

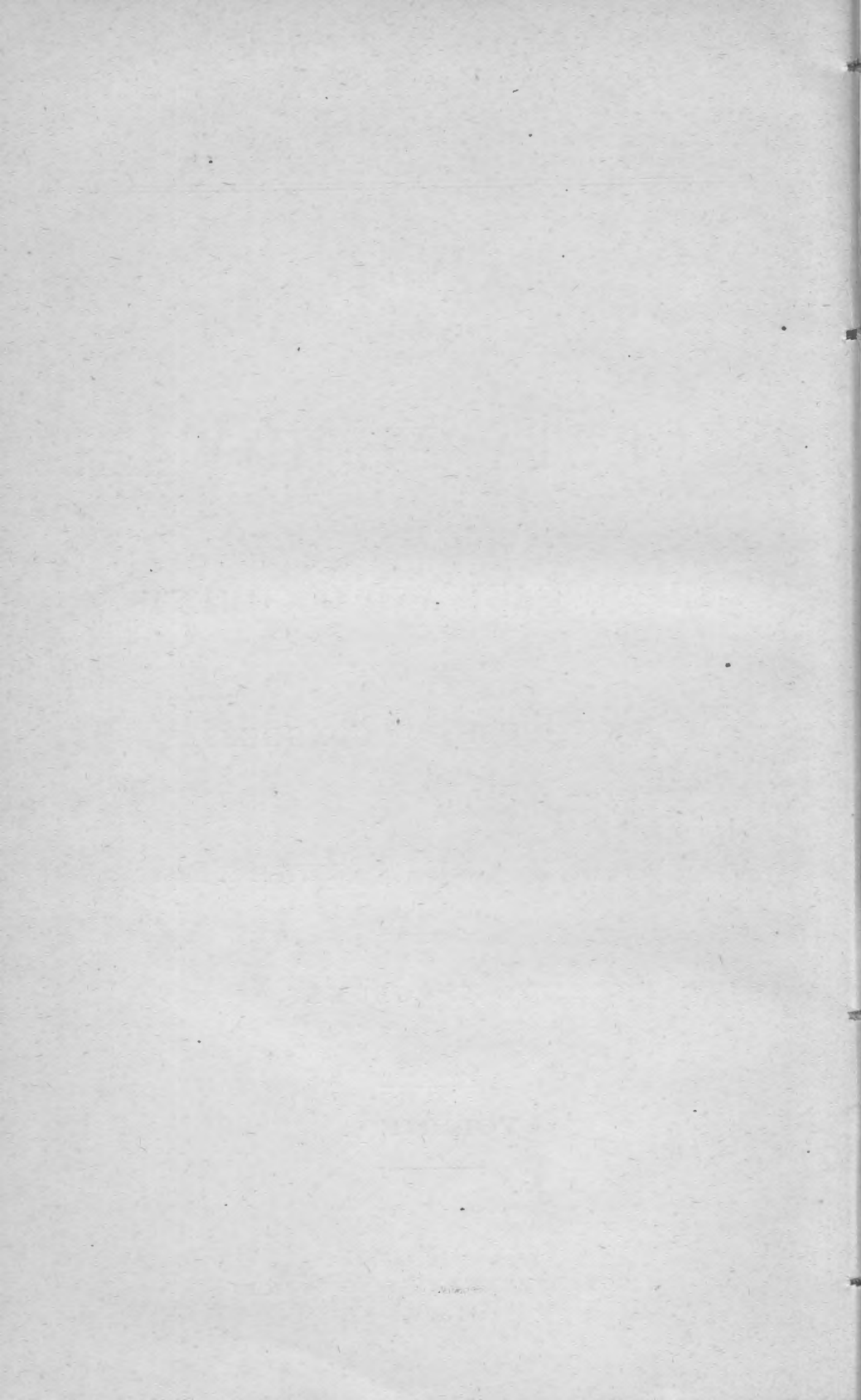
51ST CONGRESS, } HOUSE OF REPRESENTATIVES. { Ex. Doc. 1,
2d Session. } Part 2.

REPORT
OF THE
SECRETARY OF WAR;
BEING PART OF
THE MESSAGE AND DOCUMENTS
COMMUNICATED TO THE
TWO HOUSES OF CONGRESS
AT THE
BEGINNING OF THE SECOND SESSION OF THE FIFTY-FIRST CONGRESS.

IN FOUR VOLUMES.

VOLUME I.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1890.



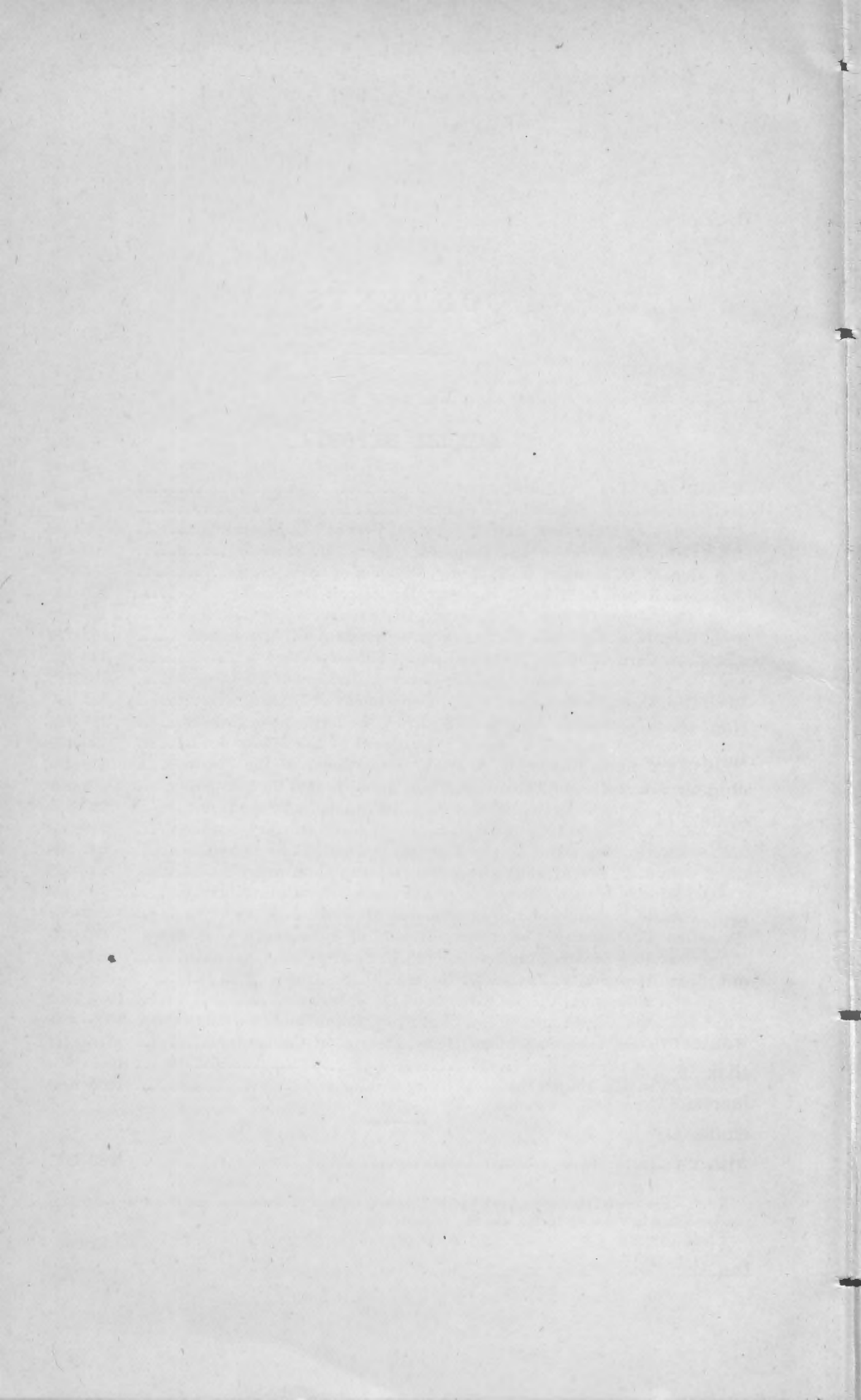
CONTENTS.

VOLUME I.

ANNUAL REPORTS.

	Page.
Hon. Redfield Proctor, Secretary of War.....	3-40
Maj. Gen. John M. Schofield, U. S. Army	43-56
Col. Chauncey McKeever, Acting Adjutant-General, U. S. Army	57-92
Brig. Gen. J. C. Breckinridge, Inspector-General, U. S. Army.....	93-150
Maj. Gen. O. O. Howard, U. S. Army, Division of the Atlantic.....	151-155
Maj. Gen. Nelson A. Miles, U. S. Army, Division of the Pacific	155-160
Brig. Gen. John Gibbon, U. S. Army, Department of the Columbia....	106-162
Brig. Gen. B. H. Grierson, U. S. Army, Department of Arizona.....	162-179
Col. E. A. Carr, 6th U. S. Cavalry, District of New Mexico	179-181
Col. R. Williams, Assistant Adjutant-General, Division of the Missouri....	182, 183
Brig. Gen. D. S. Stanley, U. S. Army, Department of Texas.....	184-187
Brig. Gen. Thomas H. Ruger, U. S. Army, Department of Dakota.....	187-194
Brig. Gen. W. Merritt, U. S. Army, Department of the Missouri.....	195-199
Brig. Gen. John R. Brooke, U. S. Army, Department of the Platte.....	199-201
Brig. Gen. A. McD. McCook, U. S. Army, Infantry and Cavalry School...	201-207
Lieut. Col. Royal T. Frank, 2d U. S. Artillery, Artillery School	208-215
Col. John M. Wilson, Engineers, U. S. Army, U. S. Military Academy....	219-243
Col. Chauncey McKeever, Acting Adjutant-General, U. S. Army.....	247-268
Brig. Gen. J. C. Breckinridge, Inspector-General, U. S. Army	271-503
Col. G. Norman Lieber, Acting Judge-Advocate-General, U. S. Army.....	507-520
Brig. Gen. R. N. Batchelder, Quartermaster-General, U. S. Army.....	523-854
Brig. Gen. B. Du Barry, Commissary-General of Subsistence, U. S. Army.	857-865
Brig. Gen. John Moore, Surgeon-General, U. S. Army	869-981
Brig. Gen. Wm. Smith, Paymaster-General, U. S. Army	985-997
Board of Publication, Official Records of the Rebellion	1001, 1002
Capt. F. C. Ainsworth, Asst. Surg., U. S. Army, Record and Pension Division	1005-1015
Board of Commissioners, Soldiers' Home, District of Columbia.....	1019-1044
Inspection of the Soldiers' Home.....	1045-1064
Board of Visitors, United States Military Academy	1069-1088
<hr/>	
INDEX	1089-1111

NOTE.—The annual reports of the Chief of Engineers, Chief of Ordnance, and Chief Signal Officer are published in Volumes II, III, and IV, respectively.



REPORT
OF THE
SECRETARY OF WAR.

WAR DEPARTMENT,
Washington, November 15, 1890.

To the PRESIDENT:

I have the honor to submit my second annual report of the condition and needs of this Department.

The legislation of the present Congress affecting the Army has been unusually important, and embraces provisions for lineal promotion and professional examinations therefor, acts for the prevention of desertion, the limitation of punishments under the Articles of War, and the improvement of courts-martial, and appropriations for additional machinery for the manufacture of large guns and for the beginning of a system of coast defense.

LINEAL PROMOTION.

By the act of October 1, 1890, promotions below the rank of a general officer are hereafter to be made lineally throughout each arm of the service. The operation of the law is postponed in the case of present first lieutenants only. Whatever advantages there might have been in the old system of regimental promotion, they were such as would prevail in a large army rather than in a small one and in war than in time of peace. On their present basis it certainly could not increase the *esprit de corps* of individual regiments. The change is one eminently just to officers and is fittingly inaugurated in connection with its companion measure in the same act.

EXAMINATIONS FOR PROMOTION.

That measure provides for a system of examinations for all officers of the Army below the rank of major, and makes their right to promotion

conditional on them. There are exceptional provisions, however, in the interests of officers who came in from the volunteer service. The measure as a whole is one of great importance to the efficiency and high professional standing of the officers of the Army. Although in keeping with the practice of all the great European powers, it is thoroughly American in theory, being based on a recognition of merit and capability. Heretofore officers have been entitled to promotion in regular rote, without any regard to competence or incompetence, efficiency or inefficiency. The new law makes no change in the rule of promotion by seniority, and the examinations are in no sense competitive, but they do require an officer to show affirmatively his fitness for the advancement to which, if qualified, the law entitles him. It is believed that its tendency must be to increase the zeal and industry of young officers.

COURTS-MARTIAL.

There have been three measures of particular importance to the administration of military justice. By the act of April 11 the time within which a person can be prosecuted for desertion has been limited to two years. The act of October 1, instituting summary courts for the trial of certain petty offenses, provides a prompt and very satisfactory method for the adjustment of such matters. It will oftentimes save the soldier from a long precedent confinement in the guard-house and relieve the investigation of his case from the cumbrous machinery of a formal court-martial. The interests of the accused are carefully guarded by the terms of the law, and the right is especially reserved to him to demand and receive a trial before a court-martial if he so desires.

In this connection I may remark that, in view of particular cases called to my attention where there seemed to have been a failure of justice in the trial of enlisted men, I caused an order to be issued on the 18th of March last directing that on the request of any prisoner a suitable officer should be detailed as counsel to defend him.

The ill-defined limits of punishment in the Articles of War have been corrected by the act of September 27, authorizing you, when punishments are left by those articles to the discretion of the court-martial, to prescribe and define limits which in time of peace they shall not exceed. As thirty-two of the thirty-four Articles of War under which enlisted men can be tried leave the punishment entirely to the discretion of the court-martial, the only check heretofore upon their variableness and the disparity of punishment prevailing in different

departments has been the executive clemency. It has been the aim of the Department, by a system of remission of sentences deemed excessive, to partially remedy that evil, a course only defensible on the ground of its imperative necessity, since it tended to impair one of the most salutary elements of all punishment, its certainty, and to pervert the proper use of the pardoning power. The act places the whole subject upon a very proper and satisfactory basis. It may be interesting to note that, although the legislation referred to was enacted too late to have had effect during the present year, still, the number of courts-martial were reduced to 1,782 the past year from 1,999 the year before, a decrease of 217 or 11 per cent. This in itself is indicative of the improving tone of the Army.

COAST DEFENSE.

It has been our traditional policy from the first to avoid entangling alliances. We are separated by an ocean from the powers which maintain great armies. The military resources of the nation have been so recently demonstrated and its network of railways is so adapted to a rapid concentration of troops on any threatened point, that no hostile force is likely to seek an encounter with us on our own soil. A small army sent upon our shores could not hope for success; it is not probable that any large one will incur the risk. We have, therefore, little to fear from invasion, and are free from the necessity of maintaining large standing armies or of fortifying against land attacks.

But our long coast line is peculiarly exposed to an attack from the sea. So long as an enemy can reach vulnerable points without exposing himself to our land forces he may inflict blows which we are unable to parry, and which may cause losses ill to be endured. No great civilized nation to-day has more just cause than ours to look well to the condition of its coast defenses, and none, since the civil war, has so wholly neglected them. It is a matter of congratulation that this national deficiency is beginning to excite the attention it merits, especially as time, even more than money, is necessary for its proper preparation.

A modern land battery constitutes a permanent defense upon a battlefield, chosen in advance, where no flanking is possible and where an enemy must force his way or abandon the attack. In such a contest ships of war are placed under every disadvantage. The channel is selected where their deployment is difficult, while they are at the cen-

ter of a concentrated fire from many dispersed guns. Modern inventions in the use of electricity, high explosives, and in rifled mortars, have resulted strongly in favor of the comparative resisting strength of land fortifications as against a naval force. They can not be blown up by dynamite nor sunk by vertical fire. They can support any weight of armament, and can protect themselves by any weight of earth or stone or iron. For accurate aim they have the solid earth for a foundation. They also have the co-operative aid of our own navy, of torpedoes, and submarine mines, and other accessory means of defense. When our principal cities, our harbors and our navy-yards are thus protected, then our coasts will be safe, and our navy and our increasing commerce will have safe ports of refuge, where they can be repaired, recoaled, and refitted.

The efficiency of land defenses is no experiment. It was the former wise policy of the Government, previous to the civil war, to maintain coast fortifications entirely competent to resist the vessels of war of that period. They are the cheapest to build; they are the cheapest to maintain; they are always in position, and ready for service. A modern land battery when once constructed and armed needs few repairs and no renewals. Outlays for coast defense are investments which yield large interest in the form of insurance, with little deterioration to principal. As the sole object of harbor fortifications is defense, their construction should at least keep pace with, if not precede, every other preparation; for it has been well said that "while we may afford to be deficient in means of offense, we can not afford to be defenseless."

Under the fortification act of last session positions for forty-eight mortars in three groups of sixteen each, and for three of the new long-range guns will be prepared in New York Harbor; for one group of mortars and one gun in Boston Harbor; and for one group of mortars and two guns in San Francisco. As this is a matter in which make-shifts from year to year are both expensive and destructive of the object to be attained, I trust that a fixed policy may be adopted in the line of a reasonable yearly appropriation for the completion of the work on which the nation is but just entering. With such a policy manufacturers could safely put in the necessary plants and be able to furnish material at a cheaper rate. With an annual appropriation of eight to ten millions—only a little more than that of the present year—the construction and emplacement of guns and mortars, works of torpedo defense,

for the whole coast, can be carried on, and in ten years our principal harbors and cities rendered reasonably secure.

ORDNANCE.

In the matter of armament a fair and promising beginning has been made. The gun factory at Watervliet Arsenal has already turned out completed steel guns of 3.2, 3.6, 8, and 10 inches caliber, which have been entirely satisfactory so far as their tests have proceeded. The 3.2-inch breech-loading field-gun meets with general approval in service and the firing tests of the 8 and 10 inch type guns manufactured at Watervliet have given excellent results, both as regards accuracy and range, and have satisfactorily demonstrated the capability of the gun factory to turn out modern high-power rifled steel guns equal to the very best. Two type guns, one of 12-inch caliber and the other a 10-inch wire-wound steel gun, both breech-loaders, and a 12-inch B. L. steel mortar are now under construction at the gun factory. It is to be remembered that the work so far done has all been accomplished in a shop improvised from an old timber store-house and with a limited equipment and that the experience gained by both officers and operatives will probably lead to valuable results in the new gun factory.

Under the present contract about thirteen 12-inch cast-iron mortars hooped with steel can be furnished per annum, and as there are other plants in the country besides that of the present contractors which are capable of turning out these mortars it is only necessary that sufficient sums be appropriated for the manufacture of about fifty mortars a year, and the production of mortars will keep pace with that of guns and the construction of emplacements. No fear need be entertained that the plant for this work will not be in existence when needed.

The manufacture of the forgings for 8-inch, 10-inch, and 12-inch breech-loading guns by the Bethlehem Iron Works, under the appropriation of \$1,500,000 made in the act of September 22, 1888, is making good progress, and it is expected that the contract will be completed by November, 1893. The sum appropriated will procure about 61 guns of the calibers mentioned. In short, the art of modern gun-making is now well inaugurated in this country.

The carriages for the 8-inch and 10-inch guns will be of the disappearing type. Several designs of this type are now under manufacture or consideration. The 12-inch guns will be mounted on platforms which will be raised into position for firing by an elevator, and then lowered

out of reach of the enemy's fire to be reloaded and aimed, except where the position is at such an elevation as to make this unnecessary for the protection of the gunners. A design for such a platform and elevator has been approved, and one is now under construction. The 16-inch guns, if any are made, will doubtless be mounted in turrets.

NORTHERN FRONTIER.

By our agreement of 1817 with Great Britain each party is restricted to a single armed vessel on Lakes Ontario and Champlain and two on the upper lakes. Since then the Great West has become an empire of production and population, with its great cities, centers of wealth, commerce, and transportation, built on the straight shores of the broad lakes and defenseless against naval attack. The Welland Canal and the six canals along the St. Lawrence between Lake Ontario and Montreal have been constructed and are wholly in foreign territory. The smallest of the St. Lawrence canals have 9 feet depth of water and locks 200 feet long and 45 feet wide, sufficient for the passage of over fifty of the armed vessels of the British Navy. Measures have already been commenced to enlarge the smaller canals so that none will have less than 14 feet depth of water, which would admit the passage of as many more of a heavier armament. One of these canals, the Beauharnois, $11\frac{1}{4}$ miles long, is wholly on the right (south) bank of the St. Lawrence. Another, is within rifle-shot of islands belonging to us. The Board of Fortifications and other defenses under the act of March 3, 1885, composed of Army and Navy officers and of civilians, of which my predecessor was president, made a full and very complete report in regard to this situation, and recommended considerable works of defense for the lake ports.

In the absence of any preparation on our part the lake cities might, in the event of war with the power holding the highway of the St. Lawrence, be in a more defenseless condition even than the sea-board cities. Although we can not, under the agreement, build armed vessels on the lakes, to overmatch on those waters the force that might be brought against us, I do not think it necessary to undertake any elaborate system of defenses as suggested. With land forces properly disposed, we could doubtless ward off any danger from this source, and hence I fully approve the suggestion of General Schofield, who, of this subject, says:

The military policy of the United States in that direction will not, it is believed, in any conceivable event, require such defense on that frontier. It is proposed to maintain at appropriate points, which have been carefully selected, suitable garri-

sons, of regular troops of all arms, as nuclei for the concentration of such forces, regular and volunteer, as any emergency may require in that direction. The wisdom of providing, without unnecessary delay, for the additional accommodations required for these permanent garrisons, will, it is believed, be manifest to all.

Proper preparations are not measures of provocation, but rather of prevention and for the continued preservation of peace.

DESERTIONS.

The number of desertions from the Army for the twelve months ending September 30 were 2,086, as against 2,751 for the same period last year, a decrease of 24 per cent. This result is due to such improvements in the service as could be accomplished under existing legislation. The act of Congress entitled "An act to prevent desertions, and for other purposes," approved June 16, 1890, was passed too late to have had much effect up to this date. Because of the time required to work out its details, the general orders to carry it into operation were not issued till July 26, and could hardly become fully effective at once. The desertions, however, for August and September were 308 as compared with 459 for the same months last year and 515 the year before, a decrease of 33 and 40 per cent.

That act embodies the more conservative and practical suggestions which have been made for lessening this evil. It provides for the retention, until the end of his enlistment, of \$4 per month from a soldier's pay for the first year. This is a pledge for his honorable service, but as it and interest are to be paid the man if he serves honestly and faithfully until the date of his discharge, it is really also a provident feature for the soldier himself. Enlistments are to continue to be made for five years, but after one year's service a soldier is permitted, in time of peace; to purchase his discharge for a prescribed sum, varying with the time he has served, and based upon a re-imbusement of the Government for the actual expense of recruiting and transporting a new man to take his place. At the end of three years of faithful service he is entitled to a free discharge if he desires it. It also increases the vegetable ration, and finally authorizes the arrest of deserters by civil officers. The act proceeds upon the theory that by making it possible to quit the service in an honorable way there will be fewer attempts to do so dishonorably; by offering a possible and reasonable escape from a life that has become a source of discontent, the discontent itself may thereby be diminished.

Although desertions are already greatly reduced, so long as they continue in any considerable numbers they must have a bad effect upon the *morale* of the Army, and entail a large and needless expense. The practical solution of this somewhat vexed question assumes three phases: First, how to make the service more desirable; second, how to remove the artificial restraints which, by binding a man inflexibly to a long service which has become distasteful to him, naturally drive him to desperate means; third, how to make the punishment for desertion so certain, that if more worthy motives fail men may be warned by its fear. As to the second and third there is now legislation enough, at least with our present experience. With respect to the first there is, I think, need of more.

My experience so far confirms an observation which I made one year ago that "the pith of the whole question is to make the service worth seeking, and then enough good men will seek it and be glad to stay in it." So far as this is a question of thoughtful and considerate treatment of the men it has thus far and will continue to engage my earnest attention, and in it I have had the hearty and intelligent co-operation of the officers of the Army. But there is a fundamental difficulty. The pay of a second lieutenant is \$116.67 per month, that of a first sergeant only \$22, and unfortunately this difference in pay largely regulates the actual distance between their relative positions. That distance is too great. The individual elements of the Army are separated by too large a gap for the best interests of either. The pay of a non-commissioned officer is but little more than a private, and the chance to rise above that position very slight. There is little inducement for a bright and energetic man, in a country of so great possibilities as ours, to either seek or to desire to remain in the military service. It would be a step in the right direction to increase somewhat the pay of the non-commissioned officers, that every man who enters the service may find in it the possibility of a modest future.

PROMOTIONS FROM THE RANKS.

With a view to the same end I would recommend a change in the law relative to the selection of enlisted men for appointment to the grade of second lieutenant. The act of June 18, 1878, providing for the promotion of meritorious non-commissioned officers makes a favorable recommendation from a company commander an essential qualification for examination. This requirement to a great extent defeats the purpose

of the statute, by making the privilege depend absolutely upon the discretion of the officer for the time being in command of the company. For example, a man in the opinion of one company commander entitled to advancement might be regarded by another as below mediocrity. Men serving with captains who hold high standards may be infinitely superior to comrades recommended for promotions from other organizations. The result being that the advantages of the law may be withheld from men entitled to more consideration than many of the successful competitors.

Practically, it is now possible for company commanders to give these valuable appointments to young men who have enlisted for that sole purpose, and who have not rendered any meritorious service, except to qualify for the examination, thus excluding bona fide soldiers who have been induced to enlist in the hope of obtaining hard-earned and legitimate promotion. The present system gives a great opportunity for favoritism. Doubtless there have been cases of it, and there is danger that the abuse may become a very serious one.

In order to insure exact justice to all, and give full effect to the beneficent purpose of Congress, the initiatory step should be with the men themselves. Any enlisted man of two years' service, who is a citizen of the United States, should, under certain fixed rules, be permitted to compete for a commission. By this means the operation of the law would be made absolutely impersonal, and every man entering the Army would be impressed with the fact that he had an exact and even chance for a commission. This information extensively disseminated would, it is hoped, further recommend the Army to desirable men.

With your approval a bill embodying the suggestions of the Department, with respect to this matter, will be submitted to Congress at an early date.

THREE-BATTALION FORMATION.

As a military question there is no difference of opinion as to the advisability and necessity of the three-battalion formation for infantry. Every European power has adopted it, and all of the leading generals of our country, including Grant, Sherman, and Sheridan, have recommended it. Now that our small army can be stationed in larger posts, the conditions of service are fully suited to its use. It already prevails in the other arms of the service, and there are even stronger reasons for it in the infantry; besides all ought to be uniform. If we were

ever met by a military contingency, we should then be forced to adopt it, and without proper preparation. Officers are regularly detailed to instruct the militia and colleges, and they necessarily instruct in that system of organization which is recognized and fixed by our laws. The country will not adopt a higher standard of military organization than that which the Government offers to it as a model. Our Army is simply a nucleus, a skeleton organization on which to build in case of necessity, and a correct organization is more important than numbers. If the present system is as erroneous as all military men agree in saying it is, and I believe that to be the case, there ought to be some way found for making the required change. As the matter requires legislative action I can only commend the subject to the careful consideration of Congress.

The reasons for the recent reduction in the number of companies, adopted on the recommendation of General Schofield, have been fully discussed in his report, and he points out that this change is an argument in favor of rather than against the three-battalion formation.

ARTILLERY.

A bill for the reorganization of the artillery has already passed the House and awaits the action of the Senate. No objection has, to my knowledge, been raised to it, and, as its desirability in order to meet the changed requirements of our service has already been so fully discussed, I think it is unnecessary for me to add anything at this time to what I said relative to this matter in my report for last year.

RETIREMENT OF OFFICERS.

By law the officers must be retired when they reach the age of sixty-four years, and may be retired on their own request after forty years' service; but very few avail themselves of this privilege. Such retirements are now unlimited, but the number of all other retirements is restricted by the statutes to four hundred. That is, enforced retirements made in pursuance of a general policy can be made without limit while the only retirements which are made because of the actual present incapacity of the officer to perform duty are expressly restricted. Retirements ought to be carefully limited in some proper way. The retired list, or any privileged class, should be strictly confined within the narrowest limits compatible with the necessity which requires its creation. But, having such a law, it should be a just one—just to the officers it is intended to benefit and just to the service it was intended to relieve.

The number of officers now awaiting retirement is about sixty. These men are performing no service whatever, but receive full pay, while junior officers doing their duties for them are unjustly deprived of both the pay and the rank which the law intends to attach to the positions they are filling.

Of the four hundred officers on the limited retired list fifty-three were retired by reason of the loss of a limb, and ninety others, making one hundred and forty-three in all, were retired for wounds. Only eighty-seven of the four hundred are West Point graduates, and all but twenty-three of the whole number served in the war of the rebellion. The limited retired list is a legacy of the war. In about one-half the cases the records show affirmatively that the retirements were made for disability contracted during that period. In fact, by direction of the act of July 28, 1866, some of these 400 officers were appointed in the regular Army at its close because of their wounds; and of substantially all it may be said that after having undergone the severe strain of the war they were the more readily disabled by their subsequent service and exposure in the Indian campaigns. It is to be observed also that these men, if not in the Army, would be generally drawing large pensions.

The incongruity of the present law is illustrated by the fact that where an officer is disabled in the line of duty, instead of opening the way for the promotion of juniors, it may and often does actually retard it. An officer put upon the limited retired list remains there so long as he lives, even if he survives the age of sixty-four by many years, thereby preventing the retirement of another officer and the consequent promotion of juniors. If he had been retired for age in regular course this could not occur. The limit now established is proper enough if the law were so amended that this limit could be construed according to the reasonable intent of its purpose. An amendment providing for the transfer of officers from the limited to the unlimited list when they reach the age of sixty-four would still permit only four hundred retirements other than those who *could* be retired for forty years' service or by virtue of the sixty-four years provision. Whatever the limit be, such is the only reasonable basis for it. A bill to that effect is already pending in Congress, and if it be enacted I believe that with the limit as it now is the evil will correct itself.

VOLUNTEER RECORDS.

On the 8th and 16th of July, 1889, I transferred to one division, to be designated the "Record and Pension Division of the War Department," all the hospital and service records of the volunteer armies in

the war, and all business in the Department pertaining to volunteer soldiers. This consisted chiefly of calls from the Pension Office for information necessary for the adjustment of claims for pensions. It also included cases from the Second Auditor for evidence required in the settlement of old accounts and a large amount of miscellaneous business relating to information required by States, Soldiers' Homes, the Grand Army of the Republic, and other organizations entitled to it. When this change was made there was on hand an accumulation of unadjusted and unanswered cases as follows :

From the Pension Office.....	23,424
From the Second Auditor	5,007
Remuster cases	4,365
Desertion cases	1,342
All other cases, miscellaneous	6,516
Total.....	40,654

There were received from July 8, 1889, to the end of the fiscal year, June 30, 1890, 301,238 cases, as follows :

From the Pension Office.....	199,359
From the Second Auditor	35,487
Remuster cases	4,326
Desertion cases	8,509
All other cases, miscellaneous	53,557
	<u>301,238</u>
Add cases on hand.....	40,654
Total.....	341,892
There have been acted on and answered.....	341,892
	<u>None.</u>
On hand June 30, 1890	None.

A record is now made each night of the number of unanswered cases left over from the day's mail, which shows that during the last two months 97.6 per cent. of all cases have been answered within twenty-four hours of their receipt. Six hundred and forty-six clerks were assigned to the division in July, 1889, of whom 458 were engaged on the current work, and 188 in copying the original records, which were rapidly going to destruction. Since then 261 clerks have gradually been transferred from current work to the necessary and permanent work of the preservation of the records, so that at the end of the fiscal year the current business of the office was being done by 197 clerks, a reduction in force of 57 per cent., although that business has in the mean time materially increased. The report of the officer in charge of this division contains much interesting information concerning the

457-1

detail of the above and a very full and complete explanation of the improved method by which these results have been obtained.

Similar cases relating to service of regular troops during the war has been attended to in the office of the Adjutant-General, who reports that the whole number of cases received by his office during the year was, from Pension Office, 7,502; from Second Auditor, 26,392; others, 573; total, 34,467, which, with thirty-one cases on hand, have all been attended to promptly, leaving none on hand at the end of the year.

REBELLION RECORDS.

The publication of the Rebellion Records since the reorganization of the work in July of last year is progressing as satisfactorily as possible in the view of the size of the appropriation. The great item of expense is the printing, and that can only be completed as funds are available. A large part of the appropriation for the past year has been devoted to the printing and distribution of volumes already in type. Ten books were published and distributed containing the accounts of the Chancellorsville and Gettysburgh campaigns and the important sieges of Vicksburg and Hudson. In the preparatory work seven more books have been stereotyped and twelve indexed, of which eleven were ready for publication at the end of the fiscal year, thus carrying the official accounts to the end of 1863. Forty-five books have been published and distributed up to June 30, 1890.

SIGNAL CORPS.

By the act approved October 1, 1890, the Weather Bureau Service, which has heretofore been under the charge of the Signal Corps, is to be transferred on the 1st day of next July to the Department of Agriculture. The growing importance of this service, in its general interest to the country, has resulted in its development and extension to the detriment of the original purely military duties of the Signal Corps. The disassociation of the two must certainly place upon a more favorable basis this very important though small branch of the military service. There has already more attention been paid to it during the past year than heretofore. Three hundred and ninety-three officers of the line, representing for the first time in many years every regiment in the Army, have been under instructions, and at least 1,500 of the enlisted men.

MILITARY POSTS.

The policy of the Department to concentrate its troops at larger posts as rapidly as the requirements of the service would permit has been

carried out during the year, and sixteen posts have been given up and the reservations turned over to the Department of the Interior, in order that they might be taken up by the people for private use. This has only been done, however, where it was felt that the presence of the troops in those particular localities was no longer necessary, and that their maintenance there was making needless extra expense.

POST TRADERS.

During the year the licenses of forty-two post-traders have been revoked, and only two new traders have been appointed, leaving the total number of traders at present in the service thirty-four. In the earlier history of the West, when military posts were upon the extreme frontier, some such system as that of post-traders was necessary. Since then towns and cities have generally grown up in the close vicinity of posts, and which have merchants who can now furnish to the garrison such stores as a post-trader has usually kept. It is believed to be wise policy to discontinue as rapidly as possible a privileged class and permit the trade of military posts outside of regular governmental supplies to take its regular channels.

NATIONAL GUARD.

Being impressed with the importance of an effective militia as a prominent and necessary factor in any military organization suited to our country, the Department has endeavored by its co-operation to encourage and aid the National Guard so far as possible under existing law. Officers have been detailed to assist in their instruction, and detachments of regular troops have been ordered to participate in some of the larger State encampments. The Department has endeavored to co-operate more especially with those States which have manifested the most interest in the matter by their own liberal appropriations and earnest efforts. The results have been very satisfactory. Its direct benefits are palpable, and its indirect influence perhaps even more important.

Any money which the National Government expends for our citizen soldiery goes to help those who help themselves, and is bound to give proportionately large returns. Under the present law there is annually appropriated for the benefit of the militia \$400,000, while the individual States appropriate in the aggregate, so far as known, over \$2,000,000, and in many States the militia receive also a considerable support from

local and private sources. If the appropriation of the General Government should be increased, and I wish it might be, I believe that it would be generously met by a corresponding increase by the States themselves. I heartily commend every intelligent effort to increase the efficiency of the National Guard, and to bring them into closer relations with the War Department, and hope that measures to that end may receive favorable consideration of Congress. One of the most useful directions which can be given to the drill and training of the militia of the seaboard States is in connection with coast defenses, where its services are most likely to be needed, if at all. In that particular training the General Government must do more than co-operate; it must take the initiative.

COLLEGES.

To secure better co-operation between the War Department and the agricultural colleges, and other institutions at which officers are serving as instructors under the act of Congress authorizing such details, a circular was issued in February last after full consultation with and approval of a committee of college presidents, defining the relations of these officers to the institutions. It is believed that this action will secure greater uniformity and efficiency.

There are applications from leading institutions for more officers than can be detailed under the law; and I would recommend that the act be so amended as to allow the detail of seventy-five officers from the Army, or at least one for every million of inhabitants at the last preceding census. This would allow for future increase if necessary.

RELIEF OF SUFFERERS FROM THE OVERFLOW OF THE MISSISSIPPI.

Congress, by joint resolution of April 25, 1890, appropriated \$150,000 to be expended by and under the direction of the Secretary of War for the purchase and distribution of subsistence stores to such destitute persons as might require assistance in the district overflowed by the Mississippi River and its tributaries. Stores were distributed thereunder, as follows:

State.	Pork.	Bacon.	Flour.	Cornmeal.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Tennessee	31,432	30,000	54,880	56,791
Arkansas		91,065	77,659	65,471
Texas		10,462		17,800
Mississippi		167,498½	95,917	172,508½
Louisiana		739,696½	496,639	680,545
Total	31,432	1,038,721½	725,095	993,115½

The amount of the appropriation used in the purchase of supplies and their distribution amounted to \$105,200, leaving \$44,800 of the appropriation unused, which balance was afterwards reappropriated by Congress to the Territory of Oklahoma. Capt. J. F. Weston, commissary of subsistence, was immediately charged with making the purchases and distribution of these stores, with headquarters at New Orleans, and with such officers detailed to assist him as were required.

Captain Weston was necessarily given large discretion in the performance of this work, as the information received was oftentimes conflicting and the necessity pressing. It was the effort of the Department to supply the destitute and carry out the purposes of Congress in granting an appropriation, but at the same time to guard against imposition, and to see to it that the bounty of the Government reached the deserving and was carefully and prudently distributed. The legislature of the State of Louisiana has formally communicated to the Department an engrossed concurrent resolution extending the thanks of their State to Congress and the Executive for the prompt and generous action of the Federal authorities.

MONUMENTS.

No action has been taken towards procuring the pedestals for the statues of Generals Sheridan and Logan under the act of March 2, 1889, for the reason that the character and size of the statues have not been fixed upon by the respective committees of the army associations having the matter in charge. There is no provision for a statue for General Hancock; and I would suggest that the law appropriating \$40,000 for the pedestal be amended so that any balance not required for the pedestal may be applied toward the purchase of the statue. A suitable pedestal can probably be procured for about \$25,000.

The monument to General Lafayette and his compatriots, authorized by the act of March 3, 1885, has been received from the sculptors, but, on account of the joint resolution of September 30, 1890, was not put in place. The Commission has now fixed upon a location at the southeast corner of Lafayette Square, and work will soon be commenced on the foundations.

EXPLORATION OF ALASKA.

The area of Alaska is estimated at nearly 600,000 square miles. It is therefore about one-fifth the size of the United States, or nearly equal to the combined areas of the New England, Middle, and Southern States east of the Mississippi River. Of the interior of this vast area

we are practically ignorant. Three or four reconnaissances have been made by officers of the Army through portions of the Territory, and the courses of several of its great navigable rivers have thus been determined. These expeditions, however, were inadequately prepared for the work of exploration, the journeys were necessarily made in very great haste, and were confined to the rivers. No systematic exploration of the interior has ever been attempted by the Government, and the topography, resources, and capabilities of Alaska are practically unknown.

In order to obtain exact and trustworthy information concerning this Territory I have approved a proposition to organize a thoroughly equipped expedition to make a systematic exploration and survey of Alaska. The duty will be arduous and trying at the best, but it will be cheerfully undertaken both by competent officers and by the men and with, in my opinion, a fair prospect of important results. I recommend that a sufficient appropriation be made by Congress for carrying the plan into effect.

EXPENDITURES, APPROPRIATIONS, ESTIMATES.

The expenditures of appropriations under the direction of the Secretary of War for the fiscal year ended June 30, 1890, were as follows:

Salaries and contingent expenses.....	\$1,940,700.74
Military establishment: Support of the Army and Military Academy.	23,961,309.95
Public works, including river and harbor improvements	15,382,785.62
Miscellaneous objects	6,072,960.11
Total.....	47,357,756.42

The appropriations for the present fiscal year, ending June 30, 1891, are as follows:

Salaries and contingent expenses.....	\$2,137,782.33
Military establishment: Support of the Army and Military Academy.	24,543,596.90
Public works	30,874,185.00
Miscellaneous objects	5,244,131.22
Total.....	62,799,695.45

The estimates of this Department for the next fiscal year ending June 30, 1892, are as follows:

Salaries and contingent expenses.....	\$2,074,430.00
Military establishment; support of the Army and Military Academy..	26,160,991.77
Public works	10,709,288.93
Miscellaneous objects	4,805,226.07
Total.....	43,749,936.77

The statement of appropriations, expenditures, and the balances on hand at the end of the fiscal year ending June 30, 1890, is appended to this report and submitted herewith, as required by law.

REPORTS.

I desire to call attention to the very full and complete report of the Major-General Commanding, particularly with reference to the re-organization of the Army and the matter of coast defense. General Schofield in greater detail has enforced the views which I have herein expressed and which with me he deems of the greatest importance. I ought to add, also, that I have had the hearty co-operation of the several bureaus and divisions of the Department and that they have done excellent work, which the individual reports of their chiefs more fully show. I would refer to these several reports and to the report of the Superintendent of the Military Academy for much detailed information concerning the Army, the Academy, and the work of the Department. Also for many valuable suggestions which they have so fully and clearly presented that I deem it unnecessary to add to what they have said. I have thought it best, therefore, to not attempt any recapitulation of their reports, but to leave them to speak for themselves, while in the foregoing I confined myself to those matters only which I have desired to discuss because of some particular duty charged upon me in connection therewith, or on account of their general interest to the whole Army or to the country.

REDFIELD PROCTOR,
Secretary of War.

APPENDIX.

Statement of appropriations under direction of the War Department for the fiscal year ending June 30, 1890, showing the amount appropriated under each title of appropriation, the amount drawn by requisition upon the Treasury, and the balances subject to requisition July 1, 1890.

Title of appropriation.	Balances July 1, 1889.	Appropriated July 1, 1889, to June 30, 1890.	Repayments July 1, 1889, to June 30, 1890.	Aggregate available.	Payments July 1, 1889, to June 30, 1890.	Carried to surplus fund June 30, 1890.	Balance June 30, 1890.
SALARIES, CONTINGENCIES, ETC.							
Salaries, office of Secretary of War.....	\$8,134.89	\$102,975.00	-----	\$111,109.89	\$101,930.94	\$3,438.37	\$5,740.58
Salaries, office of Adjutant-General.....	30,080.19	698,020.00	-----	728,100.19	686,935.85	20,843.53	20,320.81
Salaries, office of Inspector-General.....	-----	3,720.00	-----	3,720.00	3,670.00	-----	50.00
Salaries, office of Judge-Advocate-General, U. S. Army.....	1,978.84	13,460.00	-----	15,438.84	13,372.90	1,558.84	507.10
Salaries, Signal Office.....	3,236.37	153,960.00	-----	167,199.37	151,711.04	404.37	5,083.96
Salaries, office of Quartermaster-General.....	11,118.31	156,440.00	-----	167,558.31	153,964.08	7,794.31	5,799.92
Compensation and expenses of agents, Quartermaster's Department.....	3,643.15	-----	-----	3,643.15	-----	3,643.15	-----
Salaries, office of Commissary-General.....	630.74	42,760.00	-----	43,390.74	42,311.06	154.38	925.30
Salaries, office of Surgeon-General.....	22,596.11	514,500.00	-----	537,096.11	506,076.32	15,879.62	15,146.17
Salaries, office of Paymaster-General.....	501.61	52,420.00	-----	52,921.61	52,061.17	491.26	368.58
Salaries, office of Chief of Ordnance.....	446.58	44,860.00	-----	45,306.58	44,672.98	231.58	402.02
Salaries, office of Chief of Engineers.....	424.58	23,240.00	-----	23,664.58	23,060.56	374.58	229.44
Salaries, office of Publication of Records of the Rebellion.....	2,594.67	27,380.00	-----	29,974.67	26,034.70	949.67	2,990.30
Salaries of employes, public buildings and grounds, under Chief Engineer.....	18.95	47,620.00	-----	47,638.95	47,619.53	18.95	.47
Contingent expenses, public buildings and grounds, under Chief Engineer.....	.27	500.00	-----	500.27	485.48	.27	14.52
Salaries, Record and Pension Division, War Department.....	-----	813.34	-----	813.34	500.00	-----	313.34
Furniture, State, War, and Navy Department Building.....	70.97	-----	\$22.24	93.21	-----	93.21	-----
Contingent expenses, War Department.....	4,324.55	55,000.00	-----	59,324.55	54,006.79	60.31	5,257.45
Postage, Postal Union countries, War Department.....	1,975.00	1,500.00	-----	3,475.00	589.15	1,975.00	910.85
Stationery, War Department.....	352.72	39,000.00	-----	30,352.72	29,330.74	992.76	29.22
Rent of office, public buildings and grounds, under Chief Engineer.....	300.00	-----	-----	300.00	-----	300.00	-----
Rent of buildings, War Department.....	3,862.03	2,200.00	-----	6,062.03	2,395.69	3,662.03	4.31
Total salaries, contingent expenses, and postage.....	96,292.93	1,971,368.34	22.24	2,067,683.51	1,940,722.98	62,866.19	64,094.34
Deduct repayments in excess of payments.....	-----	-----	-----	-----	22.24	-----	-----
Actual expenditures.....	-----	-----	-----	-----	1,940,700.74	-----	-----
MILITARY ESTABLISHMENT.							
Expenses of Commanding General's office.....	-----	1,200.00	-----	1,200.00	1,200.00	-----	-----
Expenses of recruiting.....	17,747.99	113,000.00	-----	130,747.99	100,206.37	1,015.14	29,526.48
Contingencies of the Adjutant-General's Department.....	1.00	2,000.00	-----	2,001.00	1,974.43	3.50	23.07
Contingencies of Inspector-General's Department.....	-----	500.00	-----	500.00	500.00	-----	-----
Contingencies of the Army.....	1,868.88	15,000.00	-----	16,868.88	18,864.95	1,839.05	1,664.26
Signal Service of the Army.....	980.33	5,000.00	-----	5,980.33	5,785.53	-----	129.20
Pay, etc., of the Army.....	767,377.40	12,759,415.73	-----	13,526,793.13	12,699,357.99	447,392.07	380,043.07
Subsistence of the Army.....	155,711.36	1,745,000.00	-----	1,900,711.36	1,482,093.25	58,315.85	360,302.26
Regular supplies, Quartermaster's Department.....	25,360.65	2,678,000.00	-----	2,703,360.65	2,543,762.88	19,727.88	189,870.11
Incidental expenses, Quartermaster's Department.....	41,516.25	675,000.00	-----	716,516.25	673,116.38	19,816.79	24,682.08

Barracks and quarters	45,080.42	620,000.00	665,080.42	649,650.45	9,285.53	6,144.44
Transportation of the Army and its supplies	178,940.30	2,700,000.00	2,878,940.30	2,763,457.17	108,980.25	6,492.88
Transportation of the Army and its supplies, Pacific railroads		281,453.92	281,453.92	281,453.92		
Horses for cavalry and artillery	3,283.91	132,000.00	135,283.91	130,709.66	3,283.91	1,290.34
Construction and repair of hospitals	1,786.10	100,000.00	101,786.10	99,012.90	1,658.49	1,113.71
Quarters for hospital stewards	580.33	12,500.00	13,080.33	11,975.96	598.46	505.91
Shooting galleries and ranges	212.69	10,000.00	10,212.69	9,425.91	149.74	637.04
Clothing, camp, and garrison equipage	46,522.26	1,150,000.00	1,196,522.26	1,109,238.69	46,502.41	40,781.16
Medical and hospital department	47,641.34	215,000.00	262,641.34	177,535.56	45,041.76	40,064.02
Maintenance Army and Navy Hospital, Hot Springs, Ark	952.66	8,490.00	9,442.66	8,490.00	1.02	951.64
Army Medical Museum		5,000.00	5,000.00	5,000.00		
Library, Surgeon-General's office	333.34	10,000.00	10,333.34	10,333.34		
Engineer depot at Willets Point, New York	72.94	19,000.00	19,072.94	15,977.19	72.94	3,022.81
Ordnance stores, etc	1,444.66	360,000.00	361,444.66	359,783.20	437.26	1,224.20
Ordnance service	5.10	80,000.00	80,005.10	79,730.78	95.85	178.47
Ordnance materials (proceeds of sales)	389,950.14	39,198.37	429,148.51	74,537.19		354,611.32
Manufacture of arms	19,488.11	400,000.00	419,488.11	369,256.49	369.50	49,862.12
Manufacture or purchase of magazine guns	1,255.00		1,255.00			1,255.00
Pay of Military Academy	34,790.39	223,755.08	258,545.47	211,377.52	16,760.52	30,407.43
Current and ordinary expenses, Military Academy	3,673.13	54,529.65	58,202.78	54,341.99	3,860.49	30.50
Miscellaneous items and incidental expenses, Military Academy	1,183.22	18,220.00	19,403.22	18,161.27	1,204.45	37.50
Total military establishment	1,787,769.88	24,433,262.75	26,221,022.63	23,961,309.95	785,491.26	1,474,221.42
PUBLIC WORKS.						
<i>Arsenals.</i>						
Rock Island bridge, Rock Island, Ill	49,542.50	50,408.00	99,950.50	75,257.77		24,692.73
Rock Island Arsenal, Rock Island, Ill	257,170.00	97,000.00	354,170.00	244,712.48		109,457.52
Augusta Arsenal, Augusta, Ga	5,000.00	10,000.00	15,000.00	15,000.00		
Columbia Arsenal, Columbia, Tenn	197,600.00		197,600.00	54,472.93		143,127.07
Army gun factory, Watervliet Arsenal, West Troy, N. Y	667,054.00		667,054.00	335,467.02		331,596.98
Watervliet Arsenal, West Troy, N. Y		7,500.00	7,500.00	7,500.00		
Frankford Arsenal, Philadelphia, Pa		1,600.00	1,600.00	1,600.00		
Kennebec Arsenal, Augusta, Me		1,200.00	1,200.00	1,200.00		
San Antonio Arsenal, San Antonio, Tex		4,500.00	4,500.00	4,500.00		
Springfield Arsenal, Springfield, Mass		15,000.00	15,000.00	15,000.00		
Repairs of arsenals	2.13	50,000.00	50,002.13	49,970.23	2.13	29.77
Testing-machine	686.34	10,000.00	10,686.34	9,574.90	686.34	425.10
Powder depot, Dover, N. J	19,299.92	35,000.00	54,299.92	35,000.00		19,299.92
Proving-ground, Sandy Hook, N. J		27,320.00	27,320.00	27,320.00		
Selecting site for ordnance proving-ground		1,000.00	1,000.00	1,000.00		
Total arsenals	1,196,354.89	310,528.00	1,506,882.89	877,565.33	688.47	628,629.09
<i>Fortifications.</i>						
Armament of fortifications	2,681,258.25	501,274.00	3,182,532.25	503,228.08	1,331.07	2,677,973.10
Preservation and repair of fortifications	41,610.33	100,000.00	141,610.33	95,767.61	57	45,842.15
Board on fortifications or other defenses	28,470.77		28,470.77			28,470.77
Plans for fortifications		5,000.00	5,000.00	5,000.00		

Statement of appropriations under direction of the War Department for the fiscal year ending June 30, 1890, etc.—Continued.

Title of appropriation.	Balances July 1, 1889.	Appropriated July 1, 1889, to June 30, 1890.	Repayments July 1, 1889, to June 30, 1890.	Aggregate available.	Payments July 1, 1889, to June 30, 1890.	Carried to surplus fund June 30, 1890.	Balance June 30, 1890.
PUBLIC WORKS—continued.							
<i>Fortifications—Continued.</i>							
Construction of a counterpoise battery.....		\$40,000.00		\$40,000.00	\$2,600.00		\$37,400.00
Torpedoes for harbor defense.....	\$169,900.00	602,000.00		771,900.00	275,500.00		496,400.00
Torpedo howitzers.....		15,000.00		15,000.00			15,000.00
Sea-coast batteries for instruction of militia.....		20,000.00	\$1,053.75	1,053.75		\$1,053.75	
Machine guns.....		20,000.00		20,000.00	19,830.00		200.00
Ammunition for morning and evening gun.....	29,255.38	5,000.00		49,255.38	18,807.66		30,447.72
Artillery targets.....		187,500.00		5,000.00	4,990.51		9.49
Pneumatic and dynamite guns.....	399,900.00			587,400.00	38.55		587,361.45
Sea-walls and embankments.....	88,990.84			88,990.84	72,940.59		16,050.25
Purchase of sites for sea-coast defenses.....	100.28			100.28			100.28
Powder and projectiles (proceeds of sales).....	5,440.20	887.92		6,298.12	360.00		5,938.12
Total fortifications.....	3,444,926.05	1,496,631.92	1,053.75	4,942,611.72	999,033.00	2,985.39	3,941,193.33
Deduct repayments in excess of payments.....					1,053.75		
Actual expenditures.....					997,979.25		
<i>Buildings and grounds in and around Washington.</i>							
Improvement and care of public grounds.....	541.59	67,950.00		68,491.59	66,156.38	241.59	2,093.62
Repairs, fuel, etc., Executive Mansion.....	6.42	24,000.00		24,006.42	23,289.11	6.42	710.89
Lighting, etc., Executive Mansion.....	293.18	16,022.00		16,315.18	14,854.84	293.18	1,167.16
Repairs to water-pipes and fire-plugs.....	413.22	2,500.00		2,913.22	2,004.06	413.22	495.94
Telegraph to connect the Capitol with the Departments and Government Printing Office.....		1,250.00		1,250.00	1,250.00		
Water supply, Executive Mansion.....	5,300.00			5,300.00			5,300.00
Water supply, District of Columbia.....	534,000.00			534,000.00	422,290.72		111,709.28
Building for State, War, and Navy Departments.....	81,018.81			81,018.81	9,500.00		71,518.81
Increasing the water supply of Washington, D. C.....	434,533.33			434,533.33	2,738.16		431,795.17
Erection of fish-ways at Great Falls.....	29,894.32		126.00	30,020.32			30,020.32
Building for Army Medical Museum and Library.....	1,140.61	1,550.00		2,690.61	1,550.00		1,140.61
Bridge across the Eastern Branch of the Potomac River.....	97,000.00			97,000.00	97,000.00		
Purchase and reconstruction of Aqueduct Bridge, District of Columbia.....	7.33			7.33			7.33
Care and maintenance of the Washington Monument.....		10,500.00		10,500.00	10,373.16		126.84
Completion of the Washington Monument.....	10,068.61			10,068.61	10,068.61		
Total buildings and grounds in and around Washington.....	1,194,217.42	123,772.00	126.00	1,318,115.42	661,075.04	954.41	656,085.97
Deduct repayments in excess of payments.....					126.00		
Actual expenditures.....					660,949.04		

<i>Buildings and grounds, Military Academy.</i>							
Buildings and grounds, Military Academy	4,323.74	5,161.96		9,485.70	9,861.96	123.74	
Academic building, Military Academy	62,513.20			62,513.20		62,513.20	
New academic building, Military Academy	490,000.00			490,000.00	500.00		489,500.00
Gymnasium, Military Academy	33,851.27			33,851.27		33,851.27	
New gymnasium, Military Academy	100,000.00			100,000.00	500.00		99,500.00
Total buildings and grounds, Military Academy	690,688.21	5,161.96		695,850.17	10,861.96	96,488.21	589,000.00
<i>Military posts.</i>							
Fort Meade military reservation, Dak.	3,000.00			3,000.00	3,000.00		
Purchase of drill ground near San Antonio, Tex.	345.00			345.00		345.00	
Purchase of land adjoining military reservation at West Point, N. Y.		150,000.00		150,000.00	150,000.00		
Purchase of Fort Brown reservation, Tex.	160,000.00			160,000.00			160,000.00
Fort Brown, Tex.	25,000.00			25,000.00		25,000.00	
Buildings for cavalry and artillery school, Fort Riley, Kans.		100,000.00		100,000.00	100,000.00		
Wharf at Fortress Monroe, Va.	75,000.00			75,000.00	45,000.00		27,000.00
Bridge over Mill Creek, Fortress Monroe, Va.		20,000.00		20,000.00	20,000.00		
Sewerage system, Fortress Monroe, Va.		25,000.00		25,000.00	500.00		24,500.00
Purchase of site for Fort Elliott, Tex.		17,000.00		17,000.00	17,000.00		
Military posts	51,689.33	400,000.00		451,689.33	870,398.64		81,239.69
Officers' quarters military post at Columbus, Ohio		20,000.00		20,000.00	19,981.90		18.10
Military quarters at Fort Apache, Ariz.	.70			.70		.70	
Purchase of land adjoining military post at Madison Barracks, N. Y.		7,000.00		7,000.00			7,000.00
Military post near Chicago, Ill.	204,902.10			204,902.10	204,806.22		90,095.88
Military posts for the protection of the Rio Grande frontier	.67			.67		.67	
Military post near the northern boundary of Montana	.25			.25		.25	
Military post at Fort McKinney, Wyo.	206.00			206.00		206.00	
Fort Brady military post, Mich.	119,697.60			119,697.60	12,000.00		107,697.60
Military post at Fort Omaha, Nebr.	199,922.47			199,922.47	76,589.13		123,333.34
Army depot building, St. Paul, Minn.	.16			.16		.16	
Military post near Newport, Ky.; site	12,481.55			12,481.55	509.50		11,972.05
Military post near Newport, Ky.; buildings	1,214.74			1,214.74	1,117.11		97.63
Military post, Fort Bliss, Tex.		150,000.00		150,000.00			150,000.00
Improvement of National Park, Island of Mackinaw, Michigan.	973.98			973.98			973.98
Improvement of Yellowstone National Park		60,000.00		60,000.00	50,000.00		10,000.00
Fort Jefferson, Garden Key, Fla.			652.07	652.07			652.07
Total military posts	944,384.55	939,000.00	652.07	1,884,036.62	1,073,903.50	25,552.78	784,580.34
Deduct repayments in excess of payments					652.07		
Actual expenditures					1,073,251.43		
<i>Harbors and rivers.</i>							
Improving harbors at—							
Belfast, Me.	2,758.80			2,758.80	776.64		1,980.16
Rockland, Me.	20,000.00			20,000.00	20,000.00		
Portland, Me.	9,000.00			9,000.00	9,000.00		
Breakwater at mouth of Saco River, Me.	8,000.00			8,000.00	8,000.00		
Improving channel in Back Cove, Portland, Me.	19,500.00			19,500.00	19,500.00		

Title of appropriation.	Balances July 1, 1889.	Appropriated July 1, 1889, to June 30, 1890.	Repayments July 1, 1889, to June 30, 1890.	Aggregate available.	Payments July 1, 1889, to June 30, 1890.	Carried to surplus fund June 30, 1890.	Balance June 30, 1890.
PUBLIC WORKS—continued.							
<i>Harbors and rivers—Continued.</i>							
Improving harbor at—							
Camden, Me	\$4,500.00			\$4,500.00	\$4,500.00		
Rockport, Me	9,800.00			9,800.00	9,800.00		
York, Me	10,985.50			10,985.50	6,000.00		\$4,985.50
Breakwater from Mount Desert to Porcupine Island, Me	44,500.00			44,500.00	11,510.00		32,990.00
Improving harbor at Portsmouth, N. H.	11,500.00			11,500.00	7,003.00		4,497.00
Harbor of refuge at Little Harbor, N. H.	14,500.00			14,500.00	14,500.00		
Improving harbor at—							
Burlington, Vt	28,000.00			28,000.00	21,000.00		7,000.00
Swanton, Vt	326.93			326.93			326.93
Improving channel between North and South Hero Islands, Lake Champlain, Vermont	5,000.00			5,000.00	5,000.00		
Breakwater at Gordon's Landing, Lake Champlain, Vermont	11,000.00			11,000.00	11,000.00		
Improving harbor at—							
Vineyard Haven, Mass	19,800.00			19,800.00	17,052.00		2,748.00
Manchester, Mass	2,300.00			2,300.00	6.00		2,294.00
Lynn, Mass	9,400.00			9,400.00	9,400.00		
Winthrop, Mass	1,000.00			1,000.00			1,000.00
Newburyport, Mass	15,800.00			15,800.00	15,800.00		
Provincetown, Mass	3,000.00			3,000.00	2,010.00		990.00
Plymouth, Mass	5,300.00			5,300.00	4,300.00		1,000.00
New Bedford, Mass	3,200.00			3,200.00	3,200.00		
Scituate, Mass	4,900.00			4,900.00	4,900.00		
Nantucket, Mass	18,000.00			18,000.00	18,000.00		
Wollfleet, Mass	6,800.00			6,800.00	6,800.00		
Wareham, Mass	10,200.00			10,200.00	10,200.00		
Hingham, Mass	1,900.00			1,900.00	1,900.00		
Boston, Mass	52,000.00			52,000.00	30,000.00		22,000.00
Hyannis, Mass	13,300.00			13,300.00	13,300.00		
Harbor of refuge, Sandy Bay, Cape Ann, Massachusetts	67,000.00			67,000.00	57,000.00		10,000.00
Improving harbor at Block Island, Rhode Island	12,400.00			12,400.00	12,400.00		
Improving Little Narragansett Bay, Rhode Island	143.04			143.04		\$143.04	
Improving harbor at—							
Newport, R. I.	9,800.00			9,800.00	9,800.00		
Five-Mile River, Conn.	1,050.00			1,050.00	1,000.00		50.00
Bridgeport, Conn	2,750.00			2,750.00	2,006.00		744.00
Clinton, Conn	252.73			252.73		252.73	
Black Rock, Conn	10,000.00			10,000.00	10,000.00		
New Haven, Conn	9,500.00			9,500.00	9,500.00		
Breakwater at New Haven, Conn.	50,000.00			50,000.00	35,054.00		14,946.00

Improving harbor at—				
Norwalk, Conn.	11,500.00	11,500.00	11,500.00	
Stonington, Conn.	2,850.00	2,850.00	2,850.00	
Southport, Conn.	79.60	79.60		79.60
Dunkirk, N. Y.	15,033.41	15,033.41	14,535.00	498.41
Buffalo, N. Y.	150,000.00	150,000.00	125,258.00	24,742.00
Improving—				
Echo Harbor, New Rochelle, N. Y.	3,043.97	3,043.97	3,043.97	
Flushing Bay, New York	15,750.00	15,750.00	15,750.00	
Canarsie Bay, New York	1,500.00	1,500.00	1,104.00	396.00
Improving harbor at—				
Greenport, N. Y.	850.00	850.00	850.00	
Charlotte, N. Y.	42,367.58	42,367.58	27,065.00	15,302.58
Great Sodus Bay, New York	17,847.59	17,847.59	14,525.05	3,321.94
Little Sodus Bay, New York	10,308.08	10,308.08	9,531.30	776.78
Mamaroneck, N. Y.	220.55	220.55		220.55
New Rochelle, N. Y.	9,000.00	9,000.00	9,000.00	
Ogdensburgh, N. Y.	14,750.00	14,750.00	9,780.00	4,970.00
Plattsburgh, N. Y.	5,000.00	5,000.00	5,000.00	
Olcott, N. Y.	6,661.30	6,661.30	6,661.30	
Port Jefferson, N. Y.	374.76	374.76		374.76
Oswego, N. Y.	118,100.26	118,100.26	62,917.44	55,182.82
Pultneyville, N. Y.	2.90	2.90		2.90
Oak Orchard, N. Y.	6,000.00	6,000.00	6,000.00	
Improving Tonawanda Harbor and Niagara River, New York	79,700.00	79,700.00	59,633.00	20,067.00
Harbor at Rondout, N. Y.	5,000.00	5,000.00	5,000.00	
Sheepshead Bay, New York	6,500.00	6,500.00	6,022.00	478.00
Breakwater at Rouse's Point, Lake Champlain, New York	5,051.10	5,051.10	5,051.10	
Improving harbor at—				
Sackett's Harbor, N. Y.	500.00	500.00		500.00
Saugerties, N. Y.	4,500.00	4,500.00	4,500.00	
Wilson, N. Y.	1,393.59	1,393.59	1,393.59	
Glen Cove, N. Y.	12,650.00	12,650.00	12,650.00	
Improving New York Harbor, New York	529,000.00	529,000.00	329,000.00	200,000.00
Improving harbor at—				
Erie, Pa.	75,042.62	75,042.62	35,156.00	39,886.62
Marcus Hook, Pa.	15,000.00	15,000.00	15,000.00	
Preservation of the peninsula of Presque Isle, Erie Harbor, Pennsylvania.	59,750.00	59,750.00	59,750.00	
Improving harbor between Philadelphia, Pa., and Camden, N. J.	500,000.00	500,000.00	301,000.00	199,000.00
Improving Haritan Bay, New Jersey	25,000.00	25,000.00	25,000.00	
Survey of harbor at Atlantic City, N. J.	1,491.40	1,491.40	500.00	991.40
Improving harbor at Delaware Breakwater, Delaware	45,000.00	45,000.00	45,000.00	
Improving ice-harbor at New Castle, Del.	7,500.00	7,500.00	517.00	6,983.00
Ice-harbor at Reedy Island, Delaware	17,000.00	17,000.00	1,073.10	15,926.90
Improving harbor at Wilmington, Del.	29,500.00	29,500.00	29,500.00	
Constructing pier in Delaware Bay, near Lewes, Del.	10,000.00	10,000.00		10,000.00
Improving harbor at—				
Annapolis, Md.	1,524.58	1,524.58		1,524.58
Baltimore, Md.	60,000.00	60,000.00	20,108.00	39,892.00
Improving Breton Bay, Leonardtown, Md.	500.00	500.00	500.00	
Improving entrance to St. Jerome's Creek, Maryland	811.40	811.40	811.40	

Statement of appropriations under direction of the War Department for the fiscal year ending June 30, 1890, etc.—Continued.

Title of appropriation.	Balances July 1, 1889.	Appropriated July 1, 1889, to June 30, 1890.	Repayments July 1, 1889, to June 30, 1890.	Aggregate available.	Payments July 1, 1889, to June 30, 1890.	Carried to surplus fund June 30, 1890.	Balance June 30, 1890.
PUBLIC WORKS—continued.							
<i>Harbors and Rivers—Continued.</i>							
Improving harbor at—							
Norfolk, Va.....	\$14,000.00			\$14,000.00	\$14,000.00		
Beaufort, N. C.....	21,000.00			21,000.00	19,000.00		\$2,000.00
Improving Edenton Bay, North Carolina.....	2,447.41			2,447.41			2,447.41
Improving water-way between New Berne and Beaufort, N. C.....	7,500.00			7,500.00	23.00		7,477.00
Improving harbor at Charleston, S. C.....	350,000.00			350,000.00	158,175.00		191,825.00
Improving Winyaw Bay, South Carolina.....	111,000.00			111,000.00	22,256.00		88,744.00
Improving harbor at Savannah, Ga.....	3,750.00			3,750.00	1,525.00		2,225.00
Improving Apalachicola Bay, Florida.....	19,500.00			19,500.00	19,500.00		
Improving harbor at—							
Cedar Keys, Fla.....	6,500.00			6,500.00	6,500.00		
Key West, Fla.....	18,000.00			18,000.00	11,045.00		6,955.00
Pensacola, Fla.....	24,000.00			24,000.00	18,000.00		6,000.00
Improving Tampa Bay, Florida.....	15,000.00			15,000.00	15,000.00		
Improving harbor at—							
San Augustine, Fla.....	30,000.00			30,000.00	30,000.00		
Mobile, Ala.....	105,000.00			105,000.00	105,000.00		
Brazos Santiago, Tex.....	58,000.00			58,000.00	135.00		57,865.00
Galveston, Tex.....	280,000.00			280,000.00	190,000.00		90,000.00
Ashtabula, Ohio.....	19,000.00			19,000.00	19,000.00		
Black River, Ohio.....	1,000.00			1,000.00	1,000.00		
Cleveland, Ohio.....	49,000.00			49,000.00	49,000.00		
Fairport, Ohio.....	6,500.00			6,500.00	6,500.00		
Ice harbor at mouth of Muskingum River, Ohio.....	32,500.00			32,500.00	32,500.00		
Improving harbor at—							
Sandusky City, Ohio.....	25,000.00			25,000.00	25,000.00		
Vermillion, Ohio.....	1,000.00			1,000.00	1,000.00		
Toledo, Ohio.....	141,028.53			141,028.53	141,028.53		
Michigan City, Ind.....	82,000.00			82,000.00	79,000.00		3,000.00
Calumet, Ill.....	4,100.00			4,100.00	12.00		4,088.00
Chicago, Ill.....	116,698.75			116,698.75	100,152.00		16,544.75
Waukegan, Ill.....	13,000.00			13,000.00	9,017.00		3,983.00
Improving ice harbor of refuge at Belle River, Michigan.....	47.10			47.10		\$47.10	
Improving mouth of harbor of Cedar River, Michigan.....	2,335.02			2,335.02	335.02		2,000.00
Improving harbor at—							
Charlevoix, Mich.....	8,000.00			8,000.00	8,000.00		
Cheboygan, Mich.....	21,413.26			21,413.26	3,413.26		18,000.00
Improving Eagle Harbor, Mich.....	2,486.33			2,486.33			2,486.33

Improving harbor at—					
Frankfort, Mich.....	5,000.00		5,000.00	5,000.00	
Grand Haven, Mich.....	25,000.00		25,000.00	25,000.00	
Harbor of Refuge at Grand Marais, Mich.....	30,523.22		30,523.22	28,912.00	1,611.22
Improving harbor at—					
Ludington, Mich.....	98,504.90		98,504.90	48,504.90	50,000.00
Manistee, Mich.....	10,000.00		10,000.00	10,000.00	
Manistique, Mich.....	3,101.79		3,101.79	601.90	2,500.00
Improving harbor of refuge, Lake Huron, Michigan.....	45,000.00		45,000.00	10,059.80	34,940.20
Improving harbor at—					
Marquette, Mich.....	32,157.00		27,275.00		4,882.00
Muskegon, Mich.....	39,000.00		39,000.00	39,000.00	
Ontonagon, Mich.....	7,535.80		7,535.80	5,731.00	1,804.80
Pentwater, Mich.....	8,000.00		8,000.00	8,000.00	
Harbor of refuge at Portage Lake, Michigan.....	7,000.00		7,000.00	7,000.00	
Improving harbor at—					
St. Joseph, Mich.....	4,000.00		4,000.00	4,000.00	
Saugatuck, Mich.....	3,000.00		3,000.00	3,000.00	
South Haven, Mich.....	7,000.00		7,000.00	7,000.00	
Thunder Bay, Michigan.....	4,425.07		4,425.07	4,425.07	
White River, Michigan.....	7,500.00		7,500.00	7,500.00	
Steam launch or tug at harbor of refuge, Lake Huron, Michigan.....	4,098.86		4,098.86		4,098.86
Improving harbor at—					
Ashland, Wis.....	63,655.40		63,655.40	52,161.00	11,494.40
Ahnapee, Wis.....	3,000.00		3,000.00	3,000.00	981.00
Green Bay, Wis.....	9,000.00		9,000.00	3,000.00	6,000.00
Kenosha, Wis.....	1,000.00		1,000.00	7.00	993.00
Kewaunee, Wis.....	3,000.00		3,000.00	3,000.00	
Monomonee, Wis.....	10,187.10		10,187.10	5,213.10	4,974.00
Milwaukee, Wis.....	1,000.00		1,000.00	1,000.00	
Harbor of refuge, Milwaukee Bay, Wisconsin.....	29,000.00		29,000.00	25,013.00	3,987.00
Improving harbor at—					
Oconto, Wis.....	14,181.01		14,181.01	11,181.01	3,000.00
Pensaukee, Wis.....	4,059.92		4,059.92	559.92	3,500.00
Port Washington, Wis.....	5,000.00		5,000.00	5,000.00	
Racine, Wis.....	2,000.00		2,000.00	2,000.00	
Sheboygan, Wis.....	8,000.00		8,000.00	7,008.00	992.00
Improving harbor of refuge at entrance of Sturgeon Bay Canal, Wisconsin.....	2,478.50		2,478.50	2,478.50	
Improving harbor at Superior Bay and St. Louis Bay, Wisconsin.....	30,145.70		30,145.70	14,542.00	15,603.70
Examination of Sturgeon Bay and Lake Michigan Ship Canals, Wisconsin.....	3,091.87		3,091.87		3,091.87
Removing obstructions, harbor at Milwaukee, Wis.....		\$6,100.00	6,100.00	6,100.00	
Ice harbor at Dubuque, Iowa.....	4,503.99		4,503.99		4,503.99
Improving harbor at—					
A gate Bay, Minnesota.....	11,405.40		11,405.40	9,508.00	1,897.40
Grand Marais, Minn.....	7,737.50		7,737.50	6,605.00	1,132.50
Duluth, Minn.....	30,344.60		30,344.60	17,041.00	13,303.60
Breakwater and harbor of refuge between the Straits of Fuca and San Francisco, Cal.....	141,373.08		141,373.08		141,373.08
Improving Humboldt Harbor and Bay, California.....	216,277.84		216,277.84	111,277.84	105,000.00
Survey of San Francisco Harbor, San Pablo, and Suisun Bays, Strait of Carquinez, and mouths of San Joaquin and Sacramento Rivers, California.....	1,457.00		1,457.00	457.00	1,000.00

Statement of appropriations under direction of the War Department for the fiscal year ending June 30, 1890, etc.—Continued.

Title of appropriation.	Balances July 1, 1889.	Appropriated July 1, 1889, to June 30, 1890.	Repayments July 1, 1889, to June 30, 1890.	Aggregate available.	Payments July 1, 1889, to June 30, 1890.	Carried to surplus fund June 30, 1890.	Balance June 30, 1890.
PUBLIC WORKS—continued.							
<i>Harbors and rivers—Continued.</i>							
Improving harbor at—							
Wilmington, Cal.....	\$122,686.10			\$122,686.10	\$10,295.00		\$112,391.10
Oakland, Cal.....	252,228.00			252,228.00	155,139.00		97,689.00
San Francisco, Cal.....	3,828.57			3,828.57		\$3,828.57	
Improving entrance to—							
Coos Bay and Harbor, Oregon.....	63,707.99			63,707.99	63,707.99		
Improving—							
Yaquina Bay, Oregon.....	34,981.13			34,981.13	34,981.13		
Tillamook Bay and Bar, Oregon.....	4,200.00			4,200.00	4,200.00		
Lubec Channel, Maine.....	19,500.00			19,500.00	9,003.00		10,497.00
Moosabec Bar at Jonesport, Me.....	21,360.66			21,360.66	19,860.66		1,500.00
Narragangus River, Maine.....	7,000.00			7,000.00	7,000.00		
Saco River, Maine.....	7,000.00			7,000.00	7,000.00		
Penobscot River, Maine.....	49,000.00			49,000.00	37,005.00		11,995.00
Bagaduce River, Maine.....	2,800.00			2,800.00			2,800.00
Kennebec River, Maine.....	69,200.00			69,200.00	50,169.00		19,031.00
Lamprey River, New Hampshire.....	19.42			19.42		19.42	
Bellamy River, New Hampshire.....	4,800.00			4,800.00	4,800.00		
Otter Creek, Vermont.....	3,048.34			3,048.34	3,048.34		
Ipswich River, Massachusetts.....	2,400.00			2,400.00	5.00		2,395.00
Powow River, Massachusetts.....	3,000.00			3,000.00			3,000.00
Removing Green Jacket Shoal, Providence River, Rhode Island.....	24,300.00			24,300.00	24,300.00		
Improving—							
Pawtucket River.....	30,700.00			30,700.00	30,700.00		
Providence River and Narragansett Bay, Rhode Island.....	34,700.00			34,700.00	34,700.00		
Pawcatuck River, Rhode Island.....	8,600.00			8,600.00	8,600.00		
Hartford and New York Transportation Company, removing obstructions in Connecticut River, Connecticut.....	2,606.80			2,606.80	2,606.80		
Improving—							
Connecticut River, Connecticut.....	5,500.00			5,500.00	5,500.00		
Connecticut River, between Hartford and Holyoke.....	8,961.30			8,961.30	21.00		8,940.30
Housatonic River, Connecticut.....	32,000.00			32,000.00	13,519.00		18,481.00
Thames River, Connecticut.....	26,000.00			26,000.00	13,049.00		12,951.00
Buttermilk Channel, New York.....	103,857.16			103,857.16	38,857.16		65,000.00
East Chester Creek, New York.....	6,957.00			6,957.00	16.00		6,941.00
Removing obstructions in East River and Hellgate, New York.....	183,000.00			183,000.00	103,000.00		80,000.00
Improving—							
Channel in Gowanus Bay, New York.....	45,000.00			45,000.00	25,000.00		20,000.00
Harlem River, New York.....	290,000.00			290,000.00	145,000.00		145,000.00

Hudson River, New York	94,000.00		94,000.00	36,000.00	58,000.00
Newtown Creek, New York	20,000.00		20,000.00	15,000.00	5,000.00
Niagara River, New York	587.52		587.52		587.52
Narrows at Lake Champlain, New York and Vermont	10,000.00		10,000.00	8,011.00	1,989.00
Channel between Staten Island and New Jersey, New York and New Jersey	13,500.00		13,500.00	13,500.00	
Arthur Kill, between Staten Island and New Jersey, New York and New Jersey	8,500.00		8,500.00	8,500.00	
Manasquan River, New Jersey	1,000.00		1,000.00		1,000.00
Mantua Creek, New Jersey	2,900.00		2,900.00	2,900.00	
Maurice River, New Jersey	9,500.00		9,500.00	9,500.00	
Passaic River, New Jersey	23,187.96		23,187.96	18,483.96	4,704.00
Raritan River, New Jersey	27,646.80		27,646.80	19,217.80	8,429.00
Rancocas River, New Jersey	100.09		100.09		100.09
Raccoon River, New Jersey	2,242.77		2,242.77		2,242.77
Salem River, New Jersey	1,490.66		1,490.66		1,490.66
Shrewsbury River, New Jersey	3,183.00		3,183.00	3,183.00	
South River, New Jersey	2,200.00		2,200.00	1,006.00	1,194.00
Woodbury Creek, New Jersey	4,549.69		4,549.69		4,549.69
Allegheny River, Pennsylvania	17,000.00		17,000.00	17,000.00	
Dam at Herr's Island, Allegheny River, near Pittsburgh, Penn	69,840.90		69,840.90	36,161.00	33,679.90
Improving—					
Delaware River, Pennsylvania and New Jersey	145,000.00		145,000.00	93,000.00	52,000.00
Frankford Creek, Pennsylvania	264.50		264.50		264.50
Survey of Delaware River between Philadelphia, Pa., and Camden, N. J	4,000.00	\$465.28	4,465.28		4,465.28
Improving—					
Broad Creek, Delaware	4,500.00		4,500.00	4,500.00	
Broadkill River, Delaware	9,500.00		9,500.00	6,022.00	3,478.00
Saint Jones River, Delaware	14,500.00		14,500.00	14,500.00	
Choptank River, Maryland	7,000.00		7,000.00	8,017.00	3,983.00
Corsica Creek, Maryland	5,000.00		5,000.00	5,000.00	
Chester River, Maryland	2,958.54		2,958.54		2,958.54
Fairlee Creek, Maryland	2,000.00		2,000.00	2,000.00	
Susquehanna River, near Havre de Grace, Md	9,500.00		9,500.00	9,500.00	
Water passage between Deal's Island and the mainland, Maryland	4,669.91		4,669.91		4,669.91
Patuxent River, Maryland	4,700.00		4,700.00	4,700.00	
Wicomico River, Maryland	816.60	140.26	957.06		857.06
Potomac River	130,000.00		130,000.00	125,000.00	5,000.00
Appomattox River, Virginia	5,300.00		5,300.00	5,300.00	
Chickahominy River, Virginia	200.00		200.00	200.00	
Nomoni Creek, Virginia	500.00		500.00		500.00
North Landing River, Virginia and North Carolina	3,629.69		3,629.69	1,129.69	2,500.00
New River, Virginia and West Virginia	3,000.00		3,000.00	653.21	2,341.79
Mattaponi River, Virginia	500.00		500.00	500.00	
Pamunky River, Virginia	2,700.00		2,700.00	2,700.00	
Potomac River at Mount Vernon, Va	500.00		500.00	500.00	
Rappahannock River, Virginia	12,000.00		12,000.00	9,650.00	2,350.00
Staunton River, Virginia	2,300.00		2,300.00	2,099.00	201.00
York River, Virginia	2,500.00		2,500.00	1,400.00	1,100.00
Water-way from Chincoteague Bay to Indian River Bay, Virginia, Maryland, and Delaware	50,000.00		50,000.00	10,050.00	39,950.00
James River, Virginia	50,000.00		50,000.00	50,000.00	

Statement of appropriations under direction of the War Department for the fiscal year ending June 30, 1890, etc.—Continued.

Title of appropriation.	Balances July 1, 1889.	Appropriated July 1, 1889, to June 30, 1890.	Repayments July 1, 1889, to June 30, 1890.	Aggregate available.	Payments July 1, 1889, to June 30, 1890.	Carried to surplus fund June 30, 1890.	Balance June 30, 1890.
PUBLIC WORKS—continued.							
<i>Harbors and Rivers—Continued.</i>							
Improving—							
Nansemond River, Virginia	\$8,000.00			\$8,000.00	\$5,000.00		\$1,000.00
Guyandotte River, West Virginia	1,000.00			1,000.00	1,000.00		
Great Kanawha River, West Virginia	290,000.00			290,000.00	130,441.00		159,559.00
Little Kanawha River, West Virginia	10,000.00			10,000.00	10,000.00		
Monongahela River, West Virginia	25,000.00			25,000.00	20,078.00		4,924.00
Monongahela River, West Virginia and Pennsylvania	42,787.10			42,787.10	42,787.10		
Shenandoah River, West Virginia	16,083.40			16,083.40	500.00		15,583.40
Purchase of upper lock and dam, Monongahela River between Pittsburgh, Pa., and Morgantown, W. Va.	161,733.13			161,733.13			161,733.13
Cost of condemnation of upper lock and dam, Monongahela River between Pittsburgh, Pa., and Morgantown, W. Va.	5,000.00			5,000.00	2,466.13		2,533.87
Improving—							
Big Sandy River, West Virginia and Kentucky	16,500.00			16,500.00	5,055.00		11,445.00
Currituck Sound and North River Bar, North Carolina	6,750.00			6,750.00	6,750.00		
Cape Fear River, North Carolina	204,000.00			204,000.00	203,998.50		1.50
Contentula Creek, North Carolina	1,000.00			1,000.00	1,000.00		
Lumber River, North Carolina	3,000.00			3,000.00	1,010.00		1,990.00
Meherin River, North Carolina	415.47			415.47		\$415.47	
New River, North Carolina	3,000.00			3,000.00	10.00		2,990.00
Neuse River, North Carolina	14,003.00			14,003.00	12,029.15		1,973.85
Pamlico and Tar River, North Carolina	2,000.00			2,000.00	510.00		1,490.00
Roanoke River, North Carolina and Virginia	30,000.00			30,000.00	19,000.00		11,000.00
Roanoke River, North Carolina			\$6.76	6.76			6.76
Trent River, North Carolina	13.50			13.50			13.50
Waccamaw River, North Carolina	5,000.00			5,000.00	5,000.00		
Yadkin River, North Carolina	4,500.00			4,500.00	4,500.00		
Congaree River, South Carolina	6,000.00			6,000.00	5,000.00		1,000.00
Edisto River, South Carolina	2,000.00			2,000.00	2,000.00		
Ashley River, South Carolina	955.37			955.37	200.00		755.37
Great Pedee River, South Carolina	11,000.00			11,000.00	8,988.25		2,011.75
Salkahatchie River, South Carolina	1,000.00			1,000.00	1,000.00		
Santee River, South Carolina	24,500.00			24,500.00	24,498.20		1.80
Watauga River, South Carolina	10,000.00			10,000.00	3,028.00		6,972.00
Wapooe Cut, South Carolina	1,650.00			1,650.00	4.00		1,646.00
Altamaha River, Georgia	1,988.90			1,988.90	1,988.90		
Chattahoochee River, Georgia and Alabama	7,000.00			7,000.00	7,000.00		
Cumberland Sound, Georgia and Florida	34,043.07			34,043.07	34,043.07		
Coosa River, Georgia and Alabama	35,000.00			35,000.00	35,000.00		
Flint River, Georgia	3,000.00			3,000.00	3,000.00		
Ocmulgee River, Georgia	9,500.00			9,500.00	9,500.00		

Oconee River, Georgia	9,500.25	9,500.25	9,500.00	.25
Oostenoula and Coosawattee Rivers, Georgia	499.89	499.89		499.89
Romley Marsh, Georgia	112.20	112.20	112.20	
Savannah River, Georgia	10,634.24	10,634.24	10,634.24	
St. Augustine's Creek, Georgia	3,417.66	3,417.66		3,417.66
Apalachicola River, Fla.	1,000.00	1,000.00	1,000.00	
Choctawhatchee River, Florida and Alabama	2,000.00	2,000.00	1,508.00	492.00
Caloosahatchee River, Florida	6,500.00	6,500.00	6,500.00	
Inside passage between Fernandina and St. John's, Fla.	4,434.45	4,434.45		4,434.45
La Grange Bayou, Florida	4,839.20	4,839.20		4,839.20
Manatee River, Florida	5,000.00	5,000.00	5,000.00	
Escambia and Conecuh Rivers, Florida and Alabama	7,000.00	7,000.00	6,000.00	1,000.00
St. John's River, Florida	123,930.05	123,930.05	109,000.00	14,930.05
Withlacoochee River, Florida	3,000.00	3,000.00	3,000.00	
Alabama River, Alabama	12,000.00	12,000.00	9,000.00	3,000.00
Black Warrior River, Alabama	54,811.40	54,811.40	50,165.00	4,646.40
Tahaba River, Alabama	7,000.00	7,000.00	18.00	6,982.00
Tallahassee River, Alabama	3,500.00	3,500.00	3,500.00	
Warrior and Tombigbee Rivers, Alabama and Mississippi	21,000.00	21,000.00	21,000.00	
Big Black River, Mississippi	5,000.00	5,000.00		5,000.00
Big Sunflower River, Mississippi	1,000.00	1,000.00	1,000.00	
Pascagoula River, Mississippi	22,000.00	22,000.00	12,000.00	10,000.00
Pearl River, Mississippi	8,500.00	8,500.00	4,519.00	3,981.00
Biloxi Bay, Mississippi	13,500.00	13,500.00	42.00	13,458.00
Tallahatchee River, Mississippi	1,500.00	1,500.00	1,500.00	
Yazoo River, Mississippi	5,500.00	5,500.00	3,500.00	2,000.00
Bayou Black, Louisiana	319.31	319.31		319.31
Bayou Bartholomew, Louisiana	4,000.00	4,000.00	4,000.00	
Calcasieu River and Pass, Louisiana	10,000.00	10,000.00	23.00	9,977.00
Bayou Courtableau, Louisiana	2,500.00	2,500.00	2,500.00	
Bayou D'Arbonne, Louisiana	1,000.00	1,000.00	1,000.00	
Bayou La Fourche, Louisiana	45,461.05	45,461.05	10,107.00	35,354.05
Red River, Louisiana	58,500.00	58,500.00	47,500.00	11,000.00
Bayou Plaquemine, Louisiana	89,000.00	89,000.00	45,170.00	43,830.00
Bayou Teche, Louisiana	462.08	462.08		462.08
Bayou Terre Bonne, Louisiana	3,000.00	3,000.00	8.00	2,992.00
Connecting Bayou Teche with Grand Lake at Charenton	22,100.05	22,100.05		22,100.05
Improving—				
Arkansas Pass and Bay, Texas	40,000.00	40,000.00	103.00	39,897.00
Mouth of Brazos River, Texas	16,651.57	16,651.57		16,651.57
Ship channel in Galveston Bay, Texas	20,000.00	20,000.00	5,000.00	15,000.00
Neches River, Texas	4,167.84	4,167.84	10.00	4,157.84
Passo Cavallo, Texas	35,449.78	35,449.78	81.00	35,368.78
Sabine Pass, Texas	78,000.00	78,000.00	78,000.00	
Trinity River, Texas	12,000.00	12,000.00	12,000.00	
Little Red River, Arkansas	1,087.10	1,087.10	1,087.10	
Arkansas River, Arkansas	118,000.00	118,000.00	59,772.40	58,227.60
Black River, Arkansas and Missouri	1,000.00	1,000.00	1,000.00	
Cache River, Arkansas	2,000.00	2,000.00	2,000.00	
Removing obstructions in Arkansas River, Arkansas and Kansas	10,000.00	10,000.00	9,029.00	971.00
Improving—				
Ousatche River, Arkansas and Louisiana	12,500.00	12,500.00	5,500.00	7,000.00

Statement of appropriations under direction of the War Department for the fiscal year ending June 30, 1890, etc.—Continued.

Title of appropriation.	Balances July 1, 1889.	Appropriated July 1, 1889, to June 30, 1890.	Repayments July 1, 1889, to June 30, 1890.	Aggregate available.	Payments July 1, 1889, to June 30, 1890.	Carried to surplus fund June 30, 1890.	Balance June 30, 1890.
PUBLIC WORKS—continued.							
<i>Harbors and rivers—Continued.</i>							
Improving—							
Saline River, Arkansas	\$0.55	.....		\$0.55		\$0.55	.....
Osachita River, Arkansas	8,500.00	.....		8,500.00	\$7,000.00		\$1,500.00
White River above Buffalo Shoals, Arkansas .....	.60	.....		.60		.60	.....
Petit Jean River, Arkansas	2,200.00	.....		2,200.00	6.00		2,194.00
St. Francis River, Arkansas	2,000.00	.....		2,000.00	2,000.00		.....
White River, Arkansas	15,500.00	.....		15,500.00	14,531.31		968.69
Big Hatchee River, Tennessee	2,500.00	.....		2,500.00	2,500.00		.....
Cauey Fork River, Tennessee	1,500.00	.....		1,500.00	1,500.00		.....
Cumberland River above Nashville, Tenn	245,000.00	.....		245,000.00	23,000.00		222,000.00
Cumberland River below Nashville, Tenn	7,500.00	.....		7,500.00	5,500.00		1,980.00
Duck River, Tennessee	35.72	.....		35.72		35.72	.....
French Broad River, Tennessee	2,000.00	.....		2,000.00	2,000.00		.....
Hiawassee River, Tennessee	1,000.00	.....		1,000.00	1,000.00		.....
Red River, Tennessee	23.68	.....		23.68		23.68	.....
Tennessee River above Chattanooga, Tenn	9,000.00	.....		9,000.00	7,000.00		2,000.00
Tennessee River below Chattanooga, Tenn., Alabama, and Ken- tucky	150,000.00	.....		150,000.00	135,000.00		15,000.00
Cumberland River above mouth of the Jellico, Kentucky	5,000.00	.....		5,000.00			5,000.00
Kentucky River, Kentucky	140,129.90	.....		140,129.90	140,129.90		.....
Tradewater River, Kentucky	4,000.00	.....		4,000.00	2,015.00		1,985.00
Licking River, Kentucky	1,500.00	.....		1,500.00	1,500.00		.....
Falls of the Ohio River at Louisville, Ky	247,000.00	.....		247,000.00	92,601.00		154,399.00
Ohio River, Ohio	314,658.84	.....		314,658.84	183,807.00		130,851.84
Survey of the Ohio River below Pittsburgh, Pa.	8,000.00	.....	\$1,565.92	9,565.92			9,565.92
Improving—							
Rocky River, Ohio	119.31	.....		119.31		119.31	.....
Sandusky River, Ohio	628.47	.....		628.47	628.47		.....
Muskingum River, Ohio	96,000.00	.....		96,000.00	59,392.00		36,608.00
White River, Indiana	5,000.00	.....		5,000.00	12.00		4,988.00
Wabash River, Indiana and Illinois	26,500.00	.....		26,500.00	20,569.00		5,931.00
Calumet River, Illinois	50,000.00	.....		50,000.00	12,818.20		37,181.80
Calumet River, Illinois and Indiana	47,197.80	.....		47,197.80	83,379.00		.....
Illinois River, Illinois	86,826.15	.....		86,826.15	83,379.00		3,447.15
Mississippi River	1,553,679.89	.....		1,553,679.89	1,295,975.93		257,703.96
Reservoirs at head waters of Mississippi River	21,456.15	.....		21,456.15	13,456.15		8,000.00
Gauging the waters of Lower Mississippi and its tributaries	4,500.00	\$6,000.00		10,500.00	6,833.71		3,666.29
Operating snag and dredge boats on Upper Mississippi River		25,000.00		25,000.00	25,000.00		.....
Improving Mississippi River—							
From Des Moines to mouth of Illinois River, Illinois and Missouri	79,000.00	.....		79,000.00	60,306.00		18,694.00
Above Falls of St. Anthony, Minnesota	1,000.00	.....		1,000.00	1,000.00		.....

From St. Paul to Des Moines Rapids, Minnesota, Iowa, Missouri, Illinois, and Wisconsin	2,248.40	71.21	2,319.61	2,319.61
Between mouths of Ohio and Illinois Rivers, Illinois and Missouri	208,718.97		208,718.97	88,168.00
From Minneapolis to Des Moines Rapids, Minnesota, Iowa, Missouri, Illinois and Wisconsin	452,000.00		452,000.00	56,030.00
Survey of Mississippi River	39,000.00		39,000.00	
Improving Des Moines Rapids, Mississippi River, Iowa and Illinois	29,000.00		29,000.00	
Removing obstructions in Mississippi River	30,000.00	100,000.00	130,000.00	45,000.00
Constructing jetties and other works at South Pass, Mississippi River	500,000.00	137,500.00	637,500.00	
Examinations and surveys at South Pass, Mississippi River		10,000.00	10,000.00	
Mississippi River Commission	3,557.80		4,272.19	4,272.19
Improving—		714.39		
Missouri River	588,230.81		588,230.81	87,789.46
St. Francis River, Missouri	1,000.00		1,000.00	
Removing obstructions in Missouri River, Missouri	1,982.80		1,982.80	
Removing obstructions in Missouri River from St. Joseph, Mo., to mouth	75,000.00		75,000.00	59,500.00
Improving—				
Little River, Missouri and Arkansas	4,900.00		4,900.00	1,796.07
Gasconade River, Missouri	2,500.00		2,500.00	
Osage River, Missouri and Kansas	4,000.00		4,000.00	1,989.00
Clinton River, Michigan	13,400.00		13,400.00	
Detroit River, Michigan	80,000.00		80,000.00	
Hay Lake Channel, Sault Ste. Marie River, Michigan	450,000.00		450,000.00	299,560.00
St. Clair Plate Canal, Michigan	30,000.00		30,000.00	1,000.00
Saginaw River, Michigan	34,000.00		34,000.00	
Examination of Portage Lake and Lake Superior Ship Canals, Michigan	5,128.70		5,128.70	5,128.70
Improving—				
St. Mary's River and St. Mary's Falls Canal, Michigan	182.31		182.31	182.31
St. Mary's River, Michigan	970,000.00		970,000.00	828,529.00
St. Joseph River, Michigan	1,400.00		1,400.00	
Chippewa River, Wisconsin	600.00		600.00	600.00
Fox and Wisconsin Rivers, Wisconsin	5,000.00		5,000.00	2,000.00
Fox River, Wisconsin	43,100.00		43,000.00	6,000.00
St. Croix River, Wisconsin	100.00		100.00	
Red River of the North, Minnesota and Dakota	15,500.00		15,500.00	
St. Anthony's Falls, Minnesota	86.83		86.83	
Minnesota River, Minnesota	9,967.00		9,967.00	9,967.00
Yellowstone River, Montana and Dakota	11,800.00		11,800.00	11,800.00
Survey of Missouri River Falls at Fort Benton, Mont.	15,000.00		15,000.00	15,000.00
Investigating the mining debris question in California	5,000.00		5,000.00	
Improving—				
Sacramento and Feather Rivers, California	113,731.35		113,731.35	51,998.10
San Joaquin River, California	9,105.64		9,105.64	100.98
Petalumas Creek, California	2,000.00		2,000.00	2,000.00
Napa River, California	3,000.00		3,000.00	3,000.00
Umpqua River, Oregon	1,974.04		1,974.04	
Willamette River above Portland, Oregon	7,997.84		7,997.84	79.11
Columbia River at Cascades, Oregon	85,302.60		85,302.60	
Month of Columbia River, Oregon and Washington	220,988.85	75,000.00	304,988.85	10,000.00
Columbia and Lower Willamette Rivers below Portland, Oregon	34,992.04		34,992.04	5,902.04
Examination and survey of Columbia River, Oregon	3,600.00		3,600.00	2,934.39

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PUBLIC WORKS—continued.							
<i>Harbors and rivers—Continued.</i>							
Gauging waters of Columbia River, Oregon	\$1,500.00			\$1,500.00	\$500.00		\$1,000.00
Improving—							
Chehalis River, Washington	998.87			998.87	998.87		
Skagit, Stielaguamish, Nooksack, Snohomish, and Snoqualmie Rivers, Washington	2,999.18			2,999.18	9.00		2,990.18
Surveys—							
For deep-water harbor, Gulf of Mexico			\$766.96	766.96			766.96
To connect Delaware and Chesapeake Bays	2,803.98			2,803.98		\$2,803.98	
Examinations and surveys on the Pacific coast	3.68			3.68		3.68	
Examinations, surveys, and contingencies of rivers and harbors	72,579.41			72,579.41	52,490.01		20,089.40
Removing sunken vessels or craft obstructing or endangering navigation		\$43,254.68		43,254.68	43,254.68		
Survey for Hennepin Canal	633.66			633.66			633.66
Examination of Illinois and Michigan and Hennepin Canals	9,397.44			9,397.44	9,300.00		97.44
Operating and care of canals and other works of navigation		707,594.58		707,594.58	707,594.58		
Construction of aids to guide water-craft through bridge spans			59.22	59.22		59.22	
Total harbors and rivers	16,527,850.76	1,110,449.26	3,790.00	17,642,090.02	11,766,468.61	31,528.75	5,844,092.66
Deduct repayments in excess of payments					3,790.00		
Actual expenditures					11,762,678.61		
MISCELLANEOUS.							
<i>Signal Service.</i>							
Observation and report of storms	88,577.14	236,240.00		324,817.14	197,550.64	13,287.68	113,978.82
Observation and exploration in the Arctic Seas	156.96			156.96			156.96
Signal Service—							
Medical department	1,118.84	2,600.00		3,718.84	2,232.06	866.78	600.00
Pay, etc.	15,418.90	354,555.10		369,974.00	340,653.33	13,978.37	15,342.30
Subsistence	9,179.77		150.35	9,330.12		4,113.78	5,216.34
Regular supplies	10,246.69	9,200.00		19,446.69	6,999.95	3,261.07	9,185.67
Incidental expenses	854.16	317.00		1,171.16	200.00	575.69	395.47
Transportation	5,929.53	19,000.00		24,929.53	22,764.05	728.89	1,436.59
Barracks and quarters	3,173.09		76.87	3,249.96		2,580.90	669.06
Cable, Columbia River	80.50			80.50	50.50		30.00
Establishing signal station—							
On Island of Nantucket	6.00			6.00			6.00
At Point Jupiter, Florida	954.27			954.27			954.27

Road to the Signal Station on Pike's Peak, Colorado	10,000.00			10,000.00			10,000.00
Signal Service—							
Contingent expenses	9,500.00			9,500.00	5,000.00		4,500.00
Clothing, camp, and garrison equipage			.41	.41		.41	
Repair of Signal Service cable Columbia River			50.50	50.50			50.50
Total Signal Service	155,195.85	621,912.10	278.13	777,386.08	575,450.53	39,413.67	162,521.98
Deduct re-payments in excess of payments					278.13		
Actual expenditures					575,172.40		
<i>National cemeteries.</i>							
National cemeteries	1,840.92	100,000.00		101,840.92	97,966.56	1,659.98	2,214.38
Pay of superintendents of national cemeteries	412.50	61,160.00		61,672.50	60,882.83	115.50	574.17
Headstones for graves of soldiers	37,410.89	60,000.00		97,410.89	27,032.09		70,378.80
Burial of indigent soldiers		1,000.00		1,000.00	1,000.00		
Road from—							
Springfield to the national cemetery, Missouri	.09			.09		.09	
Fort Scott national cemetery, Kansas	941.97			941.97		941.97	
Chattanooga National Cemetery, Tennessee	54.14			54.14		54.14	
Vicksburg National Cemetery, Mississippi	.57			.57		.57	
Natchez National Cemetery, Mississippi	6,106.29			6,106.29	6,000.00		106.29
Baton Rouge to the national cemetery, Louisiana	6,000.00			6,000.00		6,000.00	
New Berne to the national cemetery, North Carolina	4,500.00			4,500.00	4,500.00		
Antietam to the national cemetery, Maryland	14,500.00			14,500.00	14,500.00		
Florence to the national cemetery, South Carolina	15,000.00			15,000.00	15,000.00		
Marietta to the national cemetery, Georgia			10.90	10.90		10.90	
Stannnton to the national cemetery, Virginia		11,000.00		11,000.00	5,000.00		6,000.00
Road to the national cemetery—							
Knoxville, Tenn	29.33			29.33		29.33	
Chalmette, La.	95.60			95.60		95.60	
Hampton, Va.		2,000.00		2,000.00			2,000.00
Near Beverly, N. J.		2,306.70		2,306.70	2,306.70		
Presidio of San Francisco, Cal.		38,000.00		38,000.00	21,109.59		16,890.41
Baton Rouge, La.			5.73	5.73		5.73	
Approaches to the national cemetery near Danville, Va.		5,000.00		5,000.00	5,000.00		
Repairing roads to national cemeteries	952.33	15,000.00		15,952.33	11,306.58		4,555.75
Road through military reservation at Plattsburgh, N. Y.		10,000.00		10,000.00	10,000.00		
Cemetery fence, Fort Winnebago, Wis.	95.59			95.59		95.59	
Confederate cemeteries near Columbus, Ohio	75.46			75.46			75.46
Carson City cemetery, Nevada	512.50			512.50		512.50	
Fort Gratiot cemetery, Michigan	110.75			110.75		110.75	
Road to national cemetery, Port Hudson, La.		13,500.00		13,500.00			13,500.00
Total national cemeteries	88,638.93	318,966.70	16.63	407,622.26	281,694.35	9,632.65	116,295.26
Deduct re-payments in excess of payments					16.63		
Actual expenditures					281,677.72		

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<i>MISCELLANEOUS—continued.</i>							
<i>Civil surveys.</i>							
Survey of—							
Northern and northwestern lakes.....	\$202.68	\$7,000.00		\$7,202.68	\$3,413.79	\$231.80	\$3,557.09
Certain historic grounds, locations, and military works.....	2.26			2.26		2.26	
Boundary lines between Indian Territory and Texas.....	7,572.36			7,572.36			7,572.36
Road from Aqueduct Bridge to Mount Vernon.....	7,000.00			7,000.00	4,887.29		2,112.71
Transportation of reports and maps to foreign countries.....	91.10	100.00		191.10		91.10	100.00
Total civil surveys.....	14,868.40	7,100.00		21,968.40	8,301.08	325.16	13,342.16
<i>Artificial limbs and appliances, and support of destitute patients.</i>							
Artificial limbs.....	34,301.25	190,000.00		224,301.25	189,098.21	29,576.25	5,626.79
Appliances for disabled soldiers.....	2,130.70	2,000.00		4,130.70	1,500.00	1,630.70	1,000.00
Trusses for disabled soldiers.....		10,003.00		10,003.00	10,003.00		
Maintenance of Garfield Hospital.....		12,500.00		12,500.00	12,496.93	3.07	
Support and medical treatment of destitute patients.....	1,416.74	17,000.00		18,416.74	17,000.00		1,416.74
Total artificial limbs and appliances, and support of destitute patients.....	37,848.69	231,503.00		269,351.69	230,098.14	31,210.02	8,043.53
<i>Miscellaneous.</i>							
Support of military prison, Fort Leavenworth, Kans.....	13,866.31	92,840.00		106,706.31	83,949.99	4,248.31	18,508.01
Support of Bureau of Refugees, Freedmen, and Abandoned Lands.....	44.00			44.00			44.00
Publication of Official Records of War of the Rebellion.....	765.97	100,000.00		100,765.97	100,765.97		
Reprinting war maps.....		5,000.00		5,000.00	5,000.00		
Expenses of military convicts.....	10,118.79	7,500.00		17,618.79	3,967.50	5,352.08	8,299.21
Artillery School, Fortress Monroe, Va.....		5,000.00		5,000.00	5,000.00		
Infantry and Cavalry School, Fort Leavenworth, Kans.....		1,500.00		1,500.00	1,500.00		
Water-supply, Fort D. A. Russell, Wyo.....		24,500.00		24,500.00	21,604.17		2,895.83
Branch home for disabled volunteer soldiers in Grant County, Ind.....	150,000.00			150,000.00	150,000.00		
State or Territorial homes for disabled volunteer soldiers and sailors.....		344,272.39		344,272.39	344,272.39		
Support of—							
National Home for Disabled Volunteer Soldiers.....		2,073,204.22		2,073,204.22	2,039,569.33		33,634.89
Soldiers' Home.....	2,174,147.58	682,730.77		2,856,878.35	567,774.96		2,289,103.39
Arming and equipping the militia.....	230,337.13	400,000.00		630,337.13	366,971.94		263,365.19
Medical and Surgical History.....	226.34			226.34			226.34
Military stores for Montana militia.....	33,860.76			33,860.76	22,068.47		11,792.29
Prevention of obstructive and injurious deposits within the harbor and adjacent waters of New York City.....	15,310.00	94,070.00		109,380.00	82,419.21		26,960.79

Quartermaster's depot, Philadelphia, Pa			\$2,386.77	2,386.77		2,386.77	
Maps of battle-field of Chickamauga		2,500.00		2,500.00	2,500.00		
Total miscellaneous	2,628,676.88	3,833,117.38	2,386.77	6,464,181.03	3,797,363.93	11,987.16	2,654,829.94
Deduct repayments in excess of payments					2,386.77		
Actual expenditures					3,794,977.16		
<i>War claims of States.</i>							
Examination of claims of States and Territories under act of June 27, 1862..	5,875.62			5,875.62	185.87		5,689.75
Re-imbursing State and citizens of California for expenses in suppressing Modoc Indian hostilities	298.51			298.51	74.26		224.25
Total war claims of States	6,174.13			6,174.13	260.13		5,914.00
<i>War claims of volunteers.</i>							
Collection and payment of bounty, prize money, and other claims of col- ored soldiers and sailors	1,565.06			1,565.06		1,565.06	
Pay of volunteers, Mexican war	36.50			36.50	36.50		
Horses and other property lost in the military service	492.60	118,706.51		119,199.11	118,706.51		492.60
Commutation of rations to prisoners of war in rebel States and to soldiers on furlough	664.12	45,023.11		45,687.23	45,679.73		7.50
Services and supplies of Montana volunteers in the Nez Percé Indian war.	657.00			657.00			657.00
Providing for the comfort of sick and discharged soldiers	1.92			1.92			1.92
Bounty under the act of July 28, 1866	1,984.97	48,976.77		50,961.74	49,769.19	1,192.55	
Pay of two and three year volunteers	6,954.67	379,104.24		386,058.91	384,889.04	1,054.83	115.04
Bounty to volunteers, their widows and legal heirs	27,256.82	323,983.11		351,239.93	350,422.06	510.61	307.26
Capture of Jefferson Davis	1,796.38			1,796.38	293.00		1,503.38
Total war claims of volunteers	41,410.04	915,793.74		967,203.78	949,796.03	4,323.05	3,084.70
<i>Relief acts.</i>							
Claims of loyal citizens for supplies furnished during the rebellion	6,939.00			6,939.00			6,939.00
Claims of officers and men of the Army for destruction of private prop- erty		4,658.95		4,658.95	4,658.95		
Claims for quartermaster's stores and commissary supplies	2,146.73	14,912.72		17,059.45	14,912.72		2,146.73
Awards for quartermaster's stores and commissary supplies taken by Army in Tennessee	130.00			130.00			130.00
Miscellaneous claims audited by Third Auditor under section 4, act June 14, 1878	2,269.75			2,269.75	2,104.32	165.43	
Tents for sufferers from floods in Arkansas, Mississippi, and Louisiana.		25,000.00		25,000.00	25,000.00		
Relief of—							
Richard Trabue and others	113.66			113.66			113.66
James Devine	700.00			700.00	700.00		
St. Joseph Commercial College of St. Joseph, Mo		7,500.00		7,500.00	7,500.00		
Sufferers from overflow of Mississippi River and its tributaries		150,000.00		150,000.00	110,000.00		40,000.00
Purchase of swords presented by Illinois and South Carolina to the late General James Shields	10,000.00			10,000.00	10,000.00		

Statement of appropriations under direction of the War Department for the fiscal year ending June 30, 1890, etc.—Continued.

Title of appropriation.	Balances July 1, 1889.	Appropriated July 1, 1889, to June 30, 1890.	Repayments July 1, 1889, to June 30, 1890.	Aggregate available.	Payments July 1, 1889, to June 30, 1890.	Carried to surplus fund June 30, 1890.	Balance June 30, 1890.
MISCELLANEOUS—continued.							
<i>Relief acts—Continued.</i>							
Relief of—							
Patrick C. McQueeny	\$50.00			\$50.00	\$50.00		
Joseph R. White	299.23			299.23	295.55	\$3.68	
Prior N. Lea	1,919.00			1,919.00	1,919.00		
The heirs or legal representatives of Samuel H. Moor		\$858.60		858.60	858.60		
James W. Harvey, as assignee of Joseph Parkins		4,925.00		4,925.00	4,925.00		
Total relief acts	24,567.37	207,855.27		232,422.64	182,924.14	169.11	\$49,329.39
<i>Erection of monuments.</i>							
Monuments or tablets at Gettysburgh	13,907.60			13,907.60	13,907.60		
Erection of monumental column at Yorktown, Va.	5,176.74			5,176.74		5,176.74	
Monument at Washington's headquarters, Newburgh, N. Y.	11,500.00			11,500.00	11,500.00		
Statue to memory of La Fayette and compatriots	46,491.62			46,491.62	25,000.00		21,491.62
Pedestal for statue of—							
General Philip H. Sheridan		40,000.00		40,000.00			40,000.00
General John A. Logan		40,000.00		40,000.00			40,000.00
General Winfield Scott Hancock		40,000.00		40,000.00			40,000.00
Soldiers' monument, Mound City, Kans.			\$12.95	12.95		12.95	
Pedestal for statue of General James A. Garfield .....			.39	.39		.39	
Unveiling the statue of General James A. Garfield			640.95	640.95		640.95	
Total erection of monuments	77,076.96	120,000.00	654.29	197,730.25	50,407.60	5,831.03	141,491.62
Deduct repayments in excess of payments					654.29		
Actual expenditures					49,753.31		
RECAPITULATION.							
Salaries, contingent expenses, and postage	\$96,292.93	\$1,971,368.34	\$22.24	\$2,067,683.51	\$1,940,722.98	\$62,866.19	\$64,094.34
Military establishment, Army and Military Academy	1,787,759.88	24,433,262.75		26,221,022.63	23,961,309.95	785,491.26	1,474,221.42
Public works	23,998,421.88	3,985,543.14	5,621.82	27,989,586.84	15,388,407.44	157,598.01	12,443,581.39
Miscellaneous objects	3,074,456.25	6,256,248.19	3,335.82	9,334,040.26	6,076,295.93	102,891.75	3,154,852.58
Total	28,956,930.94	36,646,422.42	8,979.88	65,612,333.24	47,366,736.30	1,108,847.21	17,136,749.73
Deduct repayments in excess of payments					8,979.88		
Actual expenditures					47,357,756.42		

REPORT

OF THE

MAJOR-GENERAL COMMANDING THE ARMY.



REPORT
OF THE
MAJOR-GENERAL COMMANDING THE ARMY.

HEADQUARTERS OF THE ARMY,
Washington, October 23, 1890.

SIR: I have the honor to submit herewith for your information the annual reports of the several commanding generals of divisions and departments, the commanding officer of the Artillery School at Fort Monroe, Va., and of the Infantry and Cavalry School at Fort Leavenworth, Kans., and those of the Adjutant-General and Inspector-General of the Army.

These reports give in full detail all the operations of the troops during the last year, their condition as to discipline and instruction, the changes that have been made in the stations and in the organization of divisions and departments, and in general all that is needed for complete and precise information in respect to the work that has been done by the line of the Army during the past year and its present condition.

These reports also contain valuable suggestions relative to the necessities of the military service, to which your attention is respectfully invited.

The Army in the past year has suffered a great loss in the death of Maj. Gen. George Crook, so long distinguished for ability as a commander, for fidelity in the discharge of every duty, and for honorable and humane treatment of even the most savage tribes of Indians who fell under his control during his long and most valuable service in the Indian country.

General Crook has been succeeded by General Nelson A. Miles in the office of major-general and in the command of the division of the Missouri, as modified in territorial extent by the Executive Order of August 8, 1890. Brig. Gen. John Gibbon has been assigned to the command of the Division of the Pacific, now consisting of the departments of California and the Columbia, while Brig. Gen. Alexander McD. McCook, who succeeded to the rank of brigadier-general upon the retirement of General Grierson, has been assigned to the command of the Department of Arizona. The other commands remain the same as at the date of the last annual report, except that the commanding generals of the departments of the Missouri, of Texas, and of Arizona now report directly to headquarters of the Army, instead of through division headquarters as heretofore.

From the close of the great civil war in 1865 until near the present time the Army was very actively employed in subduing the warlike

tribes of Indians which roamed over a great part of the vast territory between the Mississippi River and the Pacific Ocean, in giving necessary protection to the numerous railroads in process of construction across that territory and to the tide of emigration constantly spreading over it. That work appears now to have been nearly accomplished, and it remains only to adequately guard the adjacent settlements from possible injury by the Indian tribes, heretofore hostile and now but partially civilized, assembled upon comparatively small reservations.

The past year, like the two or three preceding, has been marked by an almost total absence of hostilities with any of the Indians, or any indication on their part of a determination to again go upon the war-path. It may be confidently asserted that all that is now requisite for the final peaceful settlement of the great Indian problem is wise, just, and humane treatment of the Indians upon their reservations, and the presence or proximity of such a military force as will deter the young and restless among them from attempting to imitate the heroic deeds of their ancestors, to the recital of which they still listen during their periodical festivities.

This improved condition in the vast interior of the country has enabled the military authorities during the past few years to give greater attention to the needs of the country respecting its relations to foreign powers.

The important question of national defense against any possible foreign aggression has also received no little attention from the public, and the policy dictated by the military principle recognized among all nations appears to have received the general indorsement of the people and of Congress. Yet it is natural that public necessities which are not always present in the public mind are apt to be overlooked in the midst of those interests which present themselves constantly to the view of the people. It may therefore not be amiss to repeatedly invite attention to those public necessities which are constantly apparent only to those whose official duty it is to devote their entire time and ability to the consideration of such special interests.

The time has now come when the future possible or probable military necessities of the country should dictate military policy. The small regular army should be so stationed that it may be prepared at the shortest notice to respond to any call which may be made upon its services, and at the same time to assist in all practicable ways in preparing the much larger body of the militia of the several States, or national guards, for active service in time of need.

It is believed to be so manifest to all who will consider the subject that demonstration is unnecessary that the important seaboard cities of the United States should be so fortified, armed, and manned as to be capable of self-defense against the attack of any foreign fleet and that each of the great sea-coasts of the United States should be provided with an adequate fleet of sea-going battle-ships capable of attacking upon the broad ocean any hostile fleet which might attempt to blockade its harbors or destroy its commerce. If the important sea-ports are adequately fortified and armed, one such fleet, it is presumed, will be sufficient for each of the great oceans.

It may be confidently stated that among military men there is seen no ground for difference of opinion on this subject, namely, that an adequate sea-coast defense requires both the fortification of each of the great sea-ports and the provision of an adequate fleet to take the part of the "offensive defensive" in the event of war with any foreign power.

The general plans for the fortification and armament of the sea-coasts

of the United States have been carefully outlined under a board appointed in pursuance of an act of Congress, that of March 3, 1885, and of which the then Secretary of War was president.

In respect to the recommendation of this board, a single modification only has been suggested, namely, that respecting the fortifications and armament upon the northern frontier. The military policy of the United States in that direction will not, it is believed, in any conceivable event, require such defense on that frontier. It is proposed to maintain at appropriate points, which have been carefully selected, suitable garrisons of regular troops of all arms as *nuclei* for the concentration of such forces, regular and volunteer, as any emergency may require in that direction. The wisdom of providing, without unnecessary delay, for the additional accommodations required for these permanent garrisons will, it is believed, be manifest to all.

Although the work of preparation for fortification and armament was but recently commenced, satisfactory progress has already been made in the construction of a gun factory at Watervliet Arsenal and in the fabrication of experimental guns and mortars of the highest type. Preparations are also in progress for the necessary foundations to support these guns in their appropriate positions for the defense of the most important sea coast cities and harbors.

There is believed to be no room for doubt that the United States are now able to manufacture guns and other implements of war quite equal to the best that can be made anywhere else in the world, and it is earnestly hoped that Congress will continue to make such moderate appropriations as may be manifestly necessary to carry this work steadily forward, until all the great seaboard cities are placed beyond the danger of injury by foreign attack.

It should be borne in mind that these measures are in no proper sense preparations for war. They are, on the contrary, those preparations which are indispensable to the security of peace. Considering the enormous latent strength and resources of the United States, no foreign power would think for a moment of attacking this country, unless it was found in a state of unpreparation for immediate defense, in which condition enormous damage might be done by even a greatly inferior power, which damage could not be repaid by any possible reprisals which this country might afterward make. It is hardly possible to over-estimate the damage that would be done to the business prosperity of this country by such even temporary interruption as would result from hostilities. The expenditure necessary to make such interruption practically impossible would amount to a very small rate of insurance upon the property and business interests endangered by the neglect of that insurance.

These general propositions are so self-evident and they have been so frequently stated and so generally accepted by the public that it seems almost superfluous to repeat them; and it is done here only for the reason that other public needs, apparently more urgent, naturally absorb the public attention. But by those whose special duty it is to consider all things pertinent to the national defense it is earnestly hoped that these military interests will receive from the public and from Congress all due consideration.

The military forces of the friendly republic of Mexico have co-operated in a most cordial manner with the troops of the United States in the pursuit of the few criminal savages who have sought refuge in the mountains of the one country after committing their crimes in the

other. It is believed that very few of these criminals now remain at large.

In like manner, along the Lower Rio Grande, mutual assistance has been rendered in the prevention of such lawless incursions from the one country to the other as are inevitable under such circumstances, except for the presence of adequate national force.

It seems probable that such efficient police work may be required of the troops for some years to come. Otherwise, there is no present or prospective necessity apparent for the presence of any considerable military force on our Southwestern frontier. Adequate garrisons are already at those several places, and only require some additional but not very expensive quarters to provide for all prospective necessities.

The wisdom of Congress determines the strength of the military forces to be maintained in time of peace, as well as of those which may be called forth in time of war. The duty of subordinate military officers acting under the Executive is to make such forces as effective as possible.

With this end in view and accepting in general terms the present limit of a permanent military establishment as that upon which this duty is to be exercised, much attention has been given to the consideration of the measures necessary to make this small force most effective and most useful.

The three-battalion organization for all arms of the service, each battalion to consist of not more than four subordinate organizations (companies, troops, or batteries), has been adopted by military experts everywhere as much the best suited to modern military conditions. Considerations of economy, as well as of efficiency, dictate that in time of peace only two or three battalions of each regiment should be fully officered and manned, so as to be thoroughly effective; while the officers of the third battalion may be much more profitably employed in various military duties other than immediate service with troops; as, for example, instructors at the Military Academy, at the Artillery School, the Infantry and Cavalry School, and as students at the latter schools; as instructors at colleges throughout the country where military instruction is given, and in the inspection and instruction of the militia of the several States. The increasing demand for services of the latter character, which it is the wise policy of the War Department to respond to in all practicable cases, and the other considerations above referred to have led the War Department to reduce to eight the active companies in each regiment of infantry and to ten in each regiment of cavalry, thus increasing in that proportion, and in fact in a much larger proportion, the effective strength of the organized companies of each regiment, at the same time leaving free the requisite number of officers for detached service.

On and before March 3, 1869, the line of the Army consisted of five regiments of artillery, ten regiments of cavalry, and forty-five regiments of infantry, and the total enlisted strength was then about fifty thousand. By the act of Congress of that date the Secretary of War was directed to consolidate the forty-five regiments of infantry into twenty-five, in which act it was also provided that no new commissions, no promotions, and no enlistments in the infantry regiments should be made until the total number of those regiments was reduced to twenty-five. This act did not otherwise fix or alter the total number of enlisted men in the Army. But in the following year, July 5, 1870, Congress passed an act to reduce the number of enlisted men in the Army to thirty thousand.

Again in 1874, in the annual appropriation bill, the number was reduced to twenty-five thousand enlisted men, which limitation was continued from year to year until 1879, when it was made permanent. This great reduction in the number of enlisted men below that contemplated in the law prescribing the organization of the Army, and below that requisite for the efficiency of all arms of the line, made it necessary for the Executive to distribute the enlisted men allowed by law among the different arms according to the necessities of the service, as they might arise from time to time.

The statute which prescribed the number of non-commissioned officers of a company of infantry also prescribed the minimum number of privates, viz, 50 for each company. To have maintained the infantry at this minimum, as indicated in the statute, would have taken all the privates then allowed to the artillery, and more than 2,000 from the cavalry. That is to say, the efficiency of the artillery, both light and heavy, would have been entirely destroyed and the cavalry seriously weakened. This being wholly inadmissible, each regiment of cavalry was then given, in view of the very important service then required of that arm, 797 enlisted men; each regiment of infantry was given 505 enlisted men; each battery of light artillery 65 enlisted men—the light batteries being schools of instruction—while the foot batteries were given only 40, that is, 26 privates each, little more than a merely nominal strength.

So, also, the infantry companies were given only 36 privates, being 14 less than the minimum prescribed in the law fixing the organization of the Army. This great reduction in the number of privates allowed to the sea-coast batteries rendered them practically inefficient as such and made it necessary whenever those troops were required for any important service to unite the men of the two or more companies present into a single company, to render them effective. The same was true in a great degree in the infantry.

It would have been more logical and more in accordance with a just interpretation of the law, as well as in accordance with the interests of the military service, to have made the reduction required by law in the total number of enlisted men to take effect proportionally in the different grades—sergeants, corporals, artificers, musicians, wagoners, and privates—instead of confining the reduction entirely to privates, and thus reducing a part of the Army to an organization of officers and non-commissioned officers, etc., without privates enough to make it effective.

But this expedient was doubtless adopted and continued for several years in the hope and expectation that Congress would ere long increase the limit in the number of enlisted men, so as to make all the organizations effective.

This distribution of the enlisted men has ceased to be necessary under the changed conditions, and it has now become imperative that the sea-coast batteries be filled to such strength as to make them effective in the use of modern sea-coast guns and in the care of the fortifications whose construction is now commencing. Congress having made no increase in the number of enlisted men allowed by law this necessary strength in the sea-coast artillery could only be obtained at the expense of the infantry and cavalry. Hence, accepting the present limit as having been fixed, at least for the time being, there remained no alternative but to stop the assignment of general-service recruits to the infantry and fill up the sea coast artillery. But a further reduction of the effective strength of the companies of infantry would almost en-

tirely destroy their efficiency for any service that might suddenly be required of them. Any considerable reduction in the present strength of the cavalry would also be imprudent until the settlement of the Indian problem is somewhat further advanced. It is manifestly far wiser to make each organization large enough to be effective and diminish the number of organizations than to reduce all to an ineffective skeleton. It is also believed, as before suggested, that this is far more accurately in accordance with the law reducing the number of enlisted men, as it was manifestly not the purpose of Congress in that reduction to reduce any part of the Army to an ineffective skeleton.

The number of officers now and heretofore habitually absent on detached service suggests the limit of most effective reduction. This is found to be very nearly the number of officers constituting the full complement of two troops of cavalry, two companies of infantry, and two batteries of artillery in all the regiments. Therefore, by distributing the enlisted men of the two troops, companies, and batteries of each regiment, including the proposed seven regiments of artillery, among the others, those others will be given the greatest possible effective strength, including the full complement of officers, viz, three officers and about sixty men to each, while the remaining officers of each regiment are doing valuable detached service, so that none remain idle or not well employed.

Whenever Congress shall be pleased to give the Army sufficient enlisted strength to make all its organizations effective the latter can readily be filled up and fitted for service in the field. In the mean time it is proposed to maintain throughout the three arms nearly the same uniform effective strength as that above named, three officers and about sixty men to each troop, battery, and company.

It is hoped that Congress may be pleased at an early day to increase the limit of the enlisted strength of the Army to that fixed in the act of July 5, 1870, viz, 30,000. This is the proper minimum strength of a peace establishment under the organization fixed by the act of March 3, 1869, and continued up to the present time. Without this number of men this peace organization can not be made thoroughly effective, and can not be relied upon for the service which may immediately be required of the regular troops in any emergency, and before the ranks can be filled by recruits or volunteers called into the field.

In this connection I beg leave to suggest that whenever any such increase is made provision be made either by law or the orders of the War Department for the organization of a large battalion of young men between the ages of sixteen and twenty years, selected with respect to their intelligence and good character, with a view to their education for service as non-commissioned officers, and officers either of the regular forces or in the militia, the privilege being given to such young men to enlist for the regular period of service or to receive honorable discharges, at their own option, at the expiration of the course of instruction. It is believed that such a school would be of very great value to the military service of the country.

The conditions now existing, and which must in all probability continue to exist for many years, make it practicable to maintain two fully organized battalions of cavalry in each regiment, and only two, the additional troops—two to each regiment—being required for service at posts where the garrisons are necessarily mixed, part infantry and part cavalry, in consequence of the special service required of these troops in the vicinity of Indian reservations. The conditions are therefore now favorable to the partial organization of a third battalion of

each regiment of cavalry. Whenever the regiments take the field as such, in the event of war, it will be desirable to fully organize the third battalion.

In the infantry the circumstances are somewhat different. With few exceptions a full battalion of infantry can occupy a single post, and in many cases two battalions. Hence, it will doubtless be practicable for many years to leave the third battalion in each regiment of infantry, if a third battalion is provided by law, to fulfill the conditions of a depot battalion, bearing on its rolls the names of all officers on detached service, prolonged leaves of absence, etc., who would in the event of war be immediately recalled to the colors, organize a third battalion, and take the field.

In the artillery service it will also in general be practicable to have one, and in some cases two, battalions of foot artillery, serving at the same station, or at nearly adjacent stations, where the colonel and other field officers may exercise immediate command of the two battalions. Continuing the present allowance of two light batteries to each regiment, giving fourteen batteries for seven regiments; will fulfill all the present necessities of the light-artillery service, leaving in each of the seven regiments of artillery, as in the ten regiments of cavalry, two batteries to each, composed in time of peace only of the officers who are habitually on detached service. The fifty-six foot batteries thus kept fully manned will be barely sufficient for the permanent garrisons of the important sea-coast fortifications. It will require about thirty thousand men to maintain these organizations and necessary detachments in an efficient condition. This number of men should be distributed as follows:

INFANTRY.

Twenty-five regiments of infantry, of which eight companies shall be with the colors and each company to be composed of—

First sergeant	1
Sergeants	4
Corporals	4
Musicians	2
Artificers	2
Wagoner	1
Privates	56
Aggregate	70

To each regiment:

Eight companies of 70 men	560
Non-commissioned staff and regimental non-commissioned officers	5
Total	565

CAVALRY.

Ten regiments of cavalry of twelve troops each, of which ten shall be with the colors and two unorganized; each organized troop to be composed of—

First sergeant	1
Sergeants	5
Corporals	4
Trumpeters	2
Farriers and blacksmiths	2
Saddler	1
Wagoner	1
Privates	54
Aggregate	70

To each regiment :

Ten troops of 70 men	700
Non-commissioned staff and regimental non-commissioned officers	5
Total	705

ARTILLERY.

Seven regiments of artillery of twelve batteries each, of which eight shall be heavy and two light, two unorganized. Each organized battery shall be composed as follows :

Heavy :

First sergeant	1
Sergeants	4
Corporals	4
Musicians	2
Artificers	2
Wagoner	1
Privates	56
Aggregate	70

Light :

First sergeant	1
Sergeants	6
Corporals	4
Musicians	2
Artificers	2
Wagoner	1
Privates	69
Aggregate	85

To each regiment :

Eight heavy batteries of 70 men	560
Two light batteries of 85 men	170
Non-commissioned staff and regimental non-commissioned officers	5
Total	735

RECAPITULATION.

Infantry, 25 regiments (8 companies each)	14, 125
Cavalry, 10 regiments (10 troops each)	7, 050
Artillery, 7 regiments (10 batteries each)	5, 145
Total for line of the Army	26, 320
Engineer battalion	500
Ordnance Department	450
West Point detachments (including Army service men in the quartermaster's department) and Military Academy band	224
Prison guard (Fort Leavenworth)	110
Ordnance sergeants	90
Commissary sergeants	120
Post quartermaster sergeants	80
Depot detachments	315
Indian scouts	476
	2, 365
Recruits at depots, including a battalion of young men under instruction	1, 315
Authorized enlisted strength	30, 000

The passage by Congress of the bills now pending and favorably reported to reorganize the artillery and infantry of the Army, giving to the artillery the very moderate increase necessitated by the extent of sea coast and the contemplated fortifications and armament, will enable

the War Department to place the small regular Army upon the most efficient footing and enable it, it is believed, to meet as far as possible the present requirements of the service in time of peace, including the instruction of the great body of organized militia that must be relied upon as the main body of the Army in time of war.

To illustrate the importance of this work, it need only be mentioned that the artillery force alone to be drawn from the militia will be sixteen times as great as the regular artillery force, which it is proposed to maintain in time of peace. In this connection it is suggested that steps be taken without delay to organize in all of the sea-board States a due proportion of heavy artillery batteries for the service of the fortifications in those States and that these batteries be reported to the War Department, in order that their places of instruction may be assigned to them where they can spend the period of their annual encampment for such purpose in company with the regular troops and under the immediate instruction of accomplished artillery officers.

Regimental organizations for such artillery batteries are not necessary and probably not desirable at the present time, although there is no objection to such organizations if the State authorities prefer them.

Satisfactory progress in the sea-coast artillery instruction has already been made, under the new regulations, although without the use of the best modern guns. As soon as type guns of modern construction are placed in position, the artillery troops will be perfected in all that pertains to their use in actual service. The militia batteries which may be organized for this purpose can share at once in this annual instruction, and thus become without delay a thoroughly reliable artillery reserve for the defense of the great sea-coast cities and harbors nearest their own homes.

The high state of efficiency which has heretofore existed in the infantry of the Army, through the regular annual practice with the infantry rifle and other prescribed instruction, has been fully maintained, although it has been thought expedient, as a measure of economy and in view of the partial reorganization of the infantry regiments above referred to, to omit for the present year the concentration of troops for field exercises on a large scale. Indeed, it is probable that biennial, instead of annual, instruction of this character will be found sufficient. In this connection it has been suggested as well worthy of consideration whether or not representatives of the organized militia of the several States may take part in these concentrations of troops for instruction in field operations on the plains of the West.

The cost of transportation is presumed to be the only serious obstacle in the way. Unfortunately appropriate fields for such military operations can hardly be found in the Eastern States, on account of the damage which would unavoidably be done to property by such operations in a thickly-settled country. It is hoped that it may be found practicable to incur the expense of sending some representatives, at least of the National Guard of the several States, to take part in this instruction, which being made to simulate as nearly as possible the actual operations of war, can not fail to be highly beneficial to all concerned.

The cavalry of the Army has in its instruction been separated from the infantry and required to use exclusively its appropriate arms, the carbine and the revolver; so that the cavalryman no longer competes with the infantryman, but with his fellow-trooper. The results of this separation are highly gratifying, the degree of efficiency attained in the use of the carbine being all that could be desired.

In like manner the instruction of the artillery has been directed

mainly toward attainment of the highest degree of efficiency in the use of its special arm—whether field or sea-coast guns. Their instruction as infantry is limited to such as is necessary to make these troops effective in the use of the musket, under those exceptional circumstances where the artilleryman must use that arm, and to pave the way for instruction in marksmanship with the larger weapons.

In the past history of this country the varied service required of the troops, and the very small numbers of the regular force in proportion to the work required of them, has made it necessary for both the artillery and cavalry to act as infantry to a very great extent, and sometimes the artillery and infantry to act as cavalry. The time now appears to have arrived when that may no longer be necessary, and the instruction of each arm of the service may be more closely confined to that which will make the troops most efficient in their own special service.

The consolidation now made, by which the enlisted men of fifty companies of infantry and twenty troops of cavalry have been absorbed into the other companies and troops of their respective regiments, has diminished by seventy the number of company barracks required for the occupation of troops, and by twenty the number of troop stables required for cavalry horses. This has enabled the War Department to carry out in much larger measure the policy heretofore adopted of abandoning the small frontier posts which had been established for temporary purposes during the progress of civilization across the continent and the subjugation of the Indian tribes that stood in the way of that progress. At the same time great expense has been saved in the construction of the additional accommodations which would otherwise have been necessary at the new, larger, and more permanent posts which the Army is to hereafter occupy.

The following posts have thus been abandoned within the last two years, the buildings being turned over to the Interior Department for use for the Indian schools and for other worthy objects, or otherwise disposed of, while some of the large reservations have been returned to the public domain to be disposed of in accordance with the law. The annual expense thereby saved has, it is believed, been far greater than the appropriations necessary to suitably quarter the troops in their more permanent stations, while the troops thus hereafter located at the great railroad centers of the United States and upon the great sea-coast harbors will be in the positions where their services will in future be needed, or from which they can be most readily and speedily moved to any point of concentration which the military interests of the United States may suggest.

Fort Concho, Tex.; Fort Hays, Kans.; Fort Klamath, Oregon; Fort Bidwell, Cal.; Fort Laramie, Wyo.; Fort Lyon, Colo.; Fort Maginnis, Mont.; Fort Thomas, Ariz.; Fort McDermitt, Nev.; Fort McDowell, Ariz.; Fort Mojave, Ariz.; Fort Selden, N. Mex.; Fort Sisseton, Dak.; Fort Verde, Ariz.; Fort Gibson, Ind. T.; Fort Bridger, Wyo.; Fort Elliott, Tex.; Fort Crawford, Colo.; Fort Totten, N. Dak.; Little Rock Barracks, Ark.

The act of Congress approved February 27, 1890, authorized the President to appoint to brevet rank "all officers of the United States Army, now on the active or retired list, who by their department commander, and with the concurrence of the commanding general of the Army, have been or may be recommended for gallant service in action against hostile Indians since January 1, 1867."

This provision covers a period of twenty-three years. During much the greater part of this long period the Army was employed in cam-

paigns against hostile Indians, and a very large number of officers had been mentioned as meriting special recognition for gallantry in action. In many, but not all, such cases the formal recommendation of the department commander was found on file in the War Department, but in only a few cases was there found any record of the concurrence of the general commanding the Army at the time. The omission of such formal action was for the avowed reason, as shown in the records, that brevets were no longer given for gallantry in engagements with Indians.

Justice and the true interests of the Army seemed to require that brevets be given impartially, and, as nearly as possible, to all officers who had merited them, or else it would be better that none at all be given under the recent law.

In order that the President might be enabled to act advisedly upon this subject the great labor was undertaken of supplying, as far as possible, the omissions above referred to. This involved a careful examination of all the reports of engagements with hostile Indians during a period of more than twenty years, and much correspondence with the still living officers who had held high commands in those engagements.

In all cases wherein the recommendation of the department commander was found upon the records or since received, and wherein the official reports, made at the time of or soon after the event, seemed to justify such action, the concurrence of the present Commanding General of the Army in the recommendation of the department commander was given.

In this manner one hundred and forty-four officers have been recommended for brevets, seven of them for two brevets each, the others only one. This number is less than 7 per cent. of the whole number of officers now on the active and retired lists who have been employed in Indian campaigns, and seems a very small percentage of specially meritorious service in the long period of twenty-three years.

Unquestionably many more officers have merited the distinction of brevet rank, but this can not now be given them because of the lapse of time and the lack of official reports of the special gallant services which merited such distinction.

It would also be very difficult, if not impossible at this late day, to justly discriminate as to the relative merits of the several officers who have received the recommendations required by the act of Congress, so as to justly give brevets to some and withhold them from others.

I believe all that is possible has been done, with the most faithful assistance of the officers and clerks of the Adjutant General's Office, in the discharge of this difficult task, and hence the subject is now submitted for your consideration.

The Board of Ordnance and Fortification, organized under the act approved September 22, 1888, held its first session October 30, 1888, and from that time up to June 30, 1890, it held twenty regular sessions, averaging over four days to each session, or eighty-six working days in all.

It has made reports of each session, in the form of a journal, to the Secretary of War, and these reports, with extracts furnished to private persons and others, and other reports made by the Board, occupy nearly a thousand type-written pages of record.

The Board has examined about two hundred and eighty inventions of various kinds and acted upon them. These include guns (cannon), and improvements in the same, mortars, guns for high explosives, small-arms, battery guns and machine guns, batteries, gun-carriages, shells and other projectiles, high explosives, range and position finders, plans for coast defense, torpedoes and torpedo-boats, sights, powders, smoke-

less and other improvements, breech mechanism for guns, air-ships or balloons, metals for gun-construction, cartridges, defensive and ammunition wagons, electric arms, fuses, defensive shields, land locomotive, optical devices, surveying compass, rocket.

The consideration of these inventions and other business has required the examination of fully two thousand papers, including over three hundred drawings.

Each inventor or person interested has been promptly informed of the action finally taken upon his invention, and about thirty hearings of inventors and others were had before the Board in explanation of matter under consideration, the record of which, made by the stenographer of the Board, contains over eight hundred folios.

The Board had placed at its disposals appropriations as follows :

Act of September 22, 1888.....	\$3,967,000.00
Fortification act of March 2, 1889	1,233,594.00
Army appropriation act of March 2, 1889	56,000.00
Total.....	5,256,594.00

Allotments were made under these acts up to June 30, 1890, amounting to \$4,800,888.81.

The allotments were approximately the following amounts for the following purposes :

For guns and steel forgings for guns, etc.....	\$1,901,612.00
For gun-carriages, gun-lifts, and platforms	390,402.50
For gun factory at Watervliet Arsenal	680,000.00
For torpedoes for harbor defense.....	200,000.00
For mortars.....	265,000.00
For protection, preservation, and repair of fortifications and other works of defense.....	200,000.00
For powders and projectiles.....	176,439.25
For construction of sea-walls and earth embankments.....	117,000.00
Miscellaneous.....	870,435.06
Total.....	4,800,888.81
Leaving a balance of.....	418,305.19

By the army appropriation Act of March 2, 1889, the duty of examining and reporting upon a site or sites for ordnance proving-ground devolved upon the Board, and it accordingly visited and examined sites near Watervliet Arsenal, New York, Cape Cod from Plymouth to Nauset Harbor, the southern coast of Rhode Island from Watch Hill, to Point Judith, Fisher's Island, Montauk Point, northern shore of Long Island from Greenport to Port Jefferson, west shore of Peconic Bay southeast of Riverhead, site at Morgan, N. J., site near New Egypt, N. J., site near Egg Harbor City, N. J., site near Richland, N. J., and at Sandy Hook, the results of which investigations were submitted to Congress and published as House Ex. Doc. 148, Fifty-first Congress, first session.

Considerable attention has been given by the Board to the subject of high explosive guns and projectiles, and allotments amounting to \$47,000 have been made for experiments with high explosives, and an elaborate series of such experiments, conducted under a committee of the Board, is in progress.

Since June 30, 1890, the Board has held four regular sessions, making sixteen working days, the record of which, with extracts furnished, etc., is comprised in two hundred type-written pages. It has examined about thirty inventions of various kinds. Over two hundred and seventy papers, including drawings, have been received, entered, ex-

amined, and acted upon. Twelve hearings of inventors and others have been had, the stenographer's record of which makes three hundred and fifty folios. The following allotments were made:

Act of September 22, 1888.

July 11. SEC. 6. For the completion of the 12-inch breech-loading mortar, steel, in addition to the \$16,000 already allotted therefor	\$2,000.00
Aug. 14. SEC. 3. For the purchase of a sample 3-inch Hotchkiss mountain gun, complete, with carriage, etc	3,822.50
SEC. 6. For Lewis's range and position finder	2,885.00
Sept. 2. SEC. 4. For completing equipment of tool-rooms, etc., at Army gun factory (amount remaining of the \$700,000 appropriation)	21,250.00
(Not an additional allotment.)	
Oct. 1. SEC. 3. For repairing carriage used in the test of the 10-inch breech-loading rifle at Sandy Hook	2,000.00
Oct. 4. SEC. 6. For a disappearing carriage for 10-inch breech-loading rifle of Lieutenant Gordon's design	57,500.00
	<hr/>
	89,457.50
	21,250.00
	<hr/>
	68,207.50

Fortification act of March 2, 1889.

Oct. 1. For the purchase of steel forgings for not less than ten 7-inch siege howitzers	18,000.00
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Act of August 18, 1890.

ALLOTMENTS.

Sept. 2. Project submitted by the Chief of Engineers for the construction of gun and mortar batteries for defense of Boston, New York, and San Francisco, \$1,221,000, as follows:

BOSTON.

1 8-inch position, Fort Warren	\$50,000.00
1 mortar battery, Grover's Cliff	185,000.00
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	235,000.00
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NEW YORK.

Battery for 1 12-inch lift, Sandy Hook	154,000.00
1 mortar battery, Sandy Hook	201,000.00
1 mortar battery, Coney Island	141,000.00
1 8-inch position, Fort Wadsworth, Staten Island Narrows	50,000.00
1 mortar battery, Fort Schuyler	130,000.00
1 8-inch position, Willets Point	50,000.00
	<hr/>
	726,000.00
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SAN FRANCISCO.

1 10-inch position, bluff above Fort Point	50,000.00
1 8-inch position, Alcatraz Island	50,000.00
1 mortar battery on bluff west of city	160,000.00
	<hr/>
	260,000.00
	<hr/>
	1,220,000.00

Sept. 2.	For steel guns, 3.2-inch caliber	\$25,000.00
	For breech-loading sea-coast mortars, cast-iron, hooped with steel, 12-inch caliber	400,000.00
	For boring and turning lathes, rifling machinery, and 80-ton traveling crane at Watervliet Arsenal, New York	320,000.00
	For steel armor-piercing projectiles for sea-coast guns	100,000.00
	For machinery to complete to full extent the present gun-factory building at Watervliet Arsenal	165,000.00
	(Letter of Chief of Ordnance of September 1, 1890.)	
	For sights and implements for guns and for fuses	2,000.00
	For metallic carriages for field-gun batteries	143,135.00
	For alteration of existing carriages for 10-inch and 15-inch smooth-bore guns to adapt them to present service conditions	100,000.00
	For powder for proving sea-coast mortars of 12-inch caliber, procured under the fortification act of September 22, 1888, and for testing projectiles	10,000.00
	For cast-iron projectiles for field, siege, and sea-coast guns, for issues to service	24,500.00
	For cast-iron projectiles for proving sea-coast mortars of 12-inch caliber, procured under the fortification act of September 22, 1888	10,000.00
	For railroad sidings, switches, and weighing-scale at Army gun factory, Watervliet Arsenal, New York	2,800.00
	For 150 horse-power steam-engine and shafting for machine-shop at the Army gun factory, Watervliet Arsenal	3,500.00
3.	For steel shell for sea-coast cannon	25,000.00
	(Letter of Chief of Ordnance of September 3, 1890.)	
5.	For construction of building for wash-rooms, closets, and sinks for the operatives of the gun-factory	10,630.00
	(Letter of Chief of Ordnance of September 1, 1890.)	
Oct. 1.	For preparing drawings and expense of advertising for bids from the \$200,000 appropriated for finishing and assembling by private parties of 8, 10, and 12 inch guns from forgings procured under the act of September 22, 1888	500.00
	(Letter of Chief of Ordnance of September 27, 1890.)	
	For increase of machinery and plant for manufacture of projectiles, and for castings needed in current work of gun fabrication at Army gun factory	16,000.00
	For the necessary expenses of the board to inquire into the facilities for producing steel forgings for high-power guns, etc. Additional from the \$12,000 for construction of a building for wash-rooms, closets, and sinks for operatives of gun-factory, according to revised plans	3,000.00
		1,370.00
		<hr/>
		2,583,435.00
	(Letter of Chief of Ordnance of September 17, 1890.)	
4.	For the fire-proof brick office building for the Army gun-factory	23,000.00
	(Letter of Chief of Ordnance of October 2, 1890.)	
	(Not approved by Secretary of War, but held for further consideration, October 6, 1890.)	

In conclusion, I beg leave to say that the several measures recommended by the Secretary of War and enacted by the present Congress will, in my judgment, prove of great and lasting benefit to the military service; and I believe the efforts of Congress and of the Executive to increase the efficiency and usefulness of the military establishment are cordially appreciated and seconded by the officers and men of the Army. The zeal and fidelity with which the duties of the Army have been performed merit my commendation.

Very respectfully,

J. M. SCHOFIELD,
Major-General Commanding.

Hon. REDFIELD PROCTOR,
Secretary of War.

REPORTS

TO THE MAJOR-GENERAL COMMANDING THE ARMY.

REPORT OF THE ADJUTANT-GENERAL.

HEADQUARTERS OF THE ARMY,
ADJUTANT-GENERAL'S OFFICE,
Washington, October 7, 1890.

GENERAL: Pursuant to your instructions, I have the honor to submit the annual returns of the Army:

- A.—General return or exhibit of the actual strength of the Army.
- B.—Position and distribution of troops in the Division of the Atlantic.
- C.—Position and distribution of troops in the Division of the Missouri.
- D.—Position and distribution of troops in the Division of the Pacific.
- E.—Position and distribution of troops in the Department of Texas.
- F.—Position and distribution of troops in the Department of the Missouri.
- G.—Position and distribution of troops in the Department of Arizona.
- H.—Geographical divisions, departments, and posts, with distribution of troops, post-offices, telegraph stations, and nearest railroad stations or boat landings.
- I.—Statement of casualties during the fiscal year ended June 30, 1890.
- K.—Statement of enlistments and re-enlistments in the Army and number of men gained from desertion during the fiscal year ended June 30, 1890.

The number of enlisted men now in service who are drawing increased pay under act of Congress of August 4, 1854, is as follows:

Five years' continuous service.....	4,530
Ten years' continuous service.....	1,901
Fifteen years' continuous service.....	1,062
Twenty years' continuous service.....	674
Twenty-five years' continuous service.....	93
Thirty years' continuous service.....	13
Thirty-five years' continuous service.....	3
Forty years' continuous service.....	3
Total.....	8,279

The number of those who will become entitled to increased pay under act of Congress of May 15, 1872, during the fiscal year ending June 30, 1892, is—

Re-enlisted pay.....	412
One dollar per month for third year of service.....	4,269
Two dollars per month for fourth year of service.....	3,872
Three dollars per month for fifth year of service.....	2,727

11,280

and the number of enlisted men in service whose terms will expire during the same fiscal year is 3,823.

The officers of the Adjutant-General's Department are properly assigned and in the discharge of their appropriate duties.

DESERTION.

It gives me pleasure to report that the desertions from the Army during the past year are 439 less than the number reported in the last annual report, and the percentage to the enlisted strength has been reduced from 11 to 9.* The following table furnishes detailed data with regard to desertions from the line of the Army:

Statement of the enlisted strength of the Army, showing average strength of regiments, number of recruits assigned to each, number of desertions, and percentage of desertions to average strength, during the year ended June 30, 1890.

Regiment.	Where stationed.	Average strength.	Recruits assigned.	No. of desertions.	Per cent.
First Cavalry	Montana	701	206	74	10.5
Second Cavalry	California, Washington, and Idaho	723	110	60	8.3
Third Cavalry	Texas	689	180	67	9.7
Fourth Cavalry	Arizona	692	138	53	7.6
Fifth Cavalry	Indian Territory	708	146	42	5.9
Sixth Cavalry	New Mexico and Colorado	679	180	75	11.0
Seventh Cavalry	Kansas and Indian Territory	671	153	63	9.4
Eighth Cavalry	Dakota	706	172	94	13.3
Ninth Cavalry	Nebraska and Wyoming	751	77	9	1.2
Tenth Cavalry	Arizona	745	122	10	1.3
Total		7,065	1,484	547	7.7
First Artillery	California	513	80	60	11.7
Second Artillery	New York	497	82	61	12.3
Third Artillery	District of Columbia and Maryland	497	101	45	9.0
Fourth Artillery	Georgia, Florida, and Louisiana	490	1.8	79	16.1
Fifth Artillery	New York	500	64	45	9.0
Total		2,497	455	290	11.6
First Infantry	California	404	97	49	12.1
Second Infantry	Nebraska	448	84	33	7.3
Third Infantry	Minnesota and Dakota	434	83	55	12.6
Fourth Infantry	Washington and Idaho	451	110	21	4.6
Fifth Infantry	Texas	442	61	36	8.1
Sixth Infantry	Kansas and Colorado	432	82	41	9.5
Seventh Infantry	Colorado and Wyoming	449	116	57	12.6
Eighth Infantry	Nebraska	451	76	32	7.4
Ninth Infantry	Arizona	420	92	36	8.5
Tenth Infantry	New Mexico and Colorado	446	85	43	9.4
Eleventh Infantry	New York	424	48	36	8.4
Twelfth Infantry	Dakota	444	113	59	13.2
Thirteenth Infantry	Indian Territory and Arkansas	435	92	38	8.7
Fourteenth Infantry	Washington	466	63	32	6.8
Fifteenth Infantry	Dakota	445	130	35	7.7
Sixteenth Infantry	Utah	452	92	20	4.4
Seventeenth Infantry	Wyoming	416	77	61	14.6
Eighteenth Infantry	Texas	436	86	46	10.5
Nineteenth Infantry	Texas, Florida, and Alabama	462	62	21	4.5
Twentieth Infantry	Dakota and Montana	423	107	74	17.6
Twenty-first Infantry	Nebraska, Wyoming, and Utah	423	73	41	9.6
Twenty-second Infantry	Montana and Dakota	433	122	78	18.0
Twenty-third Infantry	New York	413	43	53	12.8
Twenty-fourth Infantry	Arizona and New Mexico	479	69	7	1.4
Twenty-fifth Infantry	Montana	446	113	22	4.9
Total		10,954	2,176	1,026	9.5

*The desertions during the twelve months from October 1, 1888, to September 30, 1889, were 2,751, or 10.8 per cent., and for the twelve months from October 1, 1889, to September 30, 1890, 2,086, or 8 per cent.

Statement of the enlisted strength of the Army, showing the average strength of regiments, number of recruits, etc.—Continued.

RECRUITING DEPOTS.

	Total No. of recruits received.	No. of desertions.	Per cent.
Jefferson Barracks.....	1, 618	158	9. 1
Dauids Island.....	1, 256	68	5. 4
Columbus Barracks.....	1, 812	94	7. 1

It will be seen from the above statement that the cavalry lost 7.7 per cent. of its average strength, while the artillery lost 11.6 per cent., and the rate for the infantry was 9.3 per cent.

The First, Sixth, and Eighth Regiments of Cavalry had a total of 243 desertions—nearly 45 per cent. of the entire loss of the ten regiments of that arm of the service; Troop C of the First losing 20 men; Troop F of the Sixth, 15; and Troops E and H of the Eighth, 13 men each.

The loss in the First and Second Regiments of Artillery is nearly equal, while in the Fourth Regiment the rate reached 16.1 per cent. The light batteries suffering the greatest loss are: E of the First, 15 men; A of the Second, 19; F of the Third, 18, and B of the Fourth, 20 men.

In the infantry the Fourth, Sixteenth, Nineteenth, Twenty-fourth, and Twenty-fifth have the lowest rate, it being only an average of 4 per cent. of the strength of these regiments; but in the Seventh, Twelfth, Seventeenth, Twentieth, and Twenty-second the rate reached an average of 14.7 per cent. Company H of the Seventeenth lost 12 men; H of the Twentieth, 11 men, and H of the Twenty-second, 13 men.

A recent act of Congress (looking to the lessening of dissatisfaction on the part of men who too late discover their unfitness for the military service and chafe at the distant prospect of release by expiration of their term of enlistment) provides, first, for the discharge of men of good character who have served three years, and, second, for the purchase of a discharge at a reasonable and fixed sum by men serving the second or third year of their enlistment. It provides, also, for the discharge, by way of favor, of men who have served ten years or more. The date of this law (June 27, 1890) is too recent to justify a reasonably correct anticipation of its practical effect in checking desertion, for statistics have shown in the past that the greater number of desertions occurred among men who had served less than two years; and it must not be forgotten that the liberation of enlisted men under the operation of the law cited above involves the presence in the ranks of an increased number of recruits to keep the Army to its authorized strength.

The table below exhibits in detail the number of discharges by special order during the past year:

Statement of discharges of enlisted men from the Army by special orders from the Adjutant-General's Office from September 1, 1889, to September 1, 1890.

	Fraud.	Favor.	Minority.	Purchase.	Veterans.	Other causes.	Total.
1889:							
September	8	20	24			17	69
October	15	16	16			23	70
November	31	20	20			22	93
December	28	32	10			16	86
1890:							
January	24	40	29			15	108
February	38	49	9			11	107
March	38	57	20			14	129
April	81	78	20			16	195
May	50	43	11			24	128
June	68	38	17			9	122
July	44	46	12			6	108
August	35	19	9	38	39	13	153
Total	450	458	197	38	39	186	1,368

From September 1 to October 1, 1890, 205 discharges have been ordered, classified as follows: Fraud, 27; favor, 11; minority, 9; purchase, 81; veterans, 59; other causes, 18.

It will be seen that under the act of June 16, 1890, there have been discharged up to October 1, 1890, 119 men by purchase and 98 as veterans. Under the provisions of the same law 3 men have been granted a furlough, in orders from this office, with a view to their discharge after three months. It is not possible at the present time to state the number of men that, in like manner, have been granted furloughs by the several department commanders.

In fuller explanation of the columns in the above table headed "Fraud" and "Other causes," it may be stated that probably the largest number of discharges for fraud are of men who, being married, had represented themselves as single men, and for concealment of prior dishonorable service, disability for duty, having helpless responsibilities, etc.; while "Other causes" include habitual drunkenness, unfitness for the service, to prevent scandal, conviction by civil authority, etc.

Two important measures long advocated by this office have recently become laws. The first authorizes the establishment of summary courts for the prompt cognizance of minor offenses, and the second provides that when the punishment is left to the discretion of courts-martial it shall not, in time of peace, exceed a limit which the President may prescribe. The adoption of a well-considered code of punishments for all military offenses, except those specifically prescribed by the Rules and Articles of War, will undoubtedly remove a great source of irritation and discontent resulting from the present inequality of punishment awarded offenses of a similar nature but committed at different times and at different posts.

EDUCATION IN THE ARMY.

I beg to submit a synopsis of the several reports received during the past year on this subject:

DIVISION OF THE ATLANTIC.

Number of post schools, 26. School attendance: Enlisted men, 509; children of officers, 15; children of enlisted men, 97, and children of civilians, 15.

General lack of text-books (those on hand old and worn out) and of school furniture. No teacher at Fort Niagara. At Fort Warren even oral instruction is impracticable for want of blackboard; seating capacity of school is only suited for small children. At Fort Schuyler there is no suitable room, and the school is held in a badly-lighted casemate. In the face of difficulties and deficiencies, the progress made generally may be called fair.

DEPARTMENT OF CALIFORNIA.

Number of post schools, 7. School attendance: Enlisted men, 168; children of officers, 3; children of enlisted men, 9; children of civilians, 1.

Except at Forts Bidwell and Gaston, children attend public schools in the cities near which the posts are located.

DEPARTMENT OF THE COLUMBIA.

Number of post schools, 7. School attendance: Enlisted men, 94; children of officers, 5; children of enlisted men, 48; children of civilians, 27.

School buildings in good condition; progress generally good; great lack of books and school supplies.

DEPARTMENT OF DAKOTA.

Number of post schools, 18. School attendance: Enlisted men, 594; children of officers, 39; children of enlisted men, 111; children of civilians, 76.

School buildings in good condition. At two posts the school accommodation is too small. Want of books, school furniture, and suitable teachers necessarily work indifferent results.

DEPARTMENT OF THE MISSOURI.

Number of post schools, 12. School attendance: Enlisted men, 316; children of officers, 9; children of enlisted men, 60; children of civilians, 41.

At Fort Leavenworth the majority of the men purchased their own school-books. The rooms utilized as a school afford too limited space for number of men attending. At Fort Lewis school books were purchased at private expense. At four posts the rooms are inadequate. No books at Fort Logan except those voluntarily provided by the pupils at their own expense.

DEPARTMENT OF THE PLATTE.

Number of post schools, 11. School attendance: Enlisted men, 519; children of officers, 21; children of enlisted men, 70; children of civilians, 47.

Condition of school building, good at four posts and but fair at three. There being no school buildings at four of the posts, rooms available for the purpose were utilized. Under circumstances stated, the results obtained are fairly good. Almost total absence of text-books. At one post the facilities for instruction in geography are limited to the use of railroad maps.

DEPARTMENT OF TEXAS.

Number of post schools, 10. School attendance: Enlisted men, 128; children of officers, 5; children of enlisted men, 54; children of civilians, 4.

Books and school furniture very much needed; school buildings in good condition. At San Antonio it is not very good, but is the best available, the post not being yet completed. At Camp Pena, Colo, there being no school building, any available room has been used; while at Fort Ringgold the school is held in the post chapel, which is in good condition. There are no books at six of the schools, and at the others books are insufficient in number and indifferent in condition.

The above statement of facts clearly indicates the difficulties and deficiencies which have seriously hampered the successful conduct of the Army schools during the past year. Three important requisites are necessary to insure success in schools, viz: Competent teachers, a full supply of text-books and school supplies, and suitable accommodations for the scholars. The first of these is a matter of the utmost importance, and it must not be forgotten that the possession of knowledge does not of necessity carry with it the peculiar gift of capacity to impart it. Military school-teachers should have adequate rank and compensation to give dignity to the position and enforce the respect and attention of pupils; and if these conditions existed, it is not doubted that graduates of our normal schools (young men of intellectual capacity and specially trained in correct methods of teaching) could be enlisted to fill such positions, to the positive benefit of enlisted men of the service.

A full supply of books, etc., is a need second only in importance to that of competent teachers. It is hardly necessary to remark that oral instruction, alone, presents almost insurmountable difficulties, by reason of the many degrees of low mental capacity found among grown men whose minds have matured without the discipline of early education.

During the past year careful attention has been given to the subject of school-books and "methods of management and instruction," with results as promulgated in General Orders, No. 119, of October 7, 1890. The matter of school-books has been regulated by that order, and will remove the second obstacle to the success of military schools, and it is recommended that school buildings and furniture be provided, as far and as rapidly as possible, at all posts not possessing them.

CAMPS OF INSTRUCTION.

The concentration of large bodies of troops for practice, marches, and field instruction was, of necessity, omitted during the past summer, but department commanders were authorized to make arrangements for such field exercises as could be had without increased expense. The following report from Colonel Shafter, First Infantry, of the camp of instruction under his command established at Monterey, Cal., is both interesting and instructive, as showing the varied range of instruction and field exercises that judicious management can provide for the troops

without increase of expenditures and to the great professional advantage of the officers and men :

I have the honor to report that pursuant to the requirements of General Orders, No. 8, Headquarters Department of California, dated June 18, 1890, the troops therein ordered proceeded to Monterey, Cal., by means and routes as follows :

The transportation was assembled at the Presidio of San Francisco on the 22d day of June, and consisted of one hospital ambulance (red cross), one spring wagon, fifteen 4-mule escort wagons, and seventy-one mules

In view of the fact that no extra expense was to be incurred, it was desirable to shorten the time of the march as much as possible. With this end in view and to make it practicable to carry sufficient rations, equipage, etc., I started a wagon train with supplies on June 23, in charge of an officer, who had orders to arrive at Alviso, at the head of the navigation on the bay of San Francisco, 43 miles from the city, by 2 o'clock p. m. the 24th, upon which date I embarked with my regiment on board a light-draught river steamer for the same point, which is 9 miles distant from San José. The cavalry and artillery were directed to proceed by marching on the west side of the bay to San José. I reached San José on the morning of the 25th, and the cavalry and artillery arrived the following day, when I assumed command of the whole, which was composed of the following troops; First Infantry—17 officers and 350 men, Lieut. Col. J. S. Casey, commanding. Fourth Cavalry—3 officers and 92 men, Capt. A. E. Wood, commanding (Troops I and K). Fifty Artillery—Light Batteries D and F, 8 officers and 96 men, Capt. D. H. Kinsie, commanding. Hospital Corps—1 officer and 8 men, Assistant Surgeon R. G. Ebert. Total, 30 officers and 546 men.

The march from San José was begun on June 27 and Monterey was reached July 2. Distance marched—cavalry and artillery, 130 miles; infantry, 87 miles. The marches for the infantry varied from 3 to 15 miles. The longest march made by the cavalry and artillery was 21 miles. The weather was warm and marches were begun early, camp being broken by the infantry between 4:30 and 5:30 a. m., and the command was in camp by or before 10 a. m. The artillery and cavalry, marching faster, left camp from half to three-quarters of an hour later, but usually reached camp about the same time as the infantry. No discomfort was experienced by the infantry except on one day, when the start was a little too late and the weather excessively warm. The country marched through was generally too thoroughly settled and fenced to admit of any practical illustrations of the principles of war other than the "march in regular order similar to an advance of troops in the operations of war."

Camping grounds were obtained without cost to the Government, owners permitting the use of them. They were generally good and afforded abundance of water. Wood and hay were obtained by purchase, endeavor being made to keep prices within the limits of contracts within the department. Grain was supplied by the Quartermaster's Department from supplies on hand. I left two bakers at Angel Island, from which place fresh bread was shipped by railroad to points convenient to camps. Fresh beef, of excellent quality, was purchased from day to day in open market at very reasonable prices. The march developed the fact that some soldiers who can perform their duties in garrison are wholly unfit for field service. In the case of two men who developed abnormal weakness on last summer's march the same thing was repeated this year, and it was found necessary to discharge them upon surgeon's certificate of disability.

The three days allowed for placing the camp in perfect order were hardly necessary, the past experience of these troops rendering them most efficient in quickly settling themselves comfortably. A part of the command participated in the celebration of the 4th of July at Monterey, and a national salute was fired by one of the batteries at the Government reservation. As already stated, the circumstances during the march were unfavorable to practical lessons, but they have been energetically pursued since arrival at this camp, where it has been my endeavor to accomplish the greatest practical benefit to all. In battalion and skirmish drills and the evolutions of the brigade, the results have been especially gratifying. Captains and lieutenants have been required to command battalions, in which positions they have taken great interest in their duties and exhibited excellent capacity, and the degree of proficiency attained by officers and men is entirely satisfactory.

Topographical reconnaissance has been required of all lieutenants, under the direction of an officer of experience (Capt. F. H. Edmunds, First Infantry). In this connection an interesting problem was submitted for the consideration of these officers. * * * Other problems of interest were originated and solved. * * * The posting of grand guards and establishment of picket lines was intrusted to different officers, and the dispositions as made by three of them (the troops being actually placed on the ground) are indicated on map hereto appended, marked C.* In the solutions of these problems entire liberty of action was allowed the officers making

* Omitted.

them, and they exercised their own judgment as to what troops were necessary, which were furnished as called for. When these officers reported their dispositions made, I required all other officers to accompany me in an inspection of the solving officer's arrangements; upon the ground reasons and explanations of details were given, so that all were made conversant with the theories and plans of the solving officer. The subsequent discussions of these problems, in which all the officers of the camp had the opportunity to engage, were of much interest, and have been most useful in stimulating professional thought. These practical lessons have given officers the opportunity of observing conditions that would arise in actual war, and of testing their own capacity for properly making them, since the command was always considered in the actual state and the operations were made on the ground about the camp.

In battle movements the endeavor has been to assume every possible case that would arise and, by dividing the troops into several detachments representing large bodies, to give junior officers commands to which they might hope to aspire only in time of war. The object of every movement was explained, and enlisted men were instructed, by making use of the actual features of the drill ground, in the importance of using every precaution to protect themselves, reserve their strength, and inflict the greatest damage to the enemy with the least harm to themselves. The combined use of the three arms of the service in supporting each other, as an infantry advance under cover of artillery fire, the press of victory by the charge of cavalry, infantry, etc., was illustrated to good effect. With ball cartridges the infantry fire at from 1,700 to 2,000 yards was sufficiently accurate to show its efficacy against artillery at so great a range. The three arms of the service have been practiced in forming for attack at night. Their united action in a prearranged night assault of a position was carried out in a most realistic manner, and the performance of the troops was highly satisfactory.

Enlisted men of artillery have been instructed in constructing gun-pits and making gabions, fascines, etc.

There have been but five desertions in the entire command, and in every case they have been men whose records show them to be the very worst type of enlisted men, whose intemperate habits and dereliction of duty have frequently brought them to trial by courts-martial. Two of them were captured, and have been tried and sentenced; the remaining three are still at large. I do not believe that any command of the same size in the Army will show for the same length of time, from June 24 to date (August 25), so small a percentage of desertions, which is $3\frac{1}{2}$ per cent.

The discipline of the command has been excellent, and while there has been some drinking among the enlisted men, the absence of excessive, or even noticeable, intemperance has been most marked.

The health of the command has been good, no sickness of a serious nature having occurred.

The intelligent zeal manifested by all the officers in the cheerful performance of every duty has greatly aided me in accomplishing the objects of the encampment, and I am glad to report that it has been of much benefit to all.

The department and division rifle competitions have been a pleasing feature of the encampment, and given an interesting break in the camp routine.

Camp will be broken on the 28th instant, when the return march will be made in about the same manner as that to this point.

CANTEENS.

At the date of the last annual report the canteen system (formally authorized by General Orders, No. 10, dated February 1, 1889), while giving promise of full realization of the anticipations which led to its adoption, had not been extensively developed, owing to the impracticability at a majority of the posts to secure the necessary buildings and fit them for occupancy. Through the zeal of officers interested in the scheme great progress has recently been made, and the preliminary details having been accomplished, the institution may be regarded as permanently established.

At present canteens are in successful operation at 68 posts, and during the six months ended June 30, 1890, transacted a business of \$474,625, with a resulting profit of \$88,430.

Some misconception has grown up in the public mind in regard to these institutions, engendered, no doubt, by the generic term used as a designation. The word "canteen" has contracted a specific meaning

from many years of use in European armies, and is generally understood as describing a drinking place, where soldiers assemble for more or less vicious revelry. As conducted in the American service, the canteen is simply a co-operative establishment, in which a general business, under careful military supervision, is conducted in the sole behalf of the enlisted men of the Army.

The testimony of officers who have reported on the practical operation of canteens confirms the wisdom of the action of the War Department in fostering and encouraging the extension of the system. There can be no question that it has contributed largely to the comfort and contentment of enlisted men, and thereby improved and strengthened discipline throughout the service.

As illustrating accomplished results and exemplifying the character of these establishments, the following extracts from reports received at this office will prove both instructive and interesting :

The commanding officer of Fort Meade states :

The building is one story high and, in addition to school-rooms, library, etc., not directly under the control of the officer in charge of the canteen, consists of one large lunch-room and general store, bar-room, billiard-hall and reading-room, store-room, kitchen, office, and dormitory for use of the attendants. As a part of the canteen, too, there is a good-sized stage at the end of the post hall; this is suitably provided with drop-curtain and scenery bought on three months' time. An enlisted men's dramatic association is endeavoring to pay for this, with fair hopes of success. If its efforts are not successful, it is the intention to have the debt paid at maturity by the canteen. Arrangements have been made with the manager of the opera-house in Deadwood by which all theatrical troops playing in that city will give at least one performance on this stage. Funds derived from use of hall for such purposes will be devoted to paying for scenery.

There are also two rooms reserved for use of officers. These rooms are furnished and maintained at the expense of the canteen, and all profits arising from sales therein will be for the benefit of the canteen. The same articles, and no others, will be sold here that are sold to the enlisted men. No ardent spirits will be permitted to be introduced here. Police and maintenance of order in these rooms will be in the hands of the officer in charge of the canteen. These rooms will be open on or about January 1, 1890.

The canteen found itself very fortunately situated in one respect, viz, in being able to at once make use of the permanent stock of the Eighth Cavalry canteen, mentioned above. Regimental canteens being no longer permissible under the regulations, the latter institution had to give way, and had its entire permanent stock for disposal. All this stock was immediately turned over and has been in constant use since. Subsequently it was appraised by a board of officers at \$1,200, and bought at that price. The means for furnishing the billiard-rooms were at once available; and in that of the men two billiard-tables and one pool-table and in that of the officers one billiard-table were put up. These tables, together with the games and other means of amusement comprised in this property, have been a source of much amusement and pleasure to the enlisted men, who make a frequent and a constantly increasing use of them. By means also of this property the canteen came into possession of all the tools, utensils, etc., necessary to a large lunch and bar business.

The salable stock was bought on credit. Drummers and business men, upon looking thoroughly into the proposed business, did not hesitate to give ample credit. The stability of such a business, with slight expenses, and no losses to be apprehended from bad debts, was apparent at a glance, and the canteen soon had drummers vieing with one another for its trade. The canteen was opened for trade on the pay-day following the October muster, and since that day has been in successful operation. During November credit was given the men to the amount of \$834.40, and it was promptly repaid on the next pay-day in December, not one cent being lost by defaulters.

The report from Fort Snelling, one of the large posts of the Army, states :

For three months prior to the opening of the canteen sixty-three men were confined; for the three months subsequent forty-three men were confined; during both of these periods the command averaged three hundred men. In other words, for the three months previous to the opening of the canteen 21 per cent. of the command was confined, and for three months subsequent 14 per cent. was confined, showing a decrease of 33½ per cent. for the latter period as against the former.

From Fort Sidney, Nebr.:

The canteen has now become an established institution in the United States Army, and its merits are so many and so great that I think it altogether improbable it will ever be disturbed. It may be improved upon, but will never be dispensed with. After ten years' continuous careful observation of the effect of a canteen upon the well-being and general *morale* of commands, I am prepared to say that when properly conducted it is a beneficent institution at a military post. It allays discontents, is a great source of economy to the enlisted men, keeps those in the garrisons who would otherwise find their social enjoyments beyond its limits, enables men to preserve their self-respect by keeping them from public drinking places and other questionable resorts, reduces the use of strong intoxicants to a minimum, affords orderly, clean, and well-lighted rooms in which the men can enjoy themselves with games and innocent amusements without being brought in contact with the reckless and disorderly elements of civil society, and promotes sociability and good manners among the men of different organizations. It has been observed in this command that larger amounts of money are deposited with paymasters when the canteen is in successful operation than at any other time. It is a fact, which has been noticed by merchants, that soldiers in garrisons where there are well-conducted canteens expend more money in articles of dress and comfort than do soldiers at garrisons not similarly situated.

From Madison Barracks, New York :

In my opinion, no step has been taken for the improvement of the moral, social, and intellectual condition of the enlisted men more efficacious than the establishment of the canteen. With pride I am able to say that in discipline and general good conduct I have a command superior to any I have ever seen in the Army. As my general rules and mode of command have not changed, as this post differs from others only in being surrounded with even more numerous grog-shops and other temptations, I can attribute the very marked improvement only to the very wonderful influence of the canteen. I hope that this powerful influence may be extended to the whole Army, and that posts now controlled by the political, social, or moneyed power of post-traders may soon enjoy the benefits accorded to my command.

By the act of Congress making appropriations for the support of the Army for the current fiscal year it is provided that no alcoholic liquors, beer, or wine shall be sold or supplied to the enlisted men in any canteen in States or Territories in which the sale of alcoholic liquors, etc., is prohibited by law. Six posts in Kansas and South Dakota fall under the operation of the law, but the latter is of too recent date to permit any conclusions being reached as to its ultimate effect on the canteens at the posts referred to.

RECRUITING SERVICE.

During the past year the recruiting service has been conducted under one superintendent, stationed at New York City, with depots for the collection and instruction of recruits at Davids Island, New York Harbor, and Columbus Barracks, Ohio, for infantry and artillery, and at Jefferson Barracks, Missouri, for cavalry.

October 1, 1889, recruiting rendezvous were in operation at the following places: Four in New York City (with a branch at Brooklyn); two each in the cities of Philadelphia, Baltimore, and Chicago; and one each at Boston, Mass.; Providence, R. I.; Albany and Buffalo, N. Y.; Camden and Newark, N. J.; Pittsburgh, Pa.; Cincinnati and Cleveland, Ohio; Evansville, Ind.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn. (with a branch at Minneapolis); St. Louis, Mo.; Washington, D. C.; Wheeling, W. Va.; Louisville, Ky.; Memphis, Tenn., and Augusta, Ga.

In October, 1889, an additional rendezvous was established at Boston, Mass. Rendezvous were also opened at Johnstown, Pa., in November, 1889; Augusta, Me., in January, 1890, and Indianapolis, Ind., in May, 1890. Two of the rendezvous in New York City and one in Baltimore, Md., were discontinued June 30, 1890, and rendezvous to replace them were opened at Rochester, N. Y., and Hagerstown, Md. in July, 1890.

Recruiting has also been carried on as heretofore, without expense to the recruiting fund, at posts in the several departments and at the stations of the companies of the Engineer Battalion.

In addition to the operations of the general recruiting service in the larger cities, temporary rendezvous have been opened from time to time since January, 1890, by officers of the general recruiting detail, in over forty smaller cities and towns, whence recruiting parties have been sent into the surrounding rural districts, and persistent efforts have been made to obtain recruits from farming and other communities away from the great centers of population. In like manner, special regimental recruiting parties have been sent out into about thirty different towns to conduct temporary rendezvous therein and freely canvass the contiguous rural districts. Some of these tours were very successful—others only fairly so, and in some instances the results as regards the number of recruits obtained were very meager. The class of men thus obtained is believed, from reports received, to be considerable above the general average; and during the present fiscal year, with the additional appropriation made for the purpose, it is proposed to extend the plan in order that its merits may be more fully tested.

It is to be remarked in this connection that throughout the past year (as advised in the last annual report) recruits have been required, before acceptance, to present satisfactory evidence of age, character, habits, etc., and that this, coupled with the almost general business prosperity throughout the country, may, in a great measure, account for the falling off in the number of applicants for admission to the Army which has been common to all rendezvous for several months. It is also to be noted that the general testimony of officers sent in charge of traveling recruiting parties is to the effect that whether or not any immediate results were accomplished in the way of enlistments, much prejudice against service in the Army was removed by the dissemination of information concerning the nature and conditions of the military service and the inducements offered young men to enter the Army. There is reason to believe that the way has thus been prepared for more substantial results in the near future. The territory covered by these traveling parties embraced portions of Vermont, Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Maryland, Virginia, West Virginia, Indiana, Michigan, Wisconsin, Minnesota, Iowa, Nebraska, Kansas, and Georgia.

As a result of the large decrease in the number of desirable applicants for enlistment, the Army is now over 1,600 below its authorized strength, while for the present at least, the number of discharges under the provisions of the act of Congress approved June 16, 1890, will undoubtedly be large and tend to increase the number of vacancies until such time as the number of enlistments can be materially increased. It is expected, however, that the law referred to will contribute in no small degree to the end which has been constantly kept in view, viz., the filling of the ranks with contented and effective soldiers.

The total number of enlistments and re-enlistments in the Army for the fiscal year ended June 30, 1890 (excluding those not included in the legal limit of 25,000 men) was 7,845, classified as follows:

For the general and mounted services.....	4,149
For the departmental recruiting service.....	1,129
For the Engineer Battalion.....	212
For special regiments, at temporary rendezvous.....	108
	<hr/>
For regiments, detachments, etc	6,390
	<hr/>
	1,455

Of the 6,390 accepted recruits, 4,052 were native born and 2,338 of foreign birth; 5,875 were white and 515 colored. Seventeen thousand five hundred and sixty-three applicants for enlistment (over 73 per cent. of the whole number) were rejected by recruiting officers as lacking the necessary qualifications, either physical, mental, or moral. As indicated by these figures, the officers charged with the responsible duty of recruiting have, as a rule, zealously guarded the interests of the service in preventing the entrance into the Army of men unfitted for the duties of soldiers. In exceptional cases, where recruiting officers have failed in their duty in this respect, they have been replaced by others.

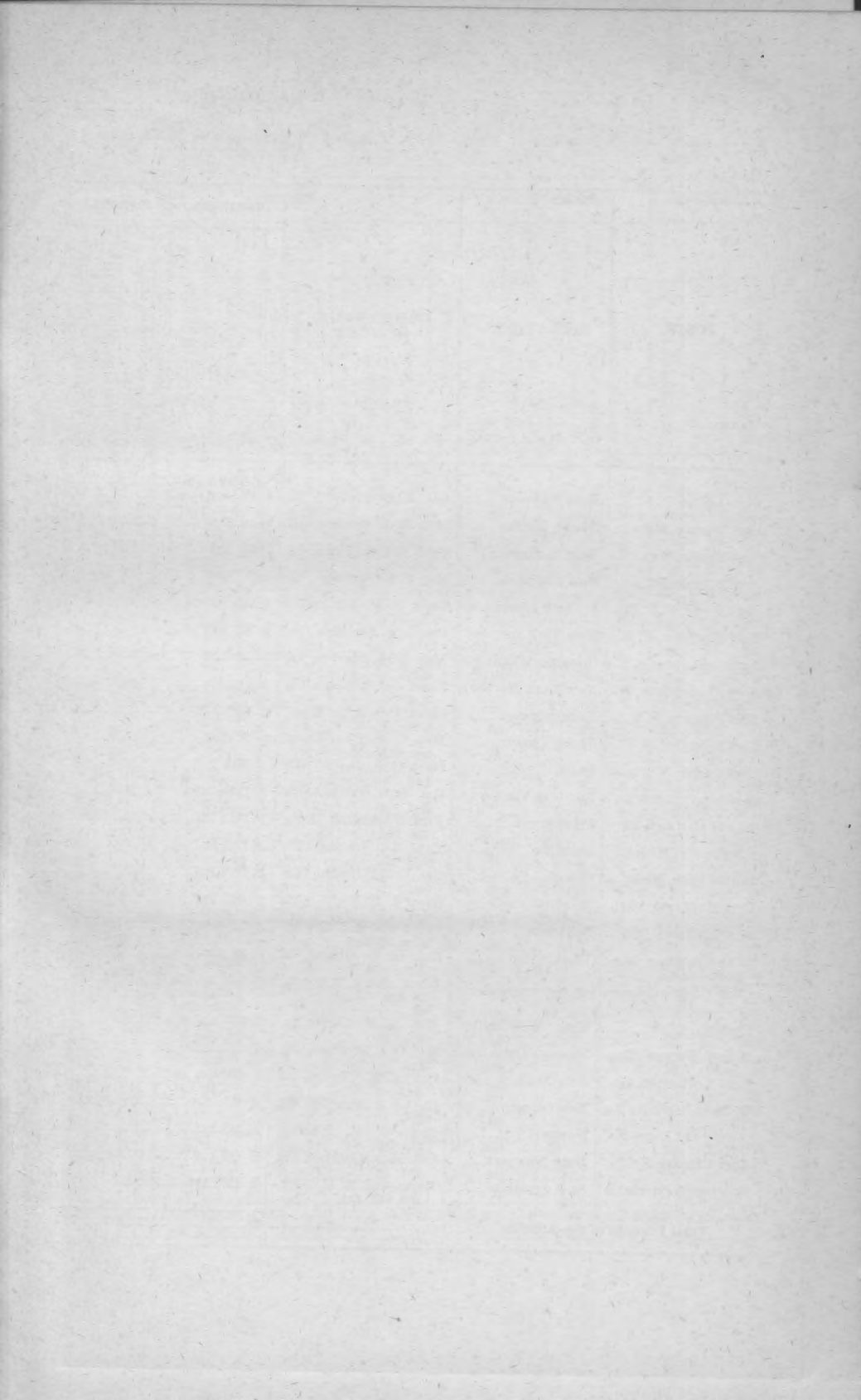
During the past year newly-enlisted men have been retained, as a rule, at least three months at the recruiting depots for instruction before assignment to regiments.

In January last detailed instructions were communicated from this office to govern in the treatment, instruction, and discipline of recruits at the depots, and from reports received it is apparent that a marked improvement in the condition of these commands has resulted. It is also reported that the orders and instructions given during the year for the purpose of securing a better class of recruits have effected a noticeable improvement in that direction, as observed in the *morale* of the men at the recruiting depots.

Respectfully submitted.

CHAUNCEY MCKEEVER,
Acting Adjutant General.

Maj. Gen. JOHN M. SCHOFIELD,
Commanding the Army.



B.—Position and distribution of troops in the Division of the Atlantic, commanded by returns on file in the Adju.

POSTS.	SITUATIONS.	COMMANDING OFFICER.	GARRISONS.		PRESENT.				
			Number of companies.	Regiments.	General officers.	Military secretary.	Aides-de-camp.	Adjutant-General's Department.	Inspectors-General.	Bureau of Military Justice.
Fort Adams, R. I.	Near Newport,	Col. J. Mendenhall, 2d Art.			4	Division staff. 2d and 4th Art.	1	2	1	1
Fort Warren, Mass. ...	Boston Harbor,	Maj. Wm. Sinclair, 2d Art.	2	2d Art.					
Fort Preble, Me.	Near Portland,	Capt. W. M. Dunn, 2d Art.	1	2d Art.					
Fort Trumbull, Conn. .	New London,	Maj. F. L. Guenther, 2d Art.	1	2d Art.					
Fort Wood, N. Y. H. ...	Bedloe's Island,	Capt. A. M. Wetherill, 6th Inf.	1	6th Inf.					
Fort Hamilton, N. Y. .	New York Harbor, ..	Col. L. L. Langdon, 1st Art.	4	1st Art.					
Fort Columbus, N. Y. .	Governor's Island, ..	Maj. W. L. Haskin, 1st Art.	3	1st Art.					
Fort Wadsworth, N. Y. .	New York Harbor, ..	Lieut. Col. R. Lodor, 1st Art.	3	1st Art.					
Fort Niagara, N. Y. ...	Youngstown,	Lieut. Col. E. G. Bush, 11th Inf.	2	11th Inf.					
Fort Schuyler, N. Y. ...	Throg's Neck,	Maj. C. B. Throckmorton, 2d Art.	2	2d Art.					
Fort Porter, N. Y.	Buffalo,	Capt. G. F. Towle, 19th Inf.	1	19th Inf.					
Madison Barracks, N. Y. .	Sackett's Harbor, ...	Col. R. I. Dodge, 11th Inf.	5	11th Inf.					
Plattsburgh Barracks, N. Y. .	Plattsburgh,	First Lieut. B. W. Hoyt, 11th Inf.	1	11th Inf.					
Fort Brady, Mich.	Sault Ste. Marie, ...	Capt. E. H. Liscum, 19th Inf.	2	19th Inf.					
Fort Wayne, Mich.	Detroit,	Col. C. H. Smith, 19th Inf.	3	19th Inf.					
Fort Mackinac, Mich. .	Michilimackinac Island.	Capt. J. H. Smith, 19th Inf.	2	19th Inf.					
Fort McHenry, Md. ...	Baltimore,	Lieut. Col. L. L. Livingston, 3d Art.	3	3d Art.					
Washington Barracks, D. C. .	Washington,	Col. H. G. Gibson, 3d Art.	6	3d Art.					
Fort Monroe, Va. ....	.....	Lieut. Col. R. T. Frank, 2d Art.	6	1st, 2d, 3d, 4th, and 5th Art.					
Fort Myer, Va.	Near Washington, D. C.	Maj. L. H. Carpenter, 5th Cav.	2	4th and 6th Cav.					
Mount Vernon Barracks, Ala. .	Mount Vernon,	Maj. H. A. Theaker, 15th Inf.	2	15th Inf.					
Fort McPherson, Ga. .	Atlanta,	Col. H. W. Closson, 4th Art.	7	4th Art. and 15th Inf.					
Jackson Barracks, La. .	New Orleans,	Capt. J. B. Campbell, 4th Art.	1	4th Art.					
Newport Barracks, Ky.	Newport,	Capt. W. M. Wherry, 6th Inf.	1	6th Inf.					
Fort Thomas, Ky.	Near Newport,	Col. M. A. Cochran, 6th Inf.	2	6th Inf.					
St. Francis Barracks, Fla. .	St. Augustine,	Lieut. Col. R. H. Jackson, 4th Art.	2	4th Art.					
Total Division of the Atlantic,			99	.....	1	2	1	1	

Maj. Gen. O. O. Howard, headquarters Governor's Island, N. Y., taken from the latest *isnt-General's office*, 1890.

PRESENT.													ABSENT.					AGGREGATE.										
Quartermaster's Department.	Subsistence Department.	Medical Department.	Pay Department.	Corps of Engineers.	Ordnance Department.	Post chaplains.	Military storekeepers.	Colonels.	Lieutenant-colonels.	Majors.	Captains.	Regimental chaplains.	Regimental adjutants.	Regimental quartermasters.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	General and staff officers.	Field and regimental staff officers	Captains.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	Commissioned officers.	Enlisted men.	Aggregate.
7	4									1	2					16	27	43								27	16	43
		2	6							4	4		1	1	8	174	17	191								21	178	199
		1			1					2					3	81	2	80					3	3	6	11	84	95
										1					2	68	3	71					1	1	1	4	68	72
		1								1					3	70	6	76								6	70	76
															2	41	3	44								3	41	44
										1	3		1	1	9	198	18	216		1	3		4	4	22	198	220	
1										1	3				6	106	13	119				3	3	3	16	106	122	
		1								1	3				4	106	9	115				5	5	5	14	106	120	
		1								1	2				4	119	8	127							8	119	127	
		1								1	2				3	75	7	82				3	3	3	10	75	85	
		1								1					2	43	4	47							4	43	47	
		1								1	4		1	1	8	271	17	288		1	2		3	3	20	271	291	
		1													2	48	3	51		1			1	1	4	48	52	
										2					4	106	6	112							6	106	112	
		1								4		1	1	6	201	14	215	1	1	2		4	4	18	201	219		
		1								2				2	91	5	96	1		2		3	3	8	91	99		
		1								1	3				5	111	10	121				4	4	4	14	111	125	
		1								1	6		1	1	14	270	25	295				4	4	4	29	270	299	
1	1	2								1	2	6			30	325	43	368							43	325	368	
		1									1	2			4	147	8	155							8	147	155	
		1									1	2			2	117	7	124	1			2	3	3	10	117	127	
		2									2	6		1	8	284	21	305		1	11		12	12	33	284	317	
		1									1				2	43	4	47				1	1	1	5	43	48	
		1									1				2	78	4	82							4	78	82	
											2		1	1	3	97	8	105		2	2		4	4	12	97	109	
		1									2				3	57	7	64				3	3	3	10	57	67	
9	5	29	6		2		7	5	14	68		7	7	141	3,343	305	3,648	2	1	7	55	7	65	72	370	3,350	3,720	

C.—Position and distribution of troops in the Division of the Missouri, commanded by file in the Adjutant-

POSTS.	SITUATIONS.	COMMANDING OFFICER.	GARRISONS.		PRESENT.				
			Number of companies.	Regiments.	General officers.	Military secretary.	Aides-de-camp.	Adjutant-General's Department	Inspectors-general.	Bureau of Military Justice.
Fort Sheridan, Ill ..	Highwood	Maj. W. J. Lyster, 6th Inf.	3	Division staff 6th and 15th Inf.	1	2	2	1	..
DEPARTMENT OF DAKOTA.									
Headquarters	St. Paul, Minn	Brig. Gen. T. H. Ruger .....	..	Department staff.	1	..	1	1	..
Fort Snelling, Minn.	Near St. Paul	Col. E. C. Mason, 3d Inf. ..	5	3d Inf. ....	..	..	..	..	..
Fort Abraham Lincoln, N. Dak.	Bismarck	Maj. W. H. Powell, 22d Inf.	2	22d Inf. ....	..	..	..	..	..
Fort Buford, N. Dak.	.....	Col. R. E. A. Crofton, 15th Inf.	4	8th Cav. and 15th, 20th and 22d Inf	..	..	..	..	..
Fort Pembina, N. Dak.	Pembina	Capt. E. S. Chapin, 15th Inf.	1	15th Inf. ....	..	..	..	..	..
Fort Totten, N. Dak.	Devil's Lake	Lieut. Col. J. S. Conrad, 22d Inf.	1	22d Inf. ....	..	..	..	..	..
Fort Yates, N. Dak.	60 miles from Bismarck.	Capt. E. G. Fehet, 8th Cav.	5	8th Cav. and 12th Inf.	..	..	..	..	..
Fort Bennett, S. Dak.	28 miles from Pierre.	Capt. J. H. Hurst, 12th Inf.	1	12th Inf. ....	..	..	..	..	..
Fort Meade, S. Dak.	2 miles from Sturgis City.	Col. E. Otis, 8th Cav.	10	8th Cav. and 3d Inf.	..	..	..	..	..
Fort Randall, S. Dak.	24 miles from Armour.	Lieut.-Col. R. F. O'Beirne, 15th Inf.	1	15th Inf. ....	..	..	..	..	..
Fort Sully, S. Dak. .	25 miles from Pierre.	Capt. A. B. MacGowan, 12th Inf.	4	12th Inf. ....	..	..	..	..	..
Fort Assiniboine, Mont.	.....	Col. E. S. Otis, 20th Inf. .	10	1st Cav. and 20th Inf.	..	..	..	..	..
Fort Custer, Mont. .	31 miles from Custer Station.	Col. J. S. Brisbin, 1st Cav	9	1st Cav. and 25th Inf.	..	..	..	..	..
Fort Keogh, Mont. .	Near Miles City	Col. P. T. Swaine, 22d Inf.	8	8th Cav. and 22d Inf.	..	..	..	..	..
Fort Missoula, Mont.	Near Missoula	Col. G. L. Andrews, 25th Inf.	3	25th Inf. ....	..	..	..	..	..
Fort Shaw, Mont. .	17 miles from Ulm ..	Lieut.-Col. J. J. Van Horn, 25th Inf.	3	25th Inf. ....	..	..	..	..	..
Camp Poplar River, Mont.	Poplar River Station	Capt. L. Wheaton, 20th Inf.	1	20th Inf. ....	..	..	..	..	..
Camp Sheridan, Wyo.	Yellowstone Park ..	Capt. F. A. Bontelle, 1st Cav.	1	1st Cav. ....	..	..	..	..	..
Total .....	.....	.....	69	.....	1	..	1	1	..
DEPARTMENT OF THE PLATTE.									
Headquarters	Omaha, Nebr.	Brig. Gen. J. R. Brooke .....	..	Department staff.	1	..	1	1	..
Fort Omaha, Nebr. .	Near Omaha	Col. F. Wheaton, 2d Inf. .	10	2d Inf. ....	..	..	..	..	..
Fort Sidney, Nebr. .	Sidney Station	Col. H. A. Morrow, 21st Inf.	4	21st Inf. ....	..	..	..	..	..
Fort Niobrara, Nebr.	Near Valentine ...	Col. A. V. Kautz, 8th Inf.	8	9th Cav. and 8th Inf.	..	..	..	..	..
Fort Robinson, Nebr.	.....	Col. J. G. Tilford, 9th Cav.	8	9th Cav. and 8th Inf.	..	..	..	..	..
Fort Douglas, Utah.	Near Salt Lake City.	Col. M. M. Blunt, 16th Inf.	8	1st Art., 16th and 21st Inf.	..	..	..	..	..
Fort Du Chene, Utah.	Near the Uintah Agency.	Maj. A. R. Chaffee, 9th Cav.	6	9th Cav. and 16th Inf.	..	..	..	..	..

Maj. Gen. Nelson A. Miles, headquarters Chicago, Ill., taken from the latest returns on General's Office, 1890.

PRESENT.													ABSENT.						AGGREGATE.									
Quartermaster's Department.	Subsistence Department.	Medical Department.	Pay Department.	Corps of Engineers.	Ordnance Department.	Post chaplains.	Military storekeepers.	Colonels.	Lieutenant-colonels.	Majors.	Captains.	Regimental chaplains.	Regimental adjutants.	Regimental quartermasters.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	General and staff officers.	Field and regimental staff officers.	Captains.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	Commissioned officers.	Enlisted men.	Aggregate.
3	1	1	1	1	1					1	3				4	14	13	27								13	14	27
		1														146	9	155								11	146	157
3	1	1	3	1						1	1				1	16	16	32								16	16	32
1		2			1			1	1		5		1	1	6	272	19	291		1	6		7	7	26	272	298	
		1						1		1	2				4	58	8	66							8	58	66	
		1								3		1	1		8	234	15	249		3	4		7	7	22	234	250	
										1					2	51	3	54								3	51	54
		1								1					2	64	5	69								5	64	69
		1								4		1	1		7	271	14	285		2	5		7	7	21	271	292	
										1					2	42	3	45								3	42	45
		2						1		7		1	1		12	478	24	502	1	3	8	12	12	36	478	514	514	
		1								1					1	56	4	60			1		1	1	5	56	61	
		1								4					4	188	9	197	1	1	4		6	6	15	188	203	
		3						1		2	6		1	1	11	439	25	464	1	4	9	14	14	39	439	478		
		1				1		1	1	2	6		1	1	12	488	26	514		3	6		9	9	35	488	523	
		2				1		1		1	6		1	1	14	470	27	497		4	6		10	10	37	470	507	
		1								3		1	1		7	201	14	215	1	2	3		6	6	20	201	221	
		1								1					4	142	9	151		1	2		3	3	12	141	153	
		1								1					2	59	4	63							4	59	63	
										1					2	72	3	75							3	72	75	
4	1	20	3	1	4		7	6	7	55		8	8	101	3,601	228	3,829	1	4	23	54		82	82	310	3,600	3,910	
3	2	1	4		1				1	1					16	16	32									16	16	32
		2					1		1	7		1	1	13	474	26	500		1	3	7		11	11	37	474	511	
		1							1	3		1	1	5	208	13	219		2	5		7	7	20	208	206	226	
		2				1		1		8		1	1	10	400	25	425				6		6	6	31	400	431	
		2								6		1	1	13	428	24	452	1		2	3		6	6	30	428	458	
		2						1	1	1	6		1	1	13	413	26	439		2	3		5	5	31	413	444	
		1								1	4				7	289	14	303			2	5		7	7	21	289	310

REPORT OF THE SECRETARY OF WAR.

C.—Position and distribution of troops in the Division of the Missouri, com

POSTS.	SITUATIONS.	COMMANDING OFFICER.	GARRISONS.		PRESENT.					
			Number of companies.	Regiments.	General officers.	Military secretary.	Aides-de-camp.	Adjutant-General's Department.	Inspectors-general.	Bureau of Military Justice.
Fort Bridger, Wyo.	Ten miles from Carter's Station.	Maj. J. N. Andrews, 21st Inf.			5	17th and 21st Inf.
Fort McKinney, Wyo.	On Clear Fork Creek.	Maj. G. V. Henry, 9th Cav.	3	9th Cav. and 21st Inf.	..	..	..	..	..	..
Fort D. A. Russell, Wyo.	Cheyenne.....	Col. H. R. Mizner, 17th Inf.	8	17th Inf.....	..	..	..	..	..	..
Fort Washakie, Wyo.	Near Shoshone Agency.	Lieut. Col. A. S. Burt, 7th Inf.	2	9th Cav. and 7th Inf.	..	..	..	..	..	..
Camp Pilot Butte, Wyo.	Rock Springs.....	Capt. C. A. Coolidge, 7th Inf.	2	7th Inf.....	..	..	..	..	..	..
Total.....	.....	.....	64	.....	1	..	1	1	..	..
Total Division of the Missouri.....	.....	.....	136	.....	3	..	3	4	2	..

headed by Maj. Gen. Nelson A. Miles, headquarters Chicago, Ill., etc.—Continued.

		PRESENT.		ABSENT.		AGGREGATE.	
	Quartermaster's Department.						
	Subsistence Department.						
	Medical Department.	1					
	Pay Department.						
	Corps of Engineers.						
	Ordnance Department.						
	Post chaplains.						
	Military storekeepers.						
	Colonels.						
	Lieutenant-colonels.						
	Majors.	1					
	Captains.	3		2		5	
	Regimental chaplains.	1					
	Regimental adjtants.						
	Regimental quartermasters.	1					
	Subalterns.	7		2		9	
	Enlisted men.	167		179		346	
	Total commissioned.	12		173		185	
	Aggregate.	179		360		539	
	General and staff officers.	1		1		2	
	Field and regimental staff officers.	1		1		2	
	Captains.	2		2		4	
	Subalterns.	3		2		5	
	Enlisted men.	5		7		12	
	Total commissioned.	5		7		12	
	Aggregate.	58		58		116	
	Commissioned officers.	58		58		116	
	Enlisted men.	17		17		34	
	Aggregate.	167		169		336	

3	2	17	4	1	2	0	13	11	7	49	1	6	6	91	3,065	203	3,268	1	1	17	39	58	58	201	3,063	346
10	4	39	8	1	2	0	13	11	15	107	1	14	14	106	9,846	453	7,299	2	5	40	95	142	142	595	9,845	7,440

D.—Position and distribution of troops in the Division of the Pacific, commanded by Brig. Gen. in the Adjutant-

POSTS.	SITUATIONS.	COMMANDING OFFICER.	GARRISONS.		PRESENT.					
			Number of companies.	Regiments.	General officers.	Military secretary.	Aides-de-camp.	Adjutant-General's Department.	Inspectors-general.	Bureau of Military Justice.
DEPARTMENT OF CALIFORNIA.										
Headquarters	San Francisco	Brig. Gen. John Gibbon		Division staff	1	2	1	1	1	
Alcatraz Island, Cal.	San Francisco	Maj. A. C. Wildrick, 5th Art.	2	5th Art.						
Angel Island, Cal.	San Francisco	Col. W. R. Shafter, 1st Inf.	5	1st Inf.						
Presidio of San Francisco, Cal.	San Francisco	Lieut. Col. W. M. Graham, 1st Art.	9	4th Cav, 5th Art., and 1st Inf.						
Fort Mason, Cal.	San Francisco	Capt. S. A. Day, 5th Art.	1	5th Art.						
Fort Bidwell, Cal.	In Surprise Valley	First lieut. J. M. Neall, 4th Cav.	1	4th Cav.						
Fort Gaston, Cal.	In Hoopa Valley	Capt. W. E. Dougherty, 1st Inf.	1	1st Inf.						
Benicia Barracks, Cal.	Benicia	Lieut. Col. J. S. Casey, 1st Inf.	1	1st Inf.						
Total			20							
DEPARTMENT OF THE COLUMBIA.										
Headquarters	Vancouver Barracks, Wash.	Brig. Gen. John Gibbon						1		
Boisé Barracks, Idaho	Boisé City	Maj. H. E. Noyes, 4th Cav.	2	4th Cav. and 4th Inf.						
Fort Sherman, Idaho.	Cœur d'Alene	Col. W. P. Carlin, 4th Inf.	5	4th Cav. and 4th Inf.						
Fort Canby, Wash.	Mouth of Columbia River.	Maj. Tully McCrea, 5th Art.	2	5th Art.						
Fort Spokane, Wash.	50 miles from Sprague	Maj. J. F. Kent, 4th Inf.	3	4th Inf.						
Fort Townsend, Wash.	Port Townsend	Capt. A. E. Bainbridge, 14th Inf.	1	14th Inf.						
Fort Walla Walla, Wash.	Walla Walla	Col. C. E. Compton, 4th Cav.	5	4th Cav.						
Vancouver Barracks, Wash.	Vancouver	Col. T. M. Anderson, 14th Inf.	8	4th Cav. and 14th Inf.						
Total			26				1			
Total Division of the Pacific			46		1	2	2	1	1	

Gen. John Gibbon, headquarters San Francisco, Cal., taken from the latest returns on General's Office, 1890.

PRESENT.													ABSENT.						AGGREGATE.									
Quartermaster's Department.	Subsistence Department.	Medical Department.	Pay Department.	Corps of Engineers.	Ordnance Department.	Post chaplains.	Military store-keepers.	Colonels.	Lieutenant-colonels.	Majors.	Captains.	Regimental chaplains.	Regimental adjutants.	Regimental quartermasters.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	General and staff officers.	Field and regimental staff officers.	Captains.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	Commissioned officers.	Enlisted men.	Aggregate.
2	2	1	2					1	1						1	16	16	32								16	16	32
		1			1				1		2				3	81	8	89				3		3	3	11	81	92
		2									3	1	1	1	11	265	19	284			4	3		7	7	26	265	291
		3			1			2			4	1	1	1	16	472	28	500	1		5	8		14	14	42	472	514
		1									1				1	44	3	47				2		2	2	5	44	49
		1									1				1	56	2	58			1	1		2	2	4	56	60
		1									1				1	47	3	50			1		1	1	4	47	51	
		1									1				2	53	6	59							6	53	59	
		10			2			3	2	12	2	2	2	2	35	1,018	69	1,087	1		10	18		29	29	98	1,018	1,116
3	2		3	1	1						2					14	13	27								13	14	27
		1									2	2			4	109	9	118								9	109	118
		2			1			1	1		5		1	1	5	300	17	317				5		5	5	22	300	322
											1	2			3	73	6	79				3		3	3	9	73	82
		2									1	3			3	174	9	183				3		3	3	12	174	186
		1									1				1	52	3	55				1		1	1	4	52	56
		2									3		1		7	317	14	331	2		2	3		7	7	21	317	338
		2									6		1	1	12	424	23	447			2	4		6	6	29	424	453
3	2	10	3	1	1			3	1	6	22		3	2	35	1,463	94	1,557	2		4	19		25	25	110	1,463	1,582
5	4	21	5	1	1	3		4	5	9	34		5	4	71	2,497	179	2,676	3		14	37		54	54	233	2,497	2,730

E.—Position and distribution of troops in the Department of Texas, commanded by Brig. on file in the Adjutant

POSTS.	SITUATIONS.	COMMANDING OFFICER.	GARRISONS.		PRESENT.				
			Number of companies.	Regiments.	General officers.	Military secretary.	Aides-de-camp.	Adjutant-General's Department.	Inspectors-general.	Bureau of Military Justice.
Camp Pena Colorado, Tex.	New Marathon	Capt. O. Elting, 3d Cav.	1	Department staff 3d Cav.	1	1	1	1	1
Fort Bliss, Tex.	El Paso	Col. N. W. Osborne, 5th Inf.	2	5th Inf.					
Fort Brown, Tex.	Brownsville	Lieut. Col. J. J. Upham, 3d Cav.	3	3d Cav. and 5th Inf.					
Fort Davis, Tex.	22 miles from Marfa	Maj. S. Ovenshine, 5th Inf.	5	5th and 23d Inf.					
Fort Hancock, Tex.	Hancock station	Capt. T. H. Logan, 5th Inf.	1	5th Inf.					
Fort McIntosh, Tex.	Laredo	Col. A. G. Brackett, 3d Cav.	2	3d Cav. and 5th Inf.					
Fort Ringgold, Tex.	Rio Grande City	Maj. E. C. Woodruff, 5th Inf.	3	3d Cav. and 5th Inf.					
Fort Clark, Tex.	Brackettville	Col. H. M. Lazelle, 18th Inf.	10	3d Cav. and 18th Inf.					
Fort Sam Houston, Tex.	San Antonio	Col. H. M. Black, 23d Inf.	9	3d Cav., 2d Att., and 23d Inf.					
Total . . . . .	.....	.....	36	.....	1	1	1	1	1

Gen. David S. Stanley, headquarters San Antonio, Tex., taken from the latest returns General's Office, 1890.

PRESENT.													ABSENT.				AGGREGATE.											
Quartermaster's Department.	Subsistence Department.	Medical Department.	Pay Department.	Corps of Engineers.	Ordnance Department.	Post chaplains.	Military store-keepers.	Colonels.	Lieutenant-colonels.	Majors.	Captains.	Regimental chaplains.	Regimental adjutants.	Regimental quartermasters.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	General and staff officers.	Field and regiment/ staff officers.	Captains.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	Commissioned officers.	Enlisted men.	Aggregate.
2	2	1		1	4				1						2	16	16	32								16	16	32
											1				2	60	3	63								3	60	63
		1					1				2	1	1		4	152	10	162		1	2		3	3	13	152	165	
		1						1			2				3	147	7	154		1	3		4	4	11	147	158	
		2			1				1	4					8	271	16	287		1	2		3	3	19	271	290	
											1				1	43	2	45				1		1	1	3	43	46
		1										1	1		3	131	7	138		2	1		3	3	10	131	141	
		1									1	3			5	129	10	139				1		1	1	11	129	140
		3			1	1		2	9		1	1	1	13	612	31	643		1	3	11		15	15	46	612	658	
		2					1	2	6		1	1	1	16	556	29	585		1	5	6		12	12	41	556	597	
2	2	12		1	6		4	1	7	28		4	4	57	2,117	131	2,248		2	13	27		42	42	173	2,117	2,290	

F.—Position and distribution of troops in the Department of the Missouri, commanded by file in the Adjutant.

POSTS.	SITUATIONS.	COMMANDING OFFICER.	Number of companies.	GARRISONS.	PRESENT.					
				Regiments.	General officers.	Military secretary.	Aides-de-camp.	Adjutant-General's Department.	Inspectors-general.	Bureau of Military Justice.
Fort Leavenworth, Kans.		Col. E. F. Townsend, 12th Inf.	9	Department staff. 1st, 2d, 5th, and 9th Cav., 2d Art., 7th, 10th, 13th, and 14th Inf. Prison guard	1		2	1	1	
Fort Leavenworth military prison, Kans.		Capt. J. W. Pope, A. Q. M.								
Fort Riley, Kans.	Junction City	Col. J. W. Forsyth, 7th Cav.	13	7th Cav., 2d and 4th Art., 6th and 13th Inf.						
Fort Gibson, Ind. T.	8 miles from Muscogee.	Capt. J. P. Schindel, 6th Inf.	1	6th Inf.						
Fort Reno, Okla. T.	Near Cheyenne Agency.	Col. J. F. Wade, 5th Cav.	5	5th Cav. and 13th Inf.						
Fort Sill, Okla. T.	65 miles north of Henrietta, Tex.	Lieut. Col. C. H. Carlton, 7th Cav.	7	5th and 7th Cav., and 13th Inf.						
Fort Supply, Ind. T.	16 miles from Woodward.	Col. M. Bryant, 13th Inf.	4	5th Cav. and 13th Inf.						
Little Rock Barracks, Ark.	Little Rock	Capt. P. H. Ellis, 13th Inf.	2	13th Inf.						
Fort Elliott, Tex.	Near Mobeetie	Maj. H. C. Cook, 13th Inf.	3	5th Cav. and 13th Inf.						
Fort Crawford, Colo.	Uncompahgre	Capt. F. E. Lacey, 10th Inf.	2	10th Inf.						
Fort Lewis, Colo.	12 miles from Durango.	Maj. T. C. Tupper, 6th Cav.	3	6th Cav. and 6th Inf.						
Fort Logan, Colo.	Denver	Col. H. C. Merriam, 7th Inf.	6	7th Inf.						
Camp Wade, Okla. T.	Kingfisher	First Lieut. C. S. Hall, 13th Inf.	1	13th Inf.						
Camp at Guthrie, Okla. T.		Capt. H. G. Cavenaugh, 13th Inf.	1	13th Inf.						
Total			57		1		2	1	1	

Brig. Gen. Wesley Merritt, headquarters St. Louis, Mo., taken from the latest returns on General's Office, 1890.

PRESENT.													ABSENT.					AGGREGATE.										
Quartermaster's Department.	Subsistence Department.	Medical Department.	Pay Department.	Corps of Engineers.	Ordnance Department.	Post chaplains.	Military store-keepers.	Colonels.	Lieutenant-colonels.	Majors.	Captains.	Regimental chaplains.	Regimental adjutants.	Regimental quartermasters.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	General and staff officers.	Field and regimental staff officers.	Captains.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	Commissioned officers.	Enlisted men.	Aggregate.
1	1	2	1	1	1	1	1	1	1	1	8				1	16	13	29								13	16	29
		3			1	1	1	1	1	1					50	432	65	497		1	6		7	7	72	432	504	
1	1			1											5	109	8	117								8	109	117
		3				1		3	9		1	1			23	685	41	726		4	5		9	9	50	685	735	
											1				1	57	2	59	1		1		2	2	4	57	61	
		2				1		1	4		1	1			5	401	15	416		1	5		6	6	21	401	422	
		2						1	1	6					11	355	21	376		1	3		4	4	25	355	380	
		1			1	1	1			3		1	1		3	234	12	246		1	1	5	7	7	19	234	253	
		1								2					2	74	5	79			2		2	2	7	74	81	
		1			1					3					2	148	8	156			4		4	4	12	148	160	
										2					4	82	6	88	1				1	1	7	82	89	
		1			1					3					3	145	9	154			3		3	3	12	145	157	
		2			1	1				6		1	1		8	203	20	313			4		4	4	24	203	317	
															1	31	1	32		1	1		2	2	3	31	34	
										1					1	42	2	44			1		1	1	3	42	45	
2	1	19	1	1	6	5	4	8	48		4	4	4	120	3,104	228	3,332	2	1	9	40	52	52	280	3,104	3,384		

G.—Position and distribution of troops in the Department of Arizona, commanded by returns on file in the Ad-

POSTS.	SITUATIONS.	COMMANDING OFFICER.	GARRISONS.		PRESENT.					
			Number of companies.	Regiments.	General officers.	Military secretary.	Aids de-camp.	Adjutant-General's Department.	Inspectors-general.	Bureau of Military Justice.
.....	Department staff.	1	1	1
Fort Apache, Ariz....	90 miles from Holbrook.	Col. J. K. Mizner, 10th Cav.	4	10th Cav.	.....	.....	.....	.....	.....	.....
Fort Bowie, Ariz.....	Bowie Station.....	Maj. T. McGregor, 2d Cav.	3	2d Cav.....	.....	.....	.....	.....	.....	.....
Fort Grant, Ariz.....	27 miles from Willcox.	Maj. S. T. Norvell, 10th Cav.	5	10th Cav. and 24th Inf.	.....	.....	.....	.....	.....	.....
Fort Huachuca, Ariz.	Near Huachuca Station.	Lieut. Col. D. S. Gordon, 2d Cav.	6	2d Cav. and 9th Inf.	.....	.....	.....	.....	.....	.....
Fort Lowell, Ariz....	Near Tucson.....	Col. D. R. Clendenin, 2d Cav.	2	2d Cav.....	.....	.....	.....	.....	.....	.....
Whipple Barracks, Ariz.	Prescott.....	Col. C. G. Bartlett, 9th Inf.	7	2d Cav. and 9th Inf.	.....	.....	.....	.....	.....	.....
San Carlos, Ariz.....	San Carlos Agency..	Capt. Lewis Johnson, 24th Inf.	5	2d and 10th Cav. and 24th Inf.	.....	.....	.....	.....	.....	.....
Fort Bayard, N. Mex.	Near Silver City....	Col. Z. R. Bliss, 24th Inf.	6	10th Cav. and 24th Inf.	.....	.....	.....	.....	.....	.....
Fort Marcy, N. Mex..	Santa Fé.....	Lieut. Col. Simon Snyder, 10th Inf.	1	10th Inf.....	.....	.....	.....	.....	.....	.....
Fort Stanton, N. Mex.	9 miles from Lincoln.	Maj. Emil Adam, 6th Cav.	2	6th Cav. and 10th Inf.	.....	.....	.....	.....	.....	.....
Fort Union, N. Mex..	8 miles from Watrous	Lieut. Col. A. P. Morrow, 6th Cav.	3	6th Cav. and 10th Inf.	.....	.....	.....	.....	.....	.....
Fort Wingate, N. Mex.	Wingate Station....	Col. E. A. Carr, 6th Cav.	7	6th Cav. and 9th Inf.	.....	.....	.....	.....	.....	.....
San Diego Barracks, Cal.	.....	Lieut. Col. G. M. Brayton, 9th Inf.	1	9th Inf.....	.....	.....	.....	.....	.....	.....
Fort Thomas, Ariz....	.....	Capt. T. C. Lebo, 10th Cav.	2	10th Cav. and 24th Inf.	.....	.....	.....	.....	.....	.....
Total.....	.....	.....	54	.....	1	1	1	.....	.....	.....

Brig. Gen. A. McD. McCook, headquarters, Los Angeles, Cal., taken from the latest Adjutant-General's Office, 1890.

PRESENT.														ABSENT.						AGGREGATE.								
Quartermaster's Department.	Subsistence Department.	Medical Department.	Pay Department.	Corps of Engineers.	Ordnance Department.	Post chaplains.	Military store-keepers.	Colonels.	Lieutenant-colonels.	Majors.	Captains.	Regimental chaplains.	Regimental adjutants.	Regimental quartermasters.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	General and staff officers.	Field and regimental staff officers.	Captains.	Subalterns.	Enlisted men.	Total commissioned.	Aggregate.	Commissioned officers.	Enlisted men.	Aggregate.
2	1	1	1	1				1	1	1	1				15	10	25									10	15	25
		1						1	1	1	2	1	1	4	345	12	357		2	4		6	6	18	345	363		
		1							1	1	1				5	193	8	201		2	1		3	3	11	193	204	
		1							1	3	1				8	332	14	346		2	2		4	4	18	332	350	
		2				1		1	1	4					9	338	18	356		2	3		5	5	23	338	361	
		1						1	1	2		1	1	3	179	10	189				1		1	1	11	179	190	
		2						1	1	5		1	1	10	350	21	371		2	4		6	6	27	350	377		
										5				5	296	10	306				5		5	5	15	296	311	
		2						1	1	2	1	1	1	8	265	17	282		4	4		8	8	25	265	290		
1	1							1		1		1	1	2	90	8	98		1				1	1	9	90	99	
		1							1	1				4	113	7	120		1				1	1	8	113	121	
		1				1		1	1	2				4	173	10	183		1	2		3	3	13	173	180		
		1				1		1	1	4		1	1	7	415	17	432	1	3	7		11	11	28	415	443		
		1						1		1				2	52	5	57								5	52	57	
										2				2	123	4	127				2		2	2	6	123	129	
3	1	16	1			8		5	6	10	36	2	6	6	73	3,279	171	3,450	1	1	19	35	56	56	227	3,279	3,506	

H.—*Military commands and posts, with post-offices, telegraph stations, and nearest railroad stations or boat landings.*

ARMY OF THE UNITED STATES.—Headquarters, Washington, D. C.—Maj. Gen. JOHN M. SCHOFIELD, commanding.

DIVISION OF THE ATLANTIC.

Maj. Gen. OLIVER O. HOWARD, comdg.—Hdqrs. Governor's Island, New York Harbor. Embraces the Department of the East.

DEPARTMENT OF THE EAST.

Maj. Gen. O. O. HOWARD, comdg.—Hdqrs. Governor's Island, New York Harbor.

Geographical limits.—The New England States, States of New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Louisiana, Mississippi, Alabama, Kentucky, Tennessee, Ohio, Michigan, Indiana, and the District of Columbia.

DIVISION OF THE MISSOURI.

Maj. Gen. NELSON A. MILES, comdg.—Hdqrs. Chicago, Ill. Embraces the Departments of the Platte and Dakota, and the State of Illinois.

DEPARTMENT OF THE PLATTE.

Brig. Gen. JOHN R. BROOKE, comdg.—Hdqrs. Omaha, Nebr.

Geographical limits.—States of Iowa, Nebraska, and Wyoming (excepting the post of Camp Sheridan, Wyo.); Territory of Utah, and so much of Idaho as lies east of a line formed by the extension of the western boundary of Utah to the north-eastern boundary of Idaho.

DEPARTMENT OF DAKOTA.

Brig. Gen. THOMAS H. RUGER, comdg.—Hdqrs. St. Paul, Minn.

Geographical limits.—States of Minnesota, Wisconsin, South Dakota, North Dakota, and Montana, and the post of Camp Sheridan, Wyo.

DIVISION OF THE PACIFIC.

Brig. Gen. JOHN GIBBON, comdg.—Hdqrs. San Francisco, Cal. Embraces the Departments of California and the Columbia.

DEPARTMENT OF CALIFORNIA.

Brig. Gen. JOHN GIBBON, comdg.—Hdqrs. San Francisco, Cal.

Geographical limits.—States of California (excepting that portion south of the 35th parallel) and Nevada.

DEPARTMENT OF THE COLUMBIA.

Brig. Gen. JOHN GIBBON, comdg.—Hdqrs. Vancouver Barracks, Wash.

Geographical limits.—States of Oregon, Washington, and Idaho, and Alaska Territory, excepting so much of Idaho as is embraced in the Department of the Platte.

DEPARTMENT OF TEXAS.

Brig. Gen. DAVID S. STANLEY, comdg.—Hdqrs. San Antonio, Tex.

Geographical limits.—State of Texas, excepting the post of Fort Elliott.

DEPARTMENT OF THE MISSOURI.

Brig. Gen. WESLEY MERRITT, comdg.—Hdqrs. St. Louis, Mo.

Geographical limits.—States of Missouri, Kansas, Arkansas, and Colorado, Indian and Oklahoma Territories, and the post of Fort Elliott, Tex.

DEPARTMENT OF ARIZONA.

Brig. Gen. ALEXANDER MCD. MCCOOK, comdg.—Hdqrs. Los Angeles, Cal.

Geographical limits.—Territories of Arizona and New Mexico, and that portion of California south of the 35th parallel.

POSTS.

[Those not garrisoned are indicated thus*.]

- Abraham Lincoln, Fort, N. Dak.* (Dept. Dak.)—P. O. and tel. stn. same; stage daily from Mandan, on N. P. R. R., dist. 6½ m.
- Adams, Fort, R. I.* (Dept. East.)—P. O. and tel. stn. Newport, R. I.; boat from Newport, dist. 3 m.
- Alcatraz Island, Cal.* (Dept. Cal.)—P. O. same; tel. and R. R. stn. San Francisco, Cal., dist. 4 m.; Govt. steamer daily (except Sunday) to post.
- Angel Island, Cal.* (Dept. Cal.)—P. O. same; R. R. and tel. stn. San Francisco, Cal., dist. 7 m.; Govt. steamer daily (except Sunday) to post.
- Apache, Fort, Ariz.* (Dept. Ariz.)—P. O. and tel. stn. same; buckboard daily (except Sunday) from Holbrook, on A. and P. R. R., dist. 90 m.
- Assiniboine, Fort, Mont.* (Dept. Dak.)—P. O., tel. and R. R. (St. P., M. and M.) stn. same.
- Barrancas, Fort, Fla.* (Dept. East.)—P. O. Warrington, Fla., tel. stn. Pensacola navy-yard, Fla., R. R. stn. at Pensacola, Fla., dist. 9 m.; special boat to post.
- Bayard, Fort, N. Mex.* (Dept. Ariz.)—P. O. same; tel. and R. R. (A., T. and S. F.) stn. Silver City, dist. 9 m.; stage daily (except Sunday) from Silver City; Govt. tel. to post.
- Benicia Barracks, Cal.* (Dept. Cal.)—P. O., tel. stn., and boat landing Benicia, Cal., dist. 1 m.; R. R. (C. P.) stn. Army Point, dist. ¼ m.
- Bennett, Fort, S. Dak.* (Dept. Dak.)—P. O. same; tel. stn. Fort Sully, S. Dak., dist. 7 m.; stage daily (except Sunday) from Pierre, S. Dak., on C. and N. W. R. R., dist. 30 m.
- Bidwell, Fort, Cal.* (Dept. Cal.)—P. O. same; R. R. (N. and C.) stn. Liegan, Cal., dist. 150 m.
- Bliss, Fort, Tex.* (Dept. Tex.)—P. O., tel. and R. R. stn. El Paso, Tex., dist. 1½ m.
- Boisé Barracks, Idaho* (Dept. Columbia.)—P. O., tel., and R. R. (O. S. L.) stn. Boise City, Idaho, dist. 2 m.
- Bowie, Fort, Ariz.* (Dept. Ariz.)—P. O. and tel. stn. same; daily buckboard from Bowie Station, Ariz., on S. P. R. R., dist. 13 m.
- Brady, Fort, Mich.* (Dept. East.)—P. O., tel. and R. R. (D., S. S. and A.) stn. Sault Ste. Marie, Mich.; boats land at post in summer.
- Brown, Fort, Tex.* (Dept. Tex.)—P. O., tel. and R. R. (R. G.) stn. Brownsville, Tex.
- Buford, Fort, N. Dak.* (Dept. Dak.)—P. O., tel. and R. R. (St. P., M. and M.) stn. same.
- Canby, Fort, Wash.* (Dept. Columbia.)—P. O. Astoria, Oreg.; tel. stn. at post; daily steamer from R. R. stn., Portland, Oreg., to Astoria, dist. 96 m., and thence by steam tug daily to post, dist. 14 m.
- * *Carroll, Fort, Md.*—P. O. and tel. stn. Baltimore, Md., dist. 6½ m. by water from Light st. wharf.
- * *Caswell, Fort, N. C.*—P. O. and tel. stn. Southport, N. C., dist. 2 m.; steamer daily from Wilmington to Southport, dist. 22 m.
- Clark, Fort, Tex.* (Dept. Tex.)—P. O. Brackettville, Tex.; tel. stn. (telephone to post) Spofford Junction, Tex.; daily stage from Spofford Junction, on G., H. and S. A. R. R., dist. 9 m.
- * *Clark's Point, Mass., Fort at.*—P. O. and tel. stn. New Bedford, Mass.; dist. 4 m.
- * *Clinch, Fort, Fla.*—P. O., tel. and R. R. stn. Fernandina, Fla., dist. 3 m.
- Columbus Barracks, Ohio.*—(See Recruiting Depots.)
- Columbus, Fort, N. Y. H.* (Dept. East.)—P. O. New York City; tel. stn. Governor's Island, N. Y.; Govt. steamer from New York City, dist. 1¼ m.
- * *Constitution, Fort, N. H.*—P. O. New Castle, N. H.; tel. stn. Portsmouth, N. H.; stage or steamer from Portsmouth, dist. 3 m.
- Custer, Fort, Mont.* (Dept. Dak.)—P. O. and tel. stn. same; daily stage from Custer Station, on N. P. R. R., dist. 32 m.
- D. A. Russell, Fort, Wyo.* (Dept. Platte.)—P. O. and tel. stn. same; R. R. (U. P.) stn. Cheyenne, Wyo., dist. 3 m.
- David's Island, N. Y.*—(See Recruiting Depots.)
- Davis, Fort, Tex.* (Dept. Tex.)—P. O. same; tel. and R. R. stn. Marfa, on G., H. and S. A. R. R., dist. 22 m.; stage daily.
- * *Delaware, Fort, Del.*—P. O. and tel. stn. Delaware City, Del.; daily steamer from Philadelphia to Delaware City, dist. 1¼ m. from post.
- Douglas, Fort, Utah* (Dept. Platte.)—P. O., tel. and R. R. stn. Salt Lake City, Utah; dist. 3 m.

- Du Chesne, Fort, Utah* (Dept. Platte).—P. O. and tel. stn. same; R. R. (D. and R. G. W.) stn. Price Station, dist. 88 m.; stage line to post.
- * *Dutch Island, R. I., Fort on*.—P. O. Jamestown, R. I.; tel. stn. Newport, R. I.; steam ferry from Newport to Jamestown, dist. 4 m., and private boat thence to post, dist. 1 m.
- * *Finn's Point, N. J., Battery at*.—P. O., R. R. and tel. stn. Salem, N. J., dist. 6 m.
- * *Foots, Fort, Md.*—P. O. same; tel. stn. Alexandria, Va.; steamer from Washington, D. C., dist. 9 m.
- * *Gaines, Fort, Ala.*—P. O., tel. and R. R. stn. Mobile, Ala.; boat from Mobile, dist. 30 m.
- Gaston, Fort, Cal. (Dept. Cal.)*—P. O. Hoopa Valley, Cal.; tel. stn. Eureka, Cal.; bi-weekly steamers from San Francisco to Arcata, dist. 284 m.; thence by saddle animal (mountain trail), dist. 40 m.
- * *Gorges, Fort, Me.*—P. O., R. R. and tel. stn. Portland, Me., dist. 2 m.
- Grant, Fort, Ariz. (Dept. Ariz.)*—P. O. and tel. stn. same; daily stage (except Sunday) from Willcox, on S. P. R. R., dist. 27 m.
- * *Griswold, Fort, Conn.*—P. O. Groton, Conn.; tel. and R. R. stn. New London; ferry from New London, dist. 1 m.
- Guthrie, Camp at, Okk. T. (Dept. Mo.)*—P. O., tel. and R. R. stn. (A., T. and S. F. R.) same.
- Hamilton, Fort, N. Y. (Dept. East.)*—P. O. and tel. stn. same; city railroad from Brooklyn, dist. 6 m.
- Hancock, Fort, Tex. (Dept. Tex.)*—P. O. same; tel. and R. R. (S. and T. P.) stn. Fort Hancock Station, dist. 1½ m.
- Huachuca, Fort, Ariz. (Dept. Ariz.)*—P. O. and tel. stn. same; daily buckboard from Huachuca Siding, on N. Mex. and A. R. R., dist. 7 m.
- * *Independence, Fort, Mass.*—P. O. and tel. stn. Boston, Mass.; Govt. tug from Boston, dist. 3 m.
- Jackson Barracks, La. (Dept. East.)*—P. O. and R. R. stn. New Orleans, La., dist. 6 m.; tel. stn. Slaughter House, St. Bernard Parish, La.
- * *Jackson, Fort, La.*—P. O. Neptune, La.; tel. stn. Quarantine, La.; steamer tri-weekly from New Orleans, dist. 73 m.
- Jefferson Barracks, Mo.*—(See Recruiting Depots.)
- * *Jefferson, Fort, Fla.*—P. O. and tel. stn. Key West, Fla.; boat from Key West, dist. 71 m.
- * *Johnston, Fort, N. C.*—P. O. and tel. stn. Southport, N. C.; steamer daily from Wilmington, N. C., dist. 26 m.
- Keogh, Fort, Mont. (Dept. Dak.)*—P. O., tel. and R. R. (N. P.) stn. same.
- * *Key West Barracks, Fla. (Dept. East.)*—P. O., tel. stn., and boat ldg. Key West, Fla.
- * *Knox, Fort, Me.*—P. O. Prospect Ferry, Me.; tel. and R. R. stn. Bucksport, Me.; ferry from Bucksport, dist. ¾ m.
- * *Lafayette, Fort, N. Y. H.*—P. O. and tel. stn. Fort Hamilton, N. Y.; city railroad from Brooklyn, dist. 6 m.
- Leavenworth, Fort, Kans. (Dept. Mo.)*—P. O., tel. and R. R. stn. same.
- Leavenworth Military Prison, Kans. (Dept. Mo.)*—P. O., tel. and R. R. stn. same as Fort Leavenworth.
- Lewis, Fort, Colo. (Dept. Mo.)*—P. O. and tel. stn. same; stage from Durango, on D. and R. G. R. R., dist. 12 m.
- * *Livingston, Fort, La.*—P. O. Grand Isle, La.; tel. stn. New Orleans, La.; steamer weekly from New Orleans, dist. 95 m.
- Logan, Fort, Colo. (Dept. Mo.)*—P. O., tel. and R. R. (D. and R. G.) stn. same.
- Lowell, Fort, Ariz. (Dept. Ariz.)*—P. O. and tel. stn. (telephone to post) Tucson, Ariz., on S. P. R. R., dist. 7 m.
- Mackinac, Fort, Mich. (Dept. East.)*—P. O. and tel. stn. Mackinac Island, Mich.; boat from Mackinaw City, dist. 11 m., and from St. Ignace, Mich., dist. 5 m.; steam-boats from Chicago, Detroit, and other lake ports arrive daily.
- * *Macomb, Fort, La.*—P. O. Lee, La.; tel. and R. R. stn. Chef Menteur, La., dist. 1½ m.
- * *Macon, Fort, N. C.*—P. O. Beaufort, N. C.; tel. and R. R. stn. Morehead City, N. C., dist. 2 m.
- Madison Barracks, N. Y. (Dept. East.)*—P. O., tel. and R. R. stn. Sackett's Harbor, N. Y.
- Marcy, Fort, N. Mex. (Dept. Ariz.)*—P. O., tel. and R. R. stn. Santa Fé, N. Mex.
- * *Marion, Fort, Fla. (Dept. East.)*—P. O., tel. and R. R. stn. St. Augustine, Fla.
- Mason, Fort, Cal. (Dept. Cal.)*—P. O. and R. R. stn. San Francisco, Cal., dist. 3 m.; tel. stn. at post.
- * *McClary, Fort, Me.*—P. O., tel. and R. R. stn. Kittery Point, Me.
- McHenry, Fort, Md. (Dept. East.)*—P. O., tel. and R. R. stn. Baltimore, Md.
- McIntosh, Fort, Tex. (Dept. Tex.)*—P. O., tel. and R. R. stn. Laredo, Tex., dist. ¼ m.
- McKinney, Fort, Wyo. (Dept. Platte)*—P. O. and tel. stn. same; daily stage from Douglas, on F. E. and M. V. R. R., dist. 148 m., and from Custer Station, Mont., on N. P. R. R., dist. 160 m.
- McPherson, Fort, Ga. (Dept. East.)*—P. O., tel. and R. R. stn. Atlanta, Ga., dist. 4 m.

- Meade, Fort, S. Dak.* (Dept. Dak.)—P. O. and tel. stn. same; R. R. (F. E. and M. V.) stn. Sturgis City, dist. 3 m.
- * *Mifflin, Fort, Pa.*—P. O., R. R. and tel. stn. Philadelphia, Pa., dist. 5 m.
- Missoula, Fort, Mont.* (Dept. Dak.)—P. O. same; tel. and R. R. (N. P.) stn. Missoula, Mont., dist. 4 m.
- Monroe, Fort, Va.* (Dept. East.)—P. O. and tel. stn. same; steamers daily from Baltimore, Washington, Norfolk, and New York, and railroad (C. and O.) from Richmond, Va.
- * *Montgomery, Fort, N. Y.*—P. O., tel. and R. R. stn. Rouse's Point, N. Y., dist. 1½ m.
- * *Morgan, Fort, Ala.*—P. O. Herndon, Ala.; tel. stn. at post; steamer from Mobile, dist. 30 m.
- * *Moultrie, Fort, S. C.*—P. O. Moultrieville, S. C.; tel. and R. R. stn. Charleston, S. C., dist. 5 m.
- Mount Vernon Barracks, Ala.* (Dept. East.)—P. O. and tel. stn. Mount Vernon, Ala.; R. R. stn. Mobile, Ala., dist. 30 m.
- Myer, Fort, Va.* (Dept. East.)—P. O. and R. R. stn. Washington, D. C.; telephone to post.
- Newport Barracks, Ky.* (Dept. East.)—P. O., tel. and R. R. stn. Newport, Ky.
- Niagara, Fort, N. Y.* (Dept. East.)—P. O. Youngstown, N. Y.; tel. and E. R. stn. Lewiston, N. Y., dist. 7 m.
- Noborara, Fort, Nebr.* (Dept. Platte.)—P. O. and tel. stn. same; R. R. (F. E. and M. V.) stn. Valentine, Nebr., dist. 4½ m.
- * *Oglethorpe, Fort, Ga.*—P. O., tel. and R. R. stn. Savannah, Ga., dist. 3 m.
- Oklahoma, camp at, Okh. T.* (Dept. Mo.)—P. O., tel. and R. R. stn. Oklahoma City, Okh.
- Omaha, Fort, Nebr.* (Dept. Platte.)—P. O. same; tel. (telephone to post) and R. R. stn. Omaha, dist. 4 m.
- Ontario, Fort, N. Y.* (Dept. East.)—P. O., tel. and R. R. stn. Oswego, N. Y.
- Pembina, Fort, N. Dak.* (Dept. Dak.)—P. O., R. R. and tel. stn. Pembina, N. Dak., dist. 2 m.
- Peña Colorado, Camp, Tex.* (Dept. Tex.)—P. O., tel. and R. R. (G., H. and S. A.) stn. Marathon, Tex., dist. 4 m.
- * *Phoenix, Fort, Mass.*—P. O., R. R. and tel. stn. Fairhaven, Mass.
- * *Pickens, Fort, Fla.*—P. O. Warrington, Fla.; tel. stn. Pensacola navy-yard; R. R. stn. at Pensacola, Fla., dist. 10 m.
- * *Pike, Fort, La.*—P. O. same; tel. stn. Chef Menteur, La.; R. R. (L. and N.) stn. New Orleans to Lake Catharine Station, dist. 28 m., and thence to post by special boat, dist. 7 m.
- Pilot Butte, Camp, Wyo.* (Dept. Platte.)—P. O., tel. and R. R. (U. P.) stn. Rock Springs, Wyo.
- Plattsburgh Barracks, N. Y.* (Dept. East.)—P. O., tel. and R. R. stn. Plattsburgh, N. Y.
- * *Popham, Fort, Me.*—P. O. Popham Beach, Me.; tel. and R. R. stn. Bath, Me.; dist. 12 m. by water, 15 m. by land.
- Poplar River, Camp, Mont.* (Dept. Dak.)—P. O., tel. and R. R. (St. P., M. and M.) stn. Poplar River Station.
- Porter, Fort, N. Y.* (Dept. East.)—P. O., tel. and R. R. stn. Buffalo, N. Y.
- Preble, Fort, Me.* (Dept. East.)—P. O., tel. and R. R. stn. Portland, Me., dist. 2½ m.
- Presidio of San Francisco, Cal.* (Dept. Cal.)—P. O. and tel. stn. same; R. R. stn. San Francisco, Cal., dist. 4½ m.; city railway to post.
- * *Pulaski, Fort, Ga.*—P. O., R. R. and tel. stn. Savannah, Ga., dist. 14 m.
- Randall, Fort, S. Dak.* (Dept. Dak.)—P. O. same; tel. and R. R. stn. Armour, S. Dak., dist. 24 m.; buckboard daily (except Sunday) and tri-weekly stage from Springfield, S. Dak., on C. M. and St. P. R. R., dist. 45 m.
- Reno, Fort, Okh. T.* (Dept. Mo.)—P. O. and tel. stn. same; stage daily from El Reno, Okh. T., on C. R. and P. R. R., dist. 5½ m.
- Riley, Fort, Kans.* (Dept. Mo.)—P. O. and tel. stn. same; R. R. stn. Junction City, Kans., dist. 3½ m.
- Ringgold, Fort, Tex.* (Dept. Tex.)—P. O. Rio Grande City, Tex.; tel. stn. at post; stage from Pena, on T. M. R. R., dist. 76 m., and from San Miguel, Mex., on Mex. N. R. R., dist. 23 m.
- Robinson, Fort, Nebr.* (Dept. Platte.)—P. O., tel. and R. R. (F. E. and M. V.) stn. same.
- Sam Houston, Fort, Tex.* (Dept. Tex.)—P. O., tel. and R. R. stn. San Antonio, Tex.
- San Carlos, Ariz.* (Dept. Ariz.)—P. O. and tel. stn. same; daily stage (except Sunday) from Bowie, on S. P. R. R. (via Fort Thomas), dist. 102 m., and tri-weekly from Wilcox, via Forts Grant and Thomas, dist. 106 m., special conveyance.
- San Diego Barracks, Cal.* (Dept. Ariz.)—P. O., tel. and R. R. (C. S.) stn. and boat ldg. San Diego, Cal.
- * *Sandy Hook, N. J., Fort at.*—P. O. New York City; tel., R. R. stn. and stubt. ldg. Sandy Hook, N. J., dist. 2 m.

- * *Scammel, Fort, Me.*—P. O., tel. and R. R. stn. Portland, Me., dist. 2 m.
- Schuyler, Fort, N. Y.* (Dept. East.)—P. O., tel. and R. R. stn. West Chester, N. Y., dist. 3½ m.
- * *Sewall, Fort, Mass.*—P. O., tel. and R. R. stn. Marblehead, Mass., dist. 1½ m.
- Shaw, Fort, Mont.* (Dept. Dak.)—P. O. and tel. stn. same; daily stage (except Sunday) from Great Falls, Mont., dist. 28 m., and from Cascade, Mont., on G. N. R. R., dist. 17½ m., private conveyance; freight and recruits sent from this point.
- Sheridan, Camp, Wyo.* (Dept. Dak.)—P. O. and tel. stn. Mammoth Hot Springs, Wyo.; R. R. (N. P.) stn. Livingston, Mont., dist. 59 m.
- Sheridan, Fort, Ill.* (Div. Mo.)—P. O., R. R. and tel. stn. same.
- Sherman, Fort, Idaho.* (Dept. Columbia.)—P. O. Sherman; tel. and R. R. stn. Cœur d'Alene, Idaho (on branch N. P. R. R.) dist. ½ m.
- * *Ship Island, Miss., Fort at.*—P. O., tel. and R. R. (N. O. and M.) stn. Biloxi, Miss., dist. 15 m.; special boat to post.
- Sidney, Fort, Nebr.* (Dept. Platte.)—P. O., tel. and R. R. (U. P.) stn. Sidney, Nebr.
- Sill, Fort, Okh. T.* (Dept. Mo.)—P. O. and tel. stn. same; stage daily (except Sunday) from Henrietta, Tex., on Ft. W. and D. R. R., dist. 65 m.
- Snelling, Fort, Minn.* (Dept. Dak.)—P. O., tel. stn. and R. R. same.
- Spokane, Fort, Wash.* (Dept. Columbia.)—P. O. and tel. stn. Miles, Wash.; daily stage (except Sunday) from Davenport, on N. P. R. R., dist. 25 m.
- Stanton, Fort, N. Mex.* (Dept. Ariz.)—P. O. and tel. stn. same; stage daily from Carthage, N. Mex., on A. T. and S. F. R. R., dist. 100 m.
- * *Stevens, Fort, Oreg.*—P. O. and tel. stn. (telephone to post) Astoria, Oreg., steamer daily from R. R. stn. Fortland, Oreg., to Astoria, dist. 98 miles; from thence by steam-tug daily (except Sunday) to post, dist. 7 m.
- St. Francis Barracks, Fla.* (Dept. East.)—P. O., tel. and R. R. stn. St. Augustine, Fla.
- * *St. Phillip, Fort, La.*—P. O. and tel. stn. Neptune, La.; steamer tri-weekly from New Orleans, dist. 73 m., and from Bohemia, on S. B. and G. R. R., dist. 25 m.
- Sully, Fort, S. Dak.* (Dept. Dak.)—P. O. and tel. stn. same; R. R. (C. and N. W.) stn. Pierre, S. Dak., dist. 25 m.; stage to post daily (except Sunday).
- * *Sumter, Fort, S. C.*—P. O. Moultrieville, S. C.; tel. and R. R. stn. Charleston, S. C., dist. 5 m.
- Supply, Fort, Ind. T.* (Dept. Mo.)—P. O. same; tel. and R. R. stn. Woodward, Ind. T., on A. T. and S. F. R. R., dist. 15½ m.; daily stage to post.
- * *Taylor, Fort, Fla.*—P. O., tel. stn. and boat landing Key West, Fla.
- Thomas, Fort, Ky.* (Dept. East.)—P. O., tel. and R. R. stn. Newport, Ky., dist. 3 m.
- Thomas, Fort, Ariz.* (Dept. Ariz.)—P. O. and tel. stn. same; stage daily (except Sunday) from Bowie Station, on S. P. R. R., dist. 70 m., and tri-weekly from Wilcox, Ariz., dist. 69 m.
- Totten, Fort, N. Dak.* (Dept. Dak.)—P. O. and tel. stn. same; R. R. stn. Devil's Lake, terminus of G. F. and D. L. branch of St. P. M. and M. R. R., dist. 14 m.; summer by stmbt., winter over ice; and daily buckboard from Oberon, on Jamestown branch N. P. R. R., dist. 11½ m.
- Townsend, Fort, Wash.* (Dept. Columbia.)—P. O. and tel. stn. Port Townsend, Wash., dist. 3 m.
- Trumbull, Fort, Conn.* (Dept. East.)—P. O., tel. and R. R. stn. New London, Conn., dist. 1 m.
- Union Fort, N. Mex.* (Dept. Ariz.)—P. O. and tel. stn. same; daily stage or buckboard from Watrous, N. Mex., on A. T. and S. F. R. R., dist. 9 m.
- Vancouver Barracks, Wash.* (Dept. Columbia.)—P. O. and tel. stn. same; boat ldg. Vancouver, Wash.; boat or stage from Portland, Oreg., daily (except Sunday); R. R. stn. Portland, Oreg., dist. 6 m.
- Verde, Fort, Ariz.* (Dept. Ariz.)—P. O. Camp Verde; tel. stn. at post; tri-weekly buckboard from Prescott, Ariz., on P. and A. C. R. R., dist. 45 m.
- Wade, Camp, Okh. T.* (Dept. Mo.)—P. O., tel. and R. R. stn. Kingfisher, Okh. T., dist. ¼ m.
- Wadsworth, Fort, N. Y.* (Dept. East.)—P. O. Rosebank, Staten Island, N. Y.; tel. stn. Quarantine, Clifton, Staten Island, N. Y.
- Walla Walla, Fort, Wash.* (Dept. Columbia.)—P. O., tel. and R. R. (N. P.) stn. Walla-Walla, Wash., dist. 1 m.
- Warren, Fort, Mass.* (Dept. East.)—P. O. and tel. stn. Boston, Mass.; steamer from Boston, dist. 7 m.
- Washakie, Fort, Wyo.* (Dept. Platte.)—P. O. and tel. stn. same; daily stage from Rawlins Wyo., on U. P. R. R., dist. 147 m.
- Washington Barracks, D. C.* (Dept. East.)—P. O., tel. and R. R. stn. Washington, D. C.
- * *Washington, Fort, Md.*—P. O. same; tel. stn. Alexandria, Va.; stmbt. from Washington, D. C., dist. 13 m.
- Wayne, Fort, Mich.* (Dept. East.)—P. O. and tel. stn. Detroit, Mich.; city railway from Detroit, dist. 4 m.

- West Point, N. Y.* (U. S. Mil. Acad.)—P. O., tel. and R. R. stn. same.
- Whipple Barracks, Ariz.* (Dept. Ariz.) P. O. Whipple; tel. and R. R. stn. (P. and A. C.) at post.
- Willetts Point, N. Y.* (Engineer School of Application.)—P. O. and R. R. stn. White-stone, N. Y., dist. 2½ m.; tel. stn. Willetts Point. (See Engineer Depot.)
- * *Winfield Scott, Fort, Cal.* (Dept. Cal.)—P. O. and R. R. stn. San Francisco, Cal.; tel. stn. Presidio of San Francisco, Cal.
- Wingate Fort, N. Mex.* (Dept. Ariz.)—P. O. and tel. stn. same; R. R. (A. and P.) stn. Wingate, dist. 3 m.
- * *Winthrop, Fort, Mass.*—P. O. and tel. stn. Boston, Mass.; steam-boat from Boston, dist. 2 m.
- Wood, Fort, Bedloe's Island, N. Y. H.* (Dept. East.)—P. O., tel. and R. R. stn. N. Y. City.
- Yates, Fort, N. Dak.* (Dept. Dak.)—P. O. and tel. stn. same; stage daily (except Sunday) from Bismarck, on N. P. R. R., dist. 60 m.

ARMORIES, ARSENALS, AND DEPOTS.

ARMORIES, ARSENALS, AND ORDNANCE DEPOTS.

- Allegheny Arsenal, Pa.*—P. O., tel. and R. R. stn. Pittsburgh, Pa.; Maj. G. W. McKee, comdg.
- Augusta Arsenal, Ga.*—P. O., tel. and R. R. stn. Augusta, Ga., dist. 3 m.; Maj. J. W. Reilly, comdg.
- Benicia Arsenal, Cal.*—P. O., tel. and R. R. stn. Benicia, Cal., dist. 1 m.; Lieut. Col. L. S. Babbitt, comdg.
- Columbia Arsenal, Tenn.*—P. O., tel. and R. R. stn. Columbia, Tenn.; Maj. Isaac Arnold, comdg.
- Fort Leavenworth Ordnance Depot, Kans.*—P. O., tel. and R. R. stn. Fort Leavenworth, Kans.; Capt. C. W. Whipple, comdg.
- Fort Monroe Arsenal, Va.*—P. O. and tel. stn. Fort Monroe, Va.; stmbts. daily from New York, Baltimore, Washington, and Norfolk, and railroad (C. & O.) from Richmond, Va.; Maj. J. R. Maginness, comdg.
- Fort Snelling Ordnance Depot, Minn.*—P. O., tel. and R. R. stn. Fort Snelling, Minn.; Capt. John Pittman, comdg.
- Frankford Arsenal, Pa.*—P. O. (Station F) and tel. stn. (telephone to post) Philadelphia, Pa.; Capt. Frank Baker, comdg.
- Indianapolis Arsenal, Ind.*—P. O., tel. and R. R. stn. Indianapolis, Ind.; Maj. Clifton Comly, comdg.
- Kennebec Arsenal, Me.*—P. O., tel. and R. R. stn. Augusta, Me.; Capt. Cullen Bryant, comdg.
- National Armory, Mass.*—P. O., tel. and R. R. stn. Springfield, Mass.; Col. A. R. Buf-fington, comdg.
- New York Arsenal, N. Y.*—P. O. New York City; tel. stn. Governor's Island, N. Y.; Govt. steamer from New York City, dist. 1½ m.; Lieut. Col. Alfred Mordecai, comdg.
- Omaha Ordnance Depot, Nebr.*—P. O., tel. and R. R. stn. Omaha, Nebr.; Capt. J. C. Ayers, comdg.
- Rock Island Arsenal, Ill.*—P. O. and tel. stn. Rock Island, Ill.; special conveyance from R. R. stn. and boat ldfs. in Rock Island, Ill., and Davenport, Iowa, dist. 2 m.; Col. J. M. Whitmore, comdg.
- St. Louis Powder Depot, Mo.*—P. O., tel. and R. R. stn. Jefferson Barracks, Mo.; Maj. J. G. Butler, comdg.
- San Antonio Arsenal, Tex.*—P. O., tel. and R. R. stn. San Antonio, Tex.; Maj. W. A. Marye, comdg.
- U. S. Powder Depot, N. J.*—P. O., tel. (telephone to post) and R. R. stn. Dover, N. J., dist. 4½ m.; Maj. F. H. Phipps, comdg.
- Vancouver Barracks Ordnance Depot, Wash.*—P. O., tel. stn. and boat ldg. Vancouver, Wash.; boat from Portland, Oreg., daily; First Lieut. C. H. Clark, comdg.
- Watertown Arsenal, Mass.*—P. O., tel. and R. R. stn. Watertown, Mass.; Col. D. W. Flagler, comdg.
- Watervliet Arsenal, N. Y.*—P. O. and tel. stn. (telephone to post) West Troy, N. Y.; R. R. stn. East Troy, N. Y., dist. 1 m.; Lieut. Col. F. H. Parker, comdg.

RECRUITING DEPOTS.

- Columbus Barracks, Ohio.*—P. O. and R. R. stn. Columbus, Ohio; tel. stn. at post; Lieut. Col. W. H. Jordan, 19th Inf., comdg.

David's Island, N. Y.—P. O. same; tel. stn. New Rochelle, N. Y.; horse-car and boat from New Rochelle, dist. 3 m.; Lieut. Col. D. Parker, 20th Inf., comdg.

Jefferson Barracks, Mo.—P. O., tel. and R. R. stn. same; Maj. R. F. Bernard, 8th Cav., comdg.

ENGINEER DEPOT.

Willetts Point, N. Y.—P. O. and R. R. stn. Whitestone, Queens County, N. Y., dist. 2½ m.; tel. stn. Willetts Point; Lieut. Col. W. R. King, comdg.

HEADQUARTERS OF REGIMENTS.

CAVALRY.

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| <ul style="list-style-type: none"> 1. Fort Custer, Mont. 2. Fort Lowell, Ariz. 3. Fort McIntosh, Tex. 4. Fort Walla Walla, Wash. 5. Fort Reno, Okh. T. | <ul style="list-style-type: none"> 6. Fort Wingate, N. Mex. 7. Fort Riley, Kans. 8. Fort Meade, S. Dak. 9. Fort Robinson, Nebr. 10. Fort Grant, Ariz. |
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ARTILLERY.

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| <ul style="list-style-type: none"> 1. Fort Hamilton, N. Y. 2. Fort Adams, R. I. 3. Washington Barracks, D. C. | <ul style="list-style-type: none"> 4. Fort McPherson, Ga. 5. Presidio of San Francisco, Cal. |
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INFANTRY.

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| <ul style="list-style-type: none"> 1. Angel Island, Cal. 2. Fort Omaha, Nebr. 3. Fort Snelling, Minn. 4. Fort Sherman, Idaho. 5. Fort Bliss, Tex. 6. Fort Thomas, Ky. 7. Fort Logan, Colo. 8. Fort Niobrara, Nebr. 9. Whipple Barracks, Ariz. 10. Fort Marcy, N. Mex. 11. Madison Barracks, N. Y. 12. Fort Leavenworth, Kans. 13. Fort Supply, Ind. T. | <ul style="list-style-type: none"> 14. Vancouver Bks., Wash. T. 15. Fort Buford, N. Dak. 16. Fort Douglas, Utah. 17. Fort D. A. Russell, Wyo. 18. Fort Clark, Tex. 19. Fort Wayne, Mich. 20. Fort Assinniboine, Mont. 21. Fort Sidney, Nebr. 22. Fort Keogh, Mont. 23. San Antonio, Tex. 24. Fort Bayard, N. Mex. 25. Fort Missoula, Mont. |
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ADJUTANT-GENERAL'S OFFICE,
Washington, D. C., October 1, 1890.

I.—Casualties from the U. S. Army for the fiscal year ended June 30, 1890.

Organization.	Discharged.						Retired.	Died.	Deserted.	Transferred to Hospital Corps.
	Expiration of serv-ice.	Disability.	Sentence general court-martial.	By civil authority.	By order.					
					Minority.	Other causes.				
General service, headquarters of the Army, divisions, and departments						6	1			
Engineers	97	10	8		3	18	3		52	1
Ordnance	51	7	1			34	4	4	12	1
First Cavalry	140	14	25		8	15			74	4
Second Cavalry	95	20	17		5	21	1	2	60	9
Third Cavalry	119	15	15		5	8	1	4	67	9
Fourth Cavalry	108	24	17		11	15	1	3	53	3
Fifth Cavalry	112	17	11		9	19	1	5	42	4
Sixth Cavalry	140	12	25		10	10		7	76	4
Seventh Cavalry	87	14	22	1	4	24		6	63	2
Eighth Cavalry	87	12	25		8	18		3	94	2
Ninth Cavalry	69	21	24		2	8		8	10	1
Tenth Cavalry	108	23	13		1	6		9	6	6
First Artillery	64	12	17		4	22		6	60	2
Second Artillery	63	10	16		5	21	1	2	61	3
Third Artillery	70	23	16	1	1	30		4	45	3
Fourth Artillery	76	15	25		6	20	4	3	79	8
Fifth Artillery	71	14	24		9	17		3	45	6
First Infantry	65	13	16		1	10		3	49	3
Second Infantry	84	10	8		1	30		5	35	3
Third Infantry	81	11	12			9		5	53	3
Fourth Infantry	81	9	10		1	16	1	1	21	8
Fifth Infantry	78	7	14		2	9		4	36	4
Sixth Infantry	94	8	13		3	17	1	2	47	5
Seventh Infantry	57	6	13		1	21		2	57	1
Eighth Infantry	63	6	11			13	2	2	32	7
Ninth Infantry	90	17	15		3	12	2	3	36	5
Tenth Infantry	76	8	10		2	4	2	1	43	3
Eleventh Infantry	55	8	7		1	19		3	36	1
Twelfth Infantry	48	10	16		2	7		3	59	3
Thirteenth Infantry	118	14	16		5	13			38	3
Fourteenth Infantry	69	14	11		1	21		2	32	1
Fifteenth Infantry	75	8	13		1	12		1	35	5
Sixteenth Infantry	62	9	10		1	21		1	20	1
Seventeenth Infantry	89	5	11		4	19		2	61	3
Eighteenth Infantry	32	12	13		5	11		2	46	5
Nineteenth Infantry	72	12	9		3	16		3	21	3
Twentieth Infantry	83	11	15		6	9		4	70	5
Twenty-first Infantry	56	14	13			17	1	4	39	4
Twenty-second Infantry	62	7	13		1	14	1	1	78	3
Twenty-third Infantry	30	4	11		2	11		2	53	3
Twenty-fourth Infantry	100	7	3			4		5	7	
Twenty-fifth Infantry	136	9	5		3	6		2	22	5
Mounted service	13	98	23	1	35	117	1	2	158	
General service	23	128	24		33	203		7	185	12
Detachments:										
West Point	43	2	3			4	3	1	10	
Provost-guard, Fort Leavenworth	24	1	1			12			1	1
General non-commissioned staff	88					4	12	7		
	3,604	730	640	3	205	993	43	152	2,319	158
Signal Corps	45					29	7	8		
Hospital Corps	170	14	11			28	3	7	25	
Total	3,819	744	651	3	205	1,050	46	187	2,344	158

RECAPITULATION.

	Army proper.	Signal Corps and Hospital Corps.
Discharges	6,175	297
Deaths	152	15
Retirements	43	3
Desertions	2,319	25
Transfers to Hospital Corps	158	
Total loss	8,847	340

K.—Number of enlistments and re-enlistments in the U. S. Army and the number of men gained from desertion during the fiscal year ended June 30, 1890.

Organization.	Enlistments.	Re-enlistments.	Joined from desertion.*	Joined Hospital Corps from line.
General Service, Hdqrs. of the Army, divisions, and departments	16			
Engineers	147	63	4	
Ordnance	39	55	1	
First Cavalry		18	12	
Second Cavalry		24	15	
Third Cavalry		24	10	
Fourth Cavalry		24	7	
Fifth Cavalry		19	9	
Sixth Cavalry		22	22	
Seventh Cavalry	7	7	16	
Eighth Cavalry	1	10	9	
Ninth Cavalry		24	5	
Tenth Cavalry		29	4	
First Artillery	14	26	16	
Second Artillery	45	29	13	
Third Artillery	38	36	12	
Fourth Artillery	63	33	18	
Fifth Artillery	42	27	17	
First Infantry		8	12	
Second Infantry		24	6	
Third Infantry	18	14	9	
Fourth Infantry		24	6	
Fifth Infantry	1	19	12	
Sixth Infantry	1	29	14	
Seventh Infantry	1	15	8	
Eighth Infantry	1	39	8	
Ninth Infantry		23	9	
Tenth Infantry		26	8	
Eleventh Infantry	52	24	3	
Twelfth Infantry		8	6	
Thirteenth Infantry	1	23	6	
Fourteenth Infantry		23	13	
Fifteenth Infantry	3	16	7	
Sixteenth Infantry		14	8	
Seventeenth Infantry		16	11	
Eighteenth Infantry		13	4	
Nineteenth Infantry	21	19	10	
Twentieth Infantry		20	9	
Twenty-first Infantry		13	9	
Twenty-second Infantry		9	17	
Twenty-third Infantry	84	12	7	
Twenty-fourth Infantry		40	1	
Twenty-fifth Infantry	4	32	2	
Detachments:				
West Point	21	35		
Military Prison	1	17	1	
Light Artillery Battalion	20			
General non-commissioned staff		88		
General recruiting service	2,665	429	38	
Mounted recruiting service	1,704	143	35	
Departmental recruiting service:				
California	154	60		
Arizona	61	26		
Columbia	65	29		
Dakota	93	32		
Missouri	217	59		
Platte	170	60		
Texas	88	46		
	5,858	1,987	468	
Signal Corps	39	46		
Hospital Corps	4	79	5	158
Total	5,901	2,112	473	158

RECAPITULATION.

	Army proper.	Signal Corps and Hospital Corps.
Enlisted	5,858	43
Re-enlisted	1,987	125
Gained from desertion	468	5
Joined Hospital Corps by transfer from line		158
Total	8,813	331

REPORT OF THE INSPECTOR-GENERAL OF THE ARMY.

WAR DEPARTMENT,
INSPECTOR-GENERAL'S OFFICE,
Washington, D. C., October 1, 1890.

SIR : The following report of the operations of the Inspector-General's Department since the last annual report is respectfully submitted for the information of the Secretary of War and the Major-General Commanding the Army :

It is as evident this year as last that the demands upon military attention are novel, pressing, constant, and increasing. Re-armament and reorganization, an improved recruiting system, new drill-books, a modified system of pay, better rations, closer scrutiny of expenditures, closer ties with the militia, better instruction at the schools and colleges, new strategic posts, broad plans for national defense, higher demands upon the officers, and practice with masses and in the field are numbered among the matters now receiving attention. The Army has never been more diligent nor more deserving the confidence of the country, nor more important to the future, than at this transition period when one year enforces changes as great as a century once caused. It is also evident from the special merit and high public services of its superior officers, their important commands, their deserving deeds, and as a matter of proper organization, and in order to promote subordination and efficiency, that the Army should now be commanded by a lieutenant-general.

It is so injurious to an army to know its arms are obsolete and inferior that the demand for something better than we have now is very earnest, and our citizens, but especially the militia, are not satisfied with feeling disarmed, and know they must pay with their lives for any lack of preparation when the next war comes. We never feel then any lack of men or money.

Perhaps it is a fair indication of the strong and united current of military thought, the earnest and successful administration of the War Department, and the just and enlightened consideration of Congress, that a score of improvements submitted hopefully in the last annual reports, are now permanently adopted among the wise and good things done for the Army, but especially for the enlisted men. The catalogue of bills that have become laws and of others still under consideration is very striking. There is no need to say, as all will recognize, how much we are indebted, too, to the Adjutant-General for his special labors in behalf of progress and improvement and the soldiers' comforts, nor need a list be given of these recent changes made by orders. An example or two will answer as the Army knows them, and others may not be sufficiently interested in its increased efficiency, comfort, and contentment to care for such a schedule. The first formal military order of the President, and about the first that Adjutant-General Kelton signed officially (General Orders, No. 50, Adjutant-General's Office, 1889), confined routine military work strictly to work days. It seems

marvelous now that the issuance of so just an order should have met with sturdy opposition. No claim is heard now that it has injured, but many assert it has improved, military discipline and harmony. Local authorities who fancied our soldiers were overworked can now arrange for one day of comparative rest and relaxation, knowing that every proper demand has been met and every duty has been done; and those who fancy that the company commander's inspection of all his men is one of the most effective military duties, can now make assurance doubly sure that all shall be inspected. There is nothing new imposed for Sunday, but much forbidden in the order. And it is evident this order has been accepted as a boon to many and has proven a benefit to the service.

Perhaps the full enforcement of the canteen order (General Orders No. 10, Adjutant-General's Office, 1889) has caused as much labor as any; but it too has reached the high tide of approval. Its success accompanied the addition by law of a pound of fresh vegetables to the ration. The act of June 16, 1890, seems almost a marvel of beneficial legislation, its benefits had been petitioned for so long and still seemed so remote. The men enjoy the change, but some may not appreciate it as fully as their company commanders, who were struggling to procure for them, the kind and quantity of food that is theirs now as a matter of course. And now the army is well fed as far as the cooks are capable, and will continue well and fully fed as long as none of this money is diverted away from the purchase of food. So the Army has fair cause to remember how some comforts came to it in the '90's.

The post school order (General Orders, No. 9, Adjutant-General's Office, 1889), is just beginning to have effect; and now gymnasias, riding halls, and drill-rooms are recognized at last as essentials for military instruction. So the preliminary instruction of the private soldier is assured; and the professional information of the commissioned officer is made certain by the act of October 2, 1890. But the proper instruction of our non-commissioned officers is not yet reached, indeed it is hardly attempted; though the admirable organization and results at Fort Monroe is a standing illustration of what very excellent work of this kind can be done at every post where the officers will devote themselves to the best possible instruction of their men. A change from the old methods produced admirable results at Fort Myer also. And the old methods pursued with broader aims, attained fine results at Fort Leavenworth. These will do for examples. As we need some 4,000 non-commissioned officers, and they are the back bone of our Army, it is evident this is not an unimportant matter. The evident weakness in the system of post school instruction is that no adequate and definite work is made the special duty of the commissioned officers connected with the schools, and there are no special officers at department headquarters to supervise this work, so a reputation may be made or marred by the results attained. By the special zeal of local officers some admirable results have been reached as at Angel Island.

But, of course, the best non-commissioned officers can only be obtained by having the best attainable material to select them from, so they can profit fully from every opportunity offered them to learn the profession of arms. Men do not enter the Army on a competitive examination except through West Point. Heretofore the private soldier was only asked to have some mind and an absolutely perfect body. Now, careful inquiry has been instituted into his average moral standing as a civilian. Only a small per cent. of the applicants were accepted on purely physical tests. Now that none but true men are admitted at all

into our Army, the rejections are growing beyond all proportions ever known before. And desertions show signs of diminishing, too. With every elevation of the standard of admission, rejections must increase. Only those who assert soldiers are mere food for gun-powder can think bodies alone are required for them. But are we not ready to expect an Army thoroughly informed throughout every grade and trained to meet every incident and emergency of war from the lowest to the highest? To be a fair representative of our country we need such an Army, and such an Army America would be justly proud of. Every effort to elevate our Army into a fairly representative one seems commendable. Its *personnel* deserves now the highest commendation for its wonderful readiness and capacity for all the demands of service in front of an enemy. And it has been submitted that the best method of producing, if possible, a still better trained Army in our country is to adopt the method which experience in every other walk of life has proved necessary, viz, take boys and train them for the purpose. Then time enough, say two years, will be given to train each individual, and only those will come out of the apprentice battalion into the other companies who are capable of reaping every reward and performing the highest duties of whatever grade they may attain in our military service. Such a preliminary training and early start will give the men in the ranks a fairer chance in the race of life where some are now handicapped by age.

Apprentice Battalions. In my last annual report a brief allusion was made to the subject of the advisability of establishing an apprentice battalion system in connection with the Army. This matter has been very thoroughly discussed by Army officers and the verdict rendered by these authorities is that the system is not only feasible and advisable, but an actual necessity; being a plan which is presented not as an experiment, but as one which has been thoroughly tested and heartily approved in the Navy.

The advantages of the apprentice battalion to the youths of the country will be great. The proposition is to enlist lads not younger than sixteen nor older than eighteen years and give them a course of military instruction, as well as the rudiments of an English education; and at the end of their term of enlistment of three to five years they may either enter regularly into the Army or go back to the walks of civic life. It is presumed that worthy youths will flock eagerly into the ranks of the apprentice battalion, affording, as it will, not only a free education, but profitable employment at exactly the age when lads begin to cast about for means of maintaining themselves, and promising them a career of usefulness and honor. Even if they should not enlist regularly in the Army, the instruction and military training which they will receive in the apprentice battalion will certainly be of great benefit to them in whatever business they may pursue in civil life.

It is not, in the main, so much a matter of importance that the military apprentice shall enter the regular Army at the close of his apprenticeship, as that the country should have distributed throughout the mass of its citizens a certain per cent. of trained and educated soldiers, ready and willing to rally to the defense of their native land whenever occasion might require them to do so. Surely the little leaven of such a contingent scattered over the country might safely be depended upon to leaven the whole of our arms-bearing population when wars come,—as come they inevitably must. In times of war model non-commissioned officers are invaluable. We possibly may not expect to have enough of these in the first days of war, but the apprentice battalion

would give us at least a few. And nowadays, when it seems wars are half fought before they are formally declared, no time will be given us to train officers. And if all Americans are born generals, still some training will not injure them.

The benefits of the apprentice battalion would prove as great to the army as to the country, and to the young men themselves. Unfortunately, as matters now stand, the Army has acquired a reputation among a certain set which deserves correction. Consequently, it is sometimes a matter of difficulty to fill the ranks with the class of men best fitted and most desirable for the position. It need hardly be said that the apprentice battalion, once adopted and recruited solely from youths presenting certificates of good character, will effectually obviate this difficulty. If Congressional districts are ready to furnish ten such lads immediately to serve their country, then no doubt will be allowed to remain that the army is composed of men above the average mental, moral, and physical capacity. While it may be anticipated that a great majority of the young men would retire to civil life at the expiration of their military apprenticeship, still it may be safely calculated that about 25 per cent. of them would remain in the Army through more than one enlistment. Coming, as they will, from our native population, these young soldiers, few in number though they might be, would tend by their presence and influence to Americanize the Army and elevate its general tone. Pray let it be tried. There are more than enough vacancies now in the Army for all the apprentices needed for this experiment.

The Gordon Boys' Home, at West End, Cobham, England, gives a quite recent illustration of the practical workings of a battalion of boys, about 60 per cent. of whom enter the army.

An act of Congress is not really necessary for the organization of apprentice battalions, since the law already authorizes the enlistment of minors. But an act of Congress authorizing apprentice battalions over and above the present small force of the Army would certainly be desirable. These battalions need not at first be numerous or comprise any large number of boys, but they might be enlarged as experience and practicability admit; and the pay of the apprentices should perhaps be upon a smaller scale than that of the adult soldiers. These details may be settled later. The main idea is to get the plan once into vogue, and then to perfect it as may appear most practicable and feasible.

An indication of what is thought in the Army on this subject will be found in Appendix "A" (the letters on apprentice battalions), and the present status of post schools is indicated by the extracts from the reports of officers of this department serving in the East and West, which are printed herein under their appropriate heads.

Recruiting. The subject of recruiting has received more than ordinary attention during the past year, and while the experiments have not yet been tried long enough for absolute decisions, it is evident that something better and cheaper than the old system, both of recruiting and of instructing recruits, should be sought till found. The best, perhaps the only wise place to enlist soldiers habitually is at their own home, with the full knowledge of their kith and kin, as must be done in war. Under the modern and civilized methods of recruiting, an army illustrates somewhat the character and qualities of the nation at large. In the first flush of our last war we resorted instinctively to regimental recruiting and localized regiments, which promises the greatest ultimate economy and efficiency as well as the greatest promptness, and this is an essential element in war now,

Our recent system perhaps represents the opposite extreme. And though it may prove very difficult to free ourselves from it, its essential character has been fully illustrated; and the many experienced soldiers now in every legislative and administrative position know how it would have worked to have had every regiment in the last war organized from promiscuous gatherings of unknown men from distant regions, as all our regiments are filled up now.

The connection between our most expensive military crime, desertion, and our old system of recruiting may not need demonstration; it is what might be expected when many men whose parents or former surroundings are unknown, are enlisted in the cities and forced into the most intimate association, so either the good or bad must go.

The duties of the average soldier in peace may be about as hard as those of the average laboring man. Their physique is most perfect and their endurance and courage are sometimes tested to the utmost even in our times of so-called peace. Soldiering is a trade in which combination is the essential element of success. All recognize how superior a properly disciplined company of one or two hundred soldiers is, for the purposes for which it was organized, to the same number of unorganized men of equal qualities. So it is wise to have them assimilate and become good comrades quickly, and not make the elements as discordant as possible. The company organization is the home of the soldier and is the proper place to train as well as fight him. He may find fighting and training often elsewhere, but there it should be the regular business.

Organization is one of the first distinctions of soldiers. So it is not surprising that during the past year those found at all unsatisfactory in affairs affecting the personnel were men without permanent legal organization, such as the prisoners at several places, the recruits at a depot, and the so-called "artillery" detachment recently abolished by the act of June 20, 1890. The contrast is illustrated perhaps by the difference between the content and comfort of the men confined in the prison at Fort Leavenworth, Kans., and elsewhere. The prison is legally established and most carefully supervised, with a large garden and with thousands of dollars accrued in the mess fund, and the men are employed at instructive work, with comforts so marked as to have become proverbial, and the command of it is recognized as a desirable detail; while at Alcatraz, the prisoners breathed vitiated air when locked up, did their work in most uncomfortable gangs, and were limited to the Army ration, which was found so inadequate that every local authority successively reported they were habitually hungry, and, with the certainty of punishment, some of the prisoners at last struck work rather than work so insufficiently fed. This has received remedial action.

There are always a good many persons who fancy desertions can be limited by imposing more severe punishment on the few that are caught, disregarding such continuous experiments as this, where practically the punishment has been decidedly more severe on the Pacific coast, and yet the per centum of desertion has been comparatively high.

The best remedy for desertion is to make it impracticable and undesirable. Proper and well-known recruits will not desire to desert under ordinary circumstances. An undesirable recruit can be discharged as he would be in any other employment. But should the service be given vicious men and vicious horses we would expect expensive trouble with them. Desertion is said to waste something like a couple of hundred thousand dollars per annum, or \$20,000,000 in the past hundred

years. No one believes it is a good thing. The problem is how to fill the Army from the first with well known and desirable recruits, without the weeding-out process of desertions and discharge.

Our Army deserves to be held in high esteem, and the regiments are held in kindly esteem and admiration where they are known, especially by the classes of the people who have a taste for military affairs. And two methods to acquaint our people always with the commendable character of our veteran soldiers have been proposed; one, to localize certain régiments under the very best recruiting officers, so in the course of years the character of the recruits will necessarily be known at their own homes when they start to enlist and within the regiments when they arrive and no incorrigibles can be admitted; and the other is to establish a battalion of apprentices raised so as to represent the whole country and assigned after thorough training to certain designated permanent organizations until the type dominates and is thoroughly established in the service. Both plans have some merits and may meet great discouragements. But we all see that a regiment of trained *élèves* from such an apprentice system will have qualities any army should desire. And regiments of such a thoroughly trained *personnel* would be of inestimable advantage as models to our National Guard. Such well selected and thoroughly trained recruits are of special importance in the mounted service; and perhaps most necessary in the light artillery, which has suffered particularly from former methods of recruiting and assignment. Surely our people can be brought to know and appreciate the Army from its best representatives as generally as such evil spirits as Dell Wild are known and talked of now.

SUPPLY DEPARTMENTS.

Our System of Purchases. Some departments are almost confined to a long advertisement before purchasing, though another is given more latitude.

The price of many standard articles is fixed by an agreement between the principal dealers; and the public advertisement of Government wants only compels it to pay the highest quotable price. For then whatever firm gives a cut-rate or rebate will be discovered and made to suffer. Two disbursing officers needing the same article have purchased it in the same market and at very different rates—one under private bargaining, the other under public advertisement. Our people can have no particular desire to enrich contractors unjustly; but the rigid contract system under public advertisement is often found of service to the contractor rather than to the Government. The purchasing power of public money would be improved if some opportunity were given our officers to establish a reputation as close and skillful buyers.

It is believed that no public or private business has a body of agents more deserving of full trust and confidence or subjected to better expert supervision than the nation has in its military disbursing officers. So it is wise to allow a latitude in the method of making these purchases whenever the disbursing officer can certify that some other method is more economical and for the best interests of the public service and his chief of bureau or the Secretary of War can approve this course.

Supplies. There occasionally seems to be a difference between the quality of the articles furnished for the immediate use of the soldier and those more remotely connected with him. The food, clothing, weapons, etc., are generally of admirable material.

SUBSISTENCE.

The lists of articles designated by the Inspectors-General of the Army May 26, 1890, under section 1144, Revised Statutes, to be kept for sale by the Subsistence Department, are shown in Appendix C. By General Orders No. 73, Adjutant-General's Office, 1890, the unnecessary restrictions were removed from the sale of these articles to the enlisted men.

Lieut. Col. G. H. Burton states :

The supply departments generally have been efficiently administered in the departments of this division.

Maj. J. P. Sanger states :

The new list of subsistence stores and the new rules in respect to their sale to officers and enlisted men have given much satisfaction.

Maj. E. B. Beaumont states :

It is recommended that certain perishable stores be furnished in smaller quantities, and at shorter intervals. * * * Congress bestowed a generous gift when it gave the vegetable ration, and would, no doubt, willingly remove any obstacle to its prompt and economical delivery to the troops.

Lieut. Col. W. F. Drum states :

The recent addition to the list of articles kept for sale in the subsistence department will greatly improve the messing of troops at frontier posts. The company messing has been reported better this year than heretofore, owing largely to the money received from the canteens. Vegetables have too recently been added to the ration to note the effect in company messes. It might in the future be well to leave the making of gardens discretionary with post commanders,

Col. R. P. Hughes states :

It is noticed that in the late exchanging of stations of various regiments that our enlisted men were permitted to cross the continent without being provided, by the subsistence department, with a single warm meal from the date of their leaving their barracks at Fort Hamilton, N. Y., until their arrival at their new station at Fort Canby, at the mouth of the Columbia, or San Francisco, Cal. Living on cold corned meat and hard tack, with an occasional hot cup of coffee, for six or eight days is not conducive to health, and by taking timely precautions there is no real reason for not giving troops "in transit" at least one good warm meal each day while en route.

Lieut. Col. R. H. Hall states :

Baking of Bread. I have the honor to recommend that the baking of bread at army posts be placed in charge of the subsistence department, which should be authorized to employ civilian bakers. Under the present system, it is pure luck if there is found in the garrison a man competent to serve as baker, and it results that the bread is not infrequently unfit for food. It would be more economical and more satisfactory to the individuals immediately concerned if the preparation of the bread ration were intrusted to the subsistence department.

Lieut. Col. W. F. Drum states :

Gardens. At the posts inspected this season some of the gardens have been poor and at others almost total failures.

Maj. J. P. Sanger states :

The system of post gardens established last year does not give satisfaction, or result generally in as good gardens as the one formerly in vogue, under which each company could, if it so desired, have its own garden. I believe a return to that plan would result beneficially to the garrisons.

Statement from the several Departments showing area under cultivation, domestic animals kept, value of product, etc., at posts in the various military departments.

Departments.	Number of posts having gardens.	Acres under cultivation.			
		Total in department.	Greatest at any one post.	Smallest at any one post.	Average per post.
East	19	84,645	10.00	0.125	4.455*
Missouri.....	12	233,000	47.00	2.000	19.417
Dakota.....	18	534,499	75.00	4.000	29.694
California.....	4	35,480	14.00	4.030	8.870
Arizona.....	16	105,487	23.75	0.200	2.029
Texas.....	6	29,125	9.00	3.000	4.864
Platte.....	11	212,110	33.00	3.500	19.280
Columbia†.....					
Approximate total	86	1,234,326	75.00	0.125	14.353

Departments.	Domestic animals kept.					No. of—		
	Horses.	Cows and bulls.	Goats.	Hogs or pigs.	Calves.	Fowl.	Men engaged.	Animals engaged.
East	1	12	.....	29	1	.....	56	25
Missouri.....	.....	34	.....	354	3	.....	93	82
Dakota.....	.....	64	.....	579	2	.....	132	.....
California.....	.....	12	.....	43	.....	82	15	12
Arizona.....	.....	18	4	589	.....	34	80	58
Texas.....	.....	4	.....	57	.....	.....	19	11
Platte.....	.....	.....	.....	.....	.....	.....	74	90
Columbia†.....	.....	.....	.....	.....	.....	.....	.....	.....
Approximate total	1	144	4	1,651	6	116	469	273

Departments.	Result.			Average gain per post.
	Cost.	Value of product.	Gain.	
East	\$1,111.40	*\$3,852.97	*\$3,119.33	\$164.17
Missouri.....	1,795.02	9,776.05	7,981.03	665.09
Dakota.....	2,963.11	24,785.94	21,822.83	1,212.38
California.....	153.81	2,004.60	1,850.79	462.70
Arizona.....	1,829.65	13,338.67	11,509.02	719.31
Texas.....	350.73	3,683.36	3,332.63	555.44
Platte.....	1,945.88	14,190.45	12,244.62	1,113.15
Columbia†.....	.....	.....	.....	.....
Approximate total	10,149.55	71,632.04	61,880.25	719.31

* Records incomplete.

† A full report not received.

The regiment of men engaged in this gardening costs the Government more than the amount gained.

QUARTERMASTER.

Col. R. P. Hughes states:

Public Buildings. I desire to renew my recommendation of last year in regard to ameliorating the condition of certain artillery troops that are quartered in casemates. * * *

As a Christian nation, and as a humane people, we owe it to ourselves to do away

with the thoughtless cruelty that is being practiced on the officers and men who are compelled to accept this sort of shelter.

If the Congressional committees of "Ways and Means" and of "Appropriations" could be prevailed upon to visit these casemates on a hot day in mid-summer they would certainly find no insurmountable difficulty in providing the funds and in appropriating them to the securing of proper sites and the erection of good sanitary barracks thereon for these troops. To enter these dark, damp, cellar-like quarters on a hot day in summer and find yourself confronted by a large base-burner coal-stove in full operation gives you both a mental and physical shock. The nation's most vicious criminals are provided with better quarters than are given these officers and men of the Army.

In connection with the subject of "new structures" it might be apropos for me to say a word on army architecture. The number of complaints of want of good planning, or of good workmanship, that are poured into the attentive and receptive ear of a busy inspector, in the course of a year, is something startling. The worst of the thing is that there is entirely too much foundation for very many of these complaints. In addition there can be no doubt that the Government suffers very much through want of some system in this matter.

Maj. E. B. Beaumont states:

Furniture for Officers. Plain, substantial furniture for officers' quarters should be supplied by the Quartermaster's Department.

Maj. J. P. Sanger states:

The character of the public buildings is gradually undergoing a beneficial change. The old-time barracks and quarters are being replaced by substantial structures of brick and stone arranged with a view to promote the comfort of those who occupy them. I believe it would be a good plan to construct all the new quarters on practically the same plan, and so that the household effects found sufficient for one set of quarters may be equally so for another of the same kind.

Col. R. P. Hughes states:

Quarters for Married Soldiers and Children. Under paragraph 914, Army Regulations, 1889, we may attribute the enlistment and re-enlistment of married soldiers to the Adjutant-General's Department. After having been an observer for years of the way this class of people are quartered and live at and about military posts, I have convinced myself that the subject demands more active attention. Overcrowded sheds and shanties, damp casemates, and in many cases insufficient and non-nutritious food is the unenviable lot of many army children. The location and sanitation of the quarters occupied by many of these people are such that their children must necessarily absorb the seeds of disease and physical weakness from the very atmosphere they breathe.

As a matter of humanity, and as a duty to the nation, the possibility of rearing children in this way should be discouraged as far as possible.

Col. R. P. Hughes states:

Fuel. Compelling officers to buy the fuel to heat Government buildings is not a satisfactory way of doing business. If officers were permitted to erect their own houses some care and attention would be devoted to the means of heating. As it now is, the Quartermaster's Department sets up a shell and lets the occupant look out for his own comfort. Aside from this unfairness the accidents of the service are permitted to play too great a part in an officer's expenses. I have seen, in inspecting quartermaster's accounts in the Department of Dakota, a bill of \$60 paid by one officer for fuel for one month. Now, the officers in the Southern section of our great country would probably pay less than \$10 per month.

Lieut. Col. W. F. Drum states:

Lamps. New lamps have been issued by the Quartermaster's Department for trial; those seen by the inspector are much more satisfactory than the old-pattern lamp.

Maj. E. B. Beaumont states:

Beds. It is recommended that the practice of rolling or folding mattresses be discontinued, as the cotton breaks and forms in hard wads. The mattress spread down is a great protection to the wire.

Lieut. Col. G. H. Burton states:

Public Animals. The present system of purchase of public animals is not satisfactory.

This subject having been specially referred to Lieut. Col. H. W. Lawton, he reports as follows :

The opinions of officers differ so widely as to the description of a desirable cavalry horse and the best method of securing them, that it is impossible to state the views of a majority. The prejudice against the half-breed, or Pacific States, horse is very strong. It is held that regardless of the amount of breaking (training) that may be given them, there is still an inbred strain of viciousness that will crop out from time to time, which renders them unsafe and unreliable. While the horses from the Middle States, or Mississippi Valley, are more satisfactory as to temper, there is a great complaint of heavy-limbed, straight-shouldered clumsiness, and in most horses of over six and seven years stiffness or some other imperfection is soon developed. The idea is that in the Eastern and Middle States the demand for saddle-horses is decreasing, and that for draft horses increasing; therefore breeders, conforming to the demands, are using the heavy Norman stallion, producing a tractable animal, but a conformation which is unsuitable for saddle purposes, and further, that colts are now put to work at three years of age instead of five as formerly, and that, having been used for draft purposes for three or four years during the period of development, a change to the saddle can not then be satisfactorily or successfully made. The animal develops unsoundness, or if he escapes this, is a clumsy brute at best. The Western horse is more satisfactory as to breeding, but as his training does not begin until he is four or five years old, his wild and vicious habits are too firmly fixed to be cured. That the breeding of saddle-horses is yearly decreasing there is no doubt, and that the picking up here and there of a horse that can be made to serve the immediate purposes of the service does not sufficiently encourage this industry to assure even the preservation of the stock. While we may continue to supply limited demands for cavalry horses in the future in this makeshift way of the present, a time will come when the service will require a larger number of this class of horses, and the street cars, hacks, and farm wagons will have to be robbed to supply the troopers. Various methods have been suggested to insure to the service a suitably bred, properly trained horse. Among them, the establishment of breeding farms. This would seem hardly necessary or possible in a country like ours, where horse-breeding is one of the leading industries, and where more and better horses are bred than in any other country in the world. I believe that to establish one or more permanent depots at suitable points where it may be known that a certain number of suitably bred colts will be annually purchased by the United States, and where these colts shall be matured, broken, and trained, will encourage the breeding in their vicinity a sufficient number of animals at reasonable prices. The advantages of such a plan to the service is apparent. The trooper will no longer have to depend upon the awkward plow-horse or unbroken colt, but may be supplied with a trained saddle-horse. Such a plan, well conducted, under the direction of suitable men, should not only give the cavalry a superior horse, but prove an economical reform.

Change of station in our great country is one of the most trying experiences of our officers. Such moves are made at the will of the Government, and all reasonable expenses should be met by it. That favored officers get concessions may not be an actual economy or desirable arrangement for the Government. Equal and necessary privileges to all is the just and wise policy.

The present allowance of baggage is ludicrously insufficient for the requirements of gentlemen, and Army officers are expected to be gentlemen; and there need be no lack of consideration for their families. Measuring the transportation allowance by the pound seems out of date when the average railroad cost per pound per mile in a long haul is something like thirty-three hundred thousandths of a cent (\$0.0000033), as it is less than a cent a ton per mile.

It is submitted that either by weight or measure a second lieutenant be allowed 2 tons; first lieutenant (as all have served five years at least), 4 tons; captain (they have generally served over twenty-five years), 6 tons; field officers, 8 tons; general officers, 10 tons; and the Government need not order any more officers around than it can afford to.

One Inspector-General remarks :

I have moved a car-load each time across the continent from the time I was a field officer, and the mere baggage transportation was but a small part of the necessary expenses of such moves, so the Government which caused all the expense can very justly bear this portion of it.

Clothing. The clothing allowed enlisted men is not always satisfactory to them in point of fit without alteration, involving a not inconsiderable expense that the soldier must bear. For instance, the following are the prices fixed by the post council at Fort Logan, Colo., "for making and altering soldiers' clothing: Making dress coat, \$5; blouse, not padded, \$2; blouse, padded, \$3; blouse, cloth, extra finish, \$5; overcoat, not padded, \$3; overcoat, padded, \$5; trousers, \$2; sewing on chevrons, \$0.25; stripes, \$0.50; half soling and heeling, \$1; half soling, \$0.75; heeling, \$0.30."

Lieut. Col. R. H. Hall states :

I invite attention to the insufficient allowance of certain articles of clothing issued to the men. One blouse for each year does not permit the soldier to be at all times presentable. It is therefore recommended that another blouse be allowed for each of the first two years of service. One blanket the first year and another the third year will not give the man proper covering even in this climate, and it is recommended that two blankets be issued in the first six months. In the cavalry service the allowance of Berlin gloves should be the same as for infantrymen, eight (8) pairs a year, instead of but four (4) pairs, as now. One pair of leather gauntlets should be issued each year to cavalrymen, instead of but three pairs in five years. A stable frock should be issued to each mounted man in the first, second, and fourth years of service, instead of only in the first and third years, as now prescribed.

PAY DEPARTMENT.

Smaller Deposits. Compelling the men to deposit at least \$5 seems to be bad policy, especially since the payments have become monthly and therefore in smaller sums. Having any deposit is found to encourage thrift and steady habits among the small depositors, and therefore the law should allow the paymaster to receive smaller sums.

Col. R. P. Hughes states :

Monthly Payments. The paymasters do not pay some of the garrisons of this inspection monthly. There does not seem to be any obstacle in the way of doing this, and I find that the troops wish it. If part of the command is thus paid, it would probably be good policy to pay all in the same way. It may not be necessary for a paymaster to go personally to all the small posts every month. Some of the payments might very easily be made by check after receipt of the pay-rolls at the office of the paymaster.

Col. E. M. Heyl states :

Per Diem for Officers Traveling. Compensation for officers traveling under orders, and while absent from their station on boards or courts-martial, at the rate of \$2.50 per diem, is urgently recommended.

Col. E. M. Heyl states :

Pay and Allowance of Quarters. It is now over twenty years since the law establishing the present rate of pay for the Army passed. Salaries in civil life have greatly increased since that time, and it is not unusual for presidents of railroads and superintendents of corporations to receive \$25,000 annually as a compensation for their services. The manager of a great brewing establishment in St. Louis receives a salary of \$50,000 per annum, and the manager of a well-known packing establishment in Chicago receives an annual compensation of \$25,000. The Commissioners for the World's Fair to be held in Chicago in 1893 have fixed the yearly salaries of the three principal officers as follows: President, \$12,000; secretary, \$10,000; director-general, \$15,000. From \$10,000 to \$12,000 is not considered an excessive salary in this city.

The pay of the Major-General Commanding the Army is \$7,500. Does this seem a just compensation for such a responsibility and command? Does the devotion of nearly forty years' service to the Government not entitle him to a salary at least as large as the head salesman of a dry-goods firm in this city? It is time that some change be made in the rate of pay and allowance of quarters. When the allowance of quarters was fixed, a log cabin with one room and a kitchen was a luxury; now the quarters are all that could be desired in the way of size, comfort, and convenience, but the *allowance* remains the same.

Col. R. P. Hughes states :

The allowance of quarters for officers of all grades, and especially for those of the lower grades, has been greatly increased in late years when quarters are furnished in kind, but there has been no change made in the old allowance of 1835 in so far as the number of rooms, at a fixed rate per room, for which the Government will commute quarters to officers not serving at military posts. Unfortunately, most of the detached officers are lieutenants who are only allowed, under the regulations, one room and a kitchen.

Lieut. Col. G. H. Burton states :

The commutation allowed by the Government does not cover the price of rent. Each grade in the Army should have at least two more rooms added to its allowance. This addition is recognized by every officer in the Army, it is demanded in the interest of justice as between regular and detached service, and it would be a direct response to the laws of sanitation as recognized in this period of progress.

MEDICAL DEPARTMENT.

Col. R. P. Hughes states :

This department is gradually working its corps of enlisted men into shape. My experience in inspecting the numerous hospital detachments in this division leads me to think that it is a mistake to send these men out to hospitals before being instructed. Scattering them about at over one hundred posts, where they must be instructed in twos and threes by as many different medical officers, looks very much like multiplying labor. If they were, when newly joined, sent to some general center or designated places, where one or two young medical officers, specially suited for the work, were assigned to put them through a regular and very thorough course of instruction, and from which school they must go out either with a certificate of proficiency or back to some company, I think it would be a great economy in labor and give much better results.

The transferring of men to the corps who have only half a term to serve leads to continual inefficiency and a Sisyphus-like task in instructing. I do not think any man should be accepted in the corps who has less than between three and four years still to serve.

Maj. E. B. Beaumont states :

The kitchens should have hoods over ranges.

ORDNANCE DEPARTMENT.

Lieut. Col. W. F. Drum states :

While some parts of the cavalry equipments are found fault with they are as a rule regarded as satisfactory. Dissatisfaction is still expressed in regard to the blanket bag, and the recommendation is respectfully repeated that those regiments whose commanders have asked for the "Merriam pack" be supplied with them.

Maj. E. B. Beaumont states :

The blanket bags furnished are not suitable for marching. The straps pinch the arms, shoulders, and hurt the soldier in the small of the back. The roll over the shoulders is preferable, as it can be shifted from shoulder to shoulder. This was thoroughly tested by Capt. F. D. Baldwin, Fifth Infantry.

Col. R. P. Hughes states :

Of the seventy-five organizations in this division there are but two of them that can be considered as supplied with the weapons and equipments of the period. * * *
The heavy artillery is entirely without modern guns.

* * * * *

Rapid-Firing Guns. So far as my information goes our Ordnance Department has not as yet made any experiments in the direction of rapid-firing guns of field and siege calibers—guns so designed as to accommodate metallic cartridges. While personally I should very much like to see some of these guns exploited by our field artillery, I would be quite content to compromise on supplying some rapid-firing guns to foot batteries for experiment and study. The purchasing of one battery of four guns—batteries of different calibers—for each of our regiments of artillery, or seven batteries (twenty-eight guns) would not be an extravagance on the part of the Government, and such a purchase would add very much to the educational library of our artillery. Such an expenditure could scarcely prove a useless one, for these guns are certain to find a place in the armaments of our sea-coast defenses, and the propellant, whatever it may finally be, will certainly lose nothing in means of preservation by being inclosed in water and air-tight cases.

* * * * *

Contracts for Supplies. In the examination of the disbursements made at the ordnance establishments in this inspection, I find two separate accounts—contract, etc., for ordnance and another for quartermaster's supplies. I also find a difference between the rates paid in the different contracts. The difference in rates does not amount to enough to attract attention, but the difference in multiplication of accounts, of advertisements, of clerical labor, etc., makes the matter of sufficient importance to entitle it to consideration.

Inventory and Inspection Reports. Inspections of property, etc., in four departments during the year are given as follows:

Department.	Number of inventory and inspection reports.									
	Quartermaster's stores.	Public animals.	Clothing, camp and garrison equipage.	Ordnance and ordnance stores.	Subsistence stores and property.	Medical property.	Miscellaneous.	Number made by Department inspectors.	Number made by special inspectors.	Total.
Arizona	216	84	156	184	85	36	8	139	546	685
Dakota	101	42	194	187	67	26	5	.....	.....	622
Missouri .....	.....	.....	.....	.....	.....	.....	.....	101	418	519
California .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	108

Maj. J. P. Sanger says :

Five hundred and nineteen sets received, 45, or about 9 per cent. of which were returned for correction. The total cost price of the articles, as far as known, amounted to \$38,953.49. Each inventory is referred to this office prior to, and the inventory and inspection report after, inspection.

Col. E. M. Heyl says :

Nine thousand six hundred and ninety-six articles were presented to me for condemnation; of these 8,766 were recommended to be sold, 7 to be issued to military convicts, 911 condemned as worthless and destroyed, and 12 to be repaired.

Lieut. Col. R. H. Hall says :

Four hundred proceedings of boards of survey were examined, recorded, and filed in this office from July 1, 1869, till the 20th instant.

CANTEENS.

Maj. S. S. Sumner states :

The canteens established at the several posts have proved a success financially, and are conducive to discipline. The profits are considerable, notwithstanding the low prices charged, and the distribution of the surplus to the companies adds materially to the company funds; with the liberal ration as now allowed, including fresh vegetables, the companies are certainly well provided for.

PERSONNEL.

Lieut. Col. G. H. Burton states :

Officers. The officers throughout this division, with hardly an exception, are temperate, more or less progressive, and assiduous in the performance of their duties. There is constantly observed an awakening sense among the commissioned force toward study and advancement in their profession. The schools of application, together with the organizations pertaining to the military service institute and the cavalry association, have contributed in a great degree to this desirable state of reform.

With reference to the artillery posts on the coast it is observed that the most complete instruction exists at the large post of the Presidio. The cause is not obscure. Under the stimulus of pride and a magnified command the commanding officer of that post has persisted until he has obtained all the appliances for mechanical maneuvers and the most recent ordnance that we have in the service. This material is so limited that it can not be supplied to all the smaller posts, and even if it were, the details demanded to administer the affairs of the posts absorb so much of the personnel that few men are left for instruction. To obviate this defect in a manner it is suggested that companies from the outlying posts be frequently withdrawn or exchanged with the best instructed organizations at the Presidio. Again, in regard to the instruction of the artillery troops, less stress should be laid on the theory and practice of small-arms drill, and the labor bestowed should be almost wholly in making the troops familiar with their own ordnance.

This same remark applies in a lesser degree to the cavalry arm. The horse and rider in some instances in this corps are often lost sight of in the pride of parades and drills on foot to the sacrifice of good horsemanship gained only by making the man a part of his horse. The cow-driver of the plains becomes a perfect horseman by constant riding and persistent care of his animal, and more especially by rapid gaits over a variety of earth surface. The general exercise of the cavalry is at slow pace, consuming during drill season about one and one-half hours per day. This is not sufficient work to keep the horses in good form, nor sufficiently rapid for instruction in the art of riding. The end sought is best gained by what may be termed irregular riding, viz, leaping ditches, hurdles, etc., cutting heads at a gallop and run, and target practice mounted. These exercises are practiced but by a small per cent. of the mounted men in this division.

Maj. J. P. Sanger states :

The character and occupation of our officers, as far as my observation goes, remain about the same, although considerable interest in military studies was awakened in this department by the camp of instruction last fall.

Lieut. Col. W. F. Drum states :

Officers have performed their duties faithfully and well, and take much interest in the improvement of their commands.

Col. E. M. Heyl states :

Officers' Records. I would recommend that a complete record of all officers be kept in the Army Register, showing the battles participated in, also wounds received in action.

* * * * *

Lieutenants as Assistants to Engineer Officers. It is recommended that lieutenants, either of the line or Engineer Corps, be detailed for the purpose of assisting Engineer Officers in charge of large works or improvements in making monthly payments to employes and supervising time books; also to keep a record of the amount of material expended in the construction of works, etc. * * * It can easily be seen how a dishonest assistant can carry fictitious names on a roll and receive the pay of same without the possibility of detection under the present system.

Maj. S. S. Sumner states :

Equipment of Mounted Officers. I would respectfully call attention to the incomplete horse equipment for mounted officers, and recommend that some definite regulation be adopted so that all officers could be properly uniformed on mounted duty. At present some officers use the Whitman saddle, while others have the McClellan; some have rounded leather bridles with double reins, others use the bridle provided for enlisted men; some use the breast strap, others do not; and these various equipments pieced out with the cheap saddle cloth provided are hardly in keeping with the full-dress uniform.

Lieut. Col. W. F. Drum states :

Instruction. Officers and men are generally well instructed, and at many posts much interest has been taken in the officers' and non-commissioned schools.

Maj. E. B. Beaumont states :

Practice Marches. Practice marches should be encouraged, as they result in practical instruction to the troops, a thorough knowledge of the country, and take the place of experience in actual war. Suitable seasons should be selected to avoid extremes of heat and cold. Field operations of this character would demonstrate the fitness of officers for command, and establish their physical capacity to endure marches and exposure. Officers incapacitated mentally or physically would be detached or retired, and the service benefited by healthy promotion.

The conditions of discipline, drill, target practice, and post administration are generally satisfactory.

Maj. J. P. Sanger states :

Establishment of Camp of Instruction. The most important military events of the past year were the establishment of the camp of instruction (Camp Schofield) at Chillicothe, in the Cherokee strip, and the orders for the abandonment of Forts Crawford, Gibson, Elliott, and Little Rock Barracks, now in process of execution.

Camp Schofield fulfilled, and even exceeded, all that was expected of it by the most hopeful. The course of instruction was carefully prepared in advance, and was thoroughly adapted to the topographical features of the country and to the character of the troops which were to take part in the maneuvers. It was announced as a rule that no time would be occupied in giving instruction which could be given in garrison, but that the attention of all would be directed to the execution of the work in hand. The maneuvers were preceded by careful instruction in modern formations of attack and defense, the duties of advanced and rear guards, patrols, and reconnaissance parties, and the escort of convoys. This was followed by problems of attack and defense, which were skillfully planned and never allowed to assume for a moment the character of what are known as sham battles. All the operations and instruction of the camp were supervised, in person, by the department commander, General W. Merritt, who aroused in his subordinates of all degrees the interest and activity displayed by himself and the desire to make the experiment worthy of the efforts of professional soldiers. That it was so no one will question who had the good fortune to take part.

Col. R. P. Hughes states :

Tactics. The drill is simply parade work, which of course is a very excellent disciplinary measure and fits the men for prompt and silent obedience to commands. But unfortunately parade-ground drill does not qualify the officers and non-commissioned officers for the work expected of them when they come in contact with a vigilant enemy. * * *

The company officers do not seek to do anything of their own motion. They must be entirely passive and do what is ordered, although they would have no such close surveillance in action.

Target Practice. For some years I have been carefully watching the effect on the men of so much and such continuous firing at fixed targets at known distances. Two years ago I became convinced that we would overdo the thing in that direction, and I then began to make some experiments at such posts as conditions would permit. I convinced myself that we would do better service for the Government if we did not continue the firing at fixed targets to the extent we now allow, but give practice in firing under service conditions after the man had been educated in firing at fixed targets to the full extent of his capacity. By trying the men at firing in rough ground and in timber it was discovered that they had little or no appreciation of the advantages to be derived from local conditions and accidents. They endeavored to apply the routine methods that they had been taught on the well smoothed and well mown target range. Seeing how unready the men were for actual work in these experiments, I determined to continue them, and acting on the principle that a complete course in firing should instruct the men in the application of their weapons in defense—which ours does not—as well as in an attack (in all our unknown distance firing it is the firer that moves and never his target), I undertook to ascertain how efficiently this firing at fixed targets qualified our men for firing at moving objects. The only two posts where I have been able to carry this experiment into execution, without endangering the lives of men and animals, were Forts Mackinac and Niagara. When I visited those two garrisons in July, ultimo, I went carefully over the firing records of the different companies and

selected for this experimental firing men who had been either marksmen or sharpshooters for many years, from four to eight years, but had not been in the habit of hunting. I selected six men in this way from each of the companies serving at Mackinac, and had them fire at an "F" target, kneeling silhouette figure, hung on a taut wire, and moved across in front of the men firing. The firing stand was 185 yards distant and each man fired ten shots. Twenty-three of the one hundred and twenty shots fired hit the target.

As a sequence to this, two men, one man from each of the two companies, who had been in the habit of hunting, and consequently of firing at moving targets, were allowed to fire twenty shots each under similar conditions, and one of these men made eighteen hits out of his twenty shots, while the other made ten. In one case the hits were less than 20 per cent., while in the other they were 70.

The firing at Fort Niagara was done by fifteen selected shots. The target was the same and mounted and manipulated in a similar manner, the distance being 175 yards. There were one hundred and seventy shots fired and fifteen hits, or a little over 8 per cent.

These experiments were made to secure indisputable evidence that our target system was not accomplishing all that it ought, nor all that is thought to be possible. The first defect in the man's education in this respect that made its appearance was in the nature of unreadiness. The target would be permitted to run the whole length of the wire, 200 feet, before the man would get his gun pointed to suit him, or at least before he had made up his mind to fire. Now, that is about the distance that the sudden rushes in modern attacks are supposed to cover, and the soldier who would let an enemy make a rush within 180 yards of him without getting in one shot at him must certainly be considered defective in instruction. The next difficulty seemed to be to get a fairly correct idea of the rate at which the target was moving. Some men would overestimate its velocity and strike in front of it, while others would underestimate its speed, and consequently would shoot in rear of it. Then there were others, and they were largely in the majority, who had no idea of how far in front of the moving target they should hold in order to hit it. The new factor, the velocity of the target, is one that will require practice to master. I would, therefore, recommend that a new class be created in the order of target firing, and that this class contain all those enlisted men who have attained and maintained the status of "marksmen" or "sharpshooters" for three years, or that of "first-class men" for four years; that this class apply the ammunition now allotted to them for firing at fixed targets at known distances in firing at moving targets at unknown distances.

I would recommend that a distinctive badge be given to all such men as may attain such a degree of expertness in firing at moving targets as may be determined upon by proper authority.

That such instruction would add to the efficiency of the men does not appear to admit of question; that it interests and entertains the men I know by actual observation.

In inspecting the condition and degree of instruction given the sergeants of infantry in the use of the revolving pistol, I have found such defectiveness that there seems to me to be but one sure way of curing it; that is, to make the pistol target practice of infantry sergeants a factor entering into the general figure of merit or standing of the company. This will secure some effort in this direction, and in time the sergeants may acquire some interest in being able to use this weapon skillfully. As things are now it is rather risky to be about when these weapons are charged and drawn for target practice.

Maj. S. S. Sumner states:

The following table gives the classification and figures of merit in the target practice in this Department for the two years past.

	1889.	1890.		1889.	1890.
Sharpshooters	188	211	Individual figure of merit	91.35	97.54
Marksmen	380	409	Collective firings:		
First class	186	216	Skirmish	38.59	37.07
Second class	162	129	Volley	38.87	48.55
Third class	83	54	Collective figure of merit	38.73	42.81
Present but not firing	13	11	General figure of merit	65.04	75.18
Total classified	1,012	1,030			

Col. R. P. Hughes states:

Artillery Firing Practice. None of the field batteries of artillery are provided with a range for practice firing. They have been able to get some practice in firing at Mount Gretna, Pa., whither they have been marching each year since I assumed the duties of this office. The accidents of *terrain* are such at that place that very little has been done in the way of exercising batteries in combination in the best ways of approaching designated locations; in the most approved methods of coming into position; in the practical method of getting the range with correctness and expedition with both fixed and moving targets; in the disposition to be made of the teams while in action, etc. All these things should be practiced, and if it can not be accomplished at Mount Gretna, I am disposed to think that some location should be found where these batteries could be grouped and instructed in all these things in connection with their annual firing practice and summer practice marches.

The foot artillery conducts its target practice under the provisions of General Order 108, series of 1888, Adjutant-General's Office. The material is such that the value of the work is greatly depreciated. The guns being used at present in this inspection are in the main such as might possibly be devoted to the protection of torpedo fields in case of attacks from the sea. Their ranges are too limited and their inexactness too great to make the experiences gained in firing them of very material value or of marked assistance in the manipulation and firing of one of the modern built-up guns. But upon the general principle that these obsolete guns may be made use of for the defense of torpedo fields, etc., and inasmuch as the ranges now designated in orders are in all probability about sufficient to cover such fields, would it not be good policy to have some of the artillery target practice conducted and studied with that as the underlying idea?

In connection with this subject I desire to invite special attention to the advisability of classifying the enlisted personnel of the foot artillery. To put these organizations on a good basis some legislative action seems to be very desirable. The modern chiefs of piece and gunners, to be thoroughly proficient in the functions required of them, should be able to bring a certain amount of elementary mathematics to their assistance in verifying their work. All non-commissioned officers and a limited number of privates should have a knowledge of the simple mathematical processes by which the point of impact of a given projectile can be determined theoretically before it is fired, etc.

There are many of the enlisted men well qualified to do this work, but the incentive to apply their knowledge or to make their ability known is wanting. I believe this would be quickly remedied if the men of the foot artillery were legally classified in the manner now authorized in the Engineer and Ordnance organizations.

The additional pay given to the men of the first class would soon have its usual effect. Such a change in the organization has so many good arguments to support it that it is not necessary to go over them, but one which promises great advantage is found in the fact that by such a division of the men it would be quite possible to leave the second class in their regular garrisons while all the men of the first class of a regiment or group of posts were assembled annually at some post or firing for a thorough and exhaustive course in artillery work.

Lieut. Col. G. H. Burton states:

Garrison Schools. The schools for the enlisted men have not progressed, except in one instance, viz, at Angel Island. The most essential cause for failure is the omission at most posts to make proper selection for superintendent. This office should be filled by a commissioned officer of the line, due regard being had for fitness and the will to perform the work in a proper spirit. Chaplains as a general rule are old officers unfitted for the direction of men; they would in most cases better fill the office of instructor under a line officer as a general director.

Maj. J. P. Sanger states:

The post schools of this Department have not been successful during the past year and are not likely to be until they are started in the right way and given a fair trial under intelligent and earnest supervision. The rooms should be clean, comfortable, and well-lighted. Each soldier should have his desk, writing materials, slate, and books, and should be required to make some mental effort from the start, and be able to note his own progress. The main point is to awaken the interest of the men and cause them to appreciate their opportunities by teaching them something they recognize as useful. This can not be done by a perfunctory supervision on the part of the chaplain or any other officer, by insufficient teachers, or by insufficient means. At most posts the school room is generally uncomfortable and not very clean. No, the schools are not in a flourishing or satisfactory condition, but, like everything else which may be considered an experiment, they can be made so. The first step is

to provide suitable school-houses, with all the necessary school furniture; the next, good, competent teachers, in the proportion of one to every ten pupils; and the last, the personal interest and occasional presence of the post commander, no matter who may be superintendent of the school. Neither should any other duty, except guard, be permitted to clash with this, which would have a standing equal to other duties as long as it is required.

Col. R. P. Hughes states:

I do not think the existing plan of leaving the decision as to who should attend the school to company commanders is a good one. At one post I found the opinions of the company commanders differed so much that in companies in which I could discover no appreciable difference, the number of men recommended by the company commanders as fit subjects for attending school differed all the way from three to thirty. There should be some better established standard than the varying opinions of our four hundred and fifty captains commanding

Lieut. Col. W. F. Drum states:

Results for past year have been fair, good enough to encourage their continuance. School books and furniture are needed at many posts and at several posts suitable rooms should be provided.

Maj. S. S. Sumner states:

The system of education prescribed in article 38, Army Regulations, has been inaugurated at the several posts in this department.

Maj. E. B. Beaumont states:

The reports from schools for enlisted men of date April 30, 1890, give the following results:

Station.	Strength of garrison.	Enlisted men in attendance.	Per cent. of attendance.
Post of San Antonio.....	684	15	2.2
Camp Pena Colorado.....	63	4	6.3
Fort Hancock.....	48	6	12.5
Camp at Eagle Pass.....	57	9	15.7
Fort Clark.....	566	0	0.0
Fort Bliss.....	71	12	16.9
Fort Ringgold.....	143	18	12.16
Fort Brown.....	148	9	6.08
Fort McIntosh.....	154	22	14.28
Fort Davis.....	81	16	19.7

The results are unsatisfactory. Personal supervision of the schools has not been carried out by commanding officers. The teachers were men generally detailed from the garrison, and, with a few exceptions, no officers gave oral instructions to the enlisted men.

Schools can not succeed unless suitable officers are selected as superintendents, who will give their personal attention daily to the supervision of the methods of teaching, system of study, and discipline.

Lieut. Col. G. H. Burton states:

Instruction of Enlisted Men. Estimating distance exercise has been generally neglected. Bayonet exercise is not pursued at all the posts with as much energy as its good to the soldier demands. This practice adds to the physical development and invests the use of the rifle with an ease and grace not otherwise acquired.

Maj. J. P. Sanger states:

Instruction in the garrisons during the past year has been improved under the recent orders of the War Department, and has been both practical and theoretical. Nevertheless, something more is needed to make it what it should be. While it has been, and no doubt wisely, decided that no particular book on military subjects can be adopted by the War Department as authority at this time, the necessity for some standard to which all can refer and from which they can learn established principles

is very great. Our books, compiled in view of the late war, are not adapted to the present conditions of warfare, yet they are the only books having the stamp of authority, and, therefore, the only ones which it is safe, ordinarily, to follow, or even to quote. This is entirely so with officers of the Inspector-General's Department, who must stand or fall by them. The moment an appeal is made to any other authority, no matter how good or recent, the case has no standing unless by mutual consent. I trust it may not be long before we may have books of our own composition, based on our own system of drills and arranged to cover all the operations of war. We can then establish in our garrisons a course of practical instruction of much benefit, which will replace in great measure the humdrum exercises which now monopolize the time available, and which, apparently, and to most observers, have no other object in view than the clock-like precision of an automaton. No soldiers that I have seen possess the general intelligence and natural aptitude of Americans, yet few soldiers of the present day are so entirely bereft of the necessary practical training to prepare them for war. As a rule drill is the beginning and end of their military exercises, which make but little demand on their intelligence, and therefore excite but little interest. Americans dislike and chafe under all kinds of routine work, and can only be held up to it by sufficient inducements. It is characteristic of our people when they have learned one thing to turn to another, and this trait should be recognized in the garrison instruction of our soldiers.

I renew my recommendations of last year that gymnastic exercises be introduced into all garrisons and made a part of the course of practical instruction for officers as well as enlisted men.

Maj. E. B. Beaumont states:

It does not appear that very good attention is paid to the individual instruction of the trooper mounted.

An outline of quite the opposite system from ours in the preliminary training of recruits, given in an article entitled, "Recent Changes in the German Army," may be submitted as suggestive:

"The recruit joins his company, as a rule, at the beginning of November; his predecessors, who have completed their full time and passed into the reserve, leaving the active ranks at the beginning of October. A full month is therefore available for making arrangements to receive the new men. This duty falls upon the captain of the company, who appoints a certain number of Gefreite to aid, instruct, and, if we may use the term, to chaperon the new arrivals.

"The forty-eight recruits are divided into squads of sixteen men, each commanded by an experienced non-commissioned officer who is responsible for their elementary training.

"The forty-eight, as a rule, are commanded by a lieutenant, who is required to be present at all drills and exercises, and ascertain that the recruits are properly treated by their instructors.

"The elementary training of the recruit in drill and musketry extends over two or three months. Men who have passed through this stage are inspected by the commanding officer of the regiment, and, if found satisfactory, join their company for duty.

"The great principle in the German army is that each company drills its own men. In the words of the author of *Unser Volk in Waffen*, 'The training of recruits in detachments, common to many armies, is unknown in Germany. Those who are to use the instrument are required to produce it. The preliminary education of the soldier is carried on, as it were, in the family and not outside the house.'

"On passing the inspection, the recruits are first exercised in outpost duty, marching and bivouacking, and afterwards in company drill. The latter lasts from six to eight weeks, and comprises not only movements laid down in the regulations, but a number of other evolutions calculated to prepare them for acting promptly under orders of their commander in emergency.

"Company drill is followed by battalion drill, lasting about four weeks, at the end of which the battalions are inspected by the brigadier, by the divisional commander, or by the general commanding the district.

"After this the battalions of each regiment are maneuvered together, and the troops trained in the construction of intrenchments, in outpost and patrol duty, in swimming, and other means of surmounting the many obstacles which present themselves to the advance of troops in the field. Rifle practice goes on all the year round. As a preparation for shooting ball cartridge, the recruits are taught to fire with aiming and sighting tubes, and with blank ammunition. Each man is provided with 110 ball cartridges per annum, and the troops receive, moreover, constant training in gymnastic and bayonet exercises."

A summary account of the British recruit's initiation is given in the current Naval and Military Magazine:

"A good deal of attention has of late been bestowed in one way or another upon the lower grades of the army, the way they are fed and housed. It may come as a surprise to many to learn that there are doing duty in the ranks a by no means small percentage of men of good birth and education, and that the general character which the private soldier bears is one for steadiness and good-will.

"The recruit on joining his regiment will be first taken to the commanding officer, with whom rests the power of finally declaring him suitable for his own particular regiment.

"On first attending stables he will be placed with one of the batmen, who have charge of two horses. One of these horses the recruit will ride, and in return for the assistance he gives the batman will receive practical instruction in grooming and in cleaning and putting up the saddlery.

"During the earlier lessons in riding, the recruit will attend the riding-school before breakfast, from 6 o'clock to about a quarter past 7. A fall harms no one; as the floor of the school is a foot deep with tan, and the horses, being fully trained, never kick or tread on a man when down.

"No saddle is used by recruits during the earlier lessons. For the first month they ride with a numnah only, and use the common bridoon bit. By having no stirrups the recruit learns to balance himself well on the horse, and being obliged to grip the animal tightly with his legs, finds out the power that pressure of the leg on the side of the horse has in guiding him. It is of course the great object in military equitation to teach the men not to use their hands in guiding or turning a horse more than is absolutely necessary, as these are required for the handling of their weapons. When the recruit is considered to have a fairly secure seat on horseback, he is promoted to a higher class and rides with a saddle, but still without stirrups. It is during this period that he is first instructed in the 'rides,' various movements which culminate in the 'double' or 'musical ride' familiar to frequenters of military tournaments.

"Finally comes promotion to the first class. The recruit now rides with a complete saddle, and in this stage he receives the most careful instruction, not only in the management of his horse, but also in the use of arms, practical use of the latter being taught by means of 'heads and posts.' Until a recruit is perfect in the use of his arms and in the management of his horse, so long will he remain under instruction in the riding-school.

"As soon as a class is pronounced perfect by the riding-master, notification of the fact is sent to the commanding officer, and the latter will fix a day on which to come and inspect the 'ride.' He will order the men to be put through any series of exercises he may think fit, and should he consider the work satisfactorily done the class will be dismissed and the men in future take their places in the mounted ranks.

"The whole course of riding-drill occupies, on an average, six or seven months, though the period may be shortened in the case of an exceptionally good rider or lengthened in the case of a bad one.

"Concurrently with riding, the recruit has to undergo a course of instruction in foot-drill, commencing with the ordinary extension motions, and proceeding by degrees to the more complicated movements and instruction in the use of carbine, sword, and lance. In all this, however, the aim is to teach the recruit to act as if he were mounted, and nothing is taught him on foot which could not be done with equal facility when on horseback.

"Instruction in foot-drill occupying somewhat less time than that in riding.

"After being dismissed these two courses of instruction a recruit has yet to undergo four others, namely, in musketry, fencing, gymnastics, and single sticks. Of these, musketry will occupy about a fortnight; as to the three others, a series of from thirty to forty lessons in each is given.

Col. R. P. Hughes states:

Recruits. The impropriety of arming recruits and putting them on guard duty before they have been taught the use of their weapons does not admit of discussion. Yet we find at times some eight hundred or one thousand men assembled at one of these depots, and no regular garrison to maintain the steady military routine of a post. By assigning recruits simply as casuals, to regular garrisoned posts, where all guard duty and military routine work is carried on by the regular garrison, the recruit would have better opportunities for learning his duties by observation, and would have more time to devote to qualifying himself for receiving his arms when he joins his regiment.

The present system of assembling recruits in large bodies does not secure the best results in either military instruction or administration. At the dates of inspections I found most of the recruiting companies, containing from 125 to 160 men, and most of them were commanded by a lieutenant.

Lieut. Col. G. H. Burton states :

Conduct of Enlisted Men. There seems a notable improvement in the conduct of enlisted men in regard to the vice of intemperance. This, in my judgment, has been gained partly by example from the temperate conduct of the commissioned officers of the Army and partly by the wise efforts of the Department of War in the establishment of canteens and other amusements for the enlisted men, under the guidance and control of officers who are thus better enabled to direct the diversions and regulate the appetites of the men within their commands.

Maj. J. P. Sanger states :

I believe that a better tone is sure to follow the many efforts now being made to enlist good men and to relieve the monotony and restraints of garrison life. While kindness and justice should mark the intercourse between all ranks, we should never lose sight of the main fact that we are soldiers, and that good soldiering is our only *raison d'être* and the feeling that we have done our duty well our only recompense.

Lieut. Col. W. F. Drum states :

There has been but little change in the character of the enlisted men in the past year. Officers claim that there is less drunkenness, particularly at posts where there are canteens.

Col. E. M. Heyl states :

Nationalities of the Non-Commissioned Officers in the Division of the Missouri. I have had some curiosity to know the proportion of foreign element among the non-commissioned officers of the Army. I have succeeded so far as the Division of the Missouri is concerned, and give the following tabulated statement, which shows that almost half the number of non-commissioned officers serving in this division are of foreign birth.

Nationalities.	Department Dakota.	Department Missouri.	Department Platte.	Department Texas.	Total.
African	1				1
American	462	381	387	223	1,453
Austrian	2	8			2
Belgian		1		1	2
Bohemian	3				3
Canadian	14	8	12	12	46
Danish	3	7	10	4	24
English	35	27	20	16	98
French	3	4	1	1	9
German	134	117	92	72	415
Dutch			1		1
Hungarian	2	2			4
Irish	111	97	88	54	350
Italian	1		1	1	3
Indian, East and West	2		2	1	5
Norwegian	10	4	3	1	18
Nova Scotian	2			1	3
Polish	3			1	4
Russian	2	2	3		7
Scandinavian	2				2
Scotch	10	6	8	5	29
Swedish	9	12	6	3	30
Swiss	6	5	6	4	21
Turkish		1			1
Grand total	817	682	640	402	2,541

Col. R. P. Hughes states :

Proper Enlisted Strength of the Army. The enlisted strength of the Army should certainly be increased to maximum limit allowed by existing laws. It may be that those making the appropriations which now restrict the enlisted force below that strength do not appreciate the very limited number of qualified soldiers we actually have under the restriction to 25,000. After discounting the uneducated recruits and the old men who would drop out on taking the field by reason of physical weakness, we would probably find that there were just about 15,000 qualified soldiers for line of battle if called out. Now, if our legislators

intended that we should have a qualified force of 25,000 men, the maximum number is placed entirely too low, and keeps the army fully one-third short of what was expected. To keep a force of 25,000 efficient soldiers constantly on foot would require that the maximum number should not be less than 35,000.

Col. E. M. Heyl states :

I would recommend that the sergeants in charge of recruiting parties at rendezvous be paid an additional compensation of 50 cents per diem. These non-commissioned officers have charge of all the clothing and property and are responsible for the good condition of the rendezvous and conduct of the party and recruits. They should either receive the pay of sergeants or the addition above recommended.

Lieut. Col. G. H. Burton states :

I desire again to call attention to the urgent necessity of competent blacksmiths for the light batteries and cavalry troops. Good men will not enlist for the pay attached to the position. I suggest that extra duty pay of 50 cents per diem be added to the grade.

Col. E. M. Heyl states :

The new method for identifying prisoners, introduced into France by M. Alphonse Bertillon, and which is now successfully practiced not only in all French prisons, but also in Russia, Japan, Spain, Italy, and some parts of Germany, has within the past year made quite a headway in the United States.

With this system of measurements when a man enlists and his examination papers are sent to Washington reference can be made at once by index to the records, and if he has ever served before the measurement card will show it.

Maj. J. P. Sanger states :

When a just feeling of indignation against those who perpetrate it replaces the sentiment which now shields and apologizes for them, some diminution in the frequency of the crime may be looked for. It is possible that the measures recently adopted, under which the amount of retained pay has been increased and men are permitted to purchase their discharges, may reduce the number of desertions, but I do not think they will reach those who constitute by far the largest proportion of this class of criminals. I believe that the surest way to prevent desertion is to take effective measures to apprehend deserters and to punish them when caught.

Lieut. Col. W. F. Drum states :

There were 478 desertions for the year ending June 30, 1890 : First Cavalry, 70 ; Third Infantry, 48 ; Fifteenth Infantry, 31 ; Twenty-second Infantry, 76 ; Eighth Cavalry, 94 ; Twelfth Infantry, 60 ; Twentieth Infantry, 74 ; Thirty-fifth Infantry, 21 ; Hospital Corps, 4.

Maj. S. S. Sumner states :

The desertions in the department from September 1, 1889, to August 31, 1890, were 89 as against 103 during previous year, a decrease of 19, classified by organizations as follows :

Second Cavalry, (headquarters and seven troops), from September 1, 1889, to June, 1890	24
Fourth Cavalry (headquarters and eight troops), from June, 1889, to August 31, 1890	9
First Artillery (1 battery) from September 1, 1889, to May, 1890	1
Fifth Artillery (2 batteries), from May to August 31, 1890	2
Fourth Infantry (headquarters and ten companies), from September 1, 1889, to August 31, 1890	21
Fourteenth Infantry (headquarters and nine companies), from September 1, 1889, to August 31, 1890	30
Hospital Corps, from September 1, 1889, to August 31, 1890	2
Total	89

So far as I have observed there is no valid reason for desertions in this department; the men are well cared for in every respect and are governed in strict accord with orders and regulations.

Maj. D. W. Benham, Department of the Platte, states:

The number of desertions during the year is reported to be 222 as against 334 last year. Of this number 128 deserted in the first year of service; 68 the second year; 15 in the third; 7 in the fourth; and but 4 in the fifth year of enlistment.

These were distributed as follows: Ninth Cavalry, 11; First Artillery, 1; Fifth Artillery, 8; Second Infantry, 31; Seventh Infantry, 23; Eighth Infantry, 30; Sixteenth Infantry, 21; Seventeenth Infantry, 59; Twenty-first Infantry, 37; Hospital Corps, 1.

Leavenworth Military Prison, Mo.—The quarterly inspections required by section 1348 Revised Statutes, have been regularly made. The reports show that the prisoners confined here are fully supplied with ample and clean clothing and bedding, and with wholesome, well-cooked, and sufficient food. Cleanliness and good order are apparent everywhere in the shops, barracks, kitchens, grounds, hospital, etc. The government of the convicts is humane and kind, but withal firm and uniform. All complaints are listened to by the inspector and reported upon.

Col. E. M. Heyl, in his annual report, states:

It is recommended that each prisoner have an iron cell, instead of using a dormitory. I believe the prisoners would be more contented, better controlled, and less liable to infractions of prison rules and regulations. These steel or iron cells could be made at the prison at a comparatively small cost to the Government.

It is also recommended that stools be manufactured for use in post mess-halls, instead of benches. I find that the five stools which are equal to one bench, cost \$1.50, while the bench costs \$1.90. The stools are much more convenient and easier to handle, and by placing a thin strip across the lower rungs it forms a place for the occupant's cap or hat.

Alcatraz Island, Cal.—There were 128 prisoners confined here at the time of its inspection by Colonel Lawton, September 28, 1889.

This is not a military prison in the same sense as is that at Fort Leavenworth, as it has no legal status, and there are no prescribed rules for the government and discipline of the prisoners, except such as have been authorized by the general commanding the Division of the Pacific. The commanding officer of the post, who is also commandant of the prison, prescribes such rules and orders and such discipline as he may deem necessary, and the convict appears to be wholly beyond the pale of the law. As they are not soldiers they are not subject to the rules and Articles of War, and as military convicts no civil rights are recognized.

The reports show that this prison differs from that at Leavenworth in other respects. The sanitary condition was dangerous to health, the table-ware and messing-outfit extremely meager, and the food insufficient.

Colonel Burton made an investigation, under orders of the department commander, regarding the subsistence of the military convicts on this island, thirty-five prisoners having refused to go to work on account of insufficiency of food. Remedial action was applied. These prisoners, at least, will probably esteem the addition of vegetables to the authorized rations as a godsend.

Fort Columbus, N. Y.—Twenty-eight military convicts and two Indian prisoners of war were confined here at the date of its inspection by Colonel Hughes, January 2, 1890.

The report shows that the guard-house, which is in the casemate of Castle Williams, is in a rough condition, and too small for the number of prisoners, the bathing facilities insufficient, and the mess furniture entirely inadequate and of poor quality.

The military convicts here are dressed in uniform clothing, which must bring great discredit upon the honorable soldiers at this prominent post.

Penitentiaries. The inspection of the several State penitentiaries where military convicts are confined, show that they are well treated, fed, and clothed.

Prisoners at Military Posts. The report of the inspection of Fort Robinson, Nebr., made by Major Vroom, December 3, 1889, mentions the case of private William C. Warmley, Troop D, Ninth Cavalry, who complained that he had been confined since July 17, 1889, awaiting trial, and that he had been compelled to work during the time with military convicts and prisoners undergoing sentence.

An investigation shows that this man was tried and the findings and sentence of the court-martial were approved January 21, 1890. He was sentenced to forfeit to the United States 50 cents of his pay.

The report of the inspection of Fort Stanton, N. Mex., made March 4, 1890, by Lieutenant-Colonel Hall, mentions the case of Private Schmidt, Troop D, Sixth Cavalry, who complained that he was tried by court-martial January 23 and was still awaiting the result. Subsequent investigation showed that the delay was caused by the loss of the proceedings of the court in the mail, and as soon as the department commander was satisfied of the loss of the papers he returned the man to duty, March 18, 1890.

Col. E. M. Heyl states :

Veterinary Surgeons. I wish to again call attention to the lack of properly organized corps of veterinary surgeons. The Army needs properly qualified veterinary surgeons to preserve the public animals in good health and also to protect them from the inhuman treatment as well as from well-meaning but disadvantageous maltreatment supposed to be medicinal. Preventive medicine, much less expensive than remedial, is unknown to our veterinary service, and sanitary rules concerning the public animals, based on the well-developed science of veterinary medicine, are little known, or ignored. The enormous expense this entails is not appreciated generally. I am sure we must all appreciate that the horse, an animal so high in the scale of organic evolution, is one requiring for his care the same attention on scientific and non-empiric basis as man himself. * * *

I hope sincerely for the good of the service, that some action will be taken by Congress to establish a veterinary corps consisting of well-educated gentlemen, scientific and practical veterinary officers, so constituted by commission and rank as to carry authority and respect with them.

MILITARY SCIENCE AT COLLEGES.

The following extracts from the reports of the inspection of the work of army officers at colleges and the tabulated statement of facts in Appendix B may indicate the current of thought and work of the army officers having the closest connection with the institutions :

[Virginia Agricultural and Mechanical College at Blacksburg, Va., Second Lieut. John J. Knight, Third Cavalry, professor of military science and tactics. Inspected November 11 and 12, 1889, by Lieut. Col. H. Clay Wood, assistant adjutant-general.]

Lieutenant Knight reports the zeal and acquisition of knowledge of the school satisfactory. He also reports opposition on the part of individual members of the faculty to the strict and rigid rules, so essential in a thorough military organization; that, with the present condition of affairs, the greatest improvement necessary is better arms, ammunition, field artillery, and, as a sequence, target practice. This could all be supplied by the United States Government upon the execution of the requisite bond. Besides this, a set of general rules and regulations governing officers on such duty, a clear definition of the duties of such officers. He reports a general opinion prevails among the college authorities that more benefit would be reaped and a better result shown should the detail of army officers be made for four instead of three years.

[Bingham School, North Carolina, Second Lieut. James B. Hughes, Tenth Cavalry, professor of military science and tactics. Inspected November 14 and 15, 1889, by Lieut. Col. H. Clay Wood, assistant adjutant-general.]

The Department in pursuance of law, provides for this school an army officer, presumably competent, as professor of military science and tactics, and supplies ord-

nance and ordnance stores in ample quantity. This officer is paid by the United States a salary equal, it is believed, to the average salary paid to college professors. These acts are gratuitous. For this gratuity I believe these institutions of learning should in equity render some adequate remuneration. I think theoretical military instruction should be required at this school, and that at least five hours a week should be allotted by the superintendent for the purpose, and that the little leaven of theory thus disseminated through the "one hundred and seventy" cadets would be abundantly productive of beneficial results.

Pennsylvania Military Academy, Chester, Pa., Second Lieut. Beverly W. Dunn, Third Artillery. Inspected June 3, 1890, by Maj. P. D. Vroom, inspector-general.]

The president suggests that the detail of the military professor be made for four years instead of three, as at present. Each officer would then be enabled to carry one class through the entire four years' course. I agree with Colonel Hyatt that an extension of the time of detail is desirable. The military professor suggests that when an officer is detailed for college duty he should be sent to the institution at least a month before the old officer is relieved. He also suggests that a suitable textbook for the military course at colleges be prepared.

[Maryland Agricultural College, Prince George's County, Maryland, Second Lieut. A. B. Scott, Thirtieth Infantry. Inspected June 9, 1890, by Maj. P. D. Vroom, inspector-general.]

The military professor suggests that the relation of an officer on college duty to the general discipline of the institution should be clearly defined.

Remarks of president of college: "This suggestion is agreed to if the words 'by the college authorities' be added. And the duties of the officer in his relation to general discipline are clearly defined at this college; he executes the orders of the president and exercises such authority as is delegated to him."

[Michigan Military Academy, Orchard Lake, Mich., Second Lieut. F. T. Van Liew, Second Infantry. Inspected November 21, 1889, by Col. R. P. Hughes, inspector-general.]

The only improvement I can see in which the Government might still further aid the school might be in lending to it a sufficient amount of tentage, once per annum, to allow of its going into camp for a few weeks to teach the youngsters something about field life and work.

[Allegheny College, Meadville, Pa., Lieut. J. F. Krebs, Twenty-second Infantry. Inspected May 13, 1890, by Col. R. P. Hughes, inspector-general.]

I do not think any institution should be given an officer that will not make the taking of the military course compulsory on at least a portion of the student body.

Remarks of president of college: "In reference to the indorsement thereon, I have the honor to report that this college will conform to all positive requirements of the War Department with scrupulous care. If, at any time in the future, these requirements should be such as we can not conform to, we will then promptly resign the detail."

[Cathedral School of St. Paul, Garden City, L. I., First Lieut. M. F. Waltz, Twelfth Infantry. Inspected May 28, 1890, by Col. R. P. Hughes, inspector-general.]

"An officer should stay where his work is unless the circumstances are very exceptional."

Remarks of head master of school: "This school has always placed quarters at the disposal of the professor of military science and tactics, and has also paid him \$45.83 a month for house rent for the accommodation of his family. This payment was in addition to the \$600 referred to in the inspector-general's report."

[St. John's College, Fordham, N. H., Second Lieut. H. C. Squiers, Seventh Cavalry. Inspected May 30, 1890, by Col. R. P. Hughes, inspector-general.]

From a personal and close observation of different systems I have no hesitation in stating that the introduction of the military organization and system into the daily routine of a college gives results in the military department that can not be obtained in any other way.

[Agricultural and Mechanical College of Mississippi, Starkville, Miss., First Lieut. John V. White, First Artillery. Inspected January 17, 1890, by Col. E. M. Heyl, inspector-general.]

Lieutenant White thought it would be well if the Government could furnish a guard report book, consolidated morning report book, and such blanks as are considered most important for the students to be familiar with.

"The military course at this college is given the same weight as other subjects in graduating class standing, but the time in this course is limited. The students are required to pass an examination on the subjects studied and make an average of sixty (60) out of a possible one hundred (100) points. In this connection Lieutenant White recommends that one course of instruction be prescribed to insure uniformity, as different officers do not attach equal weight to the same subject."

[University of Illinois, Champaign, Ill. First Lieut. C. B. Hoppin, Second Cavalry. Inspected May 22, 1890, by Col. E. M. Heyl, inspector-general.]

Lieutenant Hoppin recommends that the officer on duty at colleges should not be relieved until the one sent to relieve him has arrived and been present with the battalion for at least two weeks, so as to carry on the work as smoothly as possible and to relieve the new officer of the embarrassment and the institution of the uncertainty consequent upon his entry upon routine work, for which no rules are laid down as an index of *how* and *why* it is carried on as it is.

[State University of Nevada, Reno, Nev. First Lieut. A. C. Ducat, jr., Twenty-fourth Infantry. Inspected June 2, 1890, by Lieut. Col. G. H. Burton, inspector-general.]

I venture to suggest that the present method of making details, viz, only on the application of the faculty, is faulty in this, that the faculty in the nature of their isolation from the Army can rarely ever know the officer whom they recommend, and in their ignorance depend upon politicians for information and support that should come only from the War Department and the General of the Army. Furthermore, the loss to the college sustained by an ill-selected representative is coupled with a demoralization to the service induced by invitation to use all kinds of influence to obtain details which merit only should determine; and hence the incentives to study and labor for preferment are lost in the general scramble which is won oftener by importunities and wire-pulling than by recognized merit. In my judgment every institution entitled to an officer as professor of military science and tactics would prefer the War Department to select for it the best possible, and rest their cause on the War Department's known judgment and knowledge of the officer for the place he has to fill.

[University of the State of California, Berkeley, Cal. First Lieut. G. E. Harrison, Second Artillery. Inspected June 4, 1890, by Lieut. Col. G. H. Burton, inspector-general.]

It was a happy thought in the War Department to direct an inspector to visit the colleges each year. They themselves appreciate the value of such supervision as adding dignity and character to the Department, as well as for its diffusion of a sympathetic interest in the profession of arms, which links them as kindred in feeling, and almost a part in fact, of the Government in its Department of War. The cadets feel a pride in the paternal care exercised over them by the Secretary of War, as exhibited through these inspections, and evince an intense desire to acquit themselves with credit before the Secretary's representative.

[Cornell College, Mount Vernon, Iowa. First Lieut. Walter Howe, Fourth Artillery, professor of military science and tactics. Inspected May 21, 1890, by Maj. J. P. Sanger, inspector-general.]

Attention is invited to the importance of providing this college with field artillery in which the cadets will no doubt take much interest, and from which they will derive much benefit. It is suggested that if practicable only the brass 6-pounders or 3-inch rifled gun be furnished, as the 12-pounders are too heavy for boys to use.

[West Virginia University (State Agricultural and Mechanical College), Morgantown, W. Va. Second Lieut. Edward S. Avis, Fifth Infantry. Inspected June 6, 1890, by Lieut. Col. H. Clay Wood, assistant adjutant-general.]

Of course there are drills, and it is stated there are lectures, but an examination of the catalogue does not disclose, in the schedule of hours allotted to the different studies, that any time has been allotted to the military department for theoretical instruction, or for that matter, even for drills.

INSPECTOR-GENERAL'S DEPARTMENT.

Brig. Gen. Nelson H. Davis, U. S. Army (retired), died on May 24, 1890. His death was announced to the Army in the following order:

General Orders, No. 54.]

HEADQUARTERS OF THE ARMY,
ADJUTANT-GENERAL'S OFFICE,
Washington, May 24, 1890.

The following order has been received from the War Department:
It is with deep regret that the Secretary of War announces the death of Brig. Gen. Nelson H. Davis, U. S. Army (retired), late Inspector-General of the Army, which occurred at Governor's Island, New York Harbor, on the 15th instant.

The long and active service of General Davis, covering a period of nearly forty years, was throughout characterized by a conscientious fidelity in the performance of duty and strict integrity.

Nelson H. Davis was graduated from the Military Academy and appointed brevet second lieutenant, Third Infantry, July 1, 1846. He served in the Mexican war, participated in the siege of Vera Cruz, the battles of Cerro Gordo, Contreras, Churubusco, and the capture of the City of Mexico, and was brevetted first lieutenant "for gallant and meritorious conduct at the battles of Contreras and Churubusco." Promoted second lieutenant, Second Infantry, February 16, 1847; first lieutenant, June 8, 1849; and captain, March 3, 1855. He served on the western frontiers and in California from the close of the Mexican war until the spring of 1861, taking part in the expedition to the Sierra Nevada in 1850 and in the Rogue River expedition in 1853.

During the rebellion he served in the Army of the Potomac and held the appointment of colonel of the Seventh Massachusetts Volunteers from September 4 to November 12, 1861, when he was appointed major and assistant inspector-general, U. S. Army. He participated in the various campaigns of that army until after the battle of Gettysburgh, for which he received the brevet of lieutenant-colonel for gallant and meritorious service, when he was assigned to duty in New Mexico, where he was engaged making inspections, locating military posts, etc., and in several actions with Indians, receiving the brevet of colonel May 29, 1864, for gallant and meritorious services in action with Apache Indians; was appointed lieutenant-colonel June 13, 1867, and colonel June 25, 1872, to rank from March 23, 1864; inspector-general Division of the Atlantic from June 9, 1876, to June 22, 1881, and of the Division of the Missouri to March 10, 1885. He was appointed brigadier-general and inspector-general March 11, 1885, and retired, by operation of law, September 20, 1885.

By command of Major-General Schofield.

CHAUNCEY MCKEEVER,
Acting Adjutant-General.

There has been no change in the personnel of the permanent officers of the Department.

Stations and Duties. The officers of the Department have continued on duty during the year at the stations shown in the last annual report, as follows:

Brig. Gen. Joseph C. Breckinridge, Inspector-General, in charge of the Inspector-General's Office, War Department. He made the inspection of the Soldiers' Home, required by section 2 of the act of Congress approved March 3, 1883, and the usual annual tour of inspection under orders of the Secretary of War.

Col. Robert P. Hughes, inspector-general, Division of the Atlantic, Governor's Island, N. Y.:

Under the orders of the major-general commanding the division he has inspected in detail twenty-one posts and commands, including fifty-six troops, batteries, and companies, located in the following States: Maine, New York, Alabama, Louisiana, Florida, Georgia, Virginia, Maryland, District of Columbia, and Michigan; and tri-yearly, the money accounts of disbursing officers under control of the division commander.

Under orders from the Secretary of War he has inspected the posts of West Point, Recruiting Depot at David's Island, and Engineer Depot at Willets Point, N. Y., Recruiting Depot at Columbus Barracks, Ohio, and Allegheny Arsenal, Pa.; the money accounts of disbursing officers, who are not serving under the orders of the division commander stationed in Augusta and Portland, Me.; Burlington, Vt.; Boston, Watertown, and Springfield, Mass.; Newport, B. I.; New York City, Willets Point, West Troy, Oswego, and Buffalo, N. Y.; Cleveland, Ohio; and Detroit, Mich.; and the military departments under the officers of the Army detailed at colleges, universities, etc., under section 1225, Revised Statutes, at Orono, Me.; Burlington and Northfield, Vt.; Amherst Mass.; New Haven, Conn.; Foudham, Garden City, and Ithaca, N. Y.; New Brunswick, N. J.; Centre County and Meadville, Pa.; and Orchard Lake and Lansing, Mich.

Col. Edward M. Heyl, inspector-general, Division of the Missouri, Chicago, Ill.:

Under orders of the major general commanding the division he has made the tri-yearly inspection of the money accounts of disbursing officers under the control of the division commander; the inspection of the military posts in the Department of Texas, including thirty-nine company organizations; the inspection of public property for condemnation, and the examination of the reports of inspection of posts and money accounts of the four departments included in the division.

Under the orders of the Secretary of War he has made the quarterly inspections of the Military Prison at Leavenworth, Kans., the tri-yearly inspection of the money accounts of disbursing officers, who are not serving under the orders of the division commander, stationed in Chicago, Rock Island, and Quincy, Ill., Milwaukee, Wis., St. Louis, Mo., Memphis, Nashville, and Columbia, Tenn., Vicksburg, Miss., New Orleans, La., Mobile and Montgomery, Ala., Louisville, Ky., and Jeffersonville and Indianapolis, Ind.; and the inspection of matters pertaining to the military departments under officers of the Army detailed at colleges, universities, etc., under section 1225, Revised Statutes, at Starkville, Miss., Auburn, Ala., Wooster, Ada, and Columbus, Ohio, Lexington, Ky., Greencastle and La Fayette, Ind., Champaign and Galesburgh, Ill., Madison, Wis., and Baton Rouge, La.

Lieut. Col. George H. Burton, inspector-general, Division of the Pacific, San Francisco, Cal.:

Under the orders of the division commander he has inspected all the garrisoned posts in the Department of California and the Columbia, comprising fourteen posts with fifty company organizations, made the tri-yearly inspections of the money accounts of disbursing officers stationed at San Francisco, Cal., examined the reports of inspections of posts and money accounts of the three departments included in the division, and made six special investigations.

Under orders from the War Department he has made the tri-yearly inspections of the money accounts of disbursing officers stationed at San Francisco and Benicia Arsenal, Cal., of the military departments of the University of California and State University of Nevada, made periodical examinations into the care and treatment of military convicts confined in the State penal institution at Folsom, Cal., and made four special investigations.

Lieut. Col. H. W. Lawton, assistant in the Inspector-General's Office, Washington, D. C.:

In addition to his current duties, he made, under orders from the War Department, a tour of special investigations to the Departments of the Missouri, Platte, Columbia, California, and Arizona, and performed similar duties at New York City, Lincolnton, N. C., Lake City, Fla., Circleville, Ohio, and Fort Washakie, Wyo.; he made inspections of property for condemnation at Washington, D. C., Philadelphia, Pa., and San Francisco, Cal.; of the military prison at Alcatraz Island, Cal.; of the quartermaster, subsistence, and medical purveying depots at San Francisco, Cal., Benicia Arsenal, Cal., and of Jefferson Barracks, Mo. He inspected the money accounts of all the paymasters in the Departments of the Columbia and Arizona, and of disbursing officers stationed at Philadelphia, Pa., New York City, Baltimore, Md., Wilmington, N. C., Charleston, S. C., Savannah, Ga., and St. Augustine, Fla. He made special investigations and inspections of divisions and rooms connected with the War Department, and served as president of a board of inquiry looking into the cause of desertion at Jefferson Barracks, Mo.

Maj. Peter D. Vroom, inspector-general, Department of the Platte, Omaha, Nebr.:

Under orders of the department commander he has inspected in detail ten military posts in the department, including forty-nine company organizations; he has made the tri-yearly inspections of the money accounts of the disbursing officers under control of the department commander, and two special investigations.

Under orders from the War Department he has made the inspection of matters pertaining to the military department of the university at Lincoln, Nebr.

April 3, 1890, Major Vroom was detailed for temporary duty in the office of the Inspector-General, at Washington, since which time, under orders of the War Department, he has inspected the accounts of disbursing officers stationed at Fort Monroe and Norfolk, Va., and Wilmington, N. C., and he has made the inspection of matters pertaining to the military department under officers of the Army detailed at colleges under section 1225, Revised Statutes, at Annapolis, Md., Prince George's County, Md., Newark, Del., and Chester, Pa.

Maj. Joseph P. Sanger, inspector-general, Department of the Missouri, St. Louis, Mo.:

Under orders of the department commander he has inspected in detail twelve military posts in the department, including over forty company organizations; he has made the tri-yearly inspection of money accounts of disbursing officers under the control of the department commander, the quarterly inspections of the convicts in confinement in the Kansas penitentiary, and numerous special investigations.

Under orders from the War Department he has inspected the money accounts of disbursing officers at Little Rock and Hot Springs, Ark.; he has made the inspection of matters pertaining to the military departments under officers of the Army detailed at colleges under section 1225, Revised Statutes, at Manhattan, Kans., Fort Collins, Colo., Columbia, Mo., Mount Vernon and Iowa City, Iowa, and six special investigations.

Until October, the officers detailed as acting inspectors-general under the act approved June 23, 1874, are the same as those mentioned in the last annual report, and are as follows:

Lieut. Col. William F. Drum, Twelfth Infantry, acting inspector-general, Department of Dakota, St. Paul, Minn.; Lieut. Col. Robert H. Hall, Sixth Infantry, acting inspector-general, Department of Arizona, Los Angeles, Cal.; Maj. S. S. Sumner, Eighth Cavalry, acting inspector-general, Department of the Columbia, Vancouver Barracks, Wash.; Maj. Eugene B. Beaumont, Fourth Cavalry, acting inspector-general, Department of Texas, San Antonio, Tex.

These officers have been actively engaged in inspecting the garrisoned posts of their respective departments; the money accounts of disbursing officers; the military departments of various colleges having an Army officer detailed as instructor of military science and tactics; in making numerous special investigations and minor inspections under orders both from the War Department and the department commanders; in serving on special details, and, in general, in performing the duties pertaining to the inspection branch of the service.

Officers Temporarily Attached. Lieut. Col. H. Clay Wood, assistant adjutant-general, was assigned to temporary duty in the office of the Inspector-General, at Washington, October 25, 1889, and continued there until June 12, 1890, when the exigencies of the service required his return to his own department. He was actively engaged on work in the office; he has inspected the accounts of disbursing officers sta-

tioned at Washington, D. C., Baltimore, Md., Fort Monroe and Norfolk, Va., Wilmington, N. C., Charleston, S. C., St. Augustine, Fla., Savannah, Augusta, and Atlanta, Ga., Little Rock and Hot Springs, Ark., Louisville and Newport, Ky., and Cincinnati, Ohio; and he has made an inspection of the quartermaster's depot at Jeffersonville, Ind., and the military departments under officers of the Army detailed at colleges under section 1225, Revised Statutes, at Orange County, N. C., Charleston, S. C., Dahlonga, Ga., Knoxville and Sewanee, Tenn., Morgantown, W. Va., and Blacksburg, Va.

Capt. Joshua Fessenden, Fifth Artillery, was assigned as assistant to the inspector-general, Division of the Atlantic, May 9, 1890, and is on that duty at the present time.

Statement of work performed by officers of the Inspector-General's Department during last fiscal year.

Inspectors-general.	Money accounts.*	Posts.	Staff posts and depots.	Prisons and penitentiaries.	Company organizations.	Colleges.	Special investigations.	Miles traveled.	
Col. R. P. Hughes	144	27	5	.....	56	14	.....	12, 663	Division of the Atlantic.
Col. E. M. Heyl	41	8	.....	3	39	12	.....	16, 045	Division of the Missouri.
Lieut. Col. G. H. Burton	44	8	.....	1	50	2	10	5, 952	Division of the Pacific.
Lieut. Col. H. W. Lawton	31	.....	5	1	.....	1	11	13, 195	Assistant to the Inspector-General.
Maj. P. D. Vroom	26	6	.....	.....	49	5	.....	7, 878	Department of the Platte.
Maj. J. P. Sanger	34	19	.....	3	72	5	1	12, 421	Department of the Missouri.
<i>Acting Inspectors-General.</i>									
Lieut. Col. W. F. Drum	35	16	.....	2	76	4	.....	12, 082	Department of Dakota.
Lieut. Col. R. H. Hall	44	17	.....	1	58	4	2	10, 271	Department of Arizona.
Maj. E. B. Beaumont	55	11	.....	.....	16	1	.....	5, 992	Department of Texas.
Maj. S. S. Sumner	34	5	.....	.....	13	.....	.....	2, 480	Department of Columbia.

* But two inspections of money accounts were made, as no funds to pay mileage expenses were available for the third.

The recent assignment by paragraphs 25, 26, and 27 of Special Orders No. 211, dated headquarters of the Army, September 9, 1890, the Secretary of War directs the following changes of stations of officers of the Inspector-General's Department and details of acting inspector-generals, to take effect October 1, 1889:

Maj. Peter D. Vroom, relieved from further duty in the Department of the Platte and from temporary duty in this office, and to report in person to the commanding general, Department of the Missouri.

Maj. Joseph P. Sanger, relieved from duty in the Department of the Missouri and to report in person to the Inspector-General for duty in this office.

Maj. John M. Bacon, Seventh Cavalry, detailed as acting inspector-general, Department of the Platte, and to report in person to the commanding general of that department.

Maj. J. Ford Kent, Fourth Infantry, detailed as acting inspector-general, Department of Dakota, and to report in person to the commanding general of that department.

Maj. Adna R. Chaffee, Ninth Cavalry, proceed to Los Angeles, Cal., and report in person to the commanding general, Department of Arizona, for duty, to take charge of the office of the inspector-general of that department.

Lieut. Col. William F. Drum, Twelfth Infantry, relieved from duty as acting inspector-general, Department of Dakota.

Lieut. Col. Robert H. Hall, Sixth Infantry, relieved from duty as acting inspector-general, Department of Arizona.

Transient Officers. The experience of another year has demonstrated how utterly inadequate in numbers to the full performance of the many important and varied duties assigned to it is the present permanent force of the Department. Even with the assistance of the efficient line officers detailed under existing laws to meet the urgent requests of commanding generals for the performance of duties specially pertaining to this Department, the force with its best efforts has barely been able to meet all its requirements. Only as much time as can be spared is often given to pressing engagements, and special lines of investigations are sometimes necessarily postponed because there is not time or opportunity for them.

The varied character of the duties inherent to this Department, bringing it nearly to the inmost courts of all the other staff departments as well as the line of the Army, require from its officers a vigilance, a skill, and an experience that may not be so constantly demanded from those whose duties are confined to the specialties of one feature of the service.

It is very essential, therefore, for the efficiency of the service and the economy of its administration that the duties required from these officers should be performed with a confident completeness and thoroughness that will satisfy every requirement. To expect such service from an overworked and burdened officer is unfair to him. Justice to him and to the service demands that he should have consideration and relief. In these duties zeal and energy are necessary to efficient work. And the necessity of performing them under constant strain and haste calls for redress.

The relief proposed by the bill now before Congress to reorganize the Inspector-General's Department is urgently needed to meet pressing demands. This bill adds but six officers to the permanent force of the Department, two colonels, two lieutenant-colonels, and two majors, and the whole military establishment throughout its entire extent and in every sphere of activity will feel the benefit of their labors, for they are confined in a direction that can injure none and may help many. Every one who has studied the matter is aware that at least this addition is immediately needed.

It requires but a slight inspection of the recent assignment of work to inspectors-general under General Orders 95, 1890, which has grown up in the last decade, to show the volume of work now cast upon the officers of this Department. They are a diligent body of officers, and if they worked only under the eight-hour law what has been assigned them would never be done. This assignment is submitted as a recent illustration, though it shows but little of the entire amount of work to be done, as no mention is made of the inspection of the troops nor the inspection of the militia, of property for condemnation, nor special examination. To perform these duties now requires the temporary detail of six officers from the line. *The bill asks but six permanent officers in lieu of these temporary ones.*

It is not necessary in this connection to revert to the many good and sufficient reasons heretofore advanced why the makeshift policy of temporary details should be abandoned. If there is any one quality more than another which adds to the value of an otherwise competent officer it is his experience. Why then should the mature be discarded for the immature? All departments or none should suffer from the con-

stant unwisdom of such a course. The officers of this Department should be permanently attached to it, as recommended by the War Department and by the general commanding the Army. The officers then will be imbued with a personal ambition and a zeal in their duties that will evoke from them their best efforts to promote the efficiency of their corps.

This Department has at last escaped from the disastrous results of disregarding the general principles of promotion by seniority in 1864, and is ready to do all the Government can properly ask of it and the law requires.

Perhaps a slight summary may be presented of the changes then:

Former Changes.

March 24, 1864. James A. Hardie was appointed colonel and inspector-general, vice Col. Henry Van Renselaer, who died March 23, 1864, from major and assistant adjutant-general, being placed above the following officers then in the corps: Majs. Nelson H. Davis, James Totten, Roger Jones, Absalom Baird.

Act of July 26, 1864, provides that there shall be four inspectors-general of the Army with rank of colonels of cavalry; three assistant inspector general with rank of lieutenant-colonels of cavalry, and two with rank of major of cavalry. (General Order 56, Adjutant-General's Office, 1866.) Under this act the corps was organized as follows, as shown by the Army Register of 1867: Colonels, R. B. Marcy, D. B. Sacket, E. Schriver, J. A. Hardie; lieutenant-colonels, James Totten, Roger Jones; majors, N. H. Davis, A. Baird, E. H. Ludington.

Act of June 8, 1872, authorized the President to nominate Nelson H. Davis, of the Inspector-General's Department, to the rank and place therein to which he was entitled and which he would have held had the law of promotions by seniority under the act of March 3, 1851, and the Army Register of 1863 been carried out. (General Order 53, Adjutant-General's Office, 1872.) Under the above act N. H. Davis was appointed colonel and Inspector-General to date March 23, 1864, and placed above Colonel Hardie, and the Army Register of 1873 recorded this Department as follows: Colonels, R. B. Marcy, D. B. Sacket, Edmund Schriver, N. H. Davis, J. A. Hardie; lieutenant-colonel, Roger Jones; majors, Absalom Baird, E. H. Ludington.

Act of June 16, 1874, authorized an appointment in the Inspector-General's Department, and reads as follows:

Whereas a vacancy of lieutenant-colonel in the Inspector-General's Department of the Army originated on the thirteenth day of June, eighteen hundred and sixty-seven, to which Major Absalom Baird was entitled to be promoted under the laws then in existence, but from which he was excluded by reason of another appointment in said department previously made; and

Whereas an act of Congress approved June eighth, eighteen hundred and seventy-two, which was passed with the intention of rectifying this wrong, has failed to secure to Major Baird his just rights: Therefore,

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the President be, and hereby is, authorized to nominate and promote Absalom Baird to be lieutenant-colonel and assistant inspector-general, to date from June thirteenth, eighteen hundred and sixty-seven; but no pay or allowance shall be made to him for any time prior to the passage of this act.

(General Order 67, Adjutant-General's Office, 1874.)

A. Baird was appointed lieutenant-colonel under this act.

The Army Register for 1875 shows as follows: Colonels, R. B. Marcy, D. B. Sacket, E. Schriver, N. H. Davis, J. A. Hardie; lieutenant-colonels, R. Jones, A. Baird; major, E. H. Ludington.

Clerks for Inspectors. The necessity for more efficient clerical assistance to officers of this Department than that furnished by the uncertain detail of general-service men is again urged. The character of the duties of an inspector are more or less of a confidential nature, and his assistant should be one in whose discretion as well as permanence and ability he can rely. A clerk as well as an officer becomes valuable as his experience ripens and his own personal interests are wrapped up in any special vocation. Much valuable time is lost to an inspector who has to educate anew a clerk from time to time. Evidently then the clerks should belong absolutely to the Department to obtain the best service, and not be merely temporarily and insecurely attached, as they are now. The Adjutant-General's or any other Department should not practically control the clerks of another department. The old arrangement has worked injuriously and unjustly and created heart-burnings. The compensation offered should be sufficient to invite men of more than routine ability, as the duty pertaining to the functions of this Department so frequently affect the interests and even the fair name of others and are not of a simple routine character. Inspectors-general should have such assistance as will expedite their work and assure its performance in a complete and satisfactory manner. Now they labor under serious disadvantages, and the labor is unending. What we ask for is recognized in every other department of the Government. It is a question of economy and efficient service, and as such it is urged.

So industrious, experienced, and intelligent an officer as my predecessor, General N. H. Davis, in his report for 1885 to the Secretary of War, remarks :

Stenographic Clerks. The varied and responsible duties that devolve upon inspecting officers in their inspections and investigations affecting the personnel and material of the Army, covering the disbursements of the public moneys and frequently involving the question of justice and right as between the General Government and civilians, urge the propriety if not the necessity of allowing each division and department inspector a good civilian stenographic clerk, at a fair compensation. In making important inspections and investigations this clerk should accompany the inspector, to note at the time matter requiring attention, and to take testimony in investigations. This method and aid in discharging inspection duties would promptly bring to the attention of the proper authorities matter requiring their action important for them to know, and prevent much of the delay in the transmission of information and reports, and in the application of remedies, at present unavoidable. It would put the inspection service upon a more efficient basis and be of general and acknowledged benefit, resulting in economy to the Government.

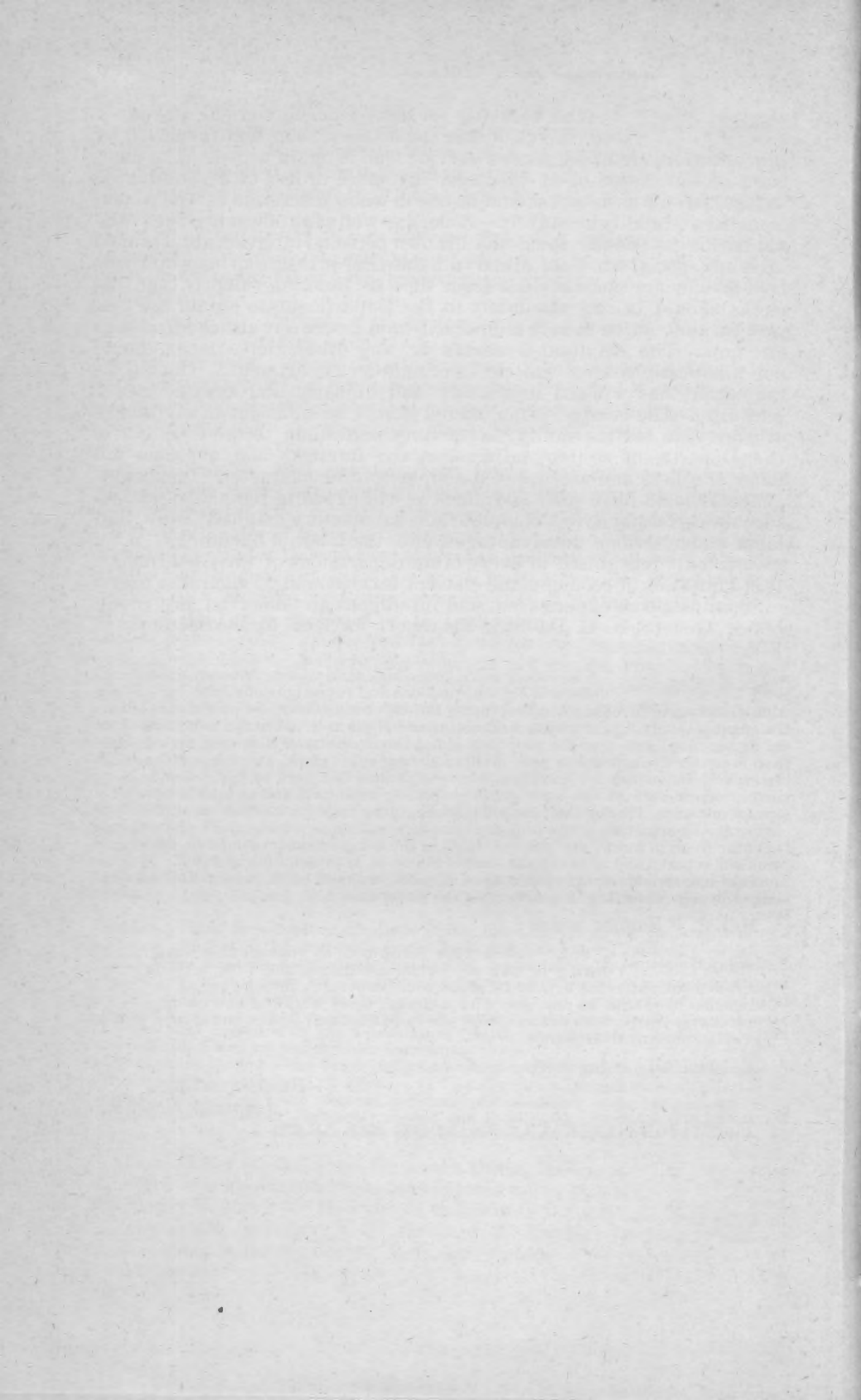
Maj. J. P. Sanger states :

Clerks for Inspectors. Some duties were performed at considerable disadvantage owing to lack of clerical assistance, and I respectfully submit that when an inspector is sent to make such important investigations as those of Oklahoma, he should be provided with a clerk. Good work can not be expected of those charged with such duties if they are to be harassed by the annoyance and delays of mere clerical drudgery.

Respectfully submitted.

J. C. BRECKINRIDGE,
Inspector-General,

The MAJOR-GENERAL COMMANDING THE ARMY.



APPENDIX A.

LETTERS OF ARMY OFFICERS RELATING TO APPRENTICE BATTALIONS.

SOUTH BETHLEHEM, PA., *December 19, 1889.*

GENERAL: I perceive in the annual reports of this year great concern expressed with reference to desertion in the Army, and an anxiety to raise the standard of recruits with a view to diminishing the number of desertions. I beg, therefore, to lay before the Major-General commanding the Army, and through him the honorable Secretary of War, a plan which for a number of years I have held for effecting these objects.

This plan is to introduce into the Army a system of apprenticeship somewhat similar to that of the Navy.

The essence of the proposition is to enlist lads from seventeen to twenty-one years of age, and then train them up to be soldiers. The general features of it would be to select certain appropriate posts, one or more for the infantry; the same for the cavalry; and one for the artillery; these posts to be exclusively for apprentices, who are to be organized into companies, troops, and batteries the same as ordinary soldiers, and to perform duties and be disciplined in a similar manner, and in addition to be given a common-school education. The sergeants for these companies to be selected with the greatest care from the most suitable non-commissioned officers of the Army; the commissioned officers to be selected in like manner, and all with a single view to the proper management and training of young men. The enlistments of the apprentices to be for three years; after the expiration of which the apprentices—now well-instructed soldiers—to be distributed, in case of re-enlistment, to the ordinary companies, troops, or batteries of the service. The apprentice companies to be kept constantly full by fresh recruits.

The arguments in favor of this scheme are briefly as follows:

First. No difficulty in the procurement of the kind of recruits required. The age proposed is that when parents and guardians are most anxious to procure positions for their sons or wards, and when they are most perplexed to know what to do with them, the age being that of adolescence, when the individual is too old to remain longer at home and yet too young to be entirely cast adrift. The proposition offers a good education and an opening to an honorable calling. It is the age, too, when youths are fascinated by the military and take to its training with avidity.

Second. It is the most suitable age for receiving instruction, both as to schooling and the ordinary duties of a soldier. It is, in fact, the only age at which a rudimentary education can be given. The history of mankind proves the fruitlessness of attempting to impart to adults education that belongs essentially to youth. There is nothing in the enlistment of a man to change this law of nature.

Third. The apprentices are taken into training before having become thoroughly contaminated by vicious surroundings, and being subjected to good influences are most likely to become good soldiers.

Fourth. Trained up as youths to a military life, most of them will continue in the service by subsequent re-enlistments, and thus in time the Army will be composed largely of a class of well-educated, instructed, and efficient soldiers.

Fifth. By being distributed in the manner proposed to other companies of the service they will be a source of supply for good non-commissioned officers. It is well known to what straits company commanders are frequently put for good material from which to select this class of officers, and the great importance to the service that they should be good.

Lastly. These companies of apprentices will be as available and quite as efficient for ordinary emergencies as any other class of soldiers; they will not therefore be as dead timber to the service, nor take from the Army a particle of its military strength.

To make the system a success it should be started on comparatively a large scale, say 3,000 for infantry, 2,000 for cavalry, and 1,000 for artillery; in all about one-fourth of the enlisted strength of the Army. This number might possibly be diminished with the successful operation of the plan.

The details for carrying out such a system of recruitment and instruction are so simple and obvious as to suggest themselves to any ordinary military mind; and the only thing required for it beyond what is now in the power of the Secretary of War and of the Major-General commanding is an act of Congress authorizing the enlistment of minors.

Very respectfully, your obedient servant,

JNO. C. TIDBALL,
Col., *Bvt. Brig. Genl.*, U. S. Army, Retired.

FORT MONROE, VA., February 24, 1890.

MY DEAR GENERAL: Your idea about military apprentices is a capital one, and no branch of the service can make better use of them than the artillery. This same idea occurred to me on my visit to the new cruiser *Baltimore* on Friday last. We went there chiefly to see her range-finders, but Captain Schley showed us all through the ship and explained the working of her vast labyrinth of machinery. The greater part of all this was cared for and operated by ordinary sailors who had received one year's training in that line at the torpedo station, and Captain Schley said they were better for that purpose than experts. Every artillery post should have a few of such men, and this school is the place to train them when we reach the condition at which we are aiming.

I hope the military apprentice idea will materialize, and that we may be in a condition to make good use of them here before long.

With kindest regards, very sincerely, yours,

ROYAL T. FRANK,
Lieutenant-Colonel, Second Artillery, U. S. Army.

SUBJECT: THE TRAINING OF ARMY APPRENTICES.

HEADQUARTERS DEPARTMENT OF THE MISSOURI,
INSPECTOR-GENERAL'S OFFICE,
Fort Leavenworth, Kans., January 18, 1890.

The INSPECTOR-GENERAL OF THE ARMY,
Washington, D. C.:

SIR: In reply to your communication of December 7 I have the honor to submit the following report. I have been very much interrupted by my duties here, which must be my apology for what may appear unnecessary delay. The views expressed are entirely my own, as requested in your letter:

In the discussion of this subject I propose to examine, *first*, its The Training of Army legal aspect; *secondly*, the object in view; and, *thirdly*, the organi-
Apprentices. zation and instruction best adapted to attain the object.

The English statute law as to binding out minors as apprentices to learn some useful art, trade, or calling has probably been very generally adopted in this country, with some local variations, and with the settled limitation that both parent or guardian and infant (except in the case of paupers) must signify their assent by being parties to the deed. The general rule is that male infants may be bound till their arrival at the age of twenty-one (Kent Coms., Vol. II). The local variations mentioned have reference to the consent of the parent, guardian, or child, but are not important to this discussion, since it has been decided by the Supreme Court that "a father can not bind his infant son without his consent to military service" (U. S. v. Bainbridge, 1 Mason, 71). This rule also applies to assignments or transfers of indentured apprentices. As a general rule in all the States apprentices are liable to imprisonment in jail for refusal to work, and also to serve double the time they may wrongfully withdraw themselves from service; on the other hand, grievances of the apprentice arising from ill-usage on the part of the master, or grievances of the master arising from a bad apprentice, are redressed by justices of the peace, who have power to annul the contract and discharge the apprentice or imprison him, if he should be in the wrong. The master is entitled to the wages and personal labor of the apprentice while the relationship continues and the apprentice is in his service.

The foregoing embraces the general provisions of the common and statute laws of the States affecting apprenticeship. This, as will be noted, "is a personal trust," and if "duly cultivated under a just sense of the responsibility attached to it and with

the moral teachings which belong to it, will produce parental care, vigilance, and kindness on the part of the master, and a steady, diligent, faithful, and reverential disposition and conduct on the part of the apprentice."

I have presented the legal status of apprenticeship as generally understood in this country, because the public sense is a safe guide in dealing with the subject, no matter for what purpose, and, therefore, one to be followed as closely as the nature of the case will admit. The controlling ideas are that the consent of the minor shall be first obtained; that when given and the indentures are signed, his time and labor, or the proceeds thereof, belong to his master, who in return must support him and teach him an art or a trade. In New York and some other States he is to provide instruction in reading, writing, and arithmetic, and the best view of the duty of the master is that he shall not neglect the moral training of his apprentice.

The laws of the United States, while providing for the enlistment of minors into the Army, do not define or make any general provision for Government apprentices, and, except in the Navy and merchant service, I believe they have not been employed. Section 1418, Revised Statutes, passed June, 1868, prescribing the number of enlisted men in the Navy, mentions "apprentices and boys" as among the number of persons who may be enlisted into the Navy. Section 1418 is as follows: "Boys between the ages of sixteen and eighteen years may be enlisted to serve in the Navy until they arrive at the age of twenty-one years," and section 1419, "minors between the ages of sixteen and eighteen years shall not be enlisted for the naval service without the consent of their parents or guardians." In May, 1879, section 1417 was amended, the amendment containing a provision for "750 apprentices and boys," and the ages of boys and minors in sections 1418 and 1419 were fixed as between fifteen and eighteen years. On these sections as amended the regulations for the training of naval apprentices are based. A brief résumé of these regulations will explain the views of the naval authorities on this subject and their consequent action, and will serve as an introduction to the second division of the subject, viz: "The object in view."

Naval Apprentices. Under authority of the foregoing statutes boys are enlisted as third-class apprentices with the pay of \$9 per month and one ration. They are to be accompanied to the ship where they enlist by their parents or guardians whose signatures, declarations, and oaths are necessary to complete the enlistment. If, from any cause, they can not be present they are furnished a printed form by which the oath is completed. Enlistments are made on any of the training vessels by examining boards. The applicant must be physically sound and not subject to fits, able to read, write, and speak English, and of a prescribed height, weight, and chest measurement according to his age. If he reside at a distance he must be examined by a competent physician as he is liable to be rejected on arrival, and no allowance is made for traveling expenses whether he be accepted or not. No boy convicted of crime can be received, and this is the only condition respecting moral character prescribed in the "Regulations for the Training of Naval Apprentices."

As soon after enlistment as practicable, and within a month, apprentices are transferred to the stationary training vessel, *New Hampshire*, at Coaster's Harbor Island, Newport, R. I., where they receive their outfit, learn to alter their clothing, and where they remain under instruction in reading, writing, geography, and history, and the rudiments of the profession of a seaman, for a period of six months. They are then transferred to the cruising training ships. On board these vessels they continue under instruction for a further period of six months, and are then, if qualified, transferred to the vessels of the general service. A certain number of apprentices, selected for their ability and good conduct, are trained as buglers, carpenters, sailmakers, and blacksmiths. Such apprentices may be retained on board the *New Hampshire* for a period of one year, and upon being drafted into the general service be designated for employment in their respective branches. Except for one and a half hours in the morning, one hour at noon, and one and a half hours in the afternoon, boys on the *New Hampshire* are occupied from 5.30 a. m. until 6.30 p. m. Tattoo sounds at 9 p. m. when they all turn in. The same system is observed on board the cruising vessels.

For instruction in English studies apprentices are divided into four classes; they are further classed in sections according to the number of demerits they receive during each month, and according to the gravity of the offense, as follows:

Section A, 0 demerits.

Section B, 2 to 30 demerits.

Section C, 31 to 50 demerits.

Section 0 (Zero), 50 or more demerits or two or more offenses of the fourth class.

In explanation of this it may be said that there is a regular scale of punishments, and these depend upon the nature and degree of the offense. Offenses are of the first, second, third, or fourth class or are "special offenses" and are punished by demerits and extra drill of not to exceed two hours in one day, by solitary confinement on bread and water, or by ordinary confinement of not to exceed three months and eighty demerits. Aggravated offenses or those frequently repeated may result in court-martial. Apprentices who are persistently vulgar in habits or language, or

whose influence is obviously pernicious, are separated from the other boys and their cases reported to the proper bureau at Washington.

As a reward for good conduct apprentices of Section "A" have liberty daily and other privileges; Section "B" once a week; Section "C" once a month. Those of the "D" Section are not permitted to leave the ship off duty except between dinner and supper on Wednesdays and Saturdays when they are allowed to visit Coaster's Island. Leaves of absence, the "Baily Medal," and honorable discharges are further inducements to good conduct. An honorable discharge, if given at the expiration of the term of enlistment, entitles an apprentice to re-enlist at any time within three months, to three months' pay of his rating, and to an addition of one dollar per month to his pay during such re-enlistment.

As far as practicable the petty officers and enlisted men of the cruising training ships are re-enlisted apprentices, or men of good moral character and sobriety.

Such in brief is a synopsis of the regulations for the training of naval apprentices. The system has in view the training of boys to become efficient seamen and petty officers.

As transfers are not made from the training ships to the Naval Academy, from which all naval officers are now commissioned, no hope is held out to a deserving, intelligent, and ambitious boy that he can ever rise above the grade of petty officer either by appointment to the Naval Academy or by promotion from the ranks. I have no knowledge of the working of the apprentice system in the Navy, but it seems to me that it would be well to avoid this feature in its application to the Army. While suitable precautions must be taken to protect our service against those who from whatever cause are unworthy, or unable to qualify for the several grades to which they may be finally promoted, no insurmountable barrier should be raised by official sanction between an honest and intelligent American boy and the highest post of honor in the hierarchy of his profession. It is repugnant to American ideas of military duty and its rewards, and if long continued will prove injurious in its effect on any system of military service which may be established. It can be maintained in time of peace, but yields inevitably, in this and all other countries, to the strain of war.

In continuation of this part of the subject I will now discuss more particularly the application of the apprentice system to the Army. The primary object should be to increase the military efficiency of the country by the establishment of a course of instruction corresponding in some respects to that of our manual training schools, and adapted to the lower grades, by means of which a suitable number of young men can be trained annually for admission to the Military Academy, or colleges where military instruction is given, or for duty as non-commissioned officers and privates of the several arms and administrative departments of the Regular Army or national guard.

As the Regular Army is small and its needs very great, every proper effort should be made to induce the apprentices when discharged to re-enter it, but they should not be compelled to do so as a condition of their apprenticeship. The object of all military legislation should be the military efficiency of the country as a whole, and this will be enhanced yearly, even if that of the Army be not, by an accession of well-trained young citizen soldiers, skilled in a trade and familiar with the system under which the Army is managed. If, for no other reason, this, in my opinion, is sufficient to justify the proposed organization.

For all the purposes embraced in this report I believe a regularly established training school would be the best. The words "battalion of apprentices," would indicate a single battalion, whereas, I think, there should be at least two battalions for reasons which will appear further on.

The first point to be considered under this head is the number of apprentices to be enlisted, and this I assume should be determined by the number of non-commissioned officers required annually, as well as the number of enlisted men employed in the service of the several administrative departments of the Army. The total number of non-commissioned officers and mechanics of infantry, cavalry, and artillery, prescribed by law, is as follows: Two thousand two hundred and ninety sergeants, 1,720 corporals, 360 farriers, blacksmiths, and saddlers of cavalry, 120 artificers of artillery, and 500 of infantry. The grade of artificer is not generally filled in the infantry and artillery owing to the conditions under which they are paid. Through some mistake artificers are not enumerated in section 1280 Revised Statutes, as part of the enlisted *personnel* of the Army and, consequently, they do not receive the benefit of section 1281 prescribing additional pay. I believe that they are as much entitled to it as other soldiers, and the fact that they do not receive it has practically extinguished this office in a large number of infantry and artillery companies.

In addition to the mechanics prescribed by law for companies, the administration of all posts requires a painter and a glazier, a carpenter and wheelwright, a blacksmith, a shoing-smith, and saddler, and an engineer. The services of a sail-maker

are also needed for the repair of tentage, although any tailor could do this work were he provided with the necessary tools. I have not at hand the data upon which to base an exact estimate of the number of vacancies filled annually in all the grades and duties enumerated, but from the statistics of the Sixth Infantry, the headquarters of which are accessible, the following may, I presume, be taken as a fair average of annual vacancies in the grades of corporal and sergeant, to wit: Corporals, 19; sergeants, 19. Using these figures as a basis of comparison, and bearing in mind the difference between the number of non-commissioned officers in the three arms, we have for the entire Army, the following number of vacancies:

Infantry, 25 regiments, 475 corporals; 475 sergeants. Cavalry, 10 regiments, 230 corporals; 270 sergeants. Artillery, 5 regiments, 115 corporals; 120 sergeants. Total annual vacancies, 820 corporals; 865 sergeants.

Another duty, which, for its proper performance, demands more than usual intelligence and time, is the clerical work of companies and posts. The regulations prescribe the books, reports, returns, correspondence, etc., common to all posts and companies as well as the manner in which they are to be kept. At a large post this work is excessive and requires the services of six or eight men, apart from those who act as company clerks. Intelligent penmen of good habits are not common, and at times very much of the entire clerical work of a post devolves on its officers and non-commissioned officers to the detriment of other and more important military duties; hence good clerks are as necessary as mechanics, and in some respects more so. In order to determine the total number of enlisted men employed on extra and daily duty in the Army and the approximate number of casualties annually, I have used such data as experience in the department of the Missouri affords. This calculation shows that about 1,000 mechanics and clerks are needed annually to fill vacancies in the Army, and this number added to the number of vacancies in the non-commissioned grades gives 2,865 vacancies, which, if filled by well-trained, conscientious young Americans, would vastly improve the tone and efficiency of the Army. But, of course, this idea is impracticable; hence the full benefit of such a system can not be realized, and it is doubtful if it ought to be even if it could. I proceed, therefore, on the assumption that at least two-thirds, if not a larger proportion, of all vacancies will be filled as heretofore, at the posts, even if the apprentice school should be successfully established. This conclusion would give, as the approximate strength of the battalion, 800 boys, which is the number I recommend for the present. Should this project be carried out successfully a third battalion of 400 boys could be added with manifest advantage to the service.

The school should be commanded by an officer of well known ability and devotion to duty without respect so much to rank as to these characteristics; and while it would, no doubt, be better on all accounts to select a field officer for this duty, the detail should not be confined to that grade if a better selection can be made from among the captains or even the first lieutenants of the Army. Similarly officers for service with the companies should be chosen for their aptitude and professional interest, and should be taken from among the lieutenants, three of whom will be needed with each company to act as instructors in the military department and the department of English studies; they should be assisted by school-masters. Just how the lieutenants are to be provided, in view of the large number already disabled or on detached service, is a point which is not easily determined. Possibly it may be advisable to open this field to officers of the national guard and Navy, if the efficiency of the service at large will be thus increased. An adjutant, a quartermaster, three medical officers, a signal officer, and a chaplain, with the usual non-commissioned staff-officers and sergeant-major would complete the official detail to the school.

The school-masters heretofore mentioned should be employed in the department of English, and in the department of mechanic arts a suitable number of master-workmen.

As a reward to the deserving and to promote the value of their military training, I think non-commissioned officers of apprentice companies should be selected from among the apprentices; the school should also be garrisoned by re-enlisted apprentices or by other enlisted men of good moral character.

For purposes of instruction 100 horses, with guns, carriages, and other appliances indicated, would be needed.

As the parents or guardians are parties to the contract of enlistment their status as well as that of the apprentice should be carefully considered. Only the sons of *worthy American citizens* should receive the benefits of the school, and this point, I think, should be strongly emphasized. Aliens have no special claims upon the Government, and citizens who not only neglect their children but perhaps set before them daily habits of obscenity, profanity, dissipation, idleness and it may be crime, should not be permitted to profit directly by its generosity. Such habits and such continual neglect of a sacred duty, no matter from what cause they may arise, exercise an influence upon the child which as a rule he can not resist, which arrests his moral growth, undermines his character

Condition of Enlistment.

and renders him a fit subject for a reformatory, but not for such an institution as is here proposed. Hence every effort should be made to learn the character and surroundings of the parent or guardian as affecting the true disposition or *heart* of the boy. To those unacquainted with modern military principles, and to those who believe that our Army is an asylum for bad characters generally, this may seem an unnecessary refinement; but it does not appear so to me, and hence I suggest the importance of this inquiry respecting the home influences of all boys who may be received into the service.

The physical qualifications of apprentices can best be determined by our medical officers. I think the educational requirements should include reading and writing, the notation, addition, subtraction, multiplication, and division of whole numbers, and that moral character should be made the subject of careful inquiry. Boys who are already addicted to vice, who are what is known in our cities and towns as hoodlums or fast boys, should not be accepted, no matter who applies for their admission to the school. In no sense whatever should this institution, if established, be treated as a *reformatory* for bad boys. The very moment such an impression becomes prevalent no good boy will care to enter it, and we shall have a set of incorrigibles to train, who, should they enter the Army, will add to, rather than detract from, the demoralizing influences which now beset it. Admission to the school should be an acknowledgment of the good character of the apprentice, and his honorable discharge an avowal of his integrity.

The ages of enlistment, I think, should be between sixteen and eighteen years, the term of enlistment five years, and the period of service at the school two, three, four, or five years, according to the aptitude and attainments of the apprentice. In other words, instead of requiring a boy of bright mind and application to continue laboriously at the school in company with those who are unable to comply with its requirements in a less period than five years, he should be permitted to leave the school at the expiration of two, three, or four years, according to his attainments, and either be appointed to the Military or Naval Academy or be transferred to the line of the Army, where he would complete his term of enlistment. For reasons equally obvious, those who have no aptitude or application or who make no progress should not continue at the school for a longer period than two years, but should be discharged to give place to other and more promising boys, while those whose example and influence are bad should be discharged at once. I have designated sixteen years as the minimum age, because this is the limit now fixed by law, and because the best authorities on the subject of physical development agree that at a younger age boys are liable to permanent injury if subjected to military exercises and fatigues, and while of course it is not the intention to subject apprentices to excessive work, they should be sufficiently developed to attain without injury the necessary military and manual training in a reasonable time. The age of eighteen is taken as the maximum limit, because the apprenticeship will expire in three years therefrom, and the average boy will not be able to complete the proposed course of instruction in a less time.

I recommend that on entering the school each apprentice be furnished a complete outfit, and that his uniforms be altered and fitted at Government expense. His pay during the first year to be \$8 per month, with \$1 per month increase for each succeeding year he remains at the school. The clothing allowances can be best determined by experience, but clothing money should accrue as it now does to our soldiers, as an inducement to neatness and economy. If transferred to the general service or to a regiment, the apprentice should receive the pay and allowances prescribed by law for other enlisted men.

Whether or not apprentices should be permitted to allot their pay is a question for consideration. I am rather of the opinion that they should not, but be encouraged to save it as a provision against future contingencies.

I suggest as a becoming dress the regulation uniform with black trimmings.

As far as practicable discipline should be enforced firmly but with kindness. Gentle measures are far more efficacious in the training of the young than harshness or severity, and while confinement to the guard-house may be necessary, this punishment should not be imposed save in aggravated cases meriting trial by court-martial or dismissal from the school. For the punishment of ordinary offenses, such as mischievous boys are most prone to, reprimands, demerits, and the withdrawal of the usual privileges will be doubtless sufficient. I commend as a principle to be remembered by those who may be charged with the more deliberate consideration of this subject that with the young and undepraved, rewards are often far more efficacious than punishments in securing obedience and good conduct.

This should embrace a department of English studies, a department of mechanic arts, and a military department, the exercises of which should be carried on simultaneously through the entire course.

Considering the object and scope of the school, instruction in English should be

limited to arithmetic, grammar, history, geography, dictation, composition, and the elementary principles of ethics.

In the department of mechanic arts instruction should embrace manual training in those branches needful in the administrative service of military posts and companies, as already enumerated—the object being to teach each boy a trade.

Instruction in the military department would embrace the squad and company drills of infantry and cavalry, the manuals of field, siege, and one kind each of sea-coast guns and mortars; artillery and infantry target practice; gymnastics and swimming; signaling, and the use of the telegraph, heliograph, and pocket compass; the conventional signs of topography, with written descriptions of ground in connection with the reading and making of simple maps; the duties of guards in garrison and on outpost; the organization of the Army, and the system of books and records of companies. In connection with this subject the curriculum of Army post schools might be considered with much advantage to the service, and I renew the suggestion made by me June 18, 1889, that a series of Army school books be compiled and arranged, so that instruction in the English branches may also be made the medium of inculcating elementary and useful military principles.

The moral training of apprentices should be by no means neglected, and the inestimable value of truthfulness and a conscientious discharge of all duties pointed out. This teaching can be largely intrusted to the chaplain, if he be, as he should be, intelligent, persevering, and active, but all who have any connection with the school should feel some responsibility on this subject, and both by precept and example endeavor to inculcate among the apprentices feelings of self respect, and a detestation of all that is mean, equivocal, or in any sense incompatible with the character of a good soldier.

The arrangement of apprentices in classes and their assignment would no doubt be determined by such inquiries concerning their attainments as might be best, but the principle to be observed is that as far as practicable they shall be carried on from the point already reached by them on entering the school, and that they shall be permitted to transfer or to receive their discharges as hereafter suggested whenever after two years they may be pronounced proficient. It is understood that to be proficient each apprentice shall sustain a good examination in all the subjects of the military and English departments, and shall have mastered at least one branch of the department of mechanic arts.

No apprentice of bad habits or whose moral character falls below the standard should be graduated from the school.

Rewards. As an incentive to good conduct and industry suitable rewards are of great consequence in all institutions devoted to the education of young soldiers. But in truth the hope of reward has ever been a great motive-power to mankind, and in most vocations, whether professional or not, has been the main-spring of all activity. I therefore recommend that at the end of the course of instruction apprentices who have the best records of conduct, and in the various departments of instruction, receive suitable medals.

Discharge. No apprentice should receive an honorable discharge from the school until he has served five years, except to enter the Military or Naval Academy, a civil college, or the general service of the Army, and a discharge for either of these purposes should not be granted until the apprentice is declared proficient in the course of instruction. When transferred to the general service, or to a regiment, they should be assigned to vacancies in the non-commissioned grades, or to the service of the administrative departments if they so elect, otherwise to duty as privates in the ranks.

As an inducement to re-enlist, I recommend the practice now observed in the Navy, of granting apprentices who receive an honorable discharge the privilege of re-enlisting at any time within three months, and three months' extra pay of their rating when discharged, and to the additional pay per month now given soldiers who re-enlist within thirty days after their discharge.

Other, and probably more appropriate, inducements will no doubt be suggested by experience; the principal object at this time is to bring the subject pointedly to notice.

The Location of the School. I do not think it would be advisable to establish this school at a military post for the reasons given in the note accompanying this report, and therefore it remains to discuss other sites.

It has been brought to my notice that a movement has been made toward the acquisition of land for military purposes near the city of Lexington, Ky., and if such be the case, I recommend that it be set apart for this object. My reasons may be briefly stated as follows:

Kentucky occupies a central position among the great States of the Union, and, consequently, is accessible from all points and to a large majority of our citizens. Lexington is situated in a country of surpassing richness, beautiful scenery, with a mild and salubrious climate admirably adapted to the health and physical develop-

ment of the young. The location of the West Point Military Academy in the northern and eastern, or manufacturing, portion of our country naturally suggests the southern and western, or agricultural, portion as the appropriate site of the next national military school. It is from a people of agricultural or pastoral pursuits that the material for a school of the proposed character should be chiefly recruited, and if this be conceded, Kentucky is beyond all reasonable denial the very center of such a population.

With the rapid settlement of the Western country, and the extension of the railroad system, many of the remote and quite inaccessible posts will soon disappear and the troops be concentrated in large garrisons at important strategic points. Each State will, no doubt, claim and receive its quota, to be located where it will not only serve as a protection against domestic violence, but where it will subserve the purposes of the general Government equally well. Such changes will bring about a corresponding and natural change in the duties of the Army. It will become more closely connected with the National Guard, serving as a military model to that body in fact as well as in theory. It will thus be brought conspicuously and closely in contact with citizens of all classes and in large numbers, and will be placed under a surveillance and criticism to which it has not yet been subjected. It should be prepared to undergo this ordeal, and while it may be said that a majority of the officers are prepared for it, a large number of the enlisted men are not. Among the latter there is great military aptitude and native American intelligence, but on the other hand there is by no means the education or the conscientious feeling in regard to duty which should be found in every grade of so small an Army maintained by so great a country. The proposed school offers in some measure to remedy these defects by training boys at the impressionable age, and before they have been corrupted by evil communications, to love of country, to habits of truthfulness, industry, obedience, neatness, courage, and to a conscientious discharge of every duty, so that whether they serve in the Army or in the walks of civil life they may be valuable American citizens.

This completes the outline I have been directed to prepare. With no knowledge of the views of others, and, consequently, with some misgivings as to its sufficiency, I nevertheless submit it with perfect faith in the feasibility and great importance of the idea it embodies, and with the sincere wish that it may receive substantial acknowledgment at the hands of the Government.

The development of such an institution must necessarily be slow if permanent and beneficial results are to be achieved, but this should inspire rather than detract from the confidence of those who may be interested in its welfare. Among the latter I shall beg to be enrolled, for I am satisfied that its influence is just as much needed among the rank and file of our Army as the influence of the West Point Military Academy among those of higher grades.

Very respectfully, your obedient servant,

J. P. SANGER,
Major and Inspector-General.

WAR DEPARTMENT,
SURGEON-GENERAL'S OFFICE,
Washington, D. C., March 13, 1890.

General JOSEPH C. BRECKINRIDGE,
Inspector-General, U. S. Army, Washington, D. C.:

Sir: In compliance with your verbal request, I have the honor to place before you my opinions upon the establishment of a school for the instruction of growing lads, with a view of preparing them for service in the ranks of the Army.

The improvements that have been made in modern times in the implements of war and the advance that has followed in its science and art necessitates for effective operations a higher degree of intelligence in the enlisted soldier than can be expected from or obtained in the men enlisted under our present system of recruitment, and it is doubtful if any degree of care in their selection would result in securing the class which the changed conditions of the period demand. Men with ordinary common school education, or who are skilled in trade, find abundance of employment in civil life, and but few such are attracted to the Army as a profession. Ordinary prudence, therefore, dictates that some other source than the floating population of our large cities should be sought for the future recruitment of our ranks, and no better one than the trained and educated youth of our country can be found. That the military profession has peculiar attractions for youth is evidenced by the large number of minors who succeed in entering it, either with or without the consent of parents or guardians, notwithstanding the restrictions that are placed by law and regulations upon their enlistment. Of unauthorized enlistments the number can not be definitely stated, because only those are known whose release is sought through the agency of

the law. Officers serving at recruiting depots may, however, form an approximate estimate from the general appearance of recruits who allege themselves to be of legal maturity. My own opinion is that 10 per cent. of the entire force of the Army would be a small estimate of the number of minors who annually enlist.

The opinions of military writers, medical and lay, are in accord upon the general unfitness of this class for the full duties of a soldier, but the authorities in foreign countries, recognizing the necessity of utilizing the material thus presented, have provided for it by assignment to duties commensurate with the capacity of the individuals, whom they at the same time train physically in gymnasia.

Such is not the case in this country. The lad who enlists is recognized as an adult, placed in a company, and required to perform all the duties which pertain to the matured and able-bodied soldier. His immature body is taxed beyond its power of endurance; his unformed and impressionable moral character, freed from the restraint of parental authority, yields readily to the dictates of budding passions for stimulants and sexual indulgencies, and he sooner or later breaks down and becomes one of the large percentage of casualties which mark the history of this class of recruits.

While at Columbus Barracks in 1886 I investigated the cases of all the minors who had been received at that depot during the ten years, 1876 and 1885, tracing the histories of each by name throughout the entire service. One hundred and seventy-two were enlisted, of whom 93, or 54 per cent. were lost by casualties as follows: Discharged by order, 8; sentence, general court-martial, 17; certificate of disability, 34; deserted, 32; died, 2; 32 served their term of service, and 47 were still in service.

The casualties during the same period for the whole Army were 27.5 per cent.

This large percentage of loss is due in the main to causes that are within control, and that the State is fully competent to prevent by the adoption of a system of training and probationary service that will fit a young man for the more arduous duties of the soldier and at the same time develop an ever-ready and inexhaustible source of supply for the ranks of the Army.

The establishment of a training school for the army, where youths could be developed in mind and body, would, in my opinion, be attended with the happiest results, insuring a body of intelligent young men, capable in every way of performing the duties of the soldier, and from whose numbers the selection of competent non-commissioned officers may be made.

The present embarrassments arising from the fraudulent enlistment of minors may also be effectually settled by their transfer to the school (if no legal objection exists) when the character of their enlistment has been discovered.

Such a school should not be located at or in the vicinity of a military post, but rather in some quiet country place, where its pupils would be free from the temptations which prove so attractive to growing lads. The age at admission should be between sixteen and eighteen years, and a promise of enlistment upon graduation should be exacted from the candidate. The course of study should be of three years' duration, and include the branches ordinarily taught in common schools, such military instruction as may be deemed necessary, a thorough course of physical training in a well-equipped gymnasium, and such manual training as would give to the pupils a rudimentary knowledge of the several trades likely to be needed in the Army. As an incentive to diligent work, the option of a cadetship at the Military Academy at West Point might be offered to the three highest graduates.

I have presented my opinions in outline sketch merely as evidencing my unqualified approval of the general plan of training growing lads for army service. The details for its practical application, such as legislation, a curriculum, administration, etc., are properly omitted; these require thoughtful consideration by the ablest men in the military service.

Very respectfully,

CHAS. R. GREENLEAF,
Major and Surgeon, U. S. Army.

FORT LEAVENWORTH, KANS.,
March 29, 1890.

Brig. Gen. J. C. BRECKINRIDGE,
Inspector-General :

GENERAL: I thank you for your compliment in asking my views as to the organization of army apprentices. I am so occupied with daily work, routine and special, constantly pressing as to have no time for the exhaustive study that I would like to give the subject. But it has been in the air for some time, and no one interested in military affairs can fail to have some opinion about it. I therefore send what I think, asking your indulgence if the particulars are not wrought out and if the style is not perfectly clear.

I suppose the desirability of such a scheme may be assumed.

It should very carefully appear that it is neither a reformatory nor a charity school, although it may discharge functions of both incidentally. Only lads of good character should be taken, and preferably those native born. (I doubt whether the presumed genius of our institutions will allow this latter to be carried out.) The geographical idea of districts, or a proportion to each State, to be carefully avoided.

When taken the apprenticeship should extend to twenty-one, with a provision for the release or discharge of boys for character, ill-health, or by favor. An ordinary apprenticeship binds the master as well as the apprentice with mutual obligations, care on the one part and service on the other; but the Government should not be required to hold a chronic invalid nor an incorrigible. I would take none over eighteen years and six months as a maximum nor under sixteen, and as soon as the system has gone into effect would forbid by orders the enlistment of minors. The laws should not be changed, for war emergencies may arise when men of twenty might be required for immediate service or in a general enrollment.

I say none under sixteen. But if drums are to be allowed in the army a special corps of drummers might be taken at twelve. It is almost impossible to acquire the proper flexibility of the wrist after 12.

Instead of establishing several battalions, as you suggest, for the various arms, I think all below eighteen should be kept together, partly for uniformity of instruction, and be taught as infantry, and those who join at eighteen or more should be kept there at least one year. I would discourage lads more than eighteen from joining. All these would be general service or junior apprentices. Semi-annually I would draft those who would be nineteen within the next six months (or eighteen), provided they had reached a certain specified standard, to the schools of special arms, calling them senior apprentices or apprentices of instruction in infantry, cavalry, etc.

It is hardly possible to exactly prefigure here what the various courses should be, but in a general way the junior apprentices should be taught to write carefully, a legible hand being insisted upon, and fluency in reading all sorts of manuscript and writing from dictation, arithmetic, the elements of algebra (possibly), the geography of North America very carefully, including its physical and perhaps economic geography and American history. They also should be taught to sew and to mend leather (to cobble), both simple and most useful military arts, and having learned them, to be required to keep their own clothes in repair. They should further be taught and be required to practice plain cooking, including soup making, not by being turned into the company kitchen as scullions, but by systematic lessons, as in cooking schools.

The manual, and company and battalion drill, so far as concerns non-commissioned officers, should of course be taught, but that would be learned speedily enough.

Physical culture should be vigorously carried on, but carefully and intelligently as at the higher colleges, under competent teachers of athletics and by the advice of medical officers who should be required to superintend the weighing and measuring in detail of the apprentices and to prescribe the kind of training.

Swimming should also be taught, and to that end sufficient swimming pools should be a part of the plant of the school.

The greater part of the summer should be spent under canvas with practice in camp making, with a yearly practice march (but no mimic war) with shelter tents through the country, but with no blanket-bags for the apprentices. Blanket-bags are substantially the old knapsacks, and are the most efficient invention of the adversary for the physical ruin of young men. The Merriam equipment, possibly lightened or loaded, is another matter.

The object of this school should be to turn out at 18 or 19 well set up and physically trained lads with a fair rudimentary English education, neither theoretical nor advanced, and with no nonsense of having commissions in sight.

About eighteen or nineteen they should be drafted to the senior battalion of the special arms by the commandant and not according to their supposed desires, although marked predilections might be considered. Prior dispositions should be made in consideration of their comparative intelligence, their physical development, and their temperament. An officer of judgment and experience can tell what is better for them and for the service than their own fancies, although an officer of the line might be prejudiced in favor of his own arm. If left to themselves nine out of ten would be on horseback. The small active men should go to the cavalry and light artillery, the large men to the heavy artillery, those with special mechanical aptitude to the engineers, and the remainder to the infantry.

At the special schools the special functions should be taught. The cavalry should be made perfect horsemen first (and for this reason they might possibly be drafted six months earlier), and after they become such be trained in their arms and then be exercised accordingly, and the same with the others. Their book instruction should be purely military, such as making out company papers, learning and practicing outpost duty, the art of military observation and of making reports, the elements of map making and reconnaissance sketching, the simpler forms of hasty trenchments suited to their special arm, the formation of camps, such as carefully pitching tents

and ditching them, ditching and preparing company streets, preparing company and kitchen sinks, guard patrol and picket duties in their highest forms, and military signaling by the manual and extemporaneously; all this as non-commissioned officers, not as commissioned officers. The art of packing, use of pack trains, should be included.

Throughout the whole apprenticeship, the physical culture in all its forms must be carefully persevered in.

Under no circumstances should the apprentices be called on for any military duty proper, nor in garrison should they do any but the most necessary and strictly regular forms of police and their own guards, the latter so as to secure six nights in bed under eighteen and five above it at the minimum, and to be otherwise lightened as occasion may require. In other words, it is to be for instruction, not duty. The lads must be made soldierly, but not regarded as soldiers.

Offences against the statute law should lead to dishonorable cancellation of the indentures and confinement in a reformatory.

I do not think the presence of these battalions with troops of the line desirable, certainly not the junior battalions.

I would establish the junior school in a healthful locality, in a temperate climate, with no soldiers accessible. The lads would almost certainly be contaminated by their proximity, and would certainly lose their high aim.

I would cultivate their military sentiment to the highest pitch, laying much stress upon ideals, and governing by encouragement rather than by repression. Military pride, not vanity, should constantly be fostered.

I would not advise sending a battalion here. This is a large and important school for officers. Every person here is thoroughly occupied with his special work. It would require in addition a special staff and would practically establish a special school, which would be a second post within or by the side of this. Any individual commanding officer will believe that he himself can command such a twin establishment, such a double post, but will admit that generally speaking it can not be done efficiently, nor can it.

At Fort Riley it is quite possible to build a post for the mounted battalion, below the new artillery post, where they will have the example of the organized commands in the distance, but will not be mingled with them.

For the reasons just given I would not choose Fort Monroe; but Fort Schuyler or Fort Wadsworth, with the present garrison evacuated, might answer. Should Willets Point not prove malarious it might answer for the engineer company. What might be called the mechanical and financial difficulties—of quarters and appropriations—I presume you have thoroughly considered, and that they need not be discussed. So with the race problem, which must be met at the outset.

I think the gravest difficulty will be in the selection of officers. If the battalion is not given the right direction and the proper impetus at the outset it will go astray in a desultory way, spoil the boys, and do discredit to the service. Nothing could be more unfortunate than to bring up a body of lads to the lazy and aimless life of the conventional, not the ideal, "old soldier." Our army is scattered in such small and remote fragments, and heretofore so little encouragement has been given the expression of well-considered opinions and study on military subjects, that I imagine the central authorities have no accurate information as to the peculiarities of individuals except as they deserve censure. Speaking generally, the men who would apply for such details are not the soldiers who should have them. The best men are modest in relation to their own capabilities and do not put themselves forward. Nevertheless, suitable officers are to be found, or we have no army. But they must be sought. Such officers should be intelligent, enthusiastic, and of mental equipoise.

The question you raise as to companies of "such unimpeachable soldiers" for each regimental headquarters, I should answer in the negative. The value of this system will consist in there being a large number of intelligent, respectable lads trained together, that is, uniformly, in the highest manner. To break the apprentices up in forty companies will dissipate their energies and lead to forty different standards. As apprentices they would have no moral influence over the other companies, by whom they would be looked down upon as boys. If made into a company after the apprenticeship has passed, they would be subjects of envy and probably of opposition. As an extra company (even if the law were modified) they would interfere with the formations (unless two companies could be allowed and thus establish a twelve-company regiment for infantry), and if kept within the standard organization they would require selected officers to develop and preserve them. But, speaking generally, I do not think an entire company of such men would have any appreciable good influence upon the other nine, whereas, as individuals, scattered through companies as units, they might prove the little lump to leaven the whole loaf.

I strongly believe in rural recruiting by peripatetic recruiting parties, and as strongly deprecate the localization of regiments. The moment that is done you have the regiment and the member of Congress looking to each other for mutual favors,

and thus Representatives will at once consider it "his regiment," and will attempt to influence its station and to manage its officers. Groups of men may properly enough be recruited from a vicinity, but regular regiments, never. I fear a weakness that will threaten the rural recruiting will be the want of an adequate physical examination. The average company officer thinks he knows a recruit, as he knows a horse, at sight. As a rule, or at least frequently, he does not.

To recapitulate: The lads should be selected for character and, above all, for physical vigor; the length of apprenticeships should depend on their age when accepted, all terminating at twenty-one, and none being received after eighteen years six months; some now under arms might be transferred with their own consent. There are probably two or three suitable in every large garrison.

They should be quartered and in immediate contact with the rank and file, except so far as general service men are necessary for their efficient care and supply of the post. Their education should be rudimentary English, with special bearing upon military topics. It would be well to provide voluntary classes as advanced as individuals might care to go and as the full discharge of their duty would allow. They should be kept occupied, not always at work but sometimes at play, but with no idleness to breed vice and discontent. The officers should be carefully selected, not for their knowledge in the higher art of war, but for their every day, soldierly qualities of example, and they should carefully cultivate the military sentiment. These qualities should be insisted upon in the staff as well as in the line officers on duty with them. After thorough general instruction they should be drafted near the age of eighteen or nineteen to special schools, which should be conducted entirely on a practical basis. When their service expires they should receive certificates for character and proficiency as they may deserve. Provision should be made for their discharge for cause, and if on account of bad conduct they should be confined in some reformatory, but not be allowed entrance to the Army at any time; it is perfectly possible to distinguish between those who are spirited and those who are vicious.

Very respectfully,

ALFRED A. WOODHULL,
Major, Med. Dpt., Bvt. Lieut. Col.

FORT LEAVENWORTH, KANS., April 3, 1890.

General J. C. BRECKINRIDGE,
Inspector-General:

GENERAL: I beg the indulgence of this postscript to my letter of yesterday to supply an accidental omission.

I intended inviting your attention to a little book of Sir William Aitken on the growth of the recruit. Its whole title, which is descriptive of the subject, is "On the Growth of the Recruit and Young Soldier with a view to Judicious Selection of 'Growing Lads' for the Army and a Regulated System of Training for Recruits." The primary object of the book is the instruction of British medical officers, and the author is a professor in the army medical school. Although written for professional men, the most of it is perfectly intelligible by laymen. It deserves careful reading at the hands of all line officers and special study by those concerned in the government of the proposed apprentices.

Since mailing my notes yesterday I have had the opportunity to read for the first time Major Sanger's report on the same subject, and I take the opportunity to modify my suggestion about the lads being of American birth to conform to his, that they should be sons of American citizens, which is practically what I had in mind. Nine times out of ten the two will be the same. In a conversation some months ago on that subject we substantially agreed that that was the desirable starting point.

If a comment on that paper is in order, I would express a doubt whether it is desirable that the Government should establish apprenticeships for the mechanical arts, except incidentally. If the trades are *thoroughly* taught there will be little time left or taste developed for military matters proper, and almost certainly these skilled mechanics will drift at once into civil life, and the question will properly be raised whether it is the province of the Government as a government to take lads, pay them wages, and teach them at the public expense a mechanic art. On the other hand, if they are *not* taught thoroughly they will pass into the Army imbued with the idea that "good enough" work for a few hours a day is all that is required of soldiers.

Should it be thought well to educate army blacksmiths and army carpenters there should be some positive condition by which they will be bound to serve in the Army one full enlistment after they are twenty-one and they should be taught in a separate school independent of and apart from the junior battalion, but they should all pass through that school first.

It would be well, however, to teach every lad how to weld iron, to mend tinware, to drive a nail, to use a saw and push a plane; in other words, to be expert in what

in educational circles is now known as "Sloyd." These minor manual accomplishments are easily taught, and when well taught add much to the usefulness of any man, civil or military. Men with decided mechanical aptitude should have it especially developed for the engineers.

A knowledge of the horse's hoof and an ability to set a shoe in an emergency and to do the necessary leather work about a saddle should be part of every cavalryman's instruction, and every soldier should be able to mend harness under pressure.

A kit of shoemaker's tools and spare leather for mending boots and shoes should be part of each company's equipment for general use under the conditions suggested in my essay on the English soldier, published several years ago and recently reprinted by the War Department.

Very respectfully,

ALF. A. WOODHULL,
Major and Surgeon.

FORT WADSWORTH, NEW YORK HARBOR, *March 30, 1890.*

Brig. Gen. JOSEPH C. BRECKINRIDGE,
Inspector-General, U. S. A. :

GENERAL: In accordance with your request, I herewith submit my views upon the subject of apprentice battalions.

The great value of such an organization in furnishing material for non-commissioned officers is so evident that there would seem to be no necessity to present any argument in its favor. The simple question is, how should the battalion be organized and maintained.

In view of the purely experimental character of such a venture, I would suggest that no effort be made to secure legislation upon the subject at present, or if any, as little as possible; let the battalion be established by orders.

The honorable Secretary of War can authorize the enlistment of minors, and as these minors must have the consent of their parents or guardians in order to enlist, a contract could readily be entered into with the parents or guardian that the pay of the apprentice should be retained and disbursed during his minority, as is now done at the Military Academy. Let the boys be enlisted at eighteen years of age to serve five years—three at the school and two years with a regiment; the school course lasting three years.

The battalion might be begun with a small number, say 50 the first year, a greater number the next, and so on until the system is on a good basis. This would send out 50 at the end of three years to regiments.

Some one of the now abandoned posts, where there is opportunity for artillery and small-arm practice, could be selected and the school established; a place near water, where boating and swimming privileges can be had, would be preferable. A place should be chosen where there are no troops; the influence of soldiers would be bad upon the boys. Officers should be carefully selected and detailed for duty with the battalion.

A few carefully selected non-commissioned officers should also be selected as drill masters and teachers of the primary classes; the higher classes should be taught by officers.

These non-commissioned officers should not be quartered with the apprentices, who should of course have a complete organization of their own.

The course of study should be that of the *grammar school*, omitting commercial training, opportunity being offered to boys who are particularly bright to advance beyond this course.

After the battalion is established Congress should be asked to furnish means for instruction in such trades as are valuable for a soldier to know. This, of course, would include shops, tools, etc.

My idea is that the practical part of the course should be made very thorough, including instruction in artillery, infantry, cavalry, gymnastic, shooting, swimming, and all many exercises, including some one trade. And that the theoretical course, while not to be in any sense neglected, should be made subservient to a thorough practical training, and be confined, except in special cases, to a grammar-school course.

The discipline should be exact, but not severe. The boys should be taught to like the service; police should be reduced to the minimum.

There are one or two points which should be carefully considered: First. The ration. I doubt whether the soldier's ration will be quite enough for growing boys, especially if athletic exercises are a part of the system. This might be met by introducing a clause into the contract, with guardians, authorizing the deduction of a certain amount, say \$3 per month, towards the mess fund, from their pay. Of course regular cooks must be enlisted. A soldier's pay, with extra duty pay of 50 cents per

day from the mess fund, would secure a good head cook, and each apprentice should take his turn in the kitchen for instruction. Second. A bakery with bakers detailed from the Army could furnish bread. Third. Provision must be made for a laundry. Fourth. Arrangements for a canteen, at which *no liquor of any kind is sold*, should be established, a sort of a trader's store, restaurant club, and reading-room, at which apprentices are allowed to deal at, say, \$2 credit per month. Fifth. Congress should also be asked to furnish bowling alleys, boats, and other means for athletic enjoyment. Sixth. The clothing question must be considered; the allowance for a soldier is hardly sufficient for a boy, and a boating or athletic suit should be added to his clothing allowance.

In fact I could go on from point to point; my object, however, has been to touch upon those salient points which must be considered at the time of organizing.

The success of the system will of course depend upon the officers selected to organize it. Primarily they should be men who are thoroughly interested in the subject—men who understand handling boys, and who are familiar with the modern ideas as to athletic culture, as well as good instructors.

Youth, activity, and enthusiasm are the qualifications which are required to produce success.

I am of the opinion that when the apprentice battalion system becomes thoroughly understood the Government will have the pick of the boys of the proper age from the rural districts. And after the system becomes established there will be turned into the service every year a hundred or more thoroughly trained boys of splendid physique and a fair education.

Very respectfully, your obedient servant,

G. N. WHISTLER,
First Lieut. Fifth Artillery.

General J. C. BRECKINRIDGE,
Inspector-General, U. S. Army:

GENERAL: In your report for the year 1889, under the heading "Army Schools," you state that "A battalion of apprentices would doubtless be as beneficial to the Army as to the Navy, and give an opening for a military career to the sons of many old soldiers now excluded by the age requirement." You also point out that "experience has shown what admirable soldiers are made by those who assume service during youth, when instruction is most easily received." The suggestion contained in these quotations seems to me of the highest importance, and if any excuse were needed for this paper it would be found in the deep interest we must all feel in the question of military education.

If we, as a nation, are to keep pace with nations of equal wealth in war, as in other sciences, it is needful that we watch keenly the tendencies of our times and take advantage of every path which leads toward perfection. The words taken from your report suggest one or two weak points in our military system. They bring up the question of the education of our enlisted men, suggest a means of educating them or of increasing their education and point out a way by which we may "Americanize" our army; this last a consideration that must appeal to our patriotism whenever we note in official reports the great preponderance of foreigners in our service, or listen, as I have done for months, to the broken English of our veterans at the National Soldiers' Home.

The necessity for the individual training of the soldier has been recognized from the earliest times, as has been well shown by Lieutenant Weaver in his article in the United Service for April, 1889; it is only the direction in which this individual training shall tend that changes from age to age. Now, these changes in training and instruction are made from time to time to meet the varying developments of military science, and that we have passed through one of these ages of change, or are now passing through it, no one doubts. The tactics of to-day are not the tactics of our civil war. The military requirements in both officers and men are far removed from those of even ten years ago. For the slow-firing short-range arms of the civil war we have substituted the long-range rapid-firing rifles and machine-guns of to-day; for the heavy masses and solid lines of old we seek a substitute, and if there is one question more prominent than all others in modern military discussions it is what this substitute is to be; what form of attack we shall adopt in place of these solid masses and strong lines. Not an advocate remains for those formations where compactness under supervision of officers made individualism on the part of the soldier of minor importance. The whole tendency of modern tacticians is to divide the company and platoon into smaller groups for action. The advance to the attack; it would seem, will be by successive lines of these groups, in open or dispersed order, which, by a succession of rushes, will pass from point to point of comparative shelter

until within striking distance; that is, within such distance as will permit the groups to reach the line of the enemy in an efficient state for further fighting.

The tendency of our times, then, is towards a subdivision of troops for special reasons into smaller groups. These groups must, in the nature of things, be comparatively independent in their action and will not be under the directing hand of an officer at all times. For the efficient action, then, of this modern formation we must seek some controlling power other than what we have had in the past; our individual men must be better trained and instructed and our non-commissioned officers vastly superior to the simple drill-sergeant of the old school. The skill of the officer must be seconded by the intelligence of his men, and this intelligence must be cultivated in our leisure to be ready for use in the hour of need. The necessity of this superior training is recognized by us. So far as it relates to our officers we provide for it by the post-graduate courses at Fortress Monroe, Fort Leavenworth, and Willets Point. We do not do as much for the enlisted man.

The means provided for his education and training outside of his company drill and duty is very meager, and what there is needs new life and spirit before it can meet the modern requirements.

How should the soldier be trained and what facilities have we for his training? A soldier's training should be divided into two periods—the one before he joins the colors, the other after. During the first period he should be taught the purely preliminary course; in other words, his company should be relieved of his burdensome presence until he knows what his duties are and how to manage himself and his weapon. This course should consist of reading and writing fairly well, the setting up drill, the manual of the piece, target practice for the shorter ranges, how to march in squad and company, how to take care of himself, his clothing and his rations, and a fair proportion of this period should be devoted to gymnastics. Having become efficient in these exercises the recruit is ready for duty with his company, and, what is equally important, his company is ready for him. Instead of joining as a burden to his officers and non-commissioned officers, he is a real acquisition and his second course of instruction should be taken up and should continue throughout his term of enlistment. This course should consist of drilling in larger formations, particularly in skirmishing group, or open order drills; great attention should be given to target practice, marches should be undertaken frequently, and always if possible with an object. Outpost, scouting, and other duties, such as light entrenchment construction, would, of course, be included. Indeed all the problems of actual warfare should be practiced as far as possible. To meet these requirements we have two classes of schools: First the company or non-commissioned officers, taught by an officer; second, the post schools, taught generally by enlisted men on extra duty. In the first the instruction consists almost without exception of recitations in tactics; sometimes the course will be expanded, from very weariness on the part of the officer, to target practice and regulations.

The pupils in this school, however, consist exclusively of the non-commissioned officers of the company; the other men do not participate. The second or post school confines its teachings to the usual English common-school branches. Where, then, does the enlisted man get his military instruction? He gets it simply by oral instruction from the commissioned and non-commissioned officers, and from them only when he is under arms. These schools, then, in no way answer the modern requirements. The time of the officer is taken up in instructing the non-commissioned officers in the minor branches of their profession, and the time of both in imparting to the privates what they should have been taught before they joined. How these schools might be improved will be discussed later in this paper. The point to be noted here is that they but imperfectly meet the end for which they were created. Our Army is suffering from three evils in its enlisted force: Lack of proper instruction, lack of nationality, and a heavy annual loss from desertion. It is of prime importance that we first recognize the evils; then follow such recognition by adopting the very best measures which experience and thought has been able to produce to meet similar demands.

One of the very best measures to mitigate these evils is that suggested in your report, and having made something of a study of the subject, I venture to briefly sketch the origin, growth, and general results of the naval apprentice system. Possibly from this sketch we may be able to see how best to organize a similar institution.

The training of naval apprentices as now practiced in our Navy is far from being an institution of recent date. The ideas embodied in the system were urged with great force before Congress and in the public press very early in the century. The scarcity of American-born and trained seamen was becoming very apparent as early as 1820 and the need of some measure to meet the demand was constantly urged. Both the naval authorities and the press seemed awake to the dangers resulting from the employment of foreign seamen. It was maintained that soon no native sailors would be left to man our naval vessels and but few for our merchant

ships; no new material was in training and commerce was steadily increasing. It was also pointed out that with crews of foreigners our commerce would be at the mercy of privateers in case of war; that the crews themselves, not being restrained by patriotism, would be liable to join in the spoliation. The dream of all seemed to be that we should so train the young men of the country that we would attach them to the sea and to the naval service, and thus create a class from which we could in time man our ships with skilled seamen of native birth. The steps towards the realization of this dream, whilst having no direct bearing upon the matter under discussion, are nevertheless of considerable interest. In 1828 a series of letters appeared in the National Gazette signed "Perry." In No. 8 of these letters "Perry" speaks of the need of apprentices and urges that they be employed. Hardly a number of the Army and Navy Chronicle of 1835 and 1836 but urges the same; letters are copied from newspapers on the subject and editorials are written. In 1835 the Chronicle urges the House of Representatives to pass a bill which has already passed the Senate for enlisting boys. This bill received a favorable report from the Naval Committee, but did not pass. So important had the question become that in 1835 President Andrew Jackson, in his message to Congress, called attention to it and urged the passage of such a bill. In 1836 he repeats this recommendation, and in 1837 such a bill was finally passed. It provided for the enlistment of boys to serve until they were twenty-one years old; that they should be sons of citizens of the United States, and must have the consent of their parents to enlist.

After the passage of this act the outcry seems to have hushed for a time at least, and no further legislation is found until 1863. Under these acts some good results were realized, but the return was not great, and it was soon recognized that the apprentice system was practically a failure. In 1873 Admiral Luce delivered an address before the Naval Institute at Annapolis on "The manning of our Navy and mercantile marine." In the address he forcibly drew attention to the need of a properly organized apprentice system. Other officers were at the same time pointing out the failure of the system as practiced up to that date, and in 1875 a new departure was taken which resulted in the adoption of the plan which has been in successful operation ever since. The cause of the failure of the efforts to establish an apprentice system up to 1875 is explained by the honorable Secretary of the Navy as follows: "They have failed owing partly to the very elaborate system of education and training adopted, and partly to the fact that inducements were held out to the boys which could not be realized." What these inducements were we learn from Lieutenant-Commander Chadwick, who says that whilst the system between 1865 and 1870 gave many excellent men, it was "handicapped by the inducements held out to parties to send their sons on board ship with the prospect of having them enter the Naval Academy, a certain number of entries from the training-ship being allowed yearly. The consequence naturally was that a large number of the boys received on board came with no intention of becoming sailors," and "it naturally died of inanition." In other words, the boys came with the expectation of becoming officers; when they found that hope was gone they left the service, some honorably by discharge procured by their friends, some dishonorably by desertion, and those who remained were as a rule discontented. However, in 1875 the plan was adopted which has grown by degrees into its present shape. From the very start excellent results were obtained, and it is firmly believed that with the changes now contemplated the benefit to the service will be vastly increased.

As now organized the naval training system takes boys of from fourteen to eighteen years of age, of respectable parentage. The boys must enlist with the consent of their parents or guardians, regular blank forms for this purpose being provided. When the boy goes on board ship an effort is made, by talking to him apart from his parents, to find whether he has an inclination for the service, and if he comes of his own free will. It is carefully and fully explained to him that he can never become a commissioned officer, nor can he back out of his agreement to serve until he is twenty-one years of age, once he has signed. In other words, no false ideas are given, and any that he may have had before are carefully removed. Being satisfied that the boy is promising, and his parents having signed the agreement to his enlistment before a notary, the boy is next examined by a board of officers. He must be of robust frame, intelligent, of perfectly sound and healthy constitution, free from physical defects or malformations. He must be able to read and write English (though if exceptionally bright in other respects deficiency in this is sometimes overlooked); he must come up to certain standards of height, weight, and chest measurements for certain ages, and must, generally speaking, be a sound, intelligent, and promising youth.

Having passed his examination, the young man signs the agreement to serve until he is twenty-one years of age, but not before the nature of the agreement has been carefully explained to him. He is then enlisted, assigned to a mess, has clothing issued to him, and his instruction begins.

The course of instruction is divided into periods: First, the training and instruction

on the stationary ships; this generally takes about six months and is followed by a course of about six months on the cruising training ships, after which the boys are assigned to the regular cruisers of the Navy. This assignment does not, however, conclude the instruction. Teachers are provided on the cruisers and the instruction of the apprentices continues and is carefully supervised by the officers until they reach the age of twenty-one.

The training and instruction on the stationary ships is divided into three departments: Seamanship, gunnery, and English. Seamanship includes all that its name implies and occupies a great share of the time. Gunnery includes drill at great guns, howitzer drill and machine-gun drill, knowledge of ammunition, broadsword exercise, infantry tactics, drill, and bugle instructions. The English department includes reading and writing from dictation, spelling, arithmetic, including decimal fractions and an understanding of the paymaster's accounts, geography, history of the United States, history of the Navy, and vocal instruction. Swimming is taught in summer and athletics at all seasons. The training in seamanship and gunnery continues throughout the apprenticeship. The English course is, however, dropped in favor of the professional branches as soon as the apprentice has reached a certain standard. The training on the cruising training-ships and on the regular cruisers of the Navy does not differ from the above, excepting in being eminently practical in seamanship and gunnery. Those whose tastes incline them that way may have special training as sail-makers, carpenters, and blacksmiths, and inducements are held out for those who may wish to take a special course in gunnery.

From the day of enlistment the boy is a third-class apprentice and is paid \$9 a month and given a ration. After he has served three months and has been found specially distinguished for proficiency and industry, he may be advanced to the ratings of second and first class apprentice with pay at \$10 and \$11, respectively. Out of this monthly payment he must purchase his clothing from the paymaster.

Discipline is maintained by a system of rewards and punishments, all misdemeanors being carefully classified and the punishment scaled to them.

This is a very brief description of the apprentice system, made so purposely, for the reason that a more detailed one would be out of place here and at this time. Only the most general features are now brought out, that we may have before us a comprehensive view of the scheme which has resulted from years of experience and constant watchfulness on the part of able officers. The prominent features of this plan seem to be that the boys are not hunted for and urged to enter the service; on the contrary, they are plainly told just what to expect, and assured that they are to be educated as seamen, not as officers. The drill and instruction is a judicious mixture of theory and practice extending over a long time; and finally, provision is made for the discharge of those apprentices who show themselves unfitted for a sea life, whether this unfitness arises from natural causes, or whether from the conviction on the part of the officers that further efforts to educate the apprentice would be wasted by reason of his indifference or neglect.

I might fill pages with favorable comment, quoted from naval officers, upon this apprentice system. From the first year's trial of this plan in 1875 up to date nothing but favorable comment has been heard. The testimony in its favor is unanimous, and notwithstanding certain recognized defects all believe it to be a more than paying institution. One of these defects, indeed about the only serious one, seems to be that as yet no means has been found by which the boys can be induced to continue in service after their arrival at the age of twenty-one years. By many it is thought that their discharge from their apprenticeship at this age when they are unformed and restless may be assigned as the cause, and a bill has lately been prepared which extends the time until the age of twenty-four. Whatever the cause may be it is stated as a fact that only about one-fifth of the apprentices re-enlist. If with this small proportion a revolution has been made in the naval service, what will be the effect when means have been devised which will induce one-half to continue in service? That such an end will be attained in time no one doubts, and until that time does come the apprentice system is producing just so many trained seamen each year. Whether these men find it more profitable to use their knowledge in the merchant marine, or whether they give up the sea, is a secondary matter. The fact remains that we have in the country, ready to come to our ships in case of need, a trained body of American sailors.

I do not think that in these days it can be seriously questioned that a soldier should be as carefully trained and educated for his duties as a sailor should be for his. At first sight it might seem that the latter has the most to learn, but by the disuse of sail-power on our ships with all its attendant masts, spars, and gear, and the substitution of steam for it, a great part of steam-ship of days gone by is rendered obsolete. I hardly think it is a question of comparison and I do not propose to argue it here. Both the soldier and the sailor need training, without doubt. There is not an argument for the education of the latter which can not be urged with equal force for the

former, and yet the sailor has the instruction and the soldier not; for the schools open to the soldier are of next to no benefit to him in a military sense.

A soldier is an expensive luxury at best, and to make him come nearer paying than he is doing now we must do one of two things: We must get more work out of him during his enlistment or we must so train him that he will be a valuable reserve in the country, ready to come again into the ranks when war is upon us. It might be argued with much force that it would not be for the benefit of the country at large to have all discharged men re-enlist until retired from age. With our small Army and consequent limited capacity for training men it would be better if each man as soon as he is thoroughly trained should step out and make room for another to be trained in his place. The trouble is we do not train them thoroughly, though I believe such training is perfectly feasible and that it can be accomplished along the lines suggested in your report. First let us have an apprentice system, modeled as far as practicable after that of the Navy—this will be the nursery. Then modify our post schools so as to have them continue and carry out a *military* scheme of education, and finally, let us provide, in addition to these, courses for the non-commissioned officers of the cavalry, the artillery, and the infantry at the present post-graduate schools of each arm. We will then have laid the foundation and opened the way for a thorough course for each branch of the service. We will certainly Americanize our Army, and possibly we may reduce desertion.

In mapping out an educational plan for the Army at this time it is only necessary to lay down the broadest lines. The minutiae and details can be filled in afterward. Modifications of such a plan might, and probably would be, found necessary. To start such a scheme of military training and education as this paper advocates, it would be necessary to get Congress to consent to a modification of the existing laws so as to permit the enlistment of boys for military as well as for naval apprenticeships. At first the number of authorized apprentices need not exceed five hundred or seven hundred and fifty. They should be in excess of the present authorized enlisted strength of the Army and should be paid. Their pay should depend upon their classification, and their classification should be determined by an academic board under carefully prepared regulations. As the naval apprentices are paid from \$9 to \$11, depending upon their classification, so the military apprentices might be paid from \$8 to \$10; the difference being that the naval apprentice buys his clothing, whereas the army apprentice should receive his under the present regulations. Additional pay should be given to the apprentice non-commissioned officers. I do not believe such a modification of the law as is here contemplated would be difficult to pass, in view of the success which has attended the naval training system. The enlistment of military apprentices having been authorized by law, the next step would be to select a proper and advantageous site for the school. The site should be near some large city, though not too near; experience in the Navy having shown that not only do the greatest number of applications for enlistment come from the large cities, but that city boys once enlisted stay longer and are more contented than country boys. The qualifications for enlistment should be those required in the Navy—sound and well-developed bodies, healthy and bright minds. No restriction should, in my opinion, be placed upon the enlistment so far as respectability of parentage is concerned. It is thought that when the boys come from a class of homes that is squalid and uncomfortable compared with what they find in the service, the tendency will be to keep them with the colors. Full power should, however, be given to reject any applicant, or discharge at any time boys who by viciousness of disposition, weakness of intellect, or other causes, are seen to be unfit for the profession. All that should be asked of a youth should be that he must be healthy, strong, intelligent, moral, and desirous of serving.

The course of training should last from a year to a year and a-half and should be under the direction of an academic board composed of the commanding officer of the school and, say, two officers from each arm of the service, cavalry, infantry, and artillery. The first six months the apprentice should be instructed in English studies, setting up drill, school of the company, manual of the rifle, carbine, and revolver, and target practice with each arm for short ranges, saber drill and bayonet exercise. A fully equipped light battery should be at the school for drill purposes and a sufficient number of horses to give constant exercise in riding under a first-class riding-master. The list of drills and exercises looks a long one, but when properly divided up need not be onerous.

The idea should be to exercise the boys for six or possibly eight months in the cavalry, artillery, and infantry drills; their proficiency in each arm to be noted and their instructors to mark the classes. The cavalry officers should have charge of and mark for those exercises pertaining to the cavalry; the artillery officers for the light-battery drills, etc. Weekly and monthly reports of progress and standing should be made, and as each class approaches the close of its preliminary course a careful selection should be made from it of those apprentices who have shown a particular aptitude for one branch rather than for another. For instance, those who are

good horsemen and can manage their weapons well when mounted should be selected for the cavalry. Those particularly expert with the rifle should go to the infantry, and those showing peculiar fitness, to the artillery. These selections should be made by the academic board from the reports and upon the recommendation of the officers in charge of the different departments.

As soon as the apprentices have been selected for the cavalry, artillery, and infantry they should be given the facings of the corps to which their selection takes them and should, after a brief furlough to visit their parents, go into a special course of training for that corps under the supervision of the senior instructor of that arm, all other instructions being given a second place. At the end of the term at the apprentice school, the boys should be allowed to select, as far as practicable, the regiments and companies to which they will be assigned, the selection being, of course, limited to the arm of the service in which they have been specially instructed, and at this time such apprentices as have shown exceptional ability and have distinguished themselves should, upon the recommendation of the academic board, be sent for a higher course to the post-graduate schools of their respective arms.

The general scheme of this course of apprentice training, it will be seen, is to exercise the boys as far as practicable in the drill of all arms for a limited period. Great stress is laid in all systems upon physical training, and it is believed that this would give it, whilst giving the instructors the best possible opportunities to select from the material at hand, that which is best fitted for each branch of the service, in order that, by concentrating upon the selected material great attention, it may be highly trained for its special purpose. Without some such system of selection, a young man that would never make a cavalry man might go to the cavalry and a born trooper to the infantry. It is also believed that by devoting the earlier months to a mixed training, with the consequent variety, an interest will be added to the instruction and, by developing tastes for one branch rather than for another, will tend to create that rivalry which leads to perfection. This rivalry should, of course, be stimulated by prizes and medals, and, above all, pride in having graduated from the school should be nurtured by giving to each pupil the right to wear some distinctive mark; such, for instance as a five-pointed cloth star on the cuff of the coat, to be worn as long as in the service.

Instruction in special courses, such as blacksmithing, carpentering, signals, horse-shoeing, etc., should be provided and study in them should be encouraged. We now come to the post schools. These schools should be at all times under a specially detailed officer of the line of the Army, who should be excused from any duty that will interfere with the purpose of the school. Indeed, if properly conducted the school should take all his time, and its importance warrants this recognition. The officer should have under him one or more teachers, depending upon the size of the post. These assistants should teach the English branches to such men as are not up to a certain standard. They should also be prepared to teach signaling, telegraphy, and drawing. The officer should be particularly charged with the instruction of the non-commissioned officers in all duties connected with their profession. Far from confining this instruction to the school room the greater part of it should be given out of doors. It would comprise laying out and constructing hasty intrenchments, field sketching, outpost duty, how to conduct and how to report a reconnaissance, best methods of estimating distances, day and night signals, repairing telegraph lines, best methods of attacking or defending bridges, etc. There is plenty to be taught, and not one item of it that should be left untaught; instead of the non-commissioned officers reciting some portion of the tactics each Friday night, no matter how well they know them, they should be instructed until they know them, should be examined, and then excused from recitation for at least six months.

Many reasons would be assigned for non-attendance upon these post schools, but none of them should be considered valid excepting other duty and sickness. It should be distinctly understood that the school hours must not be taken from the leisure hours of the men. Hours for school should be designated and attendance be as strictly required as at drill. It is believed that the men would, under careful officers, not only make rapid improvement, but would, many of them, highly appreciate the advantages.

At the artillery, cavalry, and infantry schools, as at present organized, a special course of instruction should be prepared for non-commissioned officers. It is believed that this instruction can be given by the school staff as at present constituted and no additional expense need be incurred beyond providing suitable quarters for the pupils. To these schools should be sent the selected apprentices and not less than one or more than two non-commissioned officers from each regiment. The course, it is presumed, would not be over a year in length and should be a model for the post schools. Each non-commissioned officer who graduates should receive a diploma and thereafter some slight increase in pay for the rest of his service. It is unnecessary to go into the details of the course. What the line of study should be can best be determined by the staff of each school.

This subject of military education, which has, I fear, grown to tedious length under my pen, I expected to treat in much less space, but even now I feel that not half justice has been done its importance. It is a subject of such grave importance that we can not neglect its claims much longer.

Shall we procrastinate yet a few years more, or shall we adopt the means whereby we may fill not only the Army but the country with educated and thoroughly trained soldiers? Of the three evils we now have to contend with, two—lack of instruction, and the vast preponderance of foreigners in our service—will be removed by the adoption of some such plan as is herein advocated. Will it not do something, too, towards mitigating that third evil of desertion? The soldier in time of peace is looked down upon by his acquaintances, and too often looks down upon himself. How unjust this is we all know, but we must admit the fact. It is questionable if this feeling can not be traced directly to the prevalent idea that any man who tires of other labor may find refuge in the ranks. Take away this idea, show that a soldier is a specially selected and carefully trained public servant, possessing a knowledge peculiarly his own, and that we pay him for that knowledge, and you will have done much to elevate him in his own mind and in the sight of others.

It may be said that such a scheme as is herein advocated will cost money. It may be added that the cost will be slight compared to the benefit to be derived. We must not forget when we go into the market and bid for men to serve with our colors, that to get them and to keep them, of a class to be trained with modern weapons for modern war, we must offer such inducements as will draw them from other occupations. One of the best inducements we can offer is to place such a man in a position where he will be respected by the nation, by his acquaintances, and by himself, and this we will do when we make him an honor to the profession of arms and the profession of arms an honor to him.

Very respectfully, your obedient servant,

W. W. WOTHERSPOON,
First Lieutenant, Twelfth Infantry.

WEST POINT, NEW YORK.

General J. C. BRECKINRIDGE,
Inspector-General, U. S. Army:

The question of "desertion in the Army" is ever with us. For more than sixty years the War Department has given its earnest attention and best efforts to the problem, and yet at the present time out of the 6,000 new enlistments made every year 2,500 desert. It is fair to assume that if after these years of honest attempts to determine the causes and apply remedies no better result is reached, there is still some undiscovered inherent defect

in the system by which our Army is recruited. The aim of this paper is not to enter upon a general discussion of the subject of desertion, but to call attention to one particular aspect of the problem that heretofore appears to have been neglected.

The causes that have been assigned to account for the excessive desertion in our Army are susceptible of division into two classes, viz: (1) those that assert that the majority of desertions are due to men who enlist with the premeditated design of deserting; and (2) those that claim dissatisfaction developed subsequent to enlistment to be the main cause. The first is subdivided into those who make a business of enlisting and deserting, repeating the acts sometimes several times; and those who enlist to bridge over the winter or some temporary financial embarrassment or to obtain transportation from the East to the West. The second includes all cases of desertion due to a mistaken conception on the part of the recruit as to the nature of the life, dissatisfaction due to surroundings, food, treatment, etc. The first is based upon the assumption that the soldier who deserts is essentially a man of low moral standard—a trickster without a glimmer of sensibility as to the sanctity of the oath of enlistment, who looks upon the whole proceeding as a matter in which his personal convenience alone is to be consulted. The second class looks primarily to the conditions within the service, and assumes that because 2,500 men desert annually these internal conditions must be very faulty and that there is therefore needed a deal of doctoring so as to make the service sufficiently agreeable to those who now desert as to induce them to remain.

There can be little doubt that both of these classes of causes find ample illustrations to warrant the support they receive from their advocates. There are few Army posts that can not furnish yearly examples illustrative of each variety of desertion.

The remedies suggested to reduce or do away with desertion have been of course based upon the causes assigned. To prevent repeated enlistments and subsequent desertions it is necessary to establish the personal identity of each recruit, so that the fact of service may be confirmed at any time in the future. This it is proposed to

accomplish by an elaborate system of physical measurements, record of birth-marks, tattoo-marks, and personal physical peculiarities, or marking indelibly in some obscure part of the body, as under the arm pit, all deserters with a symbol indicative of desertion; or, again, marking with an indelible symbol all who enter the service, officers and men, with an honorable mark to indicate service in the Army. There has been no end of tentative efforts to prevent dissatisfaction and discontent among new soldiers. Each year and each new administration makes its contribution. At the present time there is rather more than the usual activity in the War Department in this matter, and recently a number of measures have been instituted or suggested with a view to making the life of the soldier less obnoxious to those who desert.

But the question arises, is not this still harping upon the string of all past attempts? Does experience hold out to us much hope for permanent results from this line of action? For a time, quite likely, there may be some degree of improvement, but when what is now new and looked upon as a boon becomes old and only a well-understood right, will not the problem start out again upon its old cycle? Sixty-five years ago the Adjutant-General of the Army wrote:

"The records of this office furnish no data upon which any specific cause of desertion can be predicated. * * * The class of men from which a majority of the private soldiers are drawn scarcely regard the circumstance of desertion as an act of turpitude. This erroneous appreciation of crime, superadded to the restless spirit of our recruits, probably constitute the primary cause of desertion."

Can the same office to-day make a statement any more definite in its nature? Has there been any development in these sixty years that enables us to place our finger upon the "primary cause" of desertion in a more specific way than did the Adjutant-General in 1825? The discussions of the subjects that have taken place in our service periodically during the past two years do not reveal any decided consensus of opinion in reference to this point.

The fruitlessness that has attended this casting about within the limits of the soldier's career as at present mapped out, has suggested the thought that perhaps some benefit might come from an examination in a field beyond the present limits of the soldier's sphere. In all the explanations that have been offered accounting for desertion, and in all the remedies suggested for the correction of the evil, inquiry has not extended into the period of the recruit's life antedating the time he presented himself for enlistment; it has been assumed that the origin of investigation and discussion is necessarily limited to the epoch established by the taking of the oath of enlistment and the exchange of the civilian dress for the soldier's uniform. But let us suppose that a hale, hearty young man of twenty-one years appears before the recruiting officer in one of our large cities as an applicant for enlistment. Physically the man is perfect and is gladly accepted by the recruiting officer. Yet, only too often, if the officer had possessed the power of looking behind the veil of flesh and bones and of discerning the motives of action that formed the foundation of the man's character, of detecting his regard for moral principles, his conception of obligation, his suitability in all non-physical qualifications for the position of a soldier, the man would have been rejected without hesitation. Now, four years earlier in this man's life he was a boy of seventeen; at that age most boys have the mainsprings of action of their characters yet to forge; most of the foundation stones of a man's character whether for evil or for good, are laid in place for all time in the teens of life, and it is fair to assume that if this applicant could have lived in an environment conducive to the noble instead of the ignoble things of life during these character-forming years, he would have been a valuable force in the Army or in any walk of life; but, as it is, he has passed this period of his life out of school, out of occupation most of the time, wandering aimlessly about the streets of the lower wards, having lived in an atmosphere the essential elements of which were contempt for virtue, disregard of law, and lack of respect for constituted authority, is it surprising that he should tire of the restraints of military life and desert before his second year of service has expired?

Most of the desertions in our Army occur in the first term of enlistment and before the second year of enlistment has terminated. May not the above hypothetical case stand both as an illustration of one type of desertion and of the influences operating to cause the desertion? If so, suppose the United States had come in contact with this young man, and such like him, while still a youth and before the bad features of character that have sprung from idleness and license had become confirmed; that instead of the excessive liberty and the lack of occupation, the formative period of his youth had been passed under the rigid but wholesome discipline of the Army Regulations, kept at work in military exercises, in elementary studies, and in learning the elements of some useful trade under the direction of officers and non-commissioned officers of the United States Army, is it not almost a matter of certainty that it would be better both for the Government and for the man? It is thought, therefore, that our recruiting system might with advantage to itself reach back into the period of an applicant's life before manhood. In connection with this thought the idea of ap-

prentice soldiers is presented; that much good of the kind indicated above might be done by enlisting boys in our large cities as apprentice soldiers, placing them in organized companies and battalions, under the command and instruction of Army officers detached for this duty.

There are, it is believed, many boys in every one of our large cities who would find such an opportunity the means of saving them from the fate of worthless characters and of making them worthy of any occupation. In the congested centers of population the supply of work for men and boys is not equal to the number of available laborers, and there are idle hands. These apprentice battalions would absorb at once this excess of supply, give the material for five years the best of training for success in life, and return to the community useful units of society, instead of the dangerous units which are now being produced from this same material.

If the Army could avoid drawing recruits from this kind of material it might be useless to argue this for its consideration, except as a work of moral reform, but it can not avoid doing so. A large proportion of our recruits do now and always have come from this source, and from the very nature of the Army's needs and the necessities of this class of men, recruits must continue to come from it. It therefore becomes our duty to approach it with a view to securing a higher order of manhood. In so doing much moral good is incidentally accomplished, which should win for the plan supporters in civil life and increase our own earnestness.

It requires no forcing of the imagination to picture the effect that would be produced on these boys so organized and disciplined. Each battalion could be made as correct in its geneneral behavior, as orderly, as trim, and as well drilled as are the cadet battalions of our best military schools. Military discipline is pre-eminently suited to the government of boys. This is now generally admitted, and there is no reason to expect a smaller measure of success in its application to such boys as these we are considering than has been the experience with other boys. Indeed, an experiment has been made recently in England in forming volunteer cadet battalions from material very much the same as that now under consideration, and the strongest evidence is given as to the good results obtained.

After serving a suitable period as apprentices these boys could be passed at once into the Army, there to serve a certain definite period, to be subsequently determined. It is believed that such apprentice recruits would be more useful to the Army, and that they would be less apt to desert than the recruits now secured. They would certainly not misconceive the nature of Army life, for their Army life would be merely a continuance of their apprentice life, and it is assumed that as a result of their training and discipline they would be young men more alive to what is honorable in life and more inclined to observe obligations as to service than now obtains.

Passing to details, the apprentices could be divided into four grades; those serving their first year constituting the first grade; those serving their second year, the second grade; those serving their third year, the third grade; and those serving their fourth year, the fourth grade. Admission to apprenticeship of the first grade should be simultaneous for the entire grade, so that all may proceed together through the specified courses of the first and higher grades and finally leave the battalion together; a systematic progressive course of instruction can not otherwise be carried on satisfactorily.

Each battalion ought to be under the command of a field officer; it is suggested that the majors of our service are available for detail on detached service of this nature. Each company should be under the immediate command of a lieutenant, assisted by a reliable non-commissioned officer as first sergeant. In other respects the battalion could be organized in the line of the West Point battalion of cadets; and the relation between military training and discipline and industrial training could be analogous to that that obtains at the Military Academy between the tactical department and the academic department.

If Congress would permit it, there ought to be about twenty-five such battalions located throughout the United States in our large cities; if these were to turn out each 100 apprentices a year of the fourth grade, they could be accepted in lieu of the 2,500 deserters who now cause so much annoyance and expense to the Government. But perhaps it would be better first to test the merits of the system on a smaller scale. There can not, it seems, be any objection to organizing one or two of these battalions in New York and Chicago, say, with a view to a thorough test, and subsequently, if successful, a larger field may open.

It would be a great thing, purely as a matter of reform, to turn out 2,500 useful men from the youth of the crowded sections of our cities, and keep, at the same time, three times that number of boys under the healthful restraint of military discipline during four years of the most impressionable period of their lives; it is a large undertaking, however, and very likely may never be sanctioned by Congress to this extent, but its feasibility will hardly be denied by any one familiar with the military government of boys.

E. M. WEAVER,
First Lieutenant Second Artillery.

APPENDIX C.

List A.

Standard articles to be supplied as needed throughout the year to all posts :

All articles which are components of the ration.	Combs, coarse, horn, medium,
Allspice, ground,	Combs, coarse, horn, small,
Allspice, whole,	Combs, horn, fine,
Apples, canned,	Combs, rubber, dressing, strong,
Apples, dried or evaporated,	Corn, green, canned,
Apricots, canned,	Crabs, canned,
Asparagus, canned,	Crackers, assorted,
Bacon, breakfast,	Electro-Silicon,
Basins, hand,	Envelopes, white, letter,
Blacking, shoe,	Envelopes, white, note,
Blanco,	Fish, in kits,
Bluing,	Flavoring extract, lemon,
Brick, bath,	Flavoring extract, vanilla,
Brooms, whisk, large,	Flour, family,
Brooms, whisk, small,	Gelatine,
Brushes, blacking,	Ginger, ground,
Brushes, button,	Ham, deviled, canned,
Brushes, clothes, large,	Ham, sugar-cured,
Brushes, clothes, small,	Handkerchiefs, linen,
Brushes, hair, large,	Handkerchiefs, silk,
Brushes, hair, small,	Heel-ball,
Brushes, nail,	Hops,
Brushes, shaving,	Ink, black,
Brushes, tooth,	Ink, indelible,
Burnishing chains,	Jam, blackberry, canned,
Butter,	Jelly, currant, canned,
Buttons, collar,	Knives, pocket,
Buttons, small,	Lard, in tins,
Buttons, trouser,	Lead pencils,
Button-sticks,	Lime-juice,
Can-openers,	Lobster, canned,
Chamois-skins,	Macaroni,
Cheese, Edam,	Mackerel, fresh, canned,
Cheese, choice,	Matches, safety,
Chocolate,	Metal polish, Matchless,
Cigarette-paper,	Milk, canned,
Cigarettes,	Mushrooms, canned,
Cigars,	Mustard,
Cinnamon, ground,	Needles, Nos. 3 to 9,
Clam-broth, canned,	Needles, darning,
Clams, canned,	Needle-books,
Clothes-lines,	Nutmegs,
Clothes-pins,	Oatmeal,
Cloves, ground,	Olive oil,
Cloves, whole,	Oysters, canned,
Coffee, choice,	Paper, letter,
Combs, pocket,	Paper, note,
Combs, coarse, buffalo-horn, large,	Paper, toilet,
Combs, coarse, buffalo-horn, medium,	Peaches, canned,
	Peaches, dried or evaporated,

Pears, canned,	Sugar, cut-loaf,
Peas, green, canned,	Sugar, granulated,
Pen-holders,	Sugar, powdered,
Pens,	Syrup,
Pepper, red,	Tapioca,
Pickles, in jars,	Thimbles,
Pine-apples, canned,	Thread, cotton, white, spools, Nos. 36, 40, and 50.
Pins (medium-sized papers),	Thread, cotton, black, spools, Nos. 36, 40, and 50.
Pipe-clay,	Thread, linen, white, spools, Nos. 30, 36, and 40.
Pipes, brierwood,	Thread, linen, black, spools, Nos. 30, 36, and 40.
Pipestems,	Thread, silk, spools (sizes A, B, C, and D),
Preserve, damson, canned,	Thread, silk, in colors,
Prunes,	Thread, cotton, darning, balls,
Razor-strops,	Tobacco,
Salmon, canned,	Tomatoes, canned,
Salt, table,	Tongue, canned,
Sardines,	Toothpicks,
Sauce, cranberry, canned,	Towels, fine,
Sauce, Worcestershire,	Towels, medium,
Scissors,	Towels, coarse,
Shoe-strings,	Tripoli flour,
Shrimps, canned,	Vermicelli,
Soap, Sapolio,	Wheat, cracked.
Soaps, toilet,	
Soups, assorted, canned	
Starch, corn,	
Starch, laundry,	

LIST B.

Exceptional articles to be furnished when called for in quantities that will be accepted on delivery.

Acid, citric,	Horse radish, bottled,
Ammonia, household,	Jams, all kinds,
Apricots, dried or evaporated,	Jellies, all kinds,
Barley, pearl,	Lambs' tongues, pickled,
Beef dried, or smoked in cans,	Marmalade, all kinds,
Beef, mess, in brine, $\frac{1}{4}$ barrels,	Meats, canned,
Blacking, Acme,	Mince-meat, canned
Cabbage,	Okra, canned,
Capers,	Oysters, pickled,
Catsup, mushroom,	Pigs' feet, pickled,
Catsup, walnut	Plum pudding, canned,
Cheese, Parmesan,	Preserves, all kinds,
Cinnamon, sticks,	Raisins,
Citron,	Razors,
Cocoa, breakfast,	Sage, ground,
Figs, in 1-pound drums,	Salt, celery,
Flavoring extracts, all kinds,	Sauces, all kinds,
Flour, Graham,	Sausages, canned,
Fruits, canned,	Spices, all kinds,
Ginger, preserved,	Vegetables, canned,

REPORT OF MAJOR-GENERAL HOWARD.

HEADQUARTERS DIVISION OF THE ATLANTIC,
Governor's Island, N. Y., September 30, 1890.

SIR: I have the honor to submit, for the information of the Major-General Commanding the Army, the following annual report:

SEA-COAST DEFENSE.

Considering the armament necessary for the extent of sea-coast in this division the liberal appropriations of one year should not lead to over-confidence, but since my last annual report a decided step has been taken both in providing for the construction of sea-coast cannon and rifled mortars, the preparations of fortifications for them, and the construction of fixed torpedoes, with galleries, operating casemates, and other belongings.

Our principal harbors have been properly plotted, and the artillery on duty near them is at present engaged in earnest practice with such weapons as the forts now have, and will be fully prepared to undertake the new guns and appliances as soon as they begin to arrive.

The artillery regiments have been increased in size at the expense of the rest of the line, and while not only is this increase necessary and the addition of two more regiments advisable, it is earnestly hoped that Congress may be induced to augment the enlisted strength of the Army sufficiently to allow this increase without permanently diminishing the cavalry and infantry. For the needs of this service too many artillery officers are on detached service which could be performed by cavalry and infantry officers.

Attention is invited to the report of Maj. W. F. Randolph, Third Artillery, Inspector of Artillery. His recommendation that some material and guns for artillery practice and drill be supplied to all artillery stations is heartily concurred in.

INSTRUCTION.

The military instruction of the troops in this division has been satisfactorily continued throughout the year.

The post school system has not yet attained a proper status, though a distinct advance has been made. Books and equipment for the schools are now being regularly supplied, although some method of obtaining more satisfactory teachers needs to be discovered.

SMALL-ARMS PRACTICE.

The result of this practice has on the whole been very satisfactory, though the lack of proper ranges continues at some posts. With the increased work of the artillery on the sea-coast, in connection with their distinctive weapons, it has been necessary to limit their small-arms firing to the ranges at the posts, which in some instances have been very short ones. As, however, the infantry rifle will always be one of their weapons, and they will doubtless be occasionally on service requiring its use, I hope their practice and their taking part in competitions with it will be continued.

Attention is invited to the recommendation* of the inspector of small-arms practice, that on competitions in the skirmish firing the number of shots required to be fired at each halt be increased. I think at least three, and not more than five, could properly be ordered.

INDIAN PRISONERS OF WAR.

Until the present month (September) the mortality of the Indian prisoners has continued excessive. Now, however, it appears to have been checked, as there have been only two deaths during the first twenty days of this month. The direct cause of sickness has been the very wet summer and an epidemic of measles.

The attending surgeon recommends the construction of a new village, in which I heartily concur, as the present consists of the simplest huts, without chimneys, which were built for temporary shelter only. So many have died from consumption that the seeds of pulmonary disease saturate the old huts. As long as the Indians reside in them there will be frequent cases of this disease.

Congress having failed to render it possible to get these Indians homes elsewhere, where they could become self-supporting, we have attempted to improve their condition where they now are located and are likely to remain. Lieutenant Wotherspoon, Twelfth Infantry, was selected by the Secretary of War to take special charge of them. The idea of making them self-supporting had to be given up. Pay (35 cents a day) has been allowed to those who work for the post.

Employment was found for others to work for wages at any points within reach where work, such as cutting wood, could be obtained. The officer in charge has shown great diligence and has been rewarded by considerable success in getting the Indians at work. This constant employment, and pay for services rendered, instead of being treated as prison labor, has removed a great deal of their discontent, depression, and resulting hopelessness.

It is now proposed to clear off timber and drain a swamp by their labor and create garden and farm land. If they can be regularly paid for their labor in doing this their progress will continue.

Miss Shepard has continued the school for the children by the support of charitable ladies of Boston, and has accomplished much good, but the sphere of instruction should be extended to gradually include mechanical arts, and there should be a special dwelling-house for the pupils of each sex.

Money for the materials out of which the Indians could build new houses for their permanent homes, for the use and care of which some are now fairly well prepared, is of the first importance.

DESERTIONS.

My recommendations of last year under this head have generally been fulfilled. Civil officers are now authorized by law to arrest deserters. The universal right to obtain a discharge at the end of the third year, after faithful service, lessens the period to which a discontented man must look forward; and it is practically a shorter enlistment. Discharge by purchase serves for cases of emergency. I renew my recommendation that the reward for the apprehension of deserters be increased to \$100.

*Omitted.

As soon as the present ameliorated condition of the soldier shall have had the opportunity for full operation, few but men who commit other crimes at the time of their desertion will desert, and every possible endeavor should be made to apprehend and try them, especially as a statute of limitation of two years limits the period of their arrest.

COURTS-MARTIAL.

I renew my recommendation for the establishment by the War Department of a graduated code of punishment for the guidance of courts-martial. With a view to economy, quickness, and simplicity in enforcing discipline in minor cases, a field officers' or post commander's court is recommended.

REORGANIZATION.

The War Department as a temporary measure having transferred all enlisted men out of two companies of each cavalry and infantry regiment, and so transferred absent officers to have them belong to cadre-companies, the result is that this gives larger companies of infantry and troops of cavalry, with more officers present with each organization. As it provides for two four-company battalions it brings our infantry organization more in keeping with the tactical conditions of the day; but that effect on the cavalry arm is lost by doing away with only half of the third battalion of cavalry regiments.

I earnestly hope efforts will be continued to organize the three branches of the Army into regiments of twelve troops, batteries, or companies each, and officered by the number and grade of officers now authorized by law for cavalry regiments. As we require many officers for other duties than serving with their companies alone, such third battalions of each regiment can be supplied with officers only when the exigencies of the service so demand. The detail of eighty-five officers at colleges takes a greater number than all the officers of six battalions; recruiting more than of three battalions; staff details, scientific work, the schools of application and West Point many more.

Lineal promotion for the future, and examinations as to fitness for promotion as proposed in the new law, regularity of promotion within each arm of the service, and a means of removing incompetent officers have been provided, and it is hoped will greatly benefit the service. I strongly recommend classifying the privates of artillery with a difference in pay, as is now the case in the battalion of engineers. An increase of pay for non-commissioned officers in each arm of the line to correspond with the pay of the non-commissioned officers of the staff corps is desirable.

The very limited number of qualified soldiers that the restriction of the Army to a maximum of 25,000 enlisted men is particularly mentioned by Colonel Hughes, inspector of the division. First, vacancies can not be filled until after they occur; then the man for a long period is an uneducated recruit; third, many old men would drop out of service by reason of physical weakness. These causes, with discharges for various reasons, and desertions, keep our organizations always so far below the maximum that to keep a force of 25,000 trained men constantly on foot, the maximum allowed of all, including recruits, should not be less than 35,000.

OFFICERS.

The effect of having organized the Army in 1866 with officers of nearly the same age in all the grades, and who had already suffered

much hardship in the rebellion, is now working serious injury to the efficiency of the service. The number of disabled officers far exceeds the limit prescribed by law to the retired list. Almost all the captains of infantry and artillery are too old for duty involving marching on foot or even drill requiring continuous quick movements.

I earnestly recommend that legislation be urged transferring officers sixty-four years of age, or that become so, from the limited to the unlimited retired list, as giving a modicum of relief.

ENLISTED MEN.

Thirty years' service is too long before retirement of enlisted men. It results in keeping in the ranks men from fifty-five to sixty-five years of age, who are too old for soldiers. After serving the best part of their lives in the Army, it would be bad faith to turn them out by refusal to re-enlist them for the period necessary to make up their thirty years.

A soldier should be encouraged to try civil life after a few years' service; and if he came back he should be retired before he gets too old. I think twenty-five years a proper period considering both the interest of the service and the interest of the enlisted man.

QUARTERMASTER AND COMMISSARY DEPARTMENTS.

The increase by a pound of fresh vegetables of the daily ration has been of great value to the company messes, and has been successfully put into operation at the posts in this division.

Commissary supplies furnished during the year have been good, and their distribution well provided for.

The quartermaster's department has superintended an unusual amount of construction and repair of buildings at the posts in the division, has provided for extensive movements of troops within the division, and in the exchange of regiments from it. The clothing has been good and suitable.

Surgeons' quarters distinct from other officers' quarters should be built or set apart at all posts, as the changing of surgeons usually at different times than the officers attached to the permanent organization of a post causes unnecessary annoyance in the selection and retention of quarters. It is hoped hospital stewards' quarters will soon be constructed at all posts in this division. The allowance to build them at some points must be increased.

SANITARY CONDITIONS.

The health of the command has been excellent. Upon the recommendation of the medical department and of the commanding officer, the garrison of Fort Barrancas was temporarily withdrawn as a precaution against yellow fever and other sickness, but neither that nor cholera have appeared this year at any post in the division. The sanitary condition of nearly all posts is good, though some need better sewerage to prevent unfavorable conditions from arising.

PAY DEPARTMENT.

Troops have been regularly and promptly paid. In accordance with the statement of the chief paymaster in his report* that it is practicable, I recommend that all posts in this division be paid monthly.

* Omitted.

APPRENTICE SCHOOLS.

I think some system of school battalions of boys from seventeen to twenty-one, in addition to the number of enlisted men allowed by present law, could be organized, and would make a useful school for supplying material for non-commissioned officers to the Army and militia. One year at a time would be long enough for each engagement. Such a school established at a convenient point, say Fort Porter, N. Y., ought to attract as many boys as could be well cared for and keep them well employed, and give them good discipline at a period of life when many boys about our cities lead a very unsettled existence. Such training would be valuable to any youth who expected to work for his living by mental or manual labor. It should not be within the Army proper as at present limited, because we need more men than are now allowed by law.

The reports* from the general staff officers at my headquarters are inclosed. I desire to commend them and those of my personal staff for cheerful and efficient performance of all duties.

I am, very respectfully, your obedient servant,

OLIVER O. HOWARD.

Major-General, U. S. Army.

The ADJUTANT-GENERAL U. S. ARMY,
Washington, D. C.

REPORT OF MAJOR-GENERAL MILES.

HEADQUARTERS DIVISION OF THE PACIFIC,
San Francisco, Cal., August 30, 1890.

SIR: I have the honor to submit my annual report concerning military affairs within the Division of the Pacific:

CHANGES OF TROOPS.

The changes of troops in the Department of California are set forth in appendix A;* those in the Department of the Columbia in the report of the department commander, and those in the Department of Arizona in the report of Brig. Gen. B. H. Grierson, U. S. Army.

ADMINISTRATION.

In regard to the efficiency of the troops serving in this division; the tone and character of the service is most excellent. I do not think there has ever been a time when those in the military service were more attentive to duty, better instructed, and more efficient than at the present time; nor do I believe any community or class of civilians can be found among whom fewer offenses are committed, or who live more temperate and exemplary lives. Yet there are many embarrassing features in our military system. Any system is defective which leaves with little advancement and slight hope of recognition a class of citizens who devote themselves entirely to the military service, cheerfully jeopardizing or sacrificing, if need be, their lives for the honor and welfare of their country.

* Omitted.

This is particularly true in the ranks of the Army and in the lower grades, where the absence of recognition for valiant and valuable service often becomes disheartening.

Legislative enactment should provide some system of more reasonable professional advancement. Hence I renew my recommendation heretofore made, that for the more efficient organization and for the actual necessities of the military service the artillery arm be increased by at least two regiments, and that the same organization be given the infantry that exists in the best armies of the world, and has been recommended by the best military authorities in this country, namely, the three battalion organization.

Some measure is necessary for the relief and encouragement of officers who are wearing out their lives in the lower grades of the service with but faint prospect or hope of promotion, as is illustrated by the cases of sixty-eight captains of the line who, according to the Register for 1890, have served for twenty years or more in their present grade, while seventy-seven lieutenants have served for twenty years or more without reaching the grade of captain. Few of these officers have under the present system any prospect of promotion in the near future. When officers have served without promotion for fifteen years they should be advanced to the next higher grade, as is now done in the lower grades in certain of the staff corps.

PRACTICE MARCHES, FIELD MANEUVERS, AND SUMMER ENCAMPMENT.

On the 24th of June the First Infantry, two light batteries of the Fifth Artillery, and two troops of the Fourth Cavalry, all under the command of Col. William R. Shafter, First Infantry, left San Francisco and marched to Monterey, arriving there July 2, and remaining in camp until August 27, when the return march was commenced. The military exercises during this encampment included battalion and brigade drills, picket duty, night alarms, attack and defense, making maps, and as far as possible all that pertains to field service in time of war.

The general bearing and conduct of both officers and soldiers during this encampment, as well as the excellent manner in which the different exercises were executed, indicated a high degree of efficiency and discipline in the command. In this connection attention is invited to the very complete and able report of Colonel Shafter,* herewith inclosed.

The target contests for the Department of California and the Division of the Pacific, under the supervision of Lieut. Col. I. D. De Russy, also took place at this encampment. The result of these contests indicated that great interest had been taken by the troops in the subject of target practice, and with very satisfactory results, as shown by the records.

DESERTION.

Desertion is the principal evil of the Army, and the various methods resorted to to diminish this crime have not to any considerable extent done so. I believe, however, that we are approaching the ultimate solution of the problem, and that the measures recently adopted are a step in the right direction.

RECOMMENDATIONS.

I have for years recommended a change in the term of enlistment, or term of service, which amounts to the same thing, and also an improve-

* Omitted.

ment in the Army ration. The adoption of these two measures have been hailed with delight by the Army.

The other recommendations made in previous annual reports would, I believe, if adopted, be of great benefit to the service, namely: that soldiers who have served three years and received honorable discharges be allowed to re-enlist for one year in the department where they may be. Also that after five years of honorable service, three of which as a non-commissioned officer, they be permitted to undergo an examination for promotion to the grade of second lieutenant, and that if vacancies do not exist for all, the surplus successful candidates be commissioned and honorably discharged. The intelligent and ambitious soldier would thus have something to show for his faithful service in addition to the small compensation received. This would be a just reward for his five years of study and application, and a recommendation and passport to an honorable career in civil life, should he not remain in service. Military knowledge would thus be disseminated, and men familiar with the service and competent to assist in drilling and organizing troops would be found scattered throughout the various communities of the country, whose valuable services would be available at any time, either for the States or for the General Government.

I renew my recommendation of last year, that the pay of first sergeants be made \$50 per month, and that the pay of all non-commissioned officers of regiments be increased 50 per cent. I may say that these men are receiving less pay, considering the laborious and responsible duties required of them and the intelligence necessary for their performance, than any other class of men in this country. The Army should be a great school of discipline and instruction for young men, and should be so organized and administered that they would seek for positions therein. When all proper measures have been exhausted for the welfare and improvement of the soldier, the offense of violating his oath and sacred obligation and deserting its colors, should be regarded as a high crime and punished accordingly.

Regarding the condition of affairs in the departments of this division, I respectfully invite attention to the reports of Brig. Gen. John Gibbon and Brig. Gen. B. H. Grierson, commanding respectively the Departments of the Columbia and of Arizona.

In the Department of Arizona there has been no general outbreak of Indians, and the different tribes are in the main under fair control. The large Navajo tribe, 20,000 in number, is conspicuously peaceable and prosperous, although there is always some friction and contention between them and the whites living in the adjacent country surrounding their large reservation.

The holding of discontented and disaffected tribes on the San Carlos Reservation, especially along the Gila River, which is unsuited for them and often unhealthy, will always be a source of danger and disturbance. Even the troops stationed near them to enforce their remaining on the reservation have to be changed every few months to preserve their health. As several of the military posts and reservations in that department have been abandoned by the Army, with a view to their being occupied by Indians or converted into industrial schools, I would recommend that such use be made of them without delay, and that the Mojave, Tonto, and Yuma Indians now forced to remain in the sickly valley of the Gila be removed thereto.

The San Carlos Indians living along the San Carlos River and the White Mountains (including the Coyoteros) should be located on such suitable and sufficient part of the reservation as may be selected for the

purpose, and the remainder of the reservation thrown open for such use as can be made of it by citizens. The posts referred to as being abandoned by the military and available for Indian purposes are Forts Verde, Mojave, McDowell, and Selden. With the large San Carlos Reservation on the north, occupied by tribes of Indians unfriendly to each other and forced to remain there against their will, and the rugged Sierra Madre Mountains of Mexico on the south, affording a refuge for outlaws, neither the lives nor the property of settlers in the intermediate zone can ever be so secure as might be desired.

The tribes would be more easily controlled when separated than when congregated in large numbers, especially in such a region as they are now compelled to occupy.

COAST DEFENSES.

The subject of coast defenses is, in my opinion, the most important military question now before the people of this country, and there appears to be less information on this subject and less interest taken in it than in any other national question. It is true we sometimes hear the question asked: Why does not the Government provide defenses for the coast, and give protection to the great centers of wealth and commerce? when, in fact, the executive and legislative branches of the Government are alike powerless to take such action unless prompted and sustained by an intelligent public sentiment. When the people, however intelligent, are kept in profound ignorance of the real condition of affairs, or are living under an illusion concerning it, apathy, inaction, and national danger must necessarily be the result. Hence, I believe that the truth concerning our sea-coasts should be stated in plain language in order that the people, who control public affairs, may not be deceived as to the unfortunate condition in which we find ourselves.

More than thirty years ago the people, through the Federal authorities, established suitable fortifications and defenses for our principal harbors and ports of entry. The weapons of war then in use are now obsolete and are fast becoming relics of antiquity. Short-range, muzzle-loading cannon, mounted on rotten carriages, would be practically useless against the powerful engines of war now in use by all civilized nations except our own. Our present condition is easily accounted for. The losses, devastation, and suffering sustained by the nation twenty-five years ago, in its struggle for existence, have given our people a distaste for the subject of war, and our successes in previous foreign wars have given us an unwarranted feeling of security, an indifference to the improvements in warfare of other nations, and a lack of interest as to what our real condition may be. Our past history, vast population, and unparalleled and rapid accumulation of wealth, may well foster a feeling of pride and independence, but constitute no insurmountable barrier upon which to rely in time of actual war.

The rapidly increasing wealth in the great cities of the Atlantic, Pacific, and Gulf coasts, and along the Great Lakes, only serves to court hostilities on the part of foreign powers. The belief that all international questions can be settled by arbitration is good in theory, but dangerous to rely upon; such has not been the history of the past, nor will it be of the future.

There seems also to be a mistaken belief that in case of threatened hostilities, ample time will always be given to prepare for war. History shows us the reverse. In a great majority of cases, hostilities have commenced without any formal declaration of war, only in exceptional

cases, not exceeding 10 per cent. of the entire number, in modern times, has a declaration of war preceded hostilities. Nations are as prone as individuals to take advantage of each other in controversies.

At the rate of progress we are now making it would require from fifteen to twenty years to put our coasts in a proper condition for defense. In the meantime much of the wealth of the country is in jeopardy and at the mercy of any fourth-rate or fifth-rate naval power on the globe. It is a fact easily verified by any intelligent citizen who will maturely consider the subject, that all the great commercial cities of our coasts could be destroyed in a few days by any nation having a modern navy.

It is a mistaken idea to suppose that only arsenals, depots of construction, means of communication and transportation are subjects of destruction. Anything that can be of use, service, or benefit to an enemy is contraband of war and subject to confiscation or destruction. It is but a few years since we have seen even in our own country towns and cities reduced to ashes by armies contending against each other. The effect of a blockade of our coasts, with the destruction of property or the placing of it under tribute, can be imagined from the history of the blockade of the South Atlantic and Gulf coasts during the late war.

The power of land batteries to contend against fleets was illustrated at Fort Sumter, Alexandria, Sevastopol, and Gibraltar. The recent practice maneuvers of the English navy demonstrated the fact that their powerful navy could not defend even the limited coast of that island, and it is useless to suppose that any navy that we will construct can defend our extensive sea-coast. The navy has its most important duties in the open sea, and ships may be used as an auxiliary force in defending a port and should have safe harbors for refuge, construction, supplies, and repair. These should be well protected by land batteries. The effect of land batteries and their limited cost, as compared with those on board ship, is worthy of consideration. If a ship's guns mounted on rock or concrete, and used with an accurate knowledge of every yard of a carefully surveyed and charted harbor, are twenty times as effective when so placed and used on land, then land batteries are far more economical than ships as a means of defense, considering the additional cost of armored ships, with all their massive machinery and appliances for using and transporting them.

A condition of prosperity and peace is most desirable for a nation, and can only be assured by a condition of positive security. No one anticipates the invasion of this country by an army or armies of foreign countries, yet with the loss of our harbors and coast, gulf, and lake cities, the prosperity of the country could be crippled for a generation, and the labor, arts, and industries now adding to the wealth and welfare of our people would have to be employed in constructing war material.

The priceless boon of peace to a nation should not be jeopardized to that extent that national honor, character, and prosperity might be sacrificed to preserve it. It appears to me that it would be wise, judicious, and patriotic not to remain in a condition to court and encourage hostilities, but to place ourselves in a condition to avoid and prevent war. Either we must continue in a condition of insecurity and a temptation to the avarice and ambition of other nations, or place ourselves without delay in a safe condition of security and stability commensurate with our population and wealth.

To this end I make the following recommendation, that the sites required for coast defenses, and not already in possession of the Govern-

ment, be secured without delay. Second, that a gun foundry be established on the Pacific Coast, for the fabrication and assembling of heavy ordnance required for the Army and Navy serving on the coast and waters of the Pacific. Third, that one-fourth of the appropriation required to place the coast in proper condition of security be made every year for the next four years.

The report of General Gibbon commanding the department of the Columbia, and that of General Grierson, commanding, until lately, the department of Arizona, and that of Colonel Carr, Sixth Cavalry, commanding the district of New Mexico, together with the reports* of staff officers serving at headquarters division of the Pacific, and of the department of California, are herewith inclosed.

I have the honor to remain, very respectfully, your obedient servant;

NELSON A. MILES,
Major-General, U. S. Army.

The ADJUTANT-GENERAL OF THE ARMY,
Washington, D. C.

REPORT OF BRIGADIER-GENERAL GIBBON.

HEADQUARTERS DEPARTMENT OF THE COLUMBIA,
Vancouver Barracks, Wash., August 19, 1890.

SIR: I have the honor to submit the following report of the operations in this military department during the past year.

INDIANS.

The Indians in the department have been perfectly peaceful during the year and doubtless will remain so indefinitely, unless goaded to desperation by the constant encroachments of the whites and their acts of injustice.

The good effects of the removal of the Indian Skolaskin from the Colville Reservation are marked, and the commanding officer of Fort Spokane reports that he has heard of no difficulties such as Skolaskin caused, since his arrest. As a disquieting element on the reservation, his removal was deemed essential to the welfare of the rest of the Indians, and it is recommended that he be not returned to his tribe so long as the present condition of affairs exists. There is no desire, however, to treat him with needless severity, and I suggest that he be allowed the freedom of Alcatraz Island and, if he desires it, that his wife and children be sent to join him.

CHANGES OF TROOPS.

On the exchange of the First and Fifth Regiments of Artillery, the single battery at Fort Canby was replaced by two batteries of the Fifth, which makes a garrison better suited to the size of the post. That post is at present in a very isolated position, and until lines of transportation are established with it some means should be adopted by which the mails, requisite stores for its garrison can be furnished, and passenger traffic kept up. Even in the most favorable season, the summer, the ordinary passenger boats from Astoria across the wide estuary of the Columbia do not usually touch there, and communication with Ilwaco,

*Omitted.

the nearest point to the north across Baker's Bay, is both difficult and uncertain, and in the winter time dangerous and unreliable, whilst the trip across from Astoria at that season is out of the question, except in good sea worthy boats. Hence the only recourse at present, it appears to me, is for the military to furnish the means of transportation by chartering, as has heretofore been done, a sea-worthy vessel for the service. In consequence of the disapproval in Washington of the contract for that service, the garrison of Fort Canby is cut off from even ordinary table supplies.

In June, last, the seven troops of the Second Cavalry serving in this department were replaced by eight troops of the Fourth, which were distributed as were the Second Cavalry troops, except that E troop was sent to Vancouver Barracks.

COURTS-MARTIAL.

Supposed irregularities in courts-martial proceedings have recently given rise to a good deal of comment throughout the country, and a proposition has even been made to take from department commanders the power to order general courts and rest it only in division commanders. I am of the opinion that this would be a great mistake, would not be in furtherance of the administration of justice, and would simply add one more to the disadvantages of the present division organization.

I believe, however, that very decided improvements might be made in the present administration of military justice.

First. By authorizing, by law, the Secretary of War to establish a schedule of punishments for certain well-defined offenses, to which courts should conform in their sentences. This would render punishments throughout the Army more equitable and uniform. They are now very unequal and irregular, both from the absence of such a schedule and from the irregular methods of ordering, by the various authorities, general courts. In many instances the same powers (even those of life and death) being placed in the hands of a court of five or seven inexperienced young officers which are held by a full court of thirteen.

Second. By requiring a strict compliance with the law in convening general courts. This could be effected by a simple order from the War Department that all general courts should, whenever it was practicable, be composed of thirteen members, as required by the law when that number can be convened "without manifest injury to the service." For five years I have ordered full courts in this department whenever it was possible to do it, and have every reason to be satisfied with the result. The number of courts held in the department this year is less than for a number of years past, and one-third less than last year.

Third. The establishment of a military court of appeal, whose duties should be akin to those performed by courts of appeal in civil cases. It must be admitted that the actions of military courts are not always such as justice and right demand, and some means should be had of reviewing their proceedings other than the mere executive act of disapproving them.

The condition of the troops in the department, as regards discipline and drill, is satisfactory.

DESERTION.

The various measures taken to decrease the number of desertions in the Army will, I think, result beneficially, and no step in that direction will produce better results than the plan to get a better material by enlisting our recruits in the rural districts instead of the crowded cities.

CANTEENS.

All reports from the canteens established in the department continue to be very favorable and satisfactory in every respect. The system is not only better than that of the traderships, but the enlisted men now begin to realize how much better and *profitably* they can supply themselves than be supplied by others.

The various posts are, with the exception of Fort Canby, regularly and satisfactorily supplied.

The reports * of the various staff officers are herewith inclosed.

I am, sir, very respectfully, your obedient servant,

JOHN GIBBON,
Brigadier-General, Commanding.

The ASSISTANT ADJUTANT-GENERAL,
Division of the Pacific, San Francisco, Cal.

REPORT OF BRIGADIER-GENERAL GRIERSON.

HEADQUARTERS DEPARTMENT OF ARIZONA,
Los Angeles, Cal., July 1, 1890.

SIR: Believing that it will be of assistance to the officer who may relieve me in command of this department upon my retirement from active service and also of interest and value to those in higher authority, I have the honor to present in a concise form a summary of the most important events pertaining to Indian affairs and military operations in this department since the date of my annual report, September 1, 1889, to the end of the present fiscal year, June 30, 1890.

Early in September the citizens living near the Hualpai Indian Reservation occasioned unnecessary alarm by a misconception and consequent misrepresentation of the intentions of the Hualpais. Notwithstanding the well known quiet and peaceable disposition of those Indians, most exaggerated reports were published in the newspapers, especially throughout the West, giving pictures of the war chiefs of the Hualpais and claiming to have positive information of their war like attitude; reporting the committal of numerous depredations and showing them to be plundering, pillaging, and indiscriminately murdering the settlers along the southern border of their reservation. The excitement was gotten up by false reports made without investigation by people laboring under extravagant delusions, caused by fear, avarice, and misapprehension.

The facts in the case, briefly stated, are as follows: The Hualpai began their annual mid-summer dance in the Music Mountains north west of Hackberry, in the midst of which they were influenced by two Piute medicine men, visitors from southern Utah, to make a pilgrimage to the Buckskin Mountains, about 100 miles north of the railroad as a more auspicious place under their peculiar superstitious belief to consult with the spirits of their dead, during which journey, going and returning, the Indians suffered greatly from the extreme heat and drouth, some dying by the way. The absence of the Indians and continuance of the dance alarmed the citizens, many of whom hastily left their homes and assembled in towns along the railroad, where they secured arms to defend themselves against an imaginary foe; they wer

* Omitted.

simply frightened at their own shadows, and while laboring under the consequent excitement, prepared and signed petitions for the removal of the Hualpais. A strike happening at the time among the laborers on the Atlantic and Pacific Railroad, unemployed men congregated at the settlements and thus added to the confusion and alarm. Petty merchants and saloon-keepers also seized upon the opportunity and endeavored to bring about trouble with the hope that they might thereby reap some pecuniary benefit. The only depredations committed by the Indians was the killing of one animal from a herd of cattle found roaming at large on their reservation, which they subsequently paid for, the beef being required for food to keep their people from dying of starvation during the march through the desert. The commanding officer, Fort Mojave, was directed to send a detachment of troops to the scene of the trouble, and by the timely presence of Lieut. M. L. Hersey, Ninth Infantry, with ten enlisted men, the citizens and Indians were induced to return to their homes and avocations, and order was quickly restored.

Frequent attempts have been made from time to time, by persons interested, to cause the removal of the Hualpais without suggesting that any provision be made for them elsewhere. All such demands are based on the desire of the people adjacent to get rid of the Indians in order to occupy their lands. It might have been practicable some years ago to have placed the Hualpais on a more suitable reservation, but to attempt to do so now, anywhere in the vicinity of the country they at present occupy, would involve much trouble and expense, as the arable lands are in the possession of settlers who are unwilling to be disturbed or removed from merely temporary homes, to which in many instances they have no valid claim or title. Notwithstanding the encroachments already made upon their reservation by stockmen, prospectors, and miners, the Hualpais are well contented where they are and will not be troublesome if let alone, no matter what may be said to the contrary. It would therefore be injudicious to heed the clamor of inordinately avaricious white men, who simply want the lands although claiming they are worthless even, for Indians. Should Congress appropriate sufficient funds to establish suitable reservoirs at the most available points within the limits of the reservation, by proper management and disposition of the money such improvements would be very beneficial to the Indians and tend to make them self-sustaining; to do so, however, without effectually protecting the Indians from encroachments and giving them irrevocable titles to their lands, would only add still more to the general clamor for their removal.

In compliance with the orders of the division commander the field maneuvers in this department took place near Fort Grant, Ariz., where twelve troops of cavalry, four companies of infantry, and a detachment of the hospital corps were assembled in a camp of instruction from September 15 to October 15, 1889. In proceeding from and to their respective posts the troops marched as if in a hostile country, and dispositions were made accordingly. During the encampment instruction was given in heliograph signaling, field hospital duty, attack and defense of convoys, troop, company and battalion drill, reconnaissances and field maneuvers. The reports of the officer in command, Col. C. E. Compton, Fourth Cavalry, and battalion and company commanders, all of which were duly forwarded to division headquarters, show that the officers were attentive and zealous in the performance of the duties assigned them, and that the enlisted men were well fitted for the arduous duties

of field service; all dispositions, movements, and manœuvres usual to such an assembly of troops being remarkably well executed. The greatest drawback to the comfort of the command or more complete success was the lack of a sufficient supply of water at Fort Grant, and the scarcity of officers to take part in the exercises, there being more officers absent from the troops and companies assembled at the encampment than were present there for duty. The troops of the posts in the department not participating in the manœuvres were exercised in practice marches, etc., within their assigned districts of observation. Everything considered, the results attained were beneficial and highly creditable, conducive to discipline, and well calculated to call forth greater efforts, especially when a larger force can be assembled as contemplated by General Orders No. 105, Headquarters of the Army, Adjutant-General's Office, of December 4, 1888.

On the night of October 8 Mexican desperadoes fired upon a detachment of Troop I, Fourth Cavalry, while encamped at Mescal Springs, Ariz., wounding two enlisted men, one mortally. The troops returned the fire and subsequently the dead body of one of the marauders was found in that immediate vicinity.

On the 27th of October the railroad agent at Manuelito, N. Mex., wrote to the commanding officer, Fort Wingate, that he had been informed that the Zuñi Indians intended to murder two white men at a ranch near their reservation. On the 28th twenty-five enlisted men of Troop K, Sixth Cavalry, under command of Lieut. J. M. Stotsenburg, left the post for McGuire's ranch to protect the two white men referred to. Upon arrival of the troops at the ranch, 8 miles northwest of the Zuñi Pueblo, it was found that the report was false. The facts in the case as shown by investigation are as follows: Messrs. McGuire and Nubert had taken up a ranch about 8 miles from Zuñi, and one-half mile from the reservation. The ranch was claimed by the Zuñis, they having built a house and corral thereon. The white men refused to give up the place, and the Indians demanded payment for the improvements. The settlement of the trouble was postponed until the return of Mr. McGuire from Illinois, and nothing further has since been heard in regard to the matter. It is recommended that the Zuñis and other Pueblo Indians, who have no agent with them, be instructed to refer all such disputes to the agent at Santa Fé for adjustment. Such a course would have a tendency to obviate trouble that might otherwise arise with white men who make encroachments on or live near the Indian reservations.

Being informed that the military telegraph line between Prescott and Phoenix, Ariz., was, by direction of the Chief Signal Officer, to be disposed of at public auction, and believing that such sale would prove injudicious and unprofitable to the Government, I urgently recommended that, instead of being sold, it be removed and that all serviceable material be used in establishing a telegraph line from Holbrook to Fort Apache, as it was very difficult to maintain telegraphic communication with that important post through the unsettled and mountainous territory via San Carlos. The proposition was favorably entertained by the War Department and the necessary instructions given for the prosecution of the work, which was begun on the 1st of November under the supervision of Lieut. Frank Greene, Signal Corps, U. S. Army, and the line constructed in a most substantial and satisfactory manner, the labor being performed by troops specially detailed for the purpose. It has already proved of much advantage as another means of communicating with Fort Apache, and its usefulness would be still more fully under-

stood and appreciated in the event of serious trouble arising with Indians on the White Mountain Reservation.

On the 2d of November, 1889, information was received by telegraph from the commanding officer, San Carlos, that Sheriff Reynolds and one man while taking nine convicts—eight Indians and one Mexican—to the railroad en route to the Yuma penitentiary were overpowered and killed, 4 miles southeast of Riverside on the Gila River, by the prisoners, all of whom made their escape. Troops were at once ordered out with the scouts from San Carlos under command of Lieutenant Watson in pursuit of the fugitives and other troops also ordered into the field from Forts Thomas, Grant, Lowell, Huachuca, Bowie, and Apache, and every possible effort made to destroy or capture the escaped convicts, named as follows: Kid, Miguel, Sayes, Wash-lan-ta-ha, Lac-Cohn, Has-tin-tudo-dy, Ca do-day-du-on, and one Tonto Apache. The Mexican prisoner surrendered at Florence and claimed to have had nothing to do with the killing of the sheriff and guard. The force was increased at San Carlos and every possible precaution taken to prevent Indians from the reservation joining the fugitives. By judicious management and untiring vigilance this has been accomplished notwithstanding the unjust, false, and uncalled for reports in the newspapers to the contrary. The military authorities were neither responsible nor to blame for the unfortunate escape of those Indians, all of whom had been delivered to the civil authorities, convicted and sentenced for terms ranging from seven years to life imprisonment. Had said authorities informed the military that convicts were to be taken to prison with such a small guard, a suitable force of soldiers would have been so disposed as to prevent the possibility of the escape of the murderers, which has caused such a great amount of trouble and alarm.

The troops from the various posts in Arizona were kept in the field during the month of November, and since then Indian scouts and police have continued the pursuit. Up to the present time three of the fugitives have been killed in Arizona, viz, Lac-Cohn, Has-tin-tudo-dy, Ca-do-day-du-on, and one in Mexico, leaving Kid and three others, four in all, still at large. The Indian scouts and police are constantly on the alert pursuing the fugitives from one mountain range to another, preventing them from obtaining supplies and rest, and it is confidently expected that soon all will have been killed or captured. The difficulties of accomplishing this much desired result can not be comprehended by any one not acquainted with the wild broken face and immense extent of the country through which the fugitives roam; that their capture or destruction will be consummated can be safely presumed from what has already been done.

The latter part of November the Indian interpreter at Fort Wingate reported the finding of the dead bodies of two Navajos some 50 to 60 miles south of that post. A detachment of troops was sent to the place indicated and upon search and investigation the bodies were found, but from the best information obtained it was thought that they were those of Mexicans instead of Indians. As some time had elapsed since the deaths occurred nothing positive could be ascertained as to who the victims were or by whom they had been killed.

On application of the sheriff of Gila County, Ariz., the commanding officer at San Carlos was authorized to send a suitable force of troops to Globe, to be present at the execution of Na-diz-az, the Mojave Indian who had murdered Lieut. Seward Mott, Tenth Cavalry, on the 11th of March, 1887, as the settlers in that vicinity had manifested some apprehension on account of reported threats being made by Na-diz-az's

friends against the people of that place. The execution, however, took place at the time appointed, December 27, 1889. Quiet and order prevailed and no trouble arose in consequence of the enforcement of the death penalty.

In answer to communication from the Adjutant-General's Office, dated December 26, 1889, asking information in regard to the abandonment of posts in this department, it was recommended that Forts McDowell, Verde, Thomas, and Mojave, Ariz., be abandoned and transferred to the Interior Department and made available for the settlement of quiet and peaceably disposed Indians, and the establishment of industrial schools thereon at such time and in such manner as might be deemed most advisable for the welfare and advancement of the Indians. The recommendations have been approved, necessary orders issued and the posts specified will be turned over as agents of the Department of the Interior are sent to take charge of the buildings and reservations. The troops have been assigned to other stations in the department where arrangements are being perfected for their accommodation.

On the 26th of December, 1889, a Navajo Indian was killed by a cowboy named John Cox, near the San Juan River, without any just cause or provocation, which caused considerable excitement between the Indians and settlers in that section of the country. As usual, exaggerated reports were circulated and published in the newspapers, and application made for troops, alleging that the Navajos were assuming a warlike attitude and threatening to take the matter into their own hands and retaliate, if payment of a certain sum of money was not made to the family of the murdered Indian. Upon receipt of information regarding the trouble, the commanding officer, district of New Mexico, was directed to co-operate with the agent in such judicious measures as might be necessary to maintain peace in the emergency. Upon a full investigation of the matter the following facts were ascertained:

The Indian, Tez-chilla, with two male companions, three squaws, and a boy, had been out hunting and were preparing to return home when Cox and four other white men came into their camp. The white men soon left, and a blanket disappeared with them; the Indians thereupon followed the party and demanded its return which was refused. Hot words ensued and when the excitement was high, a pony, that one of the Indians rode, fell, causing thereby the discharge of a gun which hung at its side. Cox and his party at once opened fire, killing Tez-chilla instantly, whereupon the other Indians, without making any resistance, fled and escaped. Subsequently the cattle men offered to pay a certain sum of money to the Indians on condition that Cox should not be indicted and brought to trial for the murder, and even went so far as to authorize the Second National Bank of Santa Fé, N. Mex., to pay \$200 to agent Vandever with a view to quiet the Indians. The Navajos rejected all such overtures, saying that they simply wanted Cox brought to trial for the offense and punished if found guilty; that if acquitted they would abide by the verdict. The agent informed the bank officials that a crime had been committed and that the law must take its course as such an offense could not be atoned for with money. The citizens finally promised that Cox should be arrested and tried for the murder, upon which the Indians expressed satisfaction, giving assurances that they would await the action of the court in the case.

In the fall of 1889 orders were given for the organization of a general heliograph system between the various posts in this department, by

the establishment of signal-stations on suitable intervening mountain peaks. Maj. William J. Volkmar, Assistant Adjutant General, was placed in charge with authority to make the necessary arrangements to develop this important branch of the military service, officers were selected as assistants, and the satisfactory beginning then made has since been perfected and thoroughly systematized. Over 2,000 miles minimum "flash" connections have been opened and single sections of 70, 80, 90, 100, and 125 miles "flash" each, were operated without any intermediate stations. The prevailing sunshine and rare atmosphere in Arizona and New Mexico, together with broad plains interspersed by mountain ranges, peculiarly adapt those territories for heliograph signaling as has been fully demonstrated by the extensive system devised and consummated within this department which far excels anything of the kind heretofore attained in this or any other country. (Attention invited to map No. 1*, attached hereto.)

On the 2d of March a party of five drunken Indians killed a freighter by the name of Herbert ten miles west of Fort Thomas, Ariz. Immediately upon receipt of the information scouts from San Carlos, and troops from that and other posts were ordered into the field and every possible effort made to capture or destroy the murderers. Upon arrival of detachments under Lieutenants Watson and Clarke, Tenth Cavalry, at the scene of the murder their forces were united, the trail found and persistently followed for several days and nights over the rough, broken mountains and plains of Arizona. After five days' constant travel they overtook the murderers on Salt River where a hard fight ensued in which two Indians were killed and the others captured, one of whom was badly wounded. The prisoners were subsequently turned over to the civil authorities of Graham County, Ariz. This is one of the most brilliant affairs of its kind that has occurred in recent years and has had a very quieting effect upon, and will no doubt prove a lasting lesson to, the Indians of the San Carlos Agency. It was, therefore, extremely gratifying to congratulate the commanding officers of San Carlos and Fort Thomas, and especially Lieutenants Watson and Clarke and the troops under their command for the persistent pursuit and complete success. Such service in the execution of duty merits the highest praise and affords an excellent example of what promptness and indefatigable exertion may accomplish in the face of almost insurmountable obstacles. It was recommended that substantial recognition be promptly awarded in the way of brevets to the officers and medals to the enlisted men who took part in the engagement. The medals have already been received by the scouts and soldiers and it is to be trusted that the brevet commissions will soon be conferred on the officers, that of captain to J. W. Watson, first lieutenant Tenth Cavalry; and first lieutenant to P. H. Clarke, second lieutenant Tenth Cavalry, for gallant and distinguished services in the fight with Apache Indians near Salt River, Arizona, on the 7th day of March, 1890.

On March 10th, upon the recommendation of the Indian agent, Captain Bullis, and commanding officer at San Carlos, Captain Johnson, stating the necessity, I authorized the arrest and removal of seventy-six Indians, relatives and friends of Kid and other renegades, who were known to be in sympathy with the fugitives. I did this as a measure of precaution and asked that my action be approved by the honorable Secretary of War, that proper arrangements might be made

* Omitted.

for their care and sustenance at Fort Union, to which post they were sent under suitable guard. Since the arrival of Indian prisoners at Fort Union, in accordance with instructions received from Washington, twelve Indian children were selected from among them, and sent to the Ramona Indian school at Santa Fé, N. Mex.

Through the influence of persons interested in the establishment of a military post at El Paso, Tex., the post and military reservation of Fort Selden, N. Mex.—which had previously been abandoned and subsequently re-occupied by direction of the Lieutenant-General of the Army, with a view to the establishment of a large military post thereat—was, by authority of the President, on March 6, 1890, transferred to the Secretary of the Interior for disposition as provided in act of Congress, approved July 5, 1884.

So soon as this action became known W. H. H. Llewellyn and other parties who had previously been granted by the honorable Secretary of War the right to construct an irrigating ditch across said military reservation, and which authority had subsequently been suspended, notified the commanding officer, Fort Selden, that they would resume work on said ditch at once and continue it to completion, claiming the right to do so under the law, as the reservation had been restored to the public domain, and threatened the officer with an injunction should he interfere with them in any manner. Upon notification of their intentions I at once laid the matter before the War Department and was instructed to hold sufficient troops at Fort Selden to keep trespassers off that reservation until it could be properly transferred to the Department of the Interior. The Secretary of the Interior being advised of these proceedings, and also learning of the extent and value of the reservation, its admirable situation and its adaptability for the establishment of an Indian industrial school thereon, recommended its retention for that purpose, and by authority of the President the necessary orders were issued under date of April 9th, 1890.

An elaborate project for field maneuvers for this year was prepared and forwarded on March 14th, which provided for the concentration of sixteen troops of cavalry and twelve companies of infantry at Tanner's Cañon, near Fort Huachuca, Ariz., in addition to which arrangements were made to engage the remaining troops in the department in practice marches, reconnaissances, etc. Instructions have since been received from the Adjutant-General of the Army, directing that the encampments for field maneuvers assimilating to the operations of actual war, as contemplated in General Orders No. 105, series 1888, Adjutant-General's Office, be omitted for the present year.

On the 25th of March C. E. Vandever, agent of the Navajos, reported that a party of prospectors, about fifty in number, were trespassing on the Moqui Indian Reservation in the vicinity of Carrizo Mountains, avowing their intention of remaining there with a view of opening mines in that section. The agent requested the assistance of the military to eject the intruders, as he feared that any attempt to remove them by Indians would result in serious trouble. Immediately on receipt of this information I directed the commanding officer, District of New Mexico, to send two troops of cavalry, under a discrete officer, to the reservation, with instructions to remove all trespassers therefrom who refused to leave in obedience to the orders of the Indian agent. I also requested Agent Vandever to accompany the troops and to first notify the intruders to leave, that if they failed to comply with his commands, the troops would then use such force as might be necessary to eject them and assist in taking suitable measures to prevent their

return. Accordingly, Troops F and H, Sixth Cavalry, under command of Capt. William M. Wallace, proceeded from Fort Wingate to the point designated, and fortunately, by the mere presence of the military, the prospectors were induced to leave without causing any further trouble. Subsequently they filed a protest claiming they had discovered very rich leads in gold and silver, and that they had acquired valuable mineral property in Patterson district, Carrizo Mountains, Apache County, Ariz., by compliance with the mineral laws of the United States. The alleged discoveries will doubtless tend to lead other adventurers to the same locality, and constant vigilance on the part of the agent, the Indian police, and the military will probably be required to prevent similar encroachments on the Moqui Reservation.

Now that Forts McDowell and Verde have been abandoned with a view to their early transfer to the Department of the Interior for Indian school purposes, the attention of the authorities is again invited to the advisability of reducing with the least practicable delay the number of Indians in the vicinity of the San Carlos Agency by the removal of the Yuma and Mojave Indians, which number in all about one thousand men, women, and children, to those reservations. The keeping of so many Indians at the San Carlos Agency is detrimental to their advancement on account of the tendency to renew feuds of long standing, which always exist to a lesser or greater degree among Indians. Their disintegration, therefore, in the manner suggested, would prove of lasting benefit and tend to make them industrious and self-sustaining. The feasibility of the measure is well understood by all who have investigated the subject, and the sooner such disposition is made of those Indians the better it will be for the Government and all interested in their welfare. Fuller information in regard to this important matter will be found in my annual report, pages 8 and 9, for 1889.

The Yavai Suppai Indians, who have always been quiet and peaceable, have for a long time lived in Cataract Cañon, Arizona, a southern branch of the Grand Cañon of the Colorado. During the summer they occupy the narrow valley of the deep cañon where they raise grain, vegetables and fruit for sustenance. Their hereditary winter camp, known as "Black Tanks," was taken from them two years ago by white men. Since then, in the winter months, they remain in the vicinity of some small springs near the upper rim of the cañon, where they have built substantial "wickiups" or houses, of large cedar logs covered with bark which afford comfortable shelter. The tribe numbers at present about two hundred and fifty souls; they have no agent to look after their interests, although more industrious and less addicted to vices common among other Indians. Their property consists of about one hundred and fifty horses and ponies, with a limited supply of cooking utensils, native wicker-baskets and crockery; their clothing being mostly blankets and the cast-off garments of white people. During the last winter la grippe passed through the tribe with fatal results, causing fifteen deaths during the months of January and February. They certainly have a right to herd their stock on unsurveyed Government lands and must necessarily go outside of the cañon in order to obtain sufficient pasture. So long as game was abundant they spent much time in hunting upon the high mesa lands. Nearly all of the places which they have been in the habit of frequenting for grazing and hunting purposes have been taken possession of by white men regardless of the rights of the Indians, who have become exasperated to such a degree that trouble is likely to arise at any time, notwithstanding their quiet and peaceable disposition. If possible "Black Tanks," of which they have been de-

prived, should be restored to them. Common justice demands that they be cared for and protected; that if necessary, their reservation be enlarged and definitely defined, and that they be given an irrevocable title thereto.

From recent surveys made of the Grand Cañon of the Colorado it has been ascertained that a railroad can be constructed throughout its entire length at such estimated cost as to make the project feasible. The first ledge above the Colorado River presents generally a level surface and is peculiarly well adapted for the road-bed, being about one hundred feet above the water. The construction of a railroad as indicated is a matter of great interest, and liberal encouragement should be given by the Government to hasten its completion. By such accomplishment the grandest scenery on the face of the earth would be made accessible to every one at moderate expense, while now the difficulties of reaching that famous wonder-land are beyond the power of endurance of many who would enjoy the sight but lack the means and strength to gratify their desires.

No one is gifted enough, and no language adequate, to describe the overawing magnitude of the splendor that breaks upon the sight of the beholder at the first glance of that most remarkable freak of nature, the Grand Cañon of the Colorado. Its enormous extent can be best understood by a brief statement of its dimensions, and it is well to bear in mind, that, it is over 300 miles in length; from 1,000 to 7,000 feet in depth, and from 1 to 18 miles in width. It requires a steady nerve and strong head to stand upon its rocky rim and look downward at the surging rapid stream, which, although several hundred yards in width, appears a mere crumpled silver ribbon in the dim blue distance. By standing near the brink of the box cañon with its 5,000 feet of perpendicular walls which form the mouth of the Little Colorado, a most extended view can be obtained to the westward and northward, there being an abrupt bend in the cañon at that point of observation. Bright colored mountains of castellated rocks rise from immense depths, rivaling in appearance and number all the spires, domes, towers, ramparts, and embattlements in the world; presenting with slight aid of the imagination a wilderness of silent ruins or deserted cities. The intermingling of all varieties of variegated granite and marble, sandstone and slate, in the sunlight and shadow, dazzle, bewilder, and give endless tints to the ever changing and exquisitely brilliant scenery.

Looking upward from the great depth of the abyss, where narrow or confined, between abrupt walls and stupendous mountains of rock with their remarkable gradations of color from black to white, there opens to view, in striking contrast, a belt of pure ultramarine sky through which at mid-day the stars glitter with a weird lustre from the heavens, observable nowhere else on earth. All the wealth of the world would not be sufficient to pay for the labor necessary to construct one mile of the great chasm between its rock-bound cliffs engulfed within immeasurable space. A person might see all the paintings, engravings, or photographs ever made of the great cañon; hear all that has been said, and read all that has been written in regard to it, and not realize or adequately comprehend its astonishing magnitude and indescribable sublimity. Surely a country which has within its domain, hidden away in a wilderness, such an immensity of wonderful scenery should lose no more time in properly opening it to the view of all the people of the world.

On the 26th of May, San Francisco papers contained telegraphic reports from Tombstone, Ariz., to the effect that a man by the name

of Robert Hardie had been killed by Indians near Rucker Cañon, and subsequently voluminous statements were published throughout Arizona, alleging that many Indians from the San Carlos Reservation were on the war-path. The citizens of Tombstone, in the midst of the excitement, sent a petition to Washington, invoking the aid of the President for the protection of their frontier, and it appeared from that remarkable manifesto that the lives of all the people of Arizona were endangered by the murderous, bloodthirsty Apaches. The newspaper report of the killing of Mr. Hardie was in substance as follows: It appears that he and his brother-in-law, Dr. Haynes, were riding together on the afternoon of the 24th of May, through Rucker Cañon, in the Chiricahua Mountains, east of Tombstone, Ariz., when they were suddenly fired upon from the side of the cañon and Mr. Hardie instantly killed; that Dr. Haynes, whose horse was shot, ran and succeeded in catching and mounting the horse which had been ridden by Hardie and thereby made his escape; that he saw one Indian who looked like Geronimo, etc. Although the murder occurred on Saturday, the 24th of May, no information reached either of the nearest military posts, Forts Huachuca and Bowie, until more than two days had elapsed. When notified of the occurrence the troops started immediately for the scene of the murder, arriving there on the 27th. Not being able to find any trail they moved southward 16 miles, where it was reported that horses had been stolen, and there found a dim trail five days old, which they followed with great difficulty to a point near the Mexican line, where it was lost. The carcasses of a horse and colt were found near the trail, some of the flesh having been cut from the latter. No other evidence was obtained by following the trail, although it was thought it might have been made by Indians, possibly three in number.

On May 27th, the commanding officer, Fort Huachuca, in an official report, stated that Mr. Clark, a resident of that place, was in Tombstone when the body of Hardie was brought into that town, and at the undertakers before the inquest, saw Hardie's pockets emptied, money counted, pocket-book seemingly untouched and body without mutilation or any disfigurement; the bullet hole was straight through the body from the front, indicating that the person firing was on a level with the man killed; the index finger of the left hand showed powder burns. In Mr. Clark's opinion Mr. Hardie was killed by some other person or persons than Indians and evidently from other motives than robbery. The newspapers reported that a man had been killed in Mexico, sixty miles south of the boundary line, about the time the murder of Hardie occurred but the statement has not been verified. I communicated with the Governor of Sonora giving the press reports as to the killing of Hardie by Indians and was informed in return that Mexican troops had been sent to scout throughout the most exposed frontier. No further information has been received indicating the presence there of hostile Indians and no later depredations have been committed in that portion of Mexico.

In accordance with instructions received from the Adjutant-General of the Army, Troop I, Sixth Cavalry, Fort Wingate, N. Mex., changed station with Troop E, of the same regiment from Fort Lewis, Colo. The transfer was effected by the troops leaving the posts designated on May 24 and marching to a point on the San Juan River bordering the Navajo Indian Reservation, where transportation was exchanged, from which point each troop proceeded to its new station—Troop E arriving at Fort Wingate June 6, 1890.

In pursuance of General Orders No. 22, current series A. G. O., and

General Orders No. 5, Headquarters Division of the Pacific, May 19, 1890, the Second Regiment of cavalry, from the Departments of California and Columbia exchanged stations with the Fourth Regiment of cavalry in this department. The movement was completed during the month of June.

Press dispatches, dated June 17, from Denver gave a report from El Paso, Tex., to the effect that a man arrived at Separ, N. Mex., bare-footed and almost destitute of clothing, and reported that he was one of eleven cow-boys who had been encamped some 10 miles north of that place; that they had been attacked by Indians the night before, and that all others of the party had been killed, and that he had managed to escape by hard running, etc. On the 19th of June a telegram was received from the commanding officer, Fort Bayard, Colonel Bliss, to the effect that the affair was a hoax gotten up by the cow-boys to frighten one of their party; that a troop of the Tenth Cavalry was then engaged in scouting throughout that section of the country, and that no signs of Indians had been discovered.

Upon my application authority was granted by the honorable Secretary of War to increase the number of Indian scouts in this department. Thirty additional Indians are being enlisted, with a view to their fitness for service on the Mexican border, where they will no doubt prove effective, especially so in the event of renewal of the agreement which permitted the troops of both countries to cross the boundary line between the United States and Mexico.

Instead of enlisting scouts for six months, as at present, it would be better to enlist them for one year with the promise of increased pay on re-enlistment should their behavior warrant retention in the service. The position should be made so desirable that it would be sought after by the better class of Indians as a place of honor, profit, and trust. The scouts should, so far as practicable, be separated from their people and required to perform duties assimilating those of soldiers, being permitted to visit their families occasionally if conduct justified. A special force of Indian secret service men, if carefully selected, properly organized, instructed, disciplined, and well paid, would prove effective and might with propriety be authorized for duty at San Carlos under direct control of the commanding officer. The proposition made by an Indian inspector to organize a regiment of Indians to be enlisted for a period of three years selected from among the most restless, unruly, and non-progressive element to be found among the various tribes, would, in my judgment, prove a very dangerous experiment.

To place the worst element to be found among the most savage and warlike Indians in a regular organization of the Army and to expect them to be effectually controlled by white officers, would be unsafe, as favorable opportunities for revolt would be likely to arise during the excitement of a war which might lead to very disastrous consequences. To put the means of destruction into the hands of savages, in the belief that they would be immediately metamorphosed into obedient, law-abiding, and disciplined soldiers, would be placing too much faith in such Indians or even those recognized as semi-civilized. To enlist Indians in the manner suggested would virtually be giving a premium for bad behavior or worthlessness, when such enlistments, if made, should come from those who are known to be trustworthy, peaceful, and law-abiding, as the privilege should be awarded for good behavior and fitness for the important position of a soldier of the United States Army.

The posts of Forts Lowell, Grant, and Bayard, in my judgment, can, without detriment to the service, be abandoned and the troops now sta-

tioned thereat, that can not be provided for at the remaining posts in New Mexico and Arizona, removed to more agreeable stations on the Pacific coast in Southern California, as hereinafter recommended. The post of Fort Union, the abandonment of which has long been contemplated, could be discontinued at once by assigning the troops now there to stations, as follows: Troop G, Sixth Cavalry, to Fort Wingate; Company C, Tenth Infantry, to Fort Marcy, and Company H of that regiment to Fort Stanton; all to be reported on detached service from their new stations and to remain at Fort Union so long as their services may be required as guard for Indian prisoners now there from San Carlos, said post and reservation to be transferred to the Department of the Interior for Indian school purposes or for disposition as provided in act of Congress approved July 5, 1884, on the departure of the military therefrom.

It is again recommended that measures be taken without delay to enlarge the present military reservation at San Pedro, Cal., as indicated on map No. 2, hereto attached, as that important point is well known to be decidedly the most available place for a harbor, considering the amount of money already expended there, to be found anywhere on the coast adjacent to Los Angeles, the great commercial interests and advancement of which depend so much on the necessary enlargement and proper protection of said sea-port. The amount of land in addition to what now belongs to the Government is about 640 acres and that is not too much to make a suitable reservation on which to construct a military post large enough for a regiment of infantry, which should, in my opinion, be placed there in addition to the artillery force heretofore suggested, in view of the fortifications already contemplated in conjunction with other sea-coast defenses bordering on the Pacific Ocean.

The site is an admirable one overlooking, as it does, the town and bay of San Pedro, and embraces an extended view of sea and land and is naturally a strong position which can be readily strengthened and made almost impregnable. An abundant supply of excellent fresh water can be obtained at moderate cost and rapid transit for troops and supplies is already available by railroad and ocean steamers. Everything considered it is a convenient location for troops and far preferable to any place inland or back from the ocean and away from its healthful and invigorating influences. The bold promontory on which the site for the military post is located is a conspicuous object when approached from either the sea or the land and would, when properly fortified and garrisoned, afford protection to the country adjacent thereto, and eventually grow into a military station of great importance, situated as it is in the midst of lands rich in soil, teeming with valuable products, and rapidly increasing population.

The post of San Diego, Cal., is poorly situated, too small, and entirely inadequate to meet the present needs of the Government. It should be disposed of as heretofore recommended and a more suitable reservation obtained without delay, in order that a large post may be permanently established at that important sea-port; such action being a necessity in connection with the proper fortification of Point Loma for the protection of the city, its harbor, and the sea-coast near the southern border.

The best site for a large military post at or near San Diego is what is known as the North Island or Peninsula, directly opposite the present Government reservation of Point Loma and on the east side of entrance to the bay. The tract is said to contain 1,700 acres, but if

proper allowance is made for low lands subject to overflow and sands liable to displacement by wind and water, it does not contain over 1,500 acres of solid land. The elevation on the north side, facing the bay, is between 40 and 50 feet, from which point the entire tract gradually slopes towards the ocean. It is remarkably well adapted for military purposes, and should have been taken possession of by the Government at the time the Point Loma reservation was set aside, and the longer such action is delayed the more the property will cost. Both tracts are needed to properly protect the city and harbor. Water pipes have been laid throughout the South Island and could be readily extended to North Island or Peninsula and thence to Ballast Point, and an excellent quality and abundant quantity of water thus provided at a moderate cost. I am informed by the owners—the Coronado Beach Company—that they are ready to transfer the whole of the tract to the Government for military uses, its value to be fixed by arbitrators or commissioners appointed for that purpose. After a careful examination of the site and full consideration of the subject in all its bearings, believing that it will be greatly to the interest of the Government, I urgently recommend said proposition to the favorable consideration of the War Department and that measures be at once taken by the Government with a view to the acquisition of the property. Attention is invited to map No. 3, hereto attached, showing the location and surroundings of the North Island or Peninsula, so admirably situated between the beautiful harbor of San Diego and the Pacific Ocean.

Congress should be called upon to make liberal appropriations for the purchase of the tracts referred to, and for the construction thereon of permanent military posts for the accommodation of the troops now at inland stations where they are no longer needed, and which must necessarily soon be abandoned. The railroads, now so thoroughly established, obviate the necessity for keeping so many troops in the territories where hardships and privations have to be endured. Troops should be concentrated at healthful locations on the sea-coast as herein recommended, where they can be made comfortable, instructed and disciplined and held in position to be promptly sent to any point in an emergency where their services may be required. Such disposition would prove highly beneficial to the troops and advantageous to the people of the Pacific Coast. The concentration of large forces near the border of Mexico will not be viewed as a menace to that Government, but as an assurance that the friendly relations and the mutual interests of both countries will thereby be more carefully looked after and strengthened for the future. In view of the recent unwarranted attempt to grasp Lower California from the Republic of Mexico, in reference to which so much has been said and written, the present time is particularly auspicious for the acquisition of the lands referred to and the establishment thereon of permanent military posts for the accommodation of troops of all arms of the service.

The policy recently inaugurated by the Government to utilize the posts and reservations no longer required for the military, by the settlement of quiet and deserving Indians thereon and for the establishment of industrial schools for them, is beneficent and humane in its tendencies and should be strictly adhered to, notwithstanding the opposition that will arise to that wise measure. It should be borne in mind, however, that there is in all savage races a natural repugnance to anything new and that such aversion exists to a less or greater degree throughout the various Indian tribes. Their civilization therefore must be a slow, tedious and discouraging business, in conflict with which their superstitions, instincts and beliefs, continually rise in opposition.

To expect them to accomplish such an achievement suddenly would be unreasonable, for to do so they must accept at once new impressions and combine them with ideas and habits entirely foreign to their mode of living, to which their brain and nerves are not naturally accustomed. Still with care, patience and proper management they can be educated and in time civilized, and it is the duty of the Government to properly care for and protect them and leave nothing undone for their advancement, in order that at least the remnant of a people, who, long neglected and much abused, may in time be raised to the honorable and enviable position of citizens of our great Republic.

Ever since the murder of Robert Hardie, troops have been constantly scouting along the most exposed frontier on the border of southern Arizona and New Mexico, and up to the present time no hostile Indians have been found there. It has been definitely ascertained that the numerous reports of alleged depredations by Indians since that date are entirely groundless, gotten up by malicious persons bent upon their favorite scheme of calling upon the Government for assistance, with the design of having the country occupied by troops so they can be better able to dispose of their products at high rates. By false reports and clamor they hope that the Indian reservation may be opened to their grasp, and not being interested in the welfare of the country, like hungry wolves they skulk and roam about the purlieus of civilization, often out of honest employment for lack of stability of character; always ready to appropriate what they can, regardless of the rights of more deserving people. The following from official reports of officers in the field with troops show the methods of this class of persons:

Lieut. A. M. Fuller, Second Cavalry, under date of June 20th, from his camp in Rucker Cañon, states:

* * * * *

Reached camp at 1:10, saw no signs of Indians and no one has heard of any but Reynolds. His stories are conflicting. I do not believe there are any Indians in this section of the country. * * * I saw Reynolds about this report of Gray's and his statements are very conflicting. First he says: "six Indians took eleven head of stock; I ran after them with a six-shooter and followed them 500 yards, I then shot three times; they returned my fire with one shot and then abandoned the stock and ran." Six Indians scared off by one man with a six-shooter! Again he said: "Five Indians," and again he spoke of "one Indian" trying to get his horses. During my scout I saw horses in every direction grazing; on Silver Creek, San Simon Valley, and through the hills, and Indians could get all the mounts they desired.

* * * * *

On June 18 the commanding officer, Fort Huachuca, received a telegram from Ed. Vanderlip, justice of the peace, and other citizens at Crittenden, Ariz., stating that Indians had killed cattle the day previous in the Santa Rita Mountains and that civilians were preparing to go out that night. Immediately on receipt of the despatch Lieut. D. L. Brainard, Second Cavalry, with a detachment of troops proceeded to Crittenden, where he found that not only had the civilians failed to go as stated but that there was a decided disinclination on their part to do anything to assist him. On arrival at the scene of the reported depredations the animals were found lying on the north side of a deep gulch or ravine and must have been dead some fifteen days; no bullet holes could be found in the carcasses and the probabilities are that they died of thirst or starvation.

The young man, Paret by name, who first found the cattle and spread the report that they had been killed by Indians denied that he had seen any Indians or had observed moccasin tracks as reported. He acknowledged that the animals were in a putrid state and filled with worms when found by him three days before.

These reports when taken in connection with letter just received from the governor of Sonora, dated June 25, 1890, plainly show that no Indians have been found on either side of the boundary line between Mexico and the United States, and that no depredations of any kind have been committed there recently. The stock belonging to ranchmen on either side of the line roam at large without molestation. The circulation of false reports alleging the committal of depredations by Indians—designed to take troops into the field unnecessarily, where they have to endure hardships and privations in a desolate country almost destitute of water, incurring great expense to the Government—should be made subject to severe punishment, as they excite the apprehension of the better class of people, permanent residents, and stand in the way of the development and advancement of the country.

It is noteworthy to be able to report so few depredations by Indians in this department during the past year. None have been committed by the Navajos, although encroachments have been made upon them as usual, and one of their people brutally murdered by a cow-boy near the San Juan River, as herein reported. There probably can not be cited another instance on the face of the globe where 20,000 people have lived so quietly and well-behaved as those Indians. It is an astonishing commentary on the civilization of our country, as hardly a day passes that murders and other serious offenses are not committed, and despite all laws and police regulations crimes of the gravest character often go unpunished. The killing of freighter Herbert by drunken Indians is the only murder of which there is any positive information, and the Indians, five in number, were pursued by troops and scouts and killed or captured. The killing of Sheriff Reynolds and one man, guard for convicts in the hands of civil authorities, can not be charged against the reservation Indians, as has been clearly shown in this report, a fact which any fair-minded person must admit. It is evident, therefore, that the Indians within this department have recently been the most orderly and well-behaved people on our continent, judging from the few crimes they have committed. Either their alleged propensities must be changing rapidly for the better or the agents in charge of them, with the assistance of the troops, have been remarkably successful in the management of those wards of the nation.

During a recent journey through Arizona, it was gratifying to observe the marked improvement in the condition of the Indians of the White Mountain Reservation. At the San Carlos Agency they are under thorough control and putting forth greater energy in the raising of crops and cultivation of the soil than ever during any former season. All the stories circulated as to the absence of the Indians and their committing depredations, are purely false, *in toto*, and are mainly put into circulation by alarmists and certain interested parties who hope, by such methods, to cause the removal of the Indians and the opening up of their reservation to settlement, it being a constant eye-sore to that avaricious class of people, who live near and are constantly encroaching upon the Indian lands. They look upon the country from which they are excluded as an "Eldorado" abounding in mineral wealth and riches just suitable to their wants and aspirations. To heed their clamor and attempt to remove any of the Indians beyond those referred to in this report, viz, the Mojaves and Yumas, would be a dangerous experiment that would be sure to lead to disastrous consequences. It would be unjust to the Indians who are showing such decided evidence of advancement in agricultural pursuits and who have expended

so much labor in constructing reservoirs, opening irrigating ditches, and making other improvements upon their arable lands.

The ample supply of wagons, harness, tools, and farming implements recently received by the White Mountain Apaches, has produced great satisfaction among the Indians, they having so long been deprived of those articles so necessary for their use in cultivating the soil. They should have a separate agency. The agent at San Carlos is not able to give them the careful supervision they require, as his whole time is necessarily taken up with his responsibilities and cares at the San Carlos Agency, and it is impracticable for one person to properly attend to both tribes. A good school should be at once established at Fort Apache or in the immediate vicinity of that post, under an intelligent superintendent with the requisite number of teachers to insure success. The Indians there are in constant dread of being forced to give up their children to be sent to distant schools; a policy which, if carried into effect, would prove detrimental to their advancement. If proper schools are opened in their midst where they can observe their children advance gradually towards civilization, the influence will be far more advantageous, and make them less distrustful by allaying the fear of separation from their families. The placing of a surgeon there has had a good effect, and will be calculated to wean the Indians from the old custom of appealing to medicine men, and liberal supplies should be furnished to aid him in the important work to which he has been assigned.

I again call attention of the proper authorities to the necessity for a separate agent for the Jicarillas who are still attached to the Ute Agency; Mr. Bartholomew, the agent, spends his time with the Utes seeking to accomplish their removal. His clerk, Mr. Stollsteimer, the former agent who was removed, by whose management the Ute Reservation was converted into a cattle range and the Jicarilla Reservation used for the same purpose, is an enemy of the Indians and should have nothing to do with either agency. There is said to be a scheme on foot to have a saloon keeper by the name of Archuletta, a relative of Stollsteimer, employed at the subagency. The Jicarillas should have a separate agent who will guard their rights faithfully, in the face of all opposition. Those Indians have always had a deplorable time. They were for many years wanderers without a home and frequently removed from one reservation to another upon the whims of those who coveted their lands. After being first located on the present reservation they were in 1883 forcibly removed to the Mescalero Agency, where they were greatly dissatisfied, and virtually soon became serfs for the Mescalero Indians. Such was their discontent that in 1886 many of them ran away from that agency in the middle of winter, during a violent snow storm, to Santa Fé where they arrived in great distress. Upon representation of the fact in regard to their condition authority was given for and they were returned to their former reservation adjoining that of the Utes where they still remain; since their return efforts have been made to again have them removed. They should be kept there permanently, and all citizens within the limits of their reservation removed without delay, as heretofore recommended, and the entire reservation held until such time as the Indians can be assigned homes thereon in severalty. At the present time the citizens occupy the best of the lands, and so long as they are permitted to remain there trouble will be likely to arise to retard the advancement of the Indians. Attention invited to my annual report of 1889, pages 10 to 12.

The subject of irrigation for the development of the arable lands in the Western States and Territories is a matter of vast importance. The

more elaborate the system adopted by the Government and the greater the efforts put forth to carry it into execution the more enormous will be the returns in the increased wealth of the nation. That the project is practicable is clearly shown by what has been accomplished in other countries. To refer to merely one of the many instances which might be cited as an example: It is a well established fact that Egypt is naturally a rainless desert, where the sun has seldom been obscured, yet far away on the high table-lands of Central Africa clouds accumulate near seas or lakes, where rains pour down for many months each year, causing periodical overflows that cast forth the Nile from its source, forcing it through the intensely hot and parched desert towards the Mediterranean Sea. While about the same time, in the highlands of Abyssinia, when the rainy season sets in, two large tributaries rapidly fill and rush into the Nile pushing that swollen stream impetuously on through the deep rocky gorges of Nubia, to Egypt, where by substantial dikes, reservoirs, and lock-canal the surplus water is controlled and securely stored for use as required for irrigation; thus that arid and naturally unproductive region is converted into a blooming garden.

What has been done in Egypt so long ago, can by proper efforts be made applicable to the arid plains and valleys of the United States, by making use of the natural advantages afforded by its great western chain of mountains and elevated plateaus in the midst of which periodical rains occur forming numerous lakes and springs from which rivers rise and flow into the Pacific Ocean and Gulf of Mexico. The surplus water which accumulates in the mountains and left to run to waste, if controlled by means of reservoirs, could be saved and stored for disposition as demanded, and would be ample to irrigate successfully all the arable land west of the Mississippi river where irrigation is necessary. Further information on this subject will be found in my annual report of 1889, pages 17 to 20.

A special force of scouts with a few selected non-commissioned officers and soldiers of Troop K, Tenth Cavalry, has been organized for service on the southern border of Arizona and New Mexico under the command of Lieut. P. H. Clarke, Tenth Cavalry, that officer having a roving commission to operate actively in conjunction with the troops already in the field, to pursue, capture or destroy any hostile Indians which may be found on the border. In the event that the depredations are not committed by Indians, as now clearly indicated by the latest information received, the fact will most certainly become known and the marauders trailed to their dens or rendezvous. The reputation of this officer is sufficient to inspire a feeling of security among well disposed settlers, and to give assurances that nothing will be left undone by the military to prevent disorder on the frontier; while evil doers, let them be whom they may, will soon be induced to desist from their course or leave the country to seek more favorable locations for their nefarious practices.

The commanding officers of the various posts, viz: Colonels Carr, Douglass, Bliss, Compton, and Hough; Lieutenant-Colonels Pearson, Morrow, Brayton, Hunt, and Snyder; Majors Perry, Noyes, Adam, Cooney, and Comba; Captains Johnson, Lebo, Lee, Bowman, and De Lany; Lientenants Robertson, Richards, and Brett, have been steadfast and earnest in the performance of their difficult and important duties. The drill, discipline and efficiency of the troops under their respective commands have been excellent during the past year, as shown by the report of the inspector-general of the department.

The officers of the department staff, viz: Colonel J. R. Smith, medical director; Lieut. Col. R. H. Hall, Sixth Infantry, acting inspector-

general; Maj. J. P. Willard, chief paymaster; Maj. A. S. Kimball, quartermaster, chief quartermaster; Maj. W. J. Volkmar, assistant adjutant-general; Maj. W. A. Elderkin, commissary of subsistence, chief commissary; Capts. D. D. Wheeler, C. A. Booth, and T. E. True, assistant quartermasters; Capt. H. K. Bailey, acting judge-advocate; First Lieut. T. J. Clay, Tenth Infantry, inspector of small arms practice and acting ordnance officer; First Lieut. C. H. Grierson, Tenth Cavalry, and Second Lieut. J. A. Perry, Tenth Infantry, aides de-camp, have succeeded admirably in maintaining their excellent records for gentlemanly bearing, uprightness, and efficiency by the marked zeal, courtesy and ability displayed in the discharge of the various and complicated duties devolving upon them during the past year. Their valuable services justly merit the highest praise of the department commander and are well worthy of recognition by those in higher authority.

In closing this report past associations and vague conceptions of the future are strangely intermingled with emotions of pleasure and pain, for while looking forward with satisfaction at being freed from the cares and responsibilities of active service, I am impressed with the deepest regret at being separated from those to whom I have become so greatly attached. It is a satisfaction, however, to believe that our social and official relations have been so friendly, that it will be pleasant to recall them and that the sentiments of mutual regard which bind us together are strong enough to prove enduring in the face of separation. While cheerfully submitting to the law, which is alike applicable to all officers of the Army, it is well to know that my health remains unimpaired, and that vigor will give zest to the enjoyments which may yet fall to my lot. Conscious of having performed my duty at all times, and possessing the warmest feeling toward those with whom I have been associated—my seniors and juniors alike—gives assurance that neither time nor distance can efface from my mind those pleasurable recollections. Whatever the future may bring forth, I shall endeavor to accept its joys and sorrows with a brave heart and clear conscience which should, in any event, be sufficient to carry an old soldier through the remainder of a life, the best of which has been devoted to his country.

Very respectfully, your obedient servant,

B. H. GRIERSON,
Brigadier-General, U. S. A., Commanding.

The ASSISTANT ADJUTANT-GENERAL,
Division of the Pacific, San Francisco, Cal.

REPORT OF COLONEL CARR.

HEADQUARTERS DISTRICT OF NEW MEXICO,
Fort Wingate, N. Mex., August 17, 1890.

SIR: In making my annual report for 1890, and also upon the discontinuance of the district, per General Order No. 84, Headquarters of the Army, I have the honor to state that this district was established in 1865, but for some years has been used for little more than emergencies, and latterly the telegraph lines have been so convenient that nearly all business has been acted upon at department headquarters.

When, nearly two years ago, I expected to succeed to this command, I did not wish to relinquish my post and go to Santa Fé, where, although

more comfortable, I would have fewer troops, and none of my regiment; I so informed the commanding general, and have therefore continued here, commanding, besides the district of New Mexico, my regiment, post, and this "district of observation," which includes the Navajo and Moqui countries in Arizona.

As district commander I have issued and received very few orders nearly all of which had to do with affairs in this vicinity.

Pursuant to verbal instructions from the division and department commander, I, on July 27, inspected the Indian prisoners at Fort Union, and, incidentally, the quarters of the garrison, which are altogether unfit for habitation. (See my special report of August 1, 1890, also General Grierson's annual report.)

In November last I visited Forts Union and Stanton to inspect, as regimental commander, the troops of my regiment there stationed; and during last summer and autumn I visited the Accomac, Zuñi, Navajo, and Moqui reservations, and with the last three tribes I have been in constant communication.

In September last I took a battalion of the Sixth Cavalry from Fort Wingate into the field for three weeks, and in July I gave the infantry company some practice in heavy marching order. There have also been a number of scouts and expeditions from Fort Wingate, as well as from other posts in the district, all of which have kept the troops in practice and readiness for any service.

Owing partly to the circumstances mentioned in my last annual report, the Zuñis do not feel very kindly towards trespassers upon their domain, and there have been several instances of violence towards such persons. These were not such as called for warlike action on my part; but during a visit to their pueblo in May, last, I had a talk with the governor; in which I showed him the inevitable result of such conduct, and advised him, as a friend to the Zuñis, that such proceedings be frowned upon and prevented. This has produced a favorable result. Compensation has been made in some respects, and I have heard of no further acts of violence.

The only agent of the Zuñis is the one who has charge of all the Pueblo Indians in New Mexico, and I believe he has not visited Zuñi since his appointment. Consequently they are left pretty much to their own devices, and if they were not among the mildest and best dispositioned of people there would be more or less trouble.

I have, by constant watchfulness, keeping up a friendly understanding with the chiefs, etc., been able to anticipate and prevent any trouble with the powerful tribe of Navajos, estimated at twenty thousand souls. As stated in my last report, there is no pretense of keeping them on their reservation, and they are to be found roaming and living north, east, south, and west of it, sometimes a hundred miles away. (See also report of General Grierson, p. 27, lines 8 to 14.)

In October last, I marched with a small command over the whole of the Navajo and Moqui Reservations, visiting the celebrated Cañon de Chelle and other noted localities.

During this spring there was another invasion of the prospectors referred to in my last annual report; and, after reporting and receiving instructions, I sent a party under Capt. W. M. Wallace, Sixth Cavalry, which escorted them out of the country.

The region is so broken that one of the pack mules slipped from the trail over a precipice and was killed.

There has been more or less talk of a renewal of the invasion, and I have orders to keep a troop of cavalry encamped near the agency, on

that account, and the introduction of whisky; from which I hope soon to be relieved. (See my letter on that subject, dated August 8, 1890.)

About the time of the Kid outbreak in Arizona, I heard of three Apaches, on fine horses and well supplied with arms and ammunition, riding through the Zuñi and adjacent country, seemingly to look out the land for a raid. I sent a detachment which traced their route to where it returned towards the southwest, and prevented any raid if such were in contemplation.

Now that the subject of heliography has been thoroughly exploited I hope that officers and soldiers may have a rest therefrom. I used my personal influence to make a success of Colonel Volkmar's late efforts, and flatter myself that I was of considerable assistance; but his report, stating that 22 officers and 133 soldiers were required to work the line, involving their absence from other duty for over a month, as well as their and many others' long previous practice, and the cost of their transportation, shows that it is a great burden, and it is, in my opinion, without any commensurate advantages to the military service.

I was engaged as post commander in 1883, 1884, 1886, and 1887 in the practicing of heliography at and near Fort Lowell, and from Fort Bowie, via Bayard, to Stanton, also in the attempt to communicate from the Mogollon Mountains, northwest of Bayard, to the Animas in southwest New Mexico; and some of the failures were painful and some ludicrous. It is an exceedingly simple operation to throw and receive flashes of sunlight; and one that, with the instruments now elaborated and the descriptions printed, can be learned in a couple of hours by any intelligent telegraph operator, such as would be employed on the service in case of war. But the heliograph can be only used to advantage when the sun is shining and sufficiently high; say during not over eight hours in twenty-four, and then is uncertain on account of cloudiness, etc., and the electric telegraph and the flags and torches would be employed whenever possible.

The competition of all cavalry regiments in the Division of the Pacific was held at Fort Wingate this year under orders from the Headquarters of the Army. The score to carbine of Blacksmith A. Keiser, Troop H, Sixth Cavalry—646 out of a possible 800—is so wonderful in comparison not only with all former carbine, but rifle, shooting, that it, together with other high scores, last year and this, might give rise to suspicion of undue advantages given here were it not for the fact that the delegate sent to Fort Bayard from our small infantry company made the second best score of those of the three regiments there represented in the department rifle competition, showing that the superior excellence of this garrison is due to the careful and assiduous instruction and practice of the officers and soldiers.

Should, however, future competitions be ordered here I would suggest that adequate provision be made by detail from the commands represented for clerks, scorers, and fatigues, for it is a great burden on the garrison of Fort Wingate to furnish them.

I am, sir, very respectfully, your obedient servant,

E. A. CABE,

Colonel Sixth Cavalry, Brevet Major-General Commanding.

ASSISTANT ADJUTANT-GENERAL,

Department of Arizona.

**REPORT OF ASSISTANT ADJUTANT-GENERAL TO MAJOR-GENERAL
MILES.**

HEADQUARTERS DIVISION OF THE MISSOURI,
ASSISTANT ADJUTANT-GENERAL'S OFFICE,
Chicago, Ill., September 29, 1890.

SIR: I have the honor to submit my annual report for the past year as assistant adjutant-general of the division.

The division was commanded by Maj. Gen. George Crook until his sudden death, on the morning of March 21, 1890. It was then commanded by the major-general commanding the Army until the 15th of the present month, when, under instructions from the War Department, its command was assumed by yourself. Under these circumstances, it is not inappropriate that I should report the condition of the division during the past twelve months.

Until the 1st of September the division has consisted of four departments, that of Dakota, of the Platte, of the Missouri, and of Texas. Subsequent to the 1st of September it has consisted of the Departments of Dakota and the Platte and the State of Illinois.

The reports of the four department commanders have been, under instructions of the major-general commanding the Army, submitted to you. As a roster of the troops serving in each department has been submitted with their annual reports by the assistant adjutant-generals at the headquarters of each department, I do not deem it necessary to submit a roster for the division. I, however, inclose a monthly statement* prepared for the month of August, showing the strength of the troops at each post, the means of transportation, and of supplies, etc., which will show the condition of the troops for immediate field service on August 31.

The condition of Indian affairs within the limits of the division during the past twelve months has been peaceable and quiet, and there have been no disorders of serious nature among them. I know of nothing worthy of serious note, except the unsettled feelings of the Cheyennes on the Tongue River, and to this I invite especial attention. This tribe is now scattered at three agencies—a portion at the agency near Fort Reno, Ind. T., a portion at the Pine Ridge Agency in Southern Dakota, and the remainder at the agency on Tongue River. The latter Indians have been nervous and unsettled for a long time. It is claimed that they have not been properly supplied by the Government, and their earnest wish has been to have that portion of the tribe at the Pine Ridge Agency brought north and placed upon their reservation. It is not believed that these Indians will ever be quiet until these complaints are remedied, and I recommend that the necessary action be taken relative thereto.

The conduct of the troops stationed at the different posts in the division has been everything that could be desired, and I do not hesitate to say that in my long experience I have never known their fitness for service to have been better than it now is. It can also be said that the character of the officers and enlisted men serving within the division will compare more than favorably with that of any similar class of men in any profession.

* Omitted.

I would suggest that the time has now arrived when the interests of the service would be largely benefited by the concentration, as far as practicable, of the companies of a regiment at the same post, and to break up the system which has heretofore prevailed of forming the garrisons of the posts by a collection of companies from different regiments. The latter system produces much dissatisfaction and has a tendency to injure efficiency.

The new posts of Forts Sheridan, Riley, and Logan, built by the Quartermaster-General and officers selected by him, under charge of the Secretary of War, are rapidly approaching completion. They are most admirable in every respect for the purposes for which they are intended. It is suggested that in order to make the men's quarters more comfortable and appropriate a system of alcoves to accommodate from two to four men each may be placed in the barracks at each of these posts. It is understood that this system has been tried in the barracks at Columbus, Ohio, and that it has met with general approbation. I can scarcely imagine a more disagreeable position for a man of any delicacy than to be required to occupy a large barrack room similarly occupied by a large number of men.

The subject of mule transportation in the division, in my judgment, needs attention. Under the law which fixed the number of mules to be supplied to the Army, 2,850 was assigned to this division, as formerly constituted of four departments. It was the intention of Congress in adopting this law, it is understood, that where such transportation was required over and above the amount allowed it should be supplied by contract. Many of the mules now in service are old and nearly worn out. The number for any field operations is altogether inadequate. Railroads having been built throughout the limits of the division, the old system of transport by freighters for mercantile purposes has ceased, and in consequence it would be difficult, if not impossible, in a case of necessity to supply the wants of the Army by contract, because such transportation is no longer in existence. It is recommended that the number of mules allowed to the division be increased, and if necessary that legislation for that purpose by Congress be obtained.

In submitting the reports of the staff officers at these headquarters I invite attention to the remarks and recommendations of each, especially to the recommendations of the inspector-general of the division which, it seems to me, deserve special consideration.

Very respectfully, your obedient servant,

R. WILLIAMS,
Assistant Adjutant-General.

Maj. Gen. NELSON A. MILES, U. S. A.,
Commanding Division of the Missouri.

• REPORT OF BRIGADIER GENERAL STANLEY.

HEADQUARTERS DEPARTMENT OF TEXAS,
San Antonio, Tex., September 12, 1890.

SIR: Since my last annual report no very marked events have occurred in this department. The Nineteenth Infantry was relieved from duty and transferred to the Northern Lakes in May; the stations vacated by this regiment were occupied by the Twenty-third Infantry, transferred from the Division of the Atlantic. Four troops of cavalry serving for the past three years on the Rio Grande have been replaced by a like number from the post of San Antonio, the troops from the border taking post at San Antonio.

This year will be classed as a drought year in western Texas, and the drying up of the water holes and streams, and the consequent bad water, has resulted in a fever epidemic, specially affecting the troops lately arrived in the department. Fortunately this fever is not of a fatal kind, and not a death has occurred in 188 cases at the posts of San Antonio (119) and Fort Clark (69) from June 1 to August 29. Persons acclimated in this department are little liable to this fever, but most persons as well as animals from the North must undergo acclimation. The excessive prevalence of fever amongst new arrivals would teach that exchanges of troops into this department should be made in the fall season. All the posts in Texas, excepting Fort Davis, Fort Hancock, and Fort Bliss are tropical in climate, and for the summer months the heat is decidedly enervating.

As a rule our relations with our neighbors on the Mexican frontier have been very friendly, the military authorities on the right bank of the Rio Grande being very vigilant and anxious that no violation of international law should occur. Early in June information of a confidential nature was received at these headquarters that a revolutionary movement was organizing in Mexico near New Laredo. The commanding officers of Rio Grande posts were cautioned to watch this movement closely and to promptly arrest armed parties, however small, who could not account for themselves on this side of the river. On the same date Mr. Eugene Iglesias, United States deputy marshal, at Laredo, made oath that he had positive information of the hiding-place of a party of fifty revolutionists commanded by General Francisco Ruiz Sandoval, that their rendezvous was on the soil of the United States, and that they were revolutionists against the Republic of Mexico. He further testified that no *posse* he could control could cope with this force, and he called on the troops for aid. This matter being referred to these headquarters, Capt. E. Z. Steever, commanding Fort McIntosh, was instructed to capture the revolutionary force wherever pointed out by the United States marshal.

Marching at midnight in light order, with two lieutenants and fifty men, Troop G, Third Cavalry, Captain Steever arrived at the rendezvous of the revolutionists at daybreak. The place was found deserted, but continuing the march, about 11 o'clock, at a place called Las Islas Ranch, the main body of the revolutionists was found corralled in the tule and tall grasses near the river bank. Here the leader, General Sandoval, and ten of his party were captured. The general made a show of using his *muschata*, but thought better of it as a soldier put

the muzzle of his carbine to his shoulder. The captured men as well as their leader were almost naked as they had just swum the Rio Grande and were preparing to again swim the river. The same day the troop returned to Laredo and turned the prisoners over to the civil authorities. These prisoners are still held in jail awaiting trial for violation of the neutrality laws.

Captain Steever and the officers and men of his troop are deserving of commendation for the promptness with which this capture was made. The disquiet on the frontier subsided as quietly as it had arisen.

Attention has been called heretofore to the large territory south of the Southern Pacific Railroad, about 104 degrees of longitude, forming a peninsula bounded west, south, and east by the Rio Grande. This is a wild country, very broken in hills and mountains, a safe country for rogues to hide in. The opposite side of the river, in the Mexican territory, is still more wild and the mountains are more elevated, rugged, and difficult to cross.

Four very shocking murders have occurred in this wild peninsula within a year; old man Beckwith, who kept a little store near Polvo, was murdered apparently for a few dollars (\$20) he had in his store; Simpson and Nations, two prospectors, were murdered at Brook's ranch for a few horses and the little property they had in their camp. These murders and a general state of lawlessness throughout this wild country has given rise to a feeling of much insecurity among the few inhabitants; ordinarily this would be a matter for the State police, but in this case it is claimed and it seems true that the murderers come from the Mexican side and after their crimes escape to the same side.

Quite lately, viz, August 1, a riot occurred at the little mining town of Shafter, 20 miles from Presidio del Norte, resulting in the death of several persons. A detachment of cavalry, under command of First Lieut. T. R. Rivers, Third Cavalry, was sent immediately to the scene of disorder. The report of Lieutenant Rivers has been forwarded, giving a full account of the disturbances and the cause of them. How far this is purely a State matter and how much it belongs to the frontier interests of the general Government it is hard to say. In the case in point some of the State rangers, associated with the white citizens of Shafter, became engaged in a nocturnal battle with the Mexicans; it is claimed that a part of these Mexicans were foreigners and that after the fight they ran across the river. A ranger was killed and other damage done.

It is plain that to prevent such tragedies we must keep a force in the most settled part of this wild country and scout the rest of it. Arrangements are now being made to put a permanent camp in the near vicinity of Presidio del Norte, and to establish a patrol on the river. This should keep the department informed of what is going on in this out of the way place, and enable us to forestall such murderous affairs as have long disgraced that stretch of country.

The late consolidation of companies of infantry and of troops of cavalry has given barrack-room at several of the posts, and a regiment of infantry or one-half a one of cavalry would be very desirable for properly garrisoning the posts of this department. My recommendation of former years to buy the old post of Fort Duncan is renewed and I would recommend the building of quarters for a one-company post at Del Rio. This is the proper place for the military post and it is only a question of time when Fort Clark will be abandoned for this place. A small post where we hold the lease of Pena Colorado is desirable, and another at

the new camp near Presidio del Norte is necessary to fill our frontier system of picket posts.

Very good progress was made last year upon the buildings of the new post of San Antonio. Four years have now passed since building was commenced on this post. During the past year two sets of barracks, seven sets of line officers' quarters, a bakery, and a magazine have been built. With an allotment of money this year equal to last year the post can be nearly completed. Improvements of a permanent character have been made at Fort Clark, Fort McIntosh, and Fort Ringgold, tending to the convenience and comfort of the troops at those posts.

In regard to the transportation of the department, the mules are generally old and need replacing by younger and more efficient animals. An efficient transportation is just as essential to the military establishment as horses for cavalry or shoes for the infantry. So far as the Quartermaster's Department could accomplish, the condition of the soldier as to quartering and clothing has been greatly bettered during the past eight years.

In the matter of commissary supplies the late law of Congress giving one pound of vegetables additional to the ration fills a need long felt and asked for by those most interested in the line of the Army. I do not see how the food of the soldier could be further improved. Soldiering in Texas has peculiar features. The season of activity and work here is the winter. Summer is not only a season of enforced inactivity, but for four months it is a time of ennui and lassitude. The effect upon soldiers who have been born and raised in northern climates is to probably produce discontent, and yet, as compared with other departments, the desertions are not more numerous.

Texas has for eight months in the year the most genial climate in the United States, and probably not excelled by any country. Why our men are now subject to annoying fevers is a question. Is it the inferior stamina of the men or is it a change of climate?

Twenty years ago a sick soldier in Texas was a rarity, but then the men lived in tents, or in the open air without tents, now they are housed in comfortable barracks.

The Texas Volunteer Guard were ordered into camp at San Antonio, July 7. At the invitation of the governor the garrison of the post of San Antonio, six companies of the Twenty-third Infantry and the band of this regiment, Battery F, Third Artillery, and four troops of the Third Cavalry, camped for one week with the State troops. His excellency Governor L. S. Ross was present and occupied a tent for his headquarters. The camp was commanded by Major-General Roberts, Texas Volunteer Guard. Maj. E. C. Woodruff, Fifth Infantry, was detailed by the honorable Secretary of War as inspector, and performed that duty very faithfully. Capt. E. Z. Steever, Third Cavalry, was detailed from these headquarters as engineer and general advisory officer. He reports the military exercise and experiences of the encampment, making clear what was accomplished and advising as to the better methods for future encampments.

My impressions are that the encampment was a success, and that the yearly camping together of regular troops with the volunteer militia is a very wholesome and useful practice and should be encouraged.

Reports are submitted herewith from the assistant adjutant-general, inspector general, judge advocate, chief quartermaster, chief commissary, chief ordnance officer, medical and pay departments.* Later a report from the inspector of small-arms practice will be forwarded.

* Omitted.

The duties of these various departments have been faithfully performed by the officers in charge.

I am, sir, very respectfully, your obedient servant,

D. S. STANLEY,

Brigadier-General, Commanding.

ASSISTANT ADJUTANT-GENERAL,
Division of the Missouri.

REPORT OF BRIGADIER-GENERAL RUGER.

HEADQUARTERS DEPARTMENT OF DAKOTA,
St. Paul, Minn., September 1, 1890.

SIR: I have the honor to submit report as follows of the military affairs in the Department of Dakota since the date of the last report, September 1, 1889.

No events have occurred calling for actual campaign operations, although the services on several occasions have been required of quite strong detachments from a number of posts, particularly from Forts Custer, Keogh, Meade, Sully, Missoula, and Buford, to support the authority of Indian agents on the reservations, to confine thereto Indians not controllable by their agents, or to protect and assure safety to settlers in the vicinity of the Sioux reservations, who had become apprehensive of trouble on the part of Indians who were reported as restless or had committed depredations. Also it became necessary in accordance with instructions and to prevent intrusion on the ceded lands of the Sioux Reservation prior to the proclamation of the President of February 10, 1890, opening the same to settlement, to employ detachments of troops to repress attempts at such intrusion.

The principal services done are briefly stated following: Two companies were sent from Fort Sully, one on the 1st of January, 1890, and the other on April 10, the first to old Fort Pierre, opposite the town of Pierre, S. Dak., and the other to the Lower Brulé Agency, in South Dakota, to assist the Indian agents at the Cheyenne River and Lower Brulé Reservations, respectively, in preventing intrusion on the reservations prior to the opening to settlement of the ceded tracts, and also to prevent intrusion on the Indian lands, and to protect incoming settlers from violence from any disaffected Indians. The duties in such respects have been well performed by the troops, whose presence and the discreet action of their commanders undoubtedly prevented disorderly occurrences, if not worse.

Pursuant to instructions of March 26, from the adjutant-general's office, based upon application from the Interior Department, a force was dispatched, on April 6, last, from Fort Meade to establish a camp on the Cheyenne River reservations, South Dakota, to protect incoming settlers on the ceded lands of the Sioux Reservation from aggressive acts on the part of a band of disaffected Sioux located in that vicinity, and reported by the agent as not controllable by him and disposed to make trouble. The force sent—three troops of cavalry and two companies of infantry—under command of Capt. A. G. Hennisee, Eighth Cavalry, has since continued on the duty stated.

A part of the Indians in that vicinity, some located within and some without the limits of the present Cheyenne River Reservation, were not well disposed towards the policy ceding any part of the reservation, or

to taking lands in severalty, and when the cession of part of the reservation became a fact were distempered generally, and although not disposed to hostilities would have been aggressive against settlers on the ceded tract in their vicinity except for fear of action by the troops.

There is, however, no reason in general to apprehend molestation of settlers upon the ceded lands, even by the most disaffected Indians, if the latter are kept under military observation for a time at a few points where friction will most likely result from settlements.

Pursuant to the intent of instructions of April 18, through the Adjutant-General of the Army, a force of two troops of cavalry from Fort Meade, Capt. A. B. Wells, Eighth Cavalry, commanding, has been kept since April 23d last, having its principal station at Oelrichs, S. Dak., in observation of the Northern Cheyenne Indians belonging to the Pine Ridge Reservation, South Dak., to prevent them from joining the Cheyennes on the Tongue River Reservation, Mont., which the Indian agent reported they would do unless restrained by military force. The duty required has been effectually performed by the command of Captain Wells.

Upon application to the commanding officer Fort Custer by the Indian Agent of the Tongue River Agency for the Northern Cheyennes in Montana, for protection to the agency and public property, the commanding officer was on April 13 last directed to send a force of three troops of cavalry under command of Major Henry Carroll, First Cavalry, to give protection necessary. Instructions to like effect, consequent upon request from the Interior Department, were received by dispatch of April 14th, from the Adjutant-General of the Army. These Indians had been, for some time, in a state of disquiet, owing to causes stated in communications heretofore forwarded. Shortly after the arrival of the troops at the agency it became known to settlers located in the vicinity of the reservation, that a white man, Mr. Ferguson, employé at a stock ranch in the vicinity, had been killed, and supposed by Indians belonging to this reservation.

News of the murder, added to other reports causing uneasiness, produced alarm among the settlers in the region about, many of whom expected an outbreak by the Indians, and the Indians also, had become alarmed, and feared an attack from the whites, if not the soldiers.

As a further precautionary measure, and to quiet apprehension, a force of one troop of cavalry and three companies of infantry was sent from Fort Keogh, on June 11, 1890, under the command of Capt. M. Hooton, Twenty-second Infantry, to a point north of the reservation, with orders to protect settlers and prevent depredations.

Four Cheyenne Indians, charged with the murder of Mr. Ferguson, were arrested by the assistance of the troops and delivered to the civil authorities.

By judicious action of the commander and other officers concerned, and in particular Major Carroll, who was on the ground at the time of the greatest urgency, no serious harm befell the settlers, the Indians soon settling to a condition of comparative confidence.

The commands from Forts Custer and Keogh have not yet been withdrawn.

Reports concerning the condition of these Cheyennes, the causes of their unsettled condition and the state of their relations to settlers in the vicinity of their reservation, having been heretofore forwarded, further reference herein to details is omitted.

Upon representations made from time to time by settlers in the region north of the Flathead Lake, in Montana, that a military force

was needed there to protect settlers from depredations and threatened violence, particularly by vagabond Indians, members of tribes belonging north and south of the international boundary line, a force of one company (H) of the Twenty-fifth Infantry, Capt. D. B. Wilson, commanding, was sent on April 7 from Fort Missoula, with orders to protect settlers, and with direction for the commanding officer to obtain information and report upon the state of affairs, and especially the attitude of the Indians in the region about north and south of the boundary towards the settlers.

It appears, as a result of inquiry and observation, that there is little probability of serious trouble from such Indians, and that enforcement, by the civil officers, of the State statute prohibiting the sale of intoxicating liquors to Indians and half-breeds is the principal necessity of the case.

Other operations had, of a minor nature, are indicated sufficiently in the record of events which follows. From such record, taken in connection with what has appeared above, it will appear that, although no active campaign was called for during the past year, considerable field duties of a quite important nature have been well done by troops in the department.

July 9, 1889.—Companies A and I, Twenty-fifth Infantry, and on July 12 Company G, Twenty-fifth Infantry, returned to Fort Missoula, from the Flathead Indian Reservation, Montana, their presence at that place being no longer required. These companies were sent to that reserve June 25 last, at the request of the Indian agent, to aid in preventing an outbreak of the Indians, which was reported probable, as a consequence of one of their number having been killed in a conflict with the sheriff's posse of Missoula County while attempting the arrest of two Indians—alleged murderers.

August 27, 1889.—Camps of instruction in field operations, to continue twenty days, were established, one at a point on the Little Missouri River, Montana, about 10 miles below Stoneville, commanded by Col. Elmer Otis, Eighth Cavalry, and one near the Little Rocky Mountains, Montana, on Lodge Pole Creek, a tributary of People's Creek, commanded by Col. Elwell S. Otis, Twentieth Infantry. The troops assembled, at the first named, Camp Alex. Chambers, were from Forts Custer, Keogh, and Meade, as follows: From Fort Custer, Troops D, E, G, and M, First Cavalry, detachment of the hospital corps and a detachment of Indian scouts, all under command of Lieutenant Colonel Arnold. From Fort Keogh, one field officer and Troops H and L, Eighth Cavalry, and the colonel, headquarters, and Companies A, B, C, D, F, and H, Twenty-second Infantry, and detachment of the hospital corps. From Fort Meade, headquarters band and Troops A, B, C, D, and I, Eighth Cavalry, Companies B and F, Third Infantry, and detachment of the hospital corps. The dates of departure of the commands from respective posts and arrival at place designated for the camp, with distances marched, are: Left Fort Custer August 15; arrived at rendezvous August 26; distance 246½ miles. Left Fort Keogh August 19, arrived at rendezvous August 26; distance 149½ miles. Left Fort Meade August 22; arrived at rendezvous August 26; distance 77 miles. The strength of the command in camp August 31, was: 2 medical, 25 cavalry, and 15 infantry officers; total, 42, and enlisted, 12 hospital corps, 518 cavalry, 261 infantry, and four scouts, total 795; aggregate 837. The troops assembled at the camp on Lodge Pole Creek were from Forts Assiniboine and Buford as follows: From Fort

Assinniboine, headquarters, band, and Companies C, D, E, F, H, and K, Twentieth Infantry, one field officer and Troops C and H, First Cavalry, and detachment hospital corps. From Fort Buford, the colonel, headquarters, and Companies E, F, and G, Fifteenth Infantry, Troops E and K, Eighth Cavalry, one chaplain and detachment of the hospital corps. The dates of departure of the commands from respective posts and arrival at place designated for the camp, with distances marched are: Fort Assinniboine, the infantry left August 22, cavalry August 23, columns united 24th, thence proceeded together to camp, arriving August 26, distance 82 miles. From Fort Buford, the cavalry left August 12, arriving in camp August 22; the infantry left August 24, by rail to Dodson, 219 miles, thence marched 38 miles, arriving at camp August 27. The strength of the command in camp August 31, was: 2 medical officers, 1 chaplain, 8 cavalry, and 24 infantry officers, total 35; enlisted, 8 hospital corps, 165 cavalry, and 290 infantry; total 463; aggregate 498.

August 27, 1889.—Companies C, E, and F, Twenty-fifth Infantry, Lieutenant Colonel Van Horn, commanding, left Fort Shaw, Mont., for instruction in field operations, to be absent about thirty days.

September 1, 1889.—Instructions in field operations for other posts were had as follows: Fort Missoula, Companies H, I, and K, Twenty-fifth Infantry, from September 2 to 21, distance marched 68 miles. Fort Snelling, headquarters, band, and Companies A, D, E, G, H, and K, Third Infantry, from September 9 to 26, distance marched 104 miles. Fort Pembina, Companies B, and I, Fifteenth Infantry, from September 2 to 21, distance marched $76\frac{1}{2}$ miles. Fort Totten, Companies E and G, Twenty-second Infantry, from September 2 to 19, distance marched 40 miles. Fort Randall, Companies A, C, and D, Fifteenth Infantry, from September 9 to 19 for A, 22d for C, and 23d for D; distance marched 41 miles. Fort Sully, Companies A, B, and C, Twelfth Infantry, from September 21 to October 7; distance marched 54 miles. Fort Abraham Lincoln, Companies F, Twelfth, and I, Twenty-second Infantry, in conjunction with a force from Fort Yates, from September 2 to 20, distance marched 60 miles. Fort Yates, Companies E, G, and I, Twelfth Infantry, and F, Eighth Cavalry, from September 2 to 20, distance marched 52 miles. Fort Bennett, Company K, Twelfth Infantry, from September 25 to 30, in the vicinity of the post. Fort Maginnis, troop L, First Cavalry, and Company A, Twentieth Infantry, from August 19 to September 5. Camp Poplar River; Companies G, and I, Twentieth Infantry, from September 2 to 18, distance marched 134 miles.

September 14, 1889.—The camps of instruction on the Little Missouri River and on Lodge Pole Creek terminated September 14, 1888. The dates of departure of the commands from camps and arrival at their respective posts are: Fort Meade, command left camp on Little Missouri September 15, arriving at post, the cavalry September 17 and the infantry on the 19th; distance marched 77 miles. Fort Custer, command left September 15, arriving at post September 21; distance marched about 250 miles. Fort Keogh, command left September 14, arriving at post, the cavalry September 20 and the infantry on the 22d; distance marched 154 miles. Fort Assinniboine, command left camp on Lodge Pole Creek September 15, arriving at post September 18; distance marched 82 miles. Fort Buford, command left, the infantry, September 16, arriving at post September 18; distance traveled 259 miles, of which 219 was by rail; the cavalry left September 19, arriving at post September 29; distance marched 255 miles. The command that left Fort Shaw August 27 last

to establish a camp of instruction in field operations on or near the Maria's River, returned September 23; distance marched about 257 miles.

October 4, 1889.—Troop A, First Cavalry, left Camp Sheridan, Wyo., to return to its station, Fort Maginnis, Mont.; arrived October 14; distance marched 278 miles. It had been absent since May 20, 1889.

October 7, 1889.—Companies A, B, and C, Twelfth Infantry, returned to Fort Sully from camp of instruction in field operations. Distance marched 54 miles.

October 16, 1889.—Company F, Twentieth Infantry (Rodman's), left Fort Assiniboine, by rail, for Camp Poplar River; arrived October 17 and took station.

October 17, 1889.—Company G, Twentieth Infantry (Maize's), left Camp Poplar River, by rail, for Fort Assiniboine; arrived October 18 and took station.

November 28, 1889.—The ordnance depot of the department was transferred from Fort Abraham Lincoln to Fort Snelling (arriving 29th) preparatory to its establishment there December 1, 1889, under General Orders No. 17, current series, Department of Dakota.

December 6, 1889.—A detachment of twelve enlisted men of companies E and G, Twenty-second Infantry, Lieutenant Patten, Twenty-second Infantry, commanding, left Fort Totten for Turtle Mountain Indian Agency, N. Dak., to assist the agents of the Interior Department in maintaining order, and also to protect Government stores from seizure by certain Indians and half-breeds reported to have recently made threats of violence. The detachment arrived on December 7, and the conduct of the Indians was thereafter orderly.

January 1, 1890.—Company A, Twelfth Infantry, under Second Lieutenant Poore, Twelfth Infantry, left Fort Sully for old Fort Pierre, S. Dak., with instructions to prevent intrusions on the Sioux Reservation in advance of a proclamation by the President declaring a part thereof open to settlement. Arrived same day, distance traveled about 27 miles. Captain A. G. Tassin, Twelfth Infantry, joined the company January 13th. The company is still at old Fort Pierre. By firm and discreet action on the part of Captain Tassin and the good conduct of his command, attempted intrusion on the ceded part of the Sioux Reservation was prevented without any unfortunate conflict until the proclamation of the President announcing the fact of cession.

February 12, 1890.—To carry out instructions, based upon request by the Interior Department, Company A, Fifteenth Infantry, Captain Brinkerhoff, commanding, left Fort Randall, S. Dak., to protect Government property at the Lower Brulé Agency, and to prevent intrusion on the ceded portion of the Sioux Reservation before it should be open to settlement, and intrusion upon that part of the reservation not ceded.

April 6, 1890.—Troops C, I, and M, Eighth Cavalry, and companies F and I, Third Infantry, Captain Hennisee, Eighth Cavalry, commanding, left Fort Meade, S. Dak., to establish a camp of observation on Cheyenne River, near the southwest corner of the Cheyenne River Indian Reservation, to protect incoming settlers on land in the vicinity, on the recently ceded tract from depredation by certain Indians reported by the agents as unfriendly and not controllable by him. Distance marched, 76½ miles.

April 7, 1890.—Company H, Twenty-fifth Infantry, Captain Wilson, commanding, left Fort Missoula, Mont., and reached Demersville, Mont., north of the Flathead Lake, April 17, 1890, to protect settlers in Flathead country from depredations by Indians, supposed to be renegades

from the Kootenai or Flathead Indians, also from allied tribes of Canadian Indians. Distance traveled, 126 miles.

April 10, 1890.—Company C, Twelfth Infantry, Captain Viven, commanding, left Fort Sully, S. Dak., en route to Lower Brulé Agency for the purpose of protecting Government property on the Lower Brulé Reservation, and to prevent intrusion upon the reservation.

April 13, 1890.—Troops B, D, and M, First Cavalry, Maj. H. Carroll, commanding, left Fort Custer on application of the Indian agent, Tongue River Indian Agency, for the purpose of protecting the Indian agent and public property. Arrived April 20, 1890. Distance marched, 62 miles.

April 23, 1890.—Troops A and B, Eighth Cavalry, Captain Wells, commanding, left Fort Meade, S. Dak., to prevent Indians, particularly Northern Cheyennes, belonging to the Pine Ridge Reservation, from leaving that reservation to join the Cheyennes on the Tongue River Reservation in Montana, and established camp near Oelrichs, S. Dak., on April 27, 1890. Distance marched, 102 miles.

April 30, 1890.—Companies A and B, Fifteenth Infantry, Captain Brinkerhoff, commanding, left Fort Randall, S. Dak., en route to take station in the Division of the Atlantic; the former at Mount Vernon Barracks, Ala., and the latter at Fort Barrancas, Fla., pursuant to General Orders, No. 22, current series, Headquarters of the Army, and paragraph 4, Special Orders, No. 38, current series, Headquarters Department of Dakota.

May 1, 1890.—Companies G and K, Fifteenth Infantry, Captain Hartz, Fifteenth Infantry, left Fort Buford, N. Dak., en route to take station in the Division of the Atlantic; the former at Mount Vernon Barracks, Ala., and the latter at Jackson Barracks, La., pursuant to General Orders, 22, current series, Headquarters of the Army, and paragraph 4, Special Orders No. 38, current series, Department of Dakota.

May 2, 1890.—Lieutenant Patten and detachment of Twenty-second Infantry, rejoined post, Fort Totten, N. Dak., from Turtle Mountain Indian Agency, at which place the detachment had been since December 6th, 1889, for the purpose of preserving order and protecting public property. Distance traveled, 168 miles.

May 10, 1890.—Company B, Twelfth Infantry, Captain Tassin, Twelfth Infantry, commanding, left Fort Sully, S. Dak., for duty at old Fort Pierre, S. Dak., relieving Company A of that regiment. Arrived May 11th, 1890. Distance marched, 27 miles.

May 11, 1890.—Company A, Twelfth Infantry, Lieutenant Poore, commanding, having been relieved from duty at Old Fort Pierre, rejoined station, Fort Sully, S. Dak., May 12, 1890. Distance marched, 27 miles.

May 22, 1890.—Company A, Twentieth Infantry, Lieutenant Cronin, commanding, left Fort Maginnis, and arrived at Fort Assiniboine, Mont., May 23, 1890, for station at that post. Distance marched, 118 miles.

May 27, 1890.—Company C, Twentieth Infantry, Captain Harwood, commanding, left Fort Assiniboine, Mont., and proceeded to Fort Buford, N. Dak., to take station, where it arrived May 28, 1890. Distance traveled, 296 miles.

May 31, 1890.—Troop A, First Cavalry, Captain Bomus, commanding, left Fort Maginnis, en route to Yellowstone Park for temporary duty thereat. Arrived June 11, 1890. Distance marched, 238 miles.

June 6, 1890.—Lieutenant Miller, First Cavalry, with detachment of troop B, same regiment, left camp near Tongue River Agency and con-

ducted Indian prisoner, "White Buffalo," to Fort Custer, Mont. Distance marched, 100 miles.

June 10, 1890.—Troop G, First Cavalry, Lieutenant Mills, commanding, left Fort Custer, for Tongue River Agency, to report for duty with the command there of Major Carroll, First Cavalry. Returned to station, Fort Custer, Mont., June 17, 1890. Distance marched 108 miles.

June 11, 1890.—Troop L, Eighth Cavalry, and companies F and K, Twenty-second Infantry, Capt. M. Hooton, Twenty-second Infantry, commanding, left Fort Keogh for field service on reports of probable trouble feared by settlers with the Cheyenne Indians, and to protect settlers and their property in the vicinity of the Tongue River Indian Reservation from depredations by Cheyenne Indians. Camp was established on Rosebud River on June 12, and on July 11 was moved to the Tongue River, about 62 miles from Miles City, 8 miles from Rosebud River, about 14 miles from the Indian Mission.

June 12, 1890.—Troop K, Eighth Cavalry, Captain Sprole, commanding, left Fort Buford, N. Dak., for Fort Keogh, Mont., for field duty, and arrived at the latter post June 19. Distance marched, 156 miles.

June 13, 1890.—Troop A, First Cavalry, Captain Bomus, commanding, left Camp Sheridan, Wyo., for Lower Geyser Basin, and arrived June 15. Distance marched, 40 miles.

June 26, 1890.—Company G, Twenty-fifth Infantry, Captain Sanborn, commanding, left Fort Missoula for Demersville, Mont., to relieve Company H, Twenty-fifth Infantry, on duty at that place. Arrived June 30. Distance traveled, 126 miles.

June 27, 1890.—Lieutenant Rivers, First Cavalry, with detachment of Troop M, same regiment, left camp near Tongue River Indian Agency and conducted Indian prisoner "Seminole" to Fort Custer, Mont. Returned to camp July 2, 1890. Distance marched, 100 miles.

June 29, 1890.—Troop H, Eighth Cavalry, Lieutenant Gaston, commanding, left Fort Keogh for field service on Rosebud Creek, Mont. Arrived June 30, 1890. Distance marched, 37½ miles.

July 1, 1890.—Company H, Twenty-fifth Infantry, Captain Wilson, commanding, left Demersville, on being relieved by Company G, same regiment, and returned to Fort Missoula, Mont., July 4, 1890. Distance traveled, 126 miles.

July 5, 1890.—Headquarters and companies A, D, E, G, H and K, Third Infantry, Col. E. O. Mason, commanding, left Fort Snelling and proceeded to Camp Douglas, Wis., for encampment with the national guard of that state, pursuant to Special Orders, No. 72, current series, Department of Dakota. Returned to Fort Snelling, July 28th. Distance traveled, 382 miles.

July 7, 1890.—Company E, Twenty-second Infantry, Captain Cusick, commanding, left Fort Totten for Fort Buford, N. Dak., for station. Arrived same day. Distance traveled, 274 miles.

July 10, 1890.—The force, Troop L, First Cavalry, constituting the garrison of Fort Maginnis, Mont., Captain John Q. Adams, commanding, was withdrawn therefrom, preparatory to the discontinuance of that post, and marched to Fort Custer, Mont., taking station thereat. Distance marched, 150 miles.

July 10, 1890.—Troop E, First Cavalry, Captain Wesendorff, commanding, left Fort Custer for the camp near Tongue River Agency, Mont., to join the command of Maj. Carroll, First Cavalry, arriving July 12. Distance marched 65 miles.

July 28, 1890.—Companies D and F, Twenty-second Infantry, Cap-

tain Conway, commanding, left camp on Tongue River and returned to Fort Keogh, arriving July 31, 1890. Distance marched 65 miles.

The accompanying roster of troops will indicate the regiments in the department, with the stations occupied, and their garrisons.

The strength of the several garrisons, taken from the last completed July returns, is as follows:

Posts.	Officers.	Enlisted men.	Indian scouts.	Total.
Fort Abraham Lincoln, N. Dak	8	94		102
Fort Assiniboine, Mont.....	38	425	2	465
Fort Bennett, S. Dak	3	42	2	47
Fort Buford, N. Dak	23	304	1	328
Fort Custer, Mont.....	34	473	6	513
Fort Keogh, Mont.....	34	402	47	483
Fort Maginnis, Mont.....		2		2
Fort Meade, S. Dak.....	37	486		523
Fort Missoula, Mont.....	17	190		207
Fort Pembina, N. Dak.....	6	80		86
Fort Randall, S. Dak.....	8	80		88
Fort Shaw, Mont.....	15	166		181
Fort Snelling, Minn.....	27	275		302
Fort Sully, S. Dak.....	14	159		173
Fort Totten, N. Dak.....	5	45		50
Fort Yates, N. Dak.....	22	280	2	304
Camp Poplar River, Mont.....	7	88	2	97
Camp Sheridan, Wyo.....	3	66		69
Fort Snelling ordnance depot, Minn.....	1	6		7
Total	302	3,063	62	4027

There has been at some posts in the Department a decided decrease in the percentage of desertions, but the decrease is slight for the Department as a whole, owing to the comparatively large number at a few posts. It is fair to expect improvement in future, owing in part to opportunities which recent legislation and action thereunder will afford men who may be disposed to leave the service to do so in an honorable manner.

The post-canteen system has been in operation sufficiently long at enough posts to afford a basis for conclusion as to its merits; and beyond question the results have been beneficial.

Instruction at the different posts and the discipline of the commands are in a generally satisfactory state.

Special instructions in field operations have been had for the troops of several posts, and will be had before the close of the year for all garrisons in the Department.

For particulars relative to administration in the different departments attention is requested to the reports and recommendations by the officers of the general staff on duty at these headquarters. The report of the acting inspector-general and a further full report by the inspector of small-arms practice, not yet made, will be forwarded when furnished.*

Very respectfully, your obedient servant,

THOS. H. RUGER,
Brigadier-General Commanding.

ASSISTANT ADJUTANT-GENERAL,
Division of the Missouri.

* Omitted.

REPORT OF BRIGADIER-GENERAL MERRITT.

HEADQUARTERS DEPARTMENT OF THE MISSOURI,
St. Louis, Mo., September 11, 1890.

SIR: I have the honor to submit the annual report of this department for the year ending August 31, 1890.

The following comprise the changes in the department and transfers of troops for the period 1889-'90.

Troop M, Sixth Cavalry (Carter's), and Company H, Sixth Infantry (Schindel's), were relieved from duty at Fort Leavenworth, Kans., and proceeded on September 26 and 30, respectively, to Forts Lewis, Colo., and Gibson, Ind. T., for stations.

Company F, Tenth Infantry (Stretch's), arrived from the Department of Arizona on September 30 and took station at Fort Leavenworth, Kans.

Troop F, Sixth Cavalry (Perrine's), having been relieved from duty at Fort Lewis, Colo., left for the Department of Arizona on September 26.

The Eighteenth Regiment of Infantry having been relieved from duty in the department left during the months of October and November for the Department of Texas.

Troop F, Second Cavalry (Swigert's), arrived from the Department of the Columbia and took station at Fort Leavenworth, Kansas, on October 29.

Companies C (Powell's) and D (Thibaut's), Sixth Infantry, were relieved from duty at Fort Lewis, Colo., and assigned for station to Fort Riley, Kans., where they arrived on October 26.

Companies B (Cavanaugh's) and G (Chance's), Thirteenth Infantry, were relieved from duty at Forts Supply, Ind. T., and Elliott, Tex., and assigned to station at camp at Guthrie and Camp Wade, Kingfisher, Ind. T., respectively, where they had been on detached service since March, 1889.

The headquarters band and Companies B (Kirtland's) and G (Quinton's), Seventh Infantry, arrived from the Department of the Platte and took station at Fort Logan, Colo., on October 18.

Upon the abandonment of Fort Lyon, Colo., Company F, Thirteenth Infantry (Waterbury's), was assigned to station at Fort Riley, Kans., arriving at that post October 11, and Companies G (Stiles's) and K (Burbank), Tenth Infantry, to camp at Oklahoma City, Ind. T., where they had been on detached service since April, 1889.

Companies C (Van Orsdale's) and E (Burnett's), Seventh Infantry, arrived at Fort Logan, Colo., from the Department of the Platte on March 4.

Company C (Rogers's) and G (Chance's), Thirteenth Infantry, exchanged stations, the former arriving at Camp Wade, Ind. T., on April 26 and the latter at Fort Reno, Ind. T., April 29.

Pursuant to instructions from the War Department of March 15, the headquarters of the department were removed from Fort Leavenworth, Kans., to St. Louis, Mo., on May 4.

Under authority from the War Department of April 16, the company of Indian scouts (A) at Fort Reno, Ind. T., was increased to one hundred men by consolidation with Company C from Fort Elliott, Tex., and enlistments, and placed in command of First Lieut. H. W. Wheeler,

Fifth Cavalry, with Second Lieut. W. H. Wilhelm, Tenth Infantry, as assistant.

Troop E, Sixth Cavalry (Kramer's), exchanged station, with troop I (Hanna's), same regiment, the former departing for the Department of Arizona on May 24, the latter arriving at Fort Lewis, Colo., on June 1.

Pursuant to authority from the Secretary of War, dated April 11, Light Battery F, Second Artillery (Woodruff's) and Companies F, Tenth Infantry (Stretch's), and K, Thirteenth Infantry (Fornance's), left Fort Leavenworth, Kans., July 17 and 16, respectively, for Excelsior Springs, Mo., to encamp with the Third regiment National Guard of Missouri, returning to post July 30 and 31.

Troops G (Hayes's) and K, (Woodson's), Fifth Cavalry, were ordered on December 26 from Fort Reno to Oklahoma City, Ind. T., to prevent violence which was temporarily threatened. They returned to Fort Reno on January 3.

Since the month of March detachments from Forts Elliott, Tex., Reno, Sill, and Supply, Ind. T., were employed to enforce the President's proclamations in regard to introduction and grazing of cattle in the Cherokee strip and the settlement of that territory.

The posts of Forts Hays, Kans., and Lyon, Colo., having been ordered abandoned by the War Department, the reservations, buildings, etc., were, after the troops had been withdrawn, turned over to the Interior Department, November 27 and December 7, respectively.

The Sixth Regiment of Infantry, having been assigned for stations in the Division of the Atlantic, has been relieved from duty in the department and directed to proceed to the various stations designated.

The following posts have been ordered abandoned:

Fort Crawford, Colo., on September 15. Fort Elliott, Tex., not later than October 1. Fort Gibson, Ind. T., on withdrawal of garrison. Little Rock Barracks, Ark., not later than October 1.

On August 9 telegraphic instructions were received from the Adjutant-General's Office, directing concentration of sufficient troops at Fort Gibson, Ind. Ter., to move promptly on August 13 to the Union Agency at Muscogee, Ind. Ter., to suppress riot at the election precincts in the Indian Territory reported by the Indian agent as liable to occur. Accordingly, Companies D (Ellis's) and E. (Bishop's), Thirteenth Infantry, were ordered by telegraph to proceed at once by rail to Fort Gibson, Ind. Ter., where they arrived at 10 p. m., August 10. The commanding officers at Forts Leavenworth and Riley, Kans., were also directed to have two troops of cavalry and two companies of infantry each in readiness to proceed to Fort Gibson at a moment's notice; the commanding officer, Fort Gibson (Capt. J. P. Schindel, Sixth Infantry), was directed to investigate matters and report particulars of threatened outbreak. Captain J. B. Babcock, Fifth Cavalry, was also detailed to proceed from Fort Leavenworth, and being on the ground to manage as to the use of troops to keep within the instructions from the War Department. He rendered valuable services in this matter, keeping the department commander informed on all points of interest. The election in the Indian Territory took place without disturbances, and the troops from Little Rock Barracks were returned to their station.

Instructions having been received from the Adjutant-General's Office to employ troops for the ejection of the Murphy and Dougherty families from the Sac and Fox and Iowa Reservations, Company F, Tenth Infantry (Stretch's) was ordered to proceed from Fort Leavenworth, Kans., to those points, to carry out the instructions of the Secretary of

War. Upon arrival at Hoyt, Kans., on August 4, Captain Stretch reported that the Indian agent had received instructions from the Interior Department not to remove the Murphy family until further instructions were received by him. Thereupon Captain Stretch was directed to send a non-commissioned officer and sufficient men to eject the Dougherty's, and return with the remainder of the company to Fort Leavenworth, where he arrived on the 18th of August.

The commanding officer, Fort Sill, Ind. Ter., reported July 19 that the Indian agent had notified him of the intention of the Indians to hold a medicine dance, and had asked for troops to prevent them from doing this. He was directed to be guided by instructions of last year on the subject, and consequently Troops D (Thomas's) and L (Forbush's), Fifth Cavalry, and Troop H, Seventh Cavalry (De Rudio's), proceeded to Anadarko, Ind. Ter., on July 20, under command of Major T. A. Baldwin, Seventh Cavalry; but the Indians having abandoned the plan of holding their dance upon the arrival of the troops, the latter, after remaining at the point for a few days, were withdrawn.

In a special report, made August 15, I have given in detail the measures taken for enforcing the requirements of the President's proclamation in the Cherokee Strip. Lieutenant Macomb, Fifth Cavalry, now in command of the detachment enforcing the police of the Strip, reports that the cattle-men show no disposition to violate the conditions governing their stay in that territory.

The camp of instruction, organized last year in September, was successful in a most satisfactory degree in imparting instruction in field service under condition of a state of war. A special report was made after the instruction was finished, which report was published under the direction of the War Department. This year, owing to a lack of funds for transportation, there is to be no general camp of instruction in this department, but orders for practice marches from posts, under control of local commanders, have been issued.

Affairs in Oklahoma since my last year's report have been exceedingly quiet. Civil government has been established in that Territory, and the military commands, while still there, are in the main relieved from their unusual responsibilities. Owing to the severe drought this season the corn crop has in many sections been an almost total failure, and the farming industry not having been sufficiently organized to insure the planting of staples which are most productive in that country—as wheat and cotton—there is considerable destitution among the people in the country districts. Recent investigation shows that assistance from outside the Territory will have to be extended to about one-third, if not more, of the population. I am gratified to know that the Government is taking measures to assist these worthy and enterprising people, who, be it said to their credit, disguise their necessities, and ask that at most they be given work, so they may earn for their families what will be necessary for their support during the coming winter. It will be necessary to supply these farmers grain for seeding their farms for the coming season, and in not a few instances clothing and food must be furnished to prevent suffering and perhaps starvation this winter. It is believed that hereafter, with a better knowledge of the character of the climate and the qualities of the soil, the people of Oklahoma will be fairly prosperous, and will be able to live without extraneous aid.

In view of the abandonment of the posts of Forts Elliott and Gibson and Little Rock Barracks, it is, in my opinion, important that a

post for at least ten companies should be established somewhere near this city—St. Louis. The reservation at Jefferson Barracks naturally suggests itself as the proper location of such a post. This being a railroad center, it is possible to send troops to any needed direction. The recent anticipated troubles in the Chickasaw country illustrated the necessity of having troops for use in the Indian Territory at some such point as this. In that affair it was necessary to move the entire garrison from Little Rock Barracks to Fort Gibson, leaving only a small guard at Little Rock. In the event of an outbreak in the Indian Territory, I would have been compelled to move troops from Forts Leavenworth and Riley. A garrison here would obviate such necessity, and apart from local necessities which might arise for the use of troops, would be both economical and convenient. An east and west road now contemplated, and in part being built by the Choctaw Coal and Railroad Company from McAllister through Oklahoma and the Indian Territory, with eastern connections at Fort Smith, Ark., will greatly simplify the question of rapid transit from this point through to New Mexico. This line intersects the Missouri, Kansas and Texas Railroad and two branches of the Santa Fé, and a branch of the Chicago, Rock Island and Pacific Railroad. This last road in the past year has been extended from the neighborhood of Kingfisher, in Oklahoma Territory, to Minco, south of the Canadian River, in the Indian Territory; and all these roads combined give access direct from this city to any point in the Indian Territory or other sections south or west. If Fort Sill is to be abandoned in the near future a post in this vicinity will become of great importance, and I urge that an appropriation for its erection on the reservation at Jefferson Barracks be asked for this year.

In addition to the erection of a post on the Jefferson Barracks reservation, I recommend that additional accommodations at Fort Reno be provided for two troops of cavalry. Estimates for these have been forwarded, and I hope will receive the approval of proper authority with an allotment of funds at once.

The garrison at Fort Sill should be reduced as soon as practicable, but this is impossible now with the limited barracks and quarters in the department. Attention is also invited to the necessity of completing Fort Logan, as originally designed, for the accommodation of four troops of cavalry in addition to its present garrison. Until this is done it will not be wise to abandon Fort Lewis, though there are abundant reasons in the matter of climate and altitude which make it desirable to remove troops as soon as possible from that station.

Fort Lewis has served its purpose, if indeed it should ever have been built, and the troops stationed there and the country it controls should be provided for at Fort Logan.

I invite attention to the reports of the chiefs of the several staff departments inclosed herewith.

The medical director reports: "The sanitary condition of all the posts in the department, without exception, is most excellent, and the general health of commands very good."

I call special attention to the recommendation made by the inspector of small-arms practice as to the establishment of a department target range on the reservation at Jefferson Barracks, and that the range at Fort Leavenworth be turned over to the post. I do not doubt that an excellent range can be found on the reservation here, and it would be free from the objection that any troops which might enter the competitions practiced on it during the year, and in this way had an advantage.

The report of the chief ordnance officer of the department contains

among other matter a summary of the result of trials of numerous devices for military purposes submitted for the test of service during the year.

The universal condemnation of the present cavalry bridle-bit by cavalry officers deserves the attention of the Ordnance Department.

The report of the acting judge-advocate of the department indicates a decrease of desertion, and everything leads to the hope that the means taken to combat this evil by Congress and the War Department will another year mitigate, if they do not wholly remove, a crime which has been so serious a matter to the Army and to the country.

Owing to the absence of the inspector-general of the department on the annual tour of inspection the usual report in that department will be forwarded later. In the mean time I am informed by the inspector that his inspections this year have been of the most satisfactory character. The greatest improvement is manifest in all the organizations, and there has been, thus far, very little to criticise."

Very respectfully, your obedient servant,

W. MERRITT,
Brigadier-General, Commanding.

The ASSISTANT ADJUTANT-GENERAL,
Division of the Missouri, Chicago, Ill.

REPORT OF BRIGADIER-GENERAL BROOKE.

HEADQUARTERS DEPARTMENT OF THE PLATTE,
Omaha, Nebr., September 15, 1890.

SIR: I have the honor to submit my annual report this year, as follows:

During the entire year there has been no trouble with the Indians in this department.

The post of Fort Laramie has been abandoned and the garrison, composed of the headquarters band and three companies. Seventh Infantry, transferred to Fort Logan, Colo., as was also Company G, Seventh Infantry, from Fort Washakie, Wyo.

The post of Fort Laramie was dismantled and turned over to the Interior Department.

Other changes of troops in the department have occurred under the provisions of General Orders Nos. 76 and 79, current series headquarters of the Army, and in consequence of the abandonment of Fort Bridger, Wyo.

The enlisted men of Companies I and K of the Second, Eighth, Sixteenth, Seventeenth and Twenty-first Infantry, and Company I of the Seventh Infantry, have been transferred to other companies of their respective regiments. Also the enlisted men of Troop M, Ninth Cavalry. These transfers left the posts of Forts McKinney and Washakie without infantry, and two companies of the Eighth Infantry from Fort Niobrara have been ordered to take station, one at each of these posts.

Troop B, Ninth Cavalry, from Fort Robinson, Nebr., and Troop H, from Fort McKinney, Wyo., are under orders to proceed to Fort Du Chesne, at which post the enlisted men of Troop M, Ninth Cavalry, will be transferred to them.

The garrison of Fort Bridger has been distributed as follows: Major Andrews and three companies, Twenty-first Infantry, to Fort Douglas,

Utah, and two companies Seventeenth Infantry to Fort D. A. Russell, Wyo.

Troop C, Ninth Cavalry, from Fort Du Chesne, and Company H, Seventh Infantry, Camp Pilot Butte, have been ordered to Fort Leavenworth in compliance with the orders from the Headquarters of the Army.

The Quartermaster and Ordnance Depots at Cheyenne, Wyo., have been finally transferred to Omaha.

The camp of instruction at Fort Robinson in August and September, 1889, was the subject of a special report at its close.

Practice marches this year, in lieu of the general camp of instruction, have been ordered at each post, except Forts Du Chesne, Sidney, and Omaha, and Camp Pilot Butte.

The headquarters and eight companies Second Infantry from Fort Omaha were sent to the camps of the National Guard of Iowa, one battalion to Cedar Rapids and the other to Spirit Lake, the two battalions concentrating at Des Moines, where a brigade of the Iowa National Guard was assembled.

From reports received the practice marches were beneficial, and the mingling of the National Guard and Regular Army accomplished good results.

Since the date of my last annual report the matter of the building of new Fort Omaha has been commenced. An accurate survey has been made, and plans and estimates are now being prepared.

It is to be regretted that appropriations have not been made for continuing the construction of Forts Robinson and Niobrara, Nebr.

The improvement of the water and the construction of the sewerage system at Fort D. A. Russell, for which an appropriation and an allotment were made last year, have been successfully accomplished.

The improvement of the water and sewerage systems at Fort Douglas, Utah, for which plans and estimates have been forwarded, is a matter of the greatest importance to the health of the garrison of that post.

Instruction in signaling at the several posts in the Department has, during the past year, been carefully attended to.

The report of the Acting Judge-Advocate of the Department shows that there has been a falling-off in trials by courts-martial, both general and garrison, but it is impossible to determine at this early date whether or not this is owing to recent activity of the authorities in behalf of the enlisted men, or is the normal fluctuations incident to the service. I earnestly indorse his recommendation for the purchase of the necessary books for use in his office.

The report* of the inspector of small-arms practice gives details of the rifle firing during the season, as well as the details of the annual competitions, both the Department rifle competition and the cavalry competition for the Departments of Dakota and the Platte. The recommendations contained in this report are valuable and based upon a long experience, and are entitled to great consideration.

The annual Department rifle competition of the Department, and the cavalry competition for the Departments of Dakota and the Platte, were held simultaneously this year at the Bellevue rifle range, Nebraska.

These competitions brought together the usual details for camp and range duty and ninety-nine competitors, making a total of twenty-seven officers and one hundred and ninety-three enlisted men.

*Omitted.

The double competition overtaxed the capacity of the range and made the work unusually hard on all those who were connected with it.

I recommend that hereafter but one competition be held at a time, and that the first held be that of the Department followed by the cavalry, the division and the Army competitions, in the above order, should any of them be held at the Bellevue rifle range.

A few days should be allowed between each competition to disperse the competitors of the first in order to make room for those of the one to follow. The same camp details and range officers, officers and enlisted men, to serve through the competitions without change. This recommendation is made as a measure of economy, as in case double competitions are to be held in future, the camp details, camp equipment and mess arrangements will have to be increased to comfortably accommodate an assembly like that of this year, which numbered forty more competitors than usually collect at a Department competition.

The inspection of the posts has not yet been made, owing to the absence of the Inspector-General.

I invite attention to the accompanying reports* of the chiefs of the staff Departments, for the details of the duty performed by each during the past year. I can not too strongly express my appreciation of the able manner in which these officers have performed their duties.

Very respectfully, your obedient servant,

JOHN R. BROOKE,
Brigadier-General, Commanding.

The ASSISTANT ADJUTANT-GENERAL,
Division of the Missouri, Chicago, Ill.

REPORT OF COLONEL M'COOK.

U. S. INFANTRY AND CAVALRY SCHOOL,
Fort Leavenworth, Kans., July 1, 1890.

GENERAL: I have the honor to submit the annual report of the Infantry and Cavalry School for the first school year, commencing September 1, 1889, and ending June 30, 1890.

On September 1, 1889, the following officers reported for duty at the school, forming the class for instruction for the next two years, viz:

1st Lieut. Charles H. Barth, 12th Inf.	2d Lieut. W. A. Holbrook, 1st Cav.
2d Lieut. J. B. Batcheler, jr., 24th Inf.	2d Lieut. J. M. Jenkins, 5th Cav.
2d Lieut. James Baylies, 5th Inf.	2d Lieut. M. J. Lenihan, 20th Inf.
2d Lieut. J. C. Beardsley, 8th Inf.	2d Lieut. T. M. Moody, 22d Inf.
2d Lieut. W. F. Blanvelt, 15th Inf.	2d Lieut. W. C. Neary, 3d Inf.
1st Lieut. Thomas Cruse, 6th Cav.	1st Lieut. John Newton, 16th Inf.
2d Lieut. George B. Davis, 23d Inf.	2d Lieut. E. G. Paxton, 10th Cav.
2d Lieut. Geo. A. Detchmenny, 6th Inf.	2d Lieut. J. A. Penn, 13th Inf.
2d Lieut. Charles G. Dwyer, 21st Inf.	2d Lieut. C. W. Penrose, 11th Inf.
2d Lieut. William G. Elliot, 9th Inf.	2d Lieut. S. Rice, 7th Cav.
2d Lieut. George E. French, 4th Inf.	1st Lieut. P. P. Powell, 9th Cav.
2d Lieut. Albert S. Frost, 25th Inf.	1st Lieut. W. B. Reynolds, 14th Inf.
2d Lieut. James A. Goodin, 7th Inf.	2d Lieut. H. M. Roach, 1st Inf.
1st Lieut. E. I. Grumley, 17th Inf.	2d Lieut. S. A. Smoke, 18th Inf.
1st Lieut. A. G. Hammond, 8th Cav.	2d Lieut. E. M. Suplee, 2d Cav.
2d Lieut. T. G. Hanson, 19th Inf.	2d Lieut. W. M. Wright, 2d Inf.
2d Lieut. Floyd W. Harris, 4th Cav.	2d Lieut. W. C. Wren, 10th Inf.
2d Lieut. W. H. Hay, 3d Cav.	

*Omitted.

All of these officers passed a satisfactory examination in the drill-book of their respective arms; to include the school of the battalion.

Of these the following have been relieved from duty at the school viz :

First Lieut. P. P. Powell, Ninth Cavalry, per paragraph 7, Special Orders, No. 51, Headquarters Army, Adjutant-General's Office, March 3, 1890.

Second Lieut. H. M. Roach, First Infantry, per paragraph 19, Special Orders, No. 63, Headquarters Army, Adjutant-General's Office, March 19, 1890; on account of sickness.

Second Lieut. Sedgwick Rice, Seventh Cavalry, per paragraph 2, Special Orders, No. 133, Headquarters Army, Adjutant-General's Office, June 7, 1890; on account of sickness.

The following officers were declared deficient by the school staff in the subjects set opposite their names, viz :

Second Lieut. G. E. French, Fourth Infantry, in infantry tactics, December 7, 1889.

First Lieut. John Newton, Sixteenth Infantry, in infantry tactics, December 20, 1889.

Second Lieut. T. G. Hanson, Nineteenth Infantry, in hippology, April 10, 1890.

Second Lieut. G. A. Detchmendy, Sixth Infantry, in hippology, April 10, 1890.

Second Lieut. W. G. Elliot, Ninth Infantry, in topography, May 27, 1890.

Second Lieut. W. F. Blauvelt, Fifteenth Infantry, in topography, May 27, 1890.

Second Lieut. W. M. Wright, Second Infantry, in surveying, May 27, 1890.

Second Lieut. S. A. Smoke, Eighteenth Infantry, in topography, May 27, 1890.

First Lieut. E. I. Grumley, Seventeenth Infantry, in topography and surveying, May 27, 1890.

Second Lieut. G. E. French, Fourth Infantry, in topography and surveying, May 27, 1890.

Second Lieut. G. A. Detchmendy, Sixth Infantry, in topography and surveying, May 27, 1890.

First Lieut. John Newton, Sixteenth Infantry, in topography and surveying, May 27, 1890.

These officers will, at the close of their second year at the school, be re-examined upon the subjects in which they have been declared deficient, when, if proven proficient, diplomas will be issued to them, they losing their standing in the class. Lieutenants Hanson, Elliot, and Smoke, amongst the officers declared deficient, are graduates from the Military Academy. Too much time devoted to personal pleasures is no doubt the cause of their failures. Amongst these deficient are Lieutenants Newton, Grumley, and Blauvelt. Lieutenant Newton was too advanced in years to be sent to this school; besides, he is not in good health. He has devoted his time to his legitimate studies. Lieutenants Grumley and Blauvelt are conscientious officers, have studied hard, and no doubt will pass upon second examination; neglect of early education was the cause of their failure. Second Lieutenant Wright, Second Infantry, previous to the annual June examination, was stricken with typhoid fever; in consequence, unable to properly prepare himself in the department of surveying. By application he can become proficient.

I would respectfully call attention of the Major-General Commanding the Army to previous recommendations of the commandant of the school, that no officer be detailed for instruction here who has passed the age of thirty-five years, and preferably those be sent who have made application to come, and are anxious to improve themselves professionally by taking the advanced course of study at the school.

The officers' quarters, twenty-one in number, in Thomas and McPherson Halls, have been declared non-sanitary. I recommend that these old and damp buildings be removed, and new quarters for officers substituted in their places.

In order that the Major-General Commanding the Army may have full knowledge of the operations of this school during the past year, the reports of the principal instructors in the departments of Military Art and Infantry, Engineering and Cavalry, are embodied so as to form a part of this report.

DEPARTMENT OF INFANTRY.

The preparatory examination required for infantry officers at the school showed that all were proficient in infantry tactics up to and including the school of the battalion. Instruction commenced with "evolutions of the brigade," and covered this subject; also "evolutions of a division," "camping," "manual of the sword," and "ceremonies." At the completion of the course the usual examination was held. Whilst the daily marks of the instructors showed careful preparation for the recitations, at the examination First Lieut. John Newton, Sixteenth Infantry, and Second Lieut. George E. French, Fourth Infantry, failed to show their proficiency to the satisfaction of the school staff, and they were declared "deficient." The instructors in this department were Capt. W. H. H. Crowell, Sixth Infantry, and Capt. James Fornance, Thirteenth Infantry."

DEPARTMENT OF MILITARY ART.

The course of instruction in this department was covered by Shaw's Elements of Modern Tactics, and Home's Precis of Modern Tactics, together with practical exercises. Examinations followed the completion of each book. In Shaw, three days were required, in Home, two. The results were highly satisfactory, showing all proficient.

The practical field exercises in minor tactics were in detail as follows, viz:

No. 1. Exercise in forming an infantry advance guard. The advance guard was formed by the student officers at exactly the distance and intervals given in theory, the object being to present to them a living diagram. Each member of the class was questioned on the field as to the duties of the different parts, and the changes from the theoretical dispositions that would be made under various circumstances.

No. 2. A repetition of No. 1.

No. 3. The same as No. 1, substituting the word "cavalry," for the word "infantry," wherever the latter occurs.

No. 4. A repetition of No. 3.

No. 5. Exercise in establishing an infantry outpost. The outpost was established by the student officers at exactly the distance and intervals given in theory, the object being to give a living diagram of an infantry outpost. As soon as the outpost was posted, the student officers not in command of reserves, supports, or pickets, made the tour of sentries, pickets, and supports, with the instructor. The officers in command of the several component parts of the outpost were questioned on the field in regard to their duties.

No. 6. Exercise in establishing an infantry outpost with regard to the configuration of the ground, and with a view of combining observation with the best possible degree of security to a supposed force in rear. In this exercise no other information was given to the student officers than an indication of the position of the force to be guarded. The commander of the outpost chose his own line of defense and observation, and the commanders of the supports and pickets made their dispositions according to their own judgment. The outpost being established the instructor inspected it and commented on the advantages and defects of the dispositions made. Exercise No. 6, was conducted by the second section.

No. 7. Identical with No. 6, conducted by the third section.

No. 8. Same as No. 6, conducted by the first section.

No. 9. Exercises in duties of a small infantry patrol.

In this exercise two small patrols were pitted against each other on one part of the reservation and two on another part. Each patrol was required to carry out the principles of patrolling in the main, according to the manner prescribed in the text-book in use; but everything was left to the judgment and discretion of the patrol commanders, who were instructed to regard the text-book as their servant, not as their master. The victory was awarded to the patrol which could first get a shot at its adversary at shorter range than 200 yards. Was conducted by the second section.

No. 10. Exercises with a small cavalry patrol, similar in methods to exercises No. 9; only two patrols were out. Conducted by the second section.

No. 11. Same as No. 9. Conducted by the third section.

No. 12. Same as No. 10. Conducted by the first section.

No. 13. Same as No. 9. Conducted by the first section.

No. 14. Same as No. 10, conducted by the third section.

No one problem was the same, and different localities were selected.

No. 15. Exercise in marching from given points to effect a junction at a designated point at a fixed time. Four companies of infantry, each under command of a student officer, started from four different points to rendezvous at a given point at a fixed hour. Each company had a full complement of officers. Each commander was furnished with a map, and allowed to choose his own time for starting. No halts were allowed, except those authorized in Upton's Tactics, and all unusual accelerating or retarding of the pace of the march was prohibited. This exercise was conducted by the first section.

No. 16. Same as No. 15, by the second section, conducted by cavalry officers, substituting "cavalry" for "infantry."

No. 17. Same as No. 15, conducted by the third section.

All the exercises were satisfactory, and held the interest of student, officers, and instructors.

It is to be regretted that the infantry companies are not larger, so that more men would be available. In the five companies at no time was I able to have an aggregate force of one hundred.

It is recommended that the sections be subdivided so as to have but six student officers at a time.

DEPARTMENT OF ENGINEERING.

The following is the report of the operations of the department of engineering for the school year ending May 31, 1890, with suggestions as to desirable modifications:

The time assigned to instruction embraced alternate days during all

but the winter months of the school year. Such assignment is advantageous, as it enables entire days to be devoted to practical work when advisable.

In general a day's work consisted of two hours practical work and one recitation. Three whole days were devoted to topographical work and road sketching, advantage having been taken of convenient railroad trains to enable officers willing to defray their own expenses to make sketches of roads with more novelty than that of those in the immediate vicinity. It is expected that this sketching will be continued during the next school year.

Besides instruction in topography and surveying a lecture on range finders was prepared, and, after printing, incorporated as part of the course of military topography.

The practical work comprised the use of range finders and of surveying instruments, the drawing of topographical signs and features, the making of plan and slope scales, and the solution of topographical and surveying problems.

The ground covered by the present class has been slightly modified, by devoting more time to the use of the plane table and by the study of and practice with range finders.

For instruction in engineering the class has been arranged in four sections, according to rank; the charge of the first and second sections assigned to Lieutenant Irons, Twentieth Infantry, and of the third and fourth to Lieutenant Baker, Seventh Infantry. By this arrangement but one officer in the class ranks his instructor.

At the beginning of the school year Lieutenant Baker was, at my request, detailed as assistant instructor by the post commander.

Both Lieutenant Irons and Lieutenant Baker have ably and satisfactorily assisted me.

With additions recently made the school now possesses five range finders, of which two are of the pattern in use in the English and French armies. A sixth is now being made for the school by the Ordnance Department, U. S. Army. A standard tape for use in testing other measuring instruments has been obtained, and a contract has been made for delivering to the school two plane tables of a less elaborate pattern than that of the one now on hand.

Private Roberts, Company K, Thirteenth Infantry, has been very efficient in caring for the instruments and other property in use and in doing much clerical and photographic work. Of the latter class, in addition to that performed for school purposes, he has done a large amount for the tactical board and such as was requested by the medical board charged with the revision of the manual of the hospital corps.

In order to inculcate exact methods of work it had been thought advisable to take up the study of surveying before that of topography. However, as many officers report for instruction with a very elementary knowledge of mathematics, insufficient for a mastery of the course of surveying, it is thought advisable to take up the subject of topography first, so that opportunities may be afforded, on days not devoted to regular recitations, for adding to their knowledge of mathematics.

Field engineering might be taken up the first year, were it not that in this case sufficient time would not remain after theoretical instruction in topography for the practical work that should follow.

It is thought that officers who have not the proficiency in mathematics now required of candidates for a commission should either be sent here in advance of the rest of their class to take a course of mathematics, or should not be sent at all. The standard of the school is not too

high; and it has been deemed advisable not to graduate at one time two classes of different grades. Yet it must be recognized that many of our older subalterns have not had the education which would prepare them to master the school course in the time assigned to it. Give them then a preliminary course, or do not subject them to the stigma of a failure which may be predicted with almost absolute certainty.

DEPARTMENT OF CAVALRY.

During the first three months of the course the cavalry officers of the class received instruction in the United States cavalry tactics (school of the regiment, brigade, etc.), and after twenty-eight lessons in advance and review were examined in the subject December 6, 1889, by the academic staff.

The section, consisting of ten officers, one from each of the ten cavalry regiments, was under the direct charge of Lieut. John F. Guilfoyle, Ninth Cavalry, and the recitations conducted by him were attended by myself whenever practicable.

In January, 1890, the whole class took up the subject of hippology, using Fitzwygram's "Horses and Stables" as a text-book. The class was divided into three sections, under charge of Captain Carr, First Cavalry; Captain Moore, Ninth Cavalry; and Lieutenant Brown, First Cavalry. The instructors exchanged sections at regular intervals, in order to preserve as far as possible an equality in the marks given by them. The different sections were visited daily by me in turn. The course, consisting of about fifty lessons, included the subjects of ventilation, construction of stables, watering, feeding, forage, grooming, exercise, stable management, the blood, arteries and veins, the pulse, the absorbents, structures and uses of various membranes and tissues, the nervous system, good nursing, infection, contagion, action and uses of medicines, conformation and age as indicated by the teeth. In the latter subject practical illustrations were given in the cavalry stables, and at different times in the course lectures on the subjects under consideration were delivered by Captain Carr.

The class was examined in the subject on April 10 and 11, 1890.

The subject of biting and saddling was then taken up, Major Dwyer's work on the subject being used as a text-book, and the same instructors being in charge of the sections. After fifteen lessons the class was examined on the 26th of May, 1890. During the absence, on detached service, of Captains Carr and Moore, Lieutenants Guilfoyle, Ninth Cavalry, and Haines, Fifth Cavalry, took charge of their sections for a few days. No other change in the personnel of the department occurred during the course.

Much interest in the subjects considered has been displayed by the student officers, and their progress has been markedly satisfactory.

The examinations were in writing, and the papers submitted were, in the great majority of cases, in the highest degree creditable to the students.

For the ensuing year I respectfully recommend a continuation of the course in hippology, during which the various diseases to which the horse is subject will be treated of in such a manner as to make them easily understood. It is proposed to take up the subject of shoeing also and illustrate it practically.

The subject of equitation presents some difficulty, the majority of the members of the class having already pursued the course at the Military Academy, and being, generally speaking, excellent horsemen.

I recommend that a course of equitation be taken up by such officers as appear to require it, each member of the class being dismissed as soon as he shows himself proficient; and that this course be taken up during the months of July and August, when no section-room work is going on.

Some considerable portion of the work of the next year will be communicated to the students through the medium of lectures, and for the illustrations of the subjects treated plates are very much needed. Small ones are not difficult to obtain, but are of little use for the purpose. A stereopticon for properly enlarging them would be of great use for many purposes in the school. I respectfully recommend its purchase whenever funds are available.

The practical illustration of the subject of minor tactics, as far as it relates to the employment of cavalry on reconnaissance, outpost duty, advanced and rear guards, etc., is now included in the department of the art of war, so that the consideration of that subject as heretofore by this department is no longer required. I am inclined to think, however, that the subject, as far as it relates to the cavalry division acting as a screening and reconnoitering body for an army, or a cavalry brigade acting independently, should be included in this course.

Lieutenant Brown, First Cavalry, having been detached from duty at the school, I have requested the assignment of Captain Babcock, Fifth Cavalry, in his place. I have also requested the assignment to the department for duty in the equitation course of Lieut. J. B. Aleshire, First Cavalry.

For the welfare and still further progress of this institution it is recommended that the control of the school and the post of Fort Leavenworth be segregated from the Department of the Missouri, placing it under the immediate direction of the General commanding the Army. The school and the post are so mutually dependent upon each other that what affects one influences the other. They should enjoy like advantages with West Point, the Engineer School at Willet's Point, and Artillery School at Fort Monroe.

The efficiency, progress, and discipline of the Infantry and Cavalry School have been satisfactory.

In closing this report, it being the last one I may have opportunity to make, I can not refrain from extending my professional and personal thanks to the instructors on duty at the school for the manner they have performed the arduous duties connected therewith, and to Second Lieut. James B. Aleshire, First Cavalry, for the efficient manner he has performed all the work pertaining to the office of school secretary.

Very respectfully, your obedient servant,

A. McD. McCook,
Brigadier-General, U. S. Army,
Commanding Infantry and Cavalry School.

The ADJUTANT-GENERAL U. S. ARMY,
Washington, D. C.

REPORT OF LIEUTENANT-COLONEL FRANK.

UNITED STATES ARTILLERY SCHOOL,
Fort Monroe, Va., September 15, 1890.

SIR: I have the honor to submit the following report of the United States Artillery School and post of Fort Monroe for the year ending September 1, 1890. This period embraces the second, or last, year of the prescribed course of study.

ARTILLERY.

At the date of my last annual report instruction in the course of artillery, under Capt. J. P. Story, Fourth Artillery, was in progress. This course began May 1, 1889, and continued until June 30. An intermission of two months occurred during the artillery target season of July and August, after which it was resumed, and terminated with the reading of essays and a written examination on November 7 and 8. Instruction in this important branch was comprehensive and thorough, eliciting and maintaining the interest of the class throughout.

By authority of the Major-General commanding the Army the class, under its instructor, visited the ordnance works of the Washington Navy-Yard on October 28, 29, and 30, and there witnessed some important operations in the construction of built-up guns. The naval authorities afforded every facility for observing these operations and examining the extensive machinery with which these works are equipped, making the visit one of great interest and profit to the class.

INTERIOR BALLISTICS.

The course in interior ballistics, under Capt. James M. Ingalls, First Artillery, followed that of artillery, and terminated with a written examination December 4. With regard to this course Captain Ingalls reports:

The method of instruction was partly by lectures and partly by the study of Sarrau's Memoirs on Interior Ballistics, Noble and Abel's Researches on Explosives, and Glennon's Velocities and Pressures in Guns. The rather difficult mathematical discussions involved in the course were grappled with and mastered in a way that reflects great credit upon the zeal and ability of all the younger members of the class.

A text-book on this subject is now in course of preparation by the instructor, which it is expected will be ready for use by the time the present class reaches this subject.

ELECTRICITY.

Electricity, under Lieut. George L. Anderson, Fourth Artillery, and explosives, under Lieut. Willoughby Walke, Second Artillery, were taken up December 5. Instruction in these two branches was carried on simultaneously, both in the forenoon and afternoon, the class being divided into two sections for this purpose, the first section attending electricity in the forenoon and the second section attending explosives, and *vice versa*, in the afternoon. This plan, which was made necessary on account of the limited amount of apparatus with which these de-

partments were provided, was found convenient for other reasons. The course in electricity terminated with the usual examination March 28, and that in explosives on March 14. Of the course in electricity Lieutenant Anderson says:

The course embraced lessons assigned for each day on one or more of the text-books adopted and in daily laboratory work, which was devoted almost exclusively to experiment and the solution of practical problems relating to the lesson of the day. There were no recitations.

The text-books used were Ayrton's Practical Electricity, Munro and Jamieson's Tables and Formulæ, Abbot's Notes on Electricity, and Atkinson's Electric Lighting. The experimental work included the measurement of the various electrical and magnetic quantities used in practice, the testing of aerial and submarine lines, and the manipulation of not only the measuring instruments, but of all artillery electrical appliances at hand, such as the different velocimeters, exploders, fuzes, arc and incandescent dynamos and lamps, motors, telegraphs, telephones, etc. A knowledge of the construction of the apparatus employed was of course essential.

The members of the class worked in pairs, each pair having its own table, and each member keeping his own record of the progress of an experiment. Every table was fitted with the necessary battery power, a Siemen's universal galvanometer, a Bradley four-coil galvanometer, a Wheatstone bridge (London post-office pattern), a wire bridge, a resistance box, a detector, tools, connectors, etc. In addition to the foregoing, the Cooper voltameter and tangent galvanometer were employed for absolute calibrations, the voltameter and ammeter for strong currents, and to a limited extent the German reflecting instruments for weak currents.

The apparent facility with which the new magnitudes and their units were understood, the readiness in applying the different methods of comparing the quantities, and the interest taken by the class in using the apparatus and machinery and in the preparation for the daily work, confirm the belief that in this branch some such method as that pursued, of allowing the practical work to keep parallel with the theoretical, should be followed. The only serious objection seems to be its slowness.

The rooms occupied by this department were small and unsuitable in every way, but by perseverance more than satisfactory results were accomplished. Rooms have been fitted up for this department in part of the ordnance shops recently turned over to the school, and the department has already been transferred to it. These rooms are admirably suited to the purpose, and as the building is a substantial one, will meet the wants of the course for many years. No instruction in torpedo service has been attempted, no material having yet been provided for that purpose.

CHEMISTRY AND EXPLOSIVES.

The course in analytical chemistry, which is preparatory to that of explosives, was completed last year. As stated above, the class was divided into two sections, but in order to reduce to a minimum the danger which attaches to laboratory work such as the class was about to enter upon, as well as on account of limited facilities at hand, a further division was made in which it was sought to group together two or three officers, one of whom should possess more than an elementary knowledge of the several chemical substances entering into the com-

position of the various high explosives. The advisability of this subdivision was demonstrated by freedom from accident throughout the course. As this course in its present form is new at the Artillery School, in order to give a clear idea of its nature and extent I quote at length from the report of Lieutenant Walke, as follows:

As the course in chemistry had been completed, the entire period assigned to the combined courses of chemistry and high explosives was devoted to the latter subject.

In order to devote as much time as possible to practical work in the laboratory, the series of lectures was printed and issued to the officers, instead of being delivered orally while the course was in progress.

These lectures were supplemented by oral notes as the occasion required. For the same reason the system of daily recitations pursued in the other departments was not followed.

Regular lessons, however, were assigned and designated for each day, and the officers were expected to study them carefully in their quarters, so that as soon as they entered the laboratory they could at once proceed to investigate the subject practically.

By this system the laboratory work was extended over the entire period of thirteen and four-sevenths weeks.

For convenience in following the series of lectures which were adopted as textbooks the subject was divided as follows:

- I.—Explosive mixtures of the nitrate class.
- II.—Explosive mixtures of the chlorate class.
- III.—Explosives in which picric acid or a picrate is a main constituent.
- IV.—Explosives in which certain nitrated hydrocarbons (*e. g.*, benzine, naphthaline, etc.) enter as important constituents.
- V.—Explosives of the Sprengel type, in which the principle is the admixture of an oxidizing with a combustible agent (at the time of or just before being required for use), the constituents of the admixture being of themselves non-explosives.
- VI.—The fulminates and other detonating substances.
- VII.—Gun-cotton.
- VIII.—Nitroglycerin.
- IX.—The dynamites, cotton powders, and explosive gelatine. The various experiments under this classification were printed beforehand and given out in connection with the text. They are here appended, and special attention is invited thereto. (See Appendix A.*)

Each officer was furnished with a note-book in which he kept a complete record of his work, and upon this record his standing for the term was based.

Each group of officers (2 or 3) made and tested each of the several explosives (see Appendix A*), special attention being devoted to their strength and availability for military purposes.

Particular attention was also given to the service tests as to the condition of explosives, samples of material which had undergone partial decomposition being used for the purpose.

Upon completion of the laboratory course the following experimental work was conducted on the beach, each section attending one week:

- I.—Determination of the sensibility of various explosives to the impact of bullets under various circumstances.
- II.—Effect of confinement upon the action of various explosives.
- III.—Illustration of explosion by "influence," or "sympathetic explosions."
- IV.—Destruction of material:
 - 1.—Cutting down trees.
 - 2.—Destruction of wooden beams.
 - 3.—Destruction of iron beams and plates.
 - 4.—Destruction of iron rails.
 - 5.—Breaching of stone walls.

In the experiment under VI, the charge of the various explosives used were calculated by the members of the class for each experiment, the conditions being given beforehand, the other data as to the strength, etc, being taken from the results of their own laboratory work.

The object of this experimental work was to familiarize the officers with the manipulation and use of larger amounts of explosives than was practicable to deal with in the laboratory, as well as to verify the several formulæ set forth in the textbooks.

* Omitted.

MILITARY SCIENCE.

The course in military science, under Capt. William A. Kobbé, Third Artillery, the last in the curriculum of the school for commissioned officers, followed the two preceding ones, and closed with the reading of essays and the usual examination, June 20. Captain Kobbé has given much time and study to the preparation of this course, and through his continued efforts still further improvements may be expected. The following extract from his report indicates the scope and methods of instruction given:

The course, subdivided into minor and grand tactics, logistics, and strategy, was taught previously by recitations from standard text-books. It was greatly amplified, however, by notes and extracts from every available source, with free discussions on the part of all present. The ample literature published in the proceedings of foreign and home military societies, extracts from periodicals, and manuscript reports which were available on relevant subjects, were all freely used—so freely that the text-books soon furnished a mere guide and thread for the course.

The tactical use of field and siege artillery, machine guns, and the "tactics of coast defense" received an amount of study and attention never before given these subjects at this school.

The officers of the class, without exception, gave the course the most intelligent and careful study; the essays and examination papers received much thought and labor, and as a rule displayed very uncommon ability.

ENLISTED MEN'S DIVISION.

The non-commissioned officers' school is under the immediate charge of Lieut. S. M. Foote, Fourth Artillery, instructor, Capt. W. P. Vose, Second Artillery, superintendent. The class, consisting of forty non-commissioned officers, commenced the second year of the course September 10, and closed with a two days' examination before a committee of the staff, Majors Pennington and Miller, on April 28 and 29, 1890, the examination on the 28th being written and that on the 29th, oral. As the course was not begun until early in 1889, the rudiments only of many of the subjects laid down in the programme for this division of the school could be attempted. In addition to other instruction they were taught gunnery, elementary physics, elementary surveying, and the practical use of azimuth and transit instruments, the plotting-board, the 3.2 inch and Zalinski sights. Instruction has been, so far as possible, practical, aided by object lessons. The greatest difficulty was found in their lack of knowledge of the principles of arithmetic. After some instruction on this subject a section was formed of those most deficient and placed under the charge of Corporal James F. Welsh, Battery M, Third Artillery, who proved an efficient instructor. The following non-commissioned officers are those examined, pronounced proficient by the staff, and who received certificates:

Sergeant Walter Tscherning, Battery H, Fourth Artillery.
 Corporal Alexander Stewart, Battery I, Second Artillery.
 Corporal Martin Kenney, Battery I, Second Artillery.
 Corporal James F. Welsh, Battery M, Third Artillery.
 Sergeant Louis Hendricks, Battery M, Third Artillery.
 First Sergeant John Schmetzer, Battery F, First Artillery.
 Sergeant Patrick Kelly, Battery I, Second Artillery.
 First Sergeant Dennis F. Gallagher, Battery G, Fifth Artillery.
 Corporal David E. Shull, Battery H, Fourth Artillery.
 Sergeant Peter Ohlsen, Battery G, Fifth Artillery.
 Sergeant August Horn, Battery F, First Artillery.
 First Sergeant Harvey S. Moss, Battery I, Second Artillery.
 Sergeant James A. Richardson, Battery M, Third Artillery.
 Sergeant William F. Yost, Battery M, Third Artillery.
 First Sergeant Eugene A. Buckley, Battery M, Third Artillery.
 Sergeant Patrick Harrigan, Battery I, Second Artillery.
 First Sergeant John Hind, Battery H, Fourth Artillery.

SIGNALING.

Signaling and telegraphy for enlisted men, under Capt. W. P. Vose, Second Artillery, was commenced September 1, 1889, and continued until June 20, 1890. A class of twenty-four selected men, four from each battery at the post, received instruction and practice in signaling for one hour and a half daily, beginning with the use of the wand and continuing with field practice with flag, torch, and heliograph, until all could send and receive messages readily. From the number thus instructed, selections were made of such as were found to possess aptitude for telegraphy, and their instruction was continued in the management and operation of telegraph lines, adjustment of instruments, and in sending and receiving messages, until they were able to send and receive with facility fifteen words a minute. The services of these men have been in constant demand during the present artillery target season, and they have proven efficient operators.

ARTILLERY PRACTICAL EXERCISES.

Drills at the different guns in service and in the use of artillery machines and appliances for mounting, dismounting, and moving guns, carriages, and artillery material of all kinds, were carried on during the fall and spring months, closing with an examination by the staff in June with satisfactory results. A very good supply of new material for these maneuvers has recently been received. Artillery target practice took place during July and August. This being the second season in the course, the practice was conducted with special reference to the instruction of the non-commissioned officers and men, as well as student-officers. The shooting was good, better, perhaps, than in former seasons, but the guns are all old models and, on account of inherent defects, do not admit of accurate shooting. It is much to be regretted that the school has not at least one of each kind of the new types of guns, not only that student-officers may acquire all possible skill in handling these guns, but that they may have the means of applying in practice and verifying the principles they have demonstrated in theory.

In addition to the school and garrison batteries of this post eight batteries of the Third Artillery, from neighboring posts, have done their target practice here. The guns used during the season are the 10-inch and 15-inch smooth-bore, 8-inch converted rifle, 4½-inch siege gun, 10-inch and 13-inch sea-coast and 10-inch siege mortar, 3.2-inch breech-loading rifle, and machine guns. The several powders used were received in the months of May and June, and are as follows: Spherohexagonal for the 15-inch gun, fabricated in 1888; hexagonal for 8-inch converted rifle, fabricated in 1876; cannon, L. K. F., for 3.2-inch breech-loading rifle, date of fabrication not known; cannon S. W. E., for 4½-inch gun, date of fabrication 1864; mortar, 1865. The first two gave satisfactory results and were shown by analysis to be good; the cannon and mortar powders were caked and dirty and showed the effects of long storage. No accident to persons, or injury to guns or material has occurred, except to one 15-inch gun carriage during the firing of Battery L, Third Artillery. In this case 130 pounds of spherohexagonal powder was used, and at the second shot the piston rod of the hydraulic cylinder was broken as were also the rear transom and rubber buffers. Experience at this school has shown that none of the carriages furnished for these guns will stand, for any length of time, so large a charge.

The six platforms for the 13-inch mortar battery are old and the timbers decayed, necessitating renewal or repair before another year's practice. Under Lieut. Thomas R. Adams, Fifth Artillery, post ordnance officer, many repairs have been made during the past year to the different batteries at the post with such means as were available.

LIBRARY.

Such additions have been made to the library during the last year as limited funds and current necessities admitted of.

PRINTING-OFFICE.

The printing-office is under the charge of Lieut. Louis V. Caziare, Second Artillery, adjutant and secretary of the staff. In addition to much current work in printing blank forms, pamphlets, drill manuals, and binding books for the artillery school library, lithographing plates for text-books, manuals, etc., the following works have been published, and under the orders of the War Department, distributed to the Army:

Problems in Exterior Ballistics, Captain Ingalls.....	800
Course of Instruction for Non-commissioned Officers, Lieutenant Carbaugh....	1,100
Supplemental Manual for Sea-coast Guns, Captain Mills.....	700

FINAL EXAMINATION.

Upon the completion of the two years' course of study, June 23, 1890, a board of officers was assembled to witness the final examination and exercises of the class of student officers, to carefully examine the actual condition of the school with special reference to its discipline, methods of instruction, and the suitability and completeness of its equipment for the advanced instruction of officers of the heavy artillery service. It was also ordered to consider, in the order of their urgency, what buildings, apparatus, machines, and implements for the various departments of instruction are still necessary. The following officers composed the board: Col. Henry W. Closson, Fourth Artillery; Lieut. Col. Daniel W. Flagler, Ordnance Department; Lieut. Col. William R. King, Corps of Engineers; Maj. Henry C. Hasbrouck, Fourth Artillery; Maj. Arthur MacArthur, jr., assistant adjutant-general; Lieut. Edward A. Millar, Third Artillery, recorder. Every facility was afforded the board to carry out the duties assigned it, and its personnel is a guaranty of the thoroughness with which these duties were performed and the correctness of its conclusions.

The recommendations of the board cover the most essential wants of the school, and their favorable consideration will place the school in a condition of great efficiency.

The following officers having completed the prescribed course of study at the Artillery School, were given certificates as required by the Artillery School regulations, with the exception of those who had previously received them:

- First Lieut. E. R. Hills, Fifth Artillery.
- First Lieut. Charles Humphreys, Third Artillery.
- First Lieut. H. C. Danes, Third Artillery.
- First Lieut. M. Crawford, Second Artillery.
- First Lieut. J. H. Gifford, Second Artillery.
- First Lieut. F. S. Harlow, First Artillery.
- First Lieut. W. L. Alexander, Fourth Artillery.

First Lieut. J. L. Chamberlin, First Artillery.
 First Lieut. C. L. Phillips, Fourth Artillery.
 First Lieut. M. F. Harmon, First Artillery.
 First Lieut. J. T. Thompson, Second Artillery.
 First Lieut. C. L. Corthell, Fourth Artillery.
 First Lieut. G. T. Bartlett, Third Artillery.
 Second Lieut. Louis Ostheim, Third Artillery.
 Second Lieut. John Conklin, jr., Second Artillery.
 Second Lieut. W. N. P. Darrow, Fourth Artillery.
 Second Lieut. G. W. S. Stevens, Fifth Artillery.

Ability, zeal, and attention to duty have marked the conduct of these officers throughout the entire course, and secured for them a degree of proficiency that promises for them a career of great professional usefulness.

POST ENLISTED MEN'S SCHOOL.

The school for enlisted men was under the charge of Lieut. E. A. Millar, Third Artillery, and opened November 1, 1889, with fifty-six privates. These were examined and classified into four sections. Two weeks later thirteen more were added to the school, no more being practicable for want of room, text-books, and other facilities. The interest of Lieutenant Millar made up in a large degree for the lack of proper facilities, and by means of oral instruction and the blackboard very satisfactory progress was made.

SMALL-ARMS PRACTICE.

The month of May was designated as the season for small-arms practice at this post. In accordance with the decision of the Major-General Commanding the Army, practice was limited to the two and three hundred yard ranges. The targets used were the Laidley vertical-axis pattern. The total number of shots fired was 47,005; number of hours practice per battery, thirteen. Seven rifles sustained injuries; no accidents to individuals.

DISCIPLINE.

The discipline of the post is excellent, and service here is fairly attractive to the enlisted men. Desertions, except by recruits soon after joining, have been few.

SANITARY CONDITION.

The health of the post during the past year has been good, diarrhea and venereal diseases being the most frequent. The epidemic of influenza, though severe, was short and without mortality. Two deaths only have occurred during the year, one from drowning and the other from homicide.

The sewerage system is entirely unsatisfactory. A system has been proposed adequate to the wants of the entire post, both within and without the fort, which it is hoped may soon be constructed.

QUARTERMASTER'S DEPARTMENT.

During the past year two sets of quarters (one double set) for officers were erected at a cost of \$8,525.20, and \$5,000 were allowed for repairs, etc. Subsequently an allowance of \$850 was made for moving and repairing a building on the Mill Creek road, occupied by civilian employes, made necessary by the extension of the Chesapeake and Ohio

Railway across this reservation. An expenditure of \$475 was also made for fitting up one wing of the ordnance shop as an electrical laboratory.

An executive or headquarters building, eight sets of quarters for officers now living in casemates, quarters for the non-commissioned staff and band quarters, and funds for fitting up the portion of the ordnance shops recently turned over for the use of the Artillery School, and for all of which plans and estimates have already been forwarded, are urgently needed, and it is hoped that funds will soon be provided for this purpose. The present headquarters building is a temporary structure built during the war; the band is without any suitable quarters; casemates were never considered suitable quarters for either officers or men, and the present quarters of the non-commissioned staff are unfit habitations for old and faithful soldiers.

The water supply is unsatisfactory, and is a serious problem. Fire apparatus, means of transportation, etc., are all in good condition. The latter is severely taxed during the four months when to the wants of the regular garrison are added those of the battalion from neighboring posts here for drill and target practice.

SUBSISTENCE DEPARTMENT.

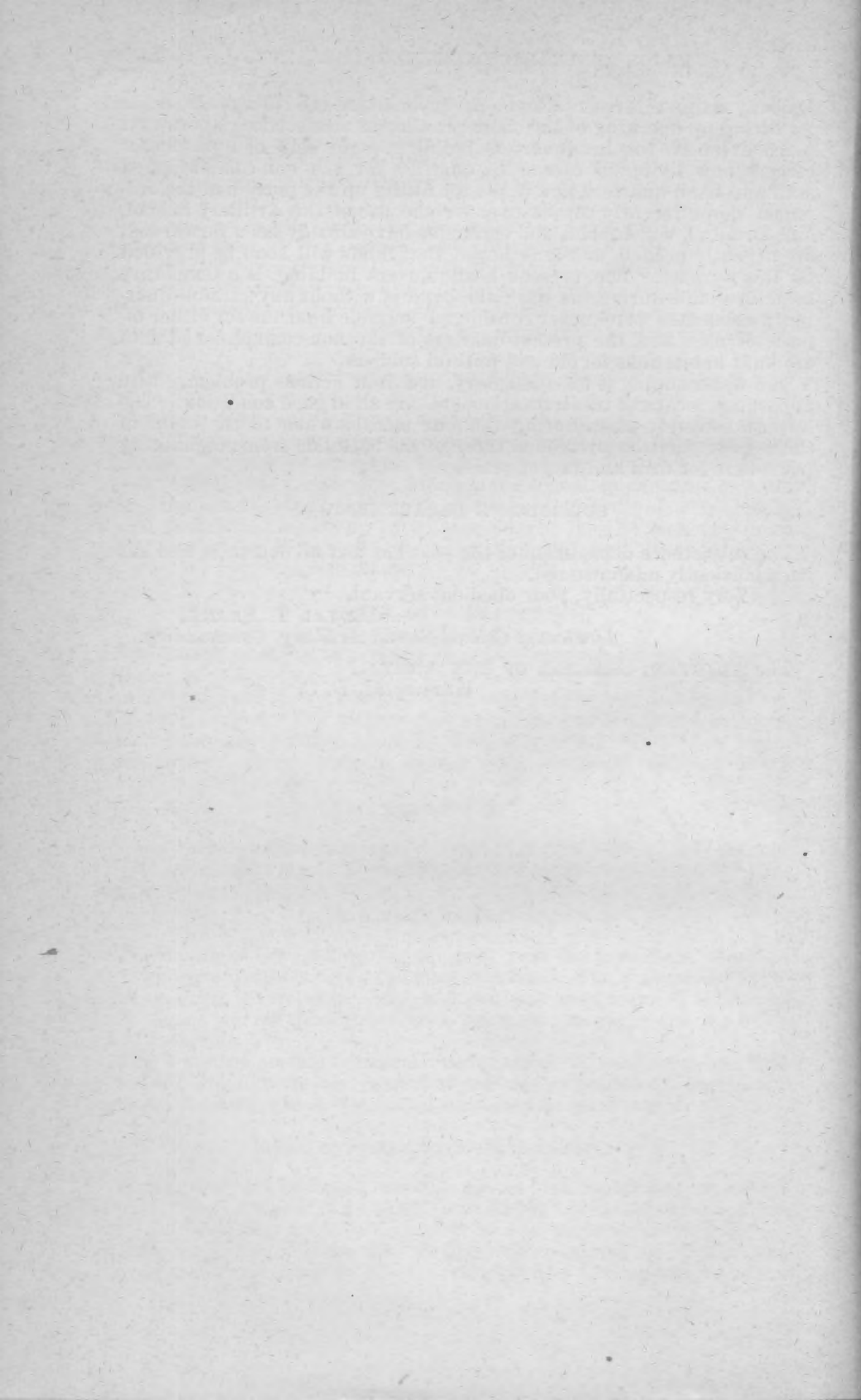
The subsistence department of the post has met all demands, and has been efficiently administered.

Very respectfully, your obedient servant,

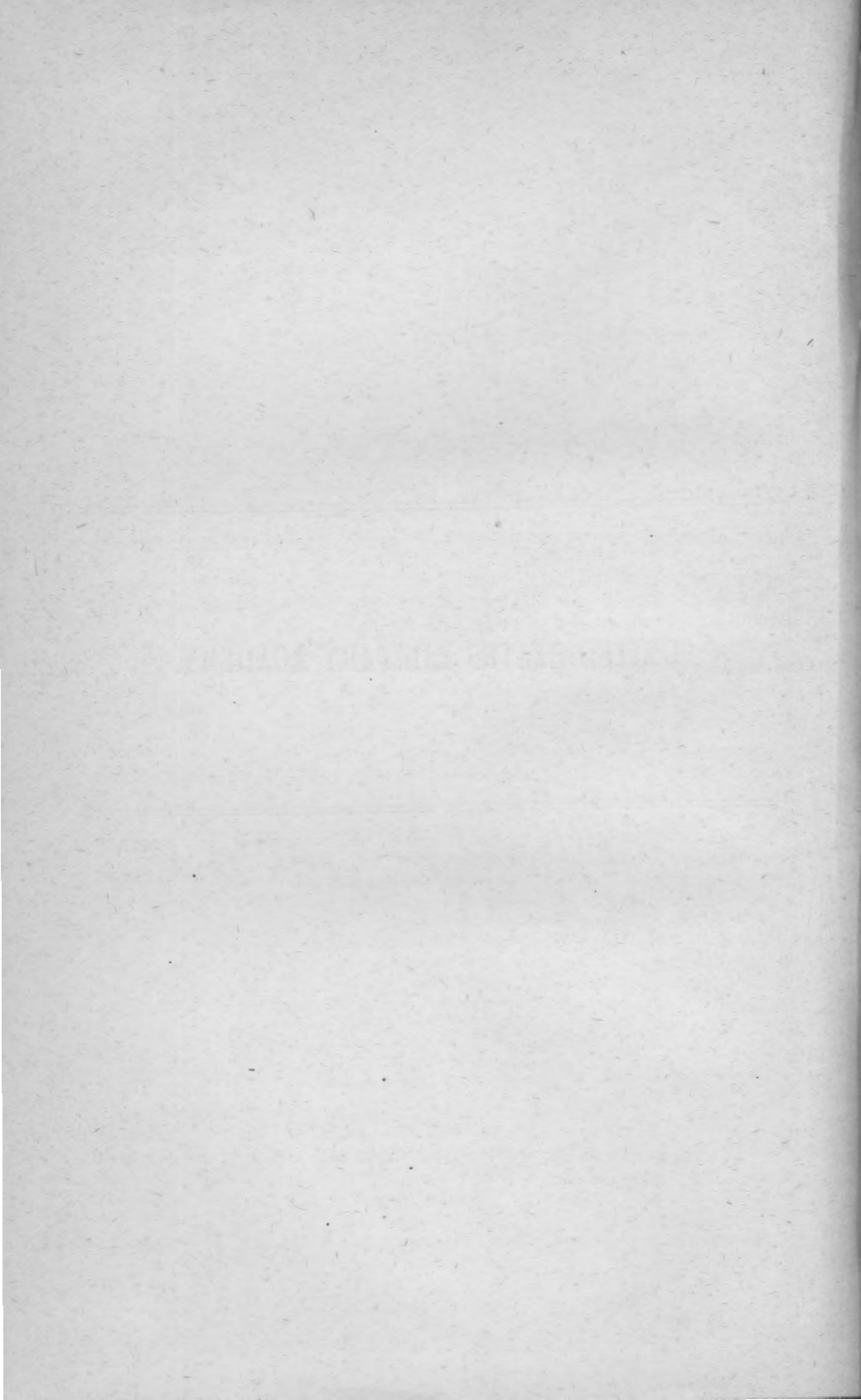
ROYAL T. FRANK,

Lieutenant Colonel Second Artillery, Commanding.

The ADJUTANT-GENERAL OF THE ARMY,
Washington, D. C.



UNITED STATES MILITARY ACADEMY.



ANNUAL REPORT

OF THE

SUPERINTENDENT OF THE U. S. MILITARY ACADEMY.

U. S. MILITARY ACADEMY,
West Point, N. Y., September 8, 1890.

GENERAL: As superintendent of the U. S. Military Academy I have the honor to submit the following report for the year ending August 31, 1890:

The number of officers and instructors stationed at this post on September 1, 1890, was as follows: Eight professors, fifty-two commissioned officers, including one surgeon and one assistant surgeon, one acting assistant surgeon, one sword-master, and one teacher of music.

THE CORPS OF CADETS.

Section 1315, Revised Statutes, provides that the Corps of Cadets shall consist of one from each Congressional district, one from each Territory, one from the District of Columbia, and ten at large, making 346 in all.

This institution is perfectly capable of accommodating that number, but owing to the fact that many candidates appear before the Academic Board unprepared for the examination, and that cadets are discharged from time to time during the year for various causes, the battalion seldom exceeds three hundred in number.

On September 1, 1889, there were 294 cadets connected with the Military Academy. Since that date the loss has been 8 by resignation, 22 by discharge, 2 by death, and 54 by graduation. The gain has been 81 admitted as new cadets, making a present total of 289 belonging to the Corps of Cadets, 4 of whom were admitted September 1, 1890.

This number includes one cadet from Switzerland and one from Central America, who are receiving instruction at the academy by authority of joint resolutions of Congress.

As stated in previous reports, the candidates entering in September labor under many disadvantages. They have failed to gain the drill and instruction which their more fortunate classmates have acquired during the summer encampment; they are ignorant of the regulations and are new to everything connected with the academy; they must be drilled and disciplined while others are resting, and they immediately begin their academic duties and are obliged to keep up with their class in their studies.

Moreover, the drilling of these new men entails additional duties upon some of the older cadet officers, who must instruct them at hours which really should be devoted to their own studies.

Of the fifty-six candidates who presented themselves August 28, 1889, only sixteen were admitted, and only six of these remained in the class after the June examination in 1890. I attribute this greatly to the fact that the young gentlemen did not get an even start with their class.

On August 27, 1890, twenty candidates presented themselves for examination. Of these only four succeeded in passing, and were admitted to the academy September 1, 1890. These four young gentlemen, in addition to their regular academic duties, must be put through a rigorous course of drill until October 15.

It is hardly necessary to dwell further upon this matter, but it is earnestly urged that, except under extraordinary circumstances, no further September appointments be made, and that the June candidates may be notified a sufficient time in advance of reporting to permit them to prepare themselves for the examinations in arithmetic, geography, grammar, history of the United States, reading, writing, and orthography.

At the June examination in 1890 twenty-four candidates were pronounced physically disqualified, a large per cent. failing upon their eyesight.

I think candidates should be required, if possible, to report for physical examination to the nearest medical officer of the Army immediately after receiving their letters of appointment, and should they be pronounced physically disqualified, their appointments could at once be revoked and they would be spared further expense and mortification.

Several of those who failed in June, 1890, informed me that they were entirely unaware that there was anything the matter with them until the result of their medical examination was announced.

In case it is not possible to reach a medical officer of the Army, then it would be well for the candidate to appear before a civilian physician, who should be furnished with an exact statement of the method of physical examination as conducted by Army surgeons.

During the past year the condition of the Corps of Cadets, as regards drill, discipline, and instruction, has been excellent. This is shown by the fact that in the first three classes, aggregating one hundred and eighty-four men, but one cadet failed to pass the June examination, while of seventeen pronounced deficient in the fourth class, ten were recommended to be turned back and only seven discharged. I attribute this not only to the care and attention bestowed upon their duties by the distinguished professors and officers in charge of departments and their able assistants, but also to the careful manner in which the preliminary examination is carried on, whereby those not properly prepared are rejected.

HEALTH OF THE POST.

Attention is invited to the report of the Post Surgeon, transmitted herewith, marked A.

During the year the health of the command appears to have been less favorable than usual. During the night of November 11, 1889, a large number of the cadets were seized with cholera morbus. This was telegraphed throughout the country and magnified to so great an extent that much unnecessary alarm was created among the families of cadets at distant localities. I received numerous telegrams and letters from the parents of cadets on the subject.

The effect was only temporary, and within less than forty-eight hours had entirely disappeared.

I convened a board, consisting of the Commandant of Cadets, the Post Surgeon, and the Commissary of Cadets, to investigate the cause of the trouble.

The board reported as follows:

It is the opinion of the board that it was a combination of causes, viz: A hearty dinner of fresh roast pork; acid fruit with milk at supper, at a time when the air was surcharged with moisture; causing indigestion and abdominal pains.

The purging under the circumstances was the natural way of ridding the system of an offending material.

Based upon this report I directed that fresh roasted pork should no longer be furnished for dinner, and that great care be exercised in furnishing acid fruits for supper. No serious consequences whatever resulted from this temporary illness of the cadets.

Later in the season the disease commonly known as "La Grippe" appeared on the post and spread with great rapidity; a number of officers and civilians residing at West Point, together with about two hundred cadets and a large number of enlisted men, were attacked. The first case appeared in the corps December 27, 1889, and many cadets were in the hospital from the disease during the semi-annual examination; there were six very serious cases on the post, three officers, one cadet, one young lady, the daughter of an officer, and one enlisted soldier; the last, an excellent man of high character, succumbed to the disease.

As a rule in the other cases those who were attacked rapidly recovered and were ready for duty in a few days.

On January 27, 1890, the mumps, which had been prevalent in the vicinity, appeared among the cadets and twenty cases followed.

During the winter scarlet fever broke out in the families of some of the officers and enlisted men. The usual precautions to prevent contagion were promptly taken, but in spite of every effort it appeared among the cadets on March 15, and five light cases occurred.

In the autumn of 1889, diphtheria, which was prevalent in the surrounding country, appeared at West Point, and during the winter and spring a number of the children of the enlisted men became the victims of this dread disease. But one case occurred among the cadets, that of Cadet C. B. Gose of the first class. His condition was pronounced very serious by the attending surgeon, but he fortunately recovered in time to go on with his class and was graduated in June, 1890.

Early in the spring of 1890 a light case of varioloid appeared in the family of one of the officers.

Throughout the entire period during which these various diseases were prevalent, the officers of the Medical Department on duty at this post were earnest, faithful, and indefatigable in the performance of their duties, spending day and night in their ceaseless efforts to save the lives of those who were dangerously ill from diphtheria.

The Post Surgeon was apparently impressed with the belief that the illness on the post was mainly due to defective sewerage and plumbing. As his views and my own were not fully in accord upon the subject, although I promptly approved every recommendation he made, I requested that a sanitary expert, familiar with the drainage and plumbing of large cities, might be sent here for the purpose of making a complete and thorough investigation of our entire system and recommending such changes and improvements as might be deemed necessary.

As there were no funds available for the employment of such an ex-

pert, an officer of the Quartermaster's Department was ordered here, and after an examination of the system recommended extensive improvements, both in sewerage and plumbing. I understand that an estimate for the necessary improvements will be submitted to Congress by the Quartermaster's Department at an early day.

During the latter part of the spring and early part of summer, when windows and doors could be left open and life out of doors became more agreeable, the general health of the post rapidly improved, and at the close of August there was no sickness at West Point worthy of mention.

During the entire year the post quartermaster used every effort within the limited means at his command to maintain both sewerage and plumbing in the best condition in his power.

MASTER OF THE SWORD AND INSTRUCTOR IN GYMNASTICS AND SWIMMING.

I beg to invite attention to the recommendation contained in the report of the Board of Visitors for 1889 in regard to the faithful, efficient, and capable sword-master. I heartily concur in the views of the Board that he should have the rank of a lieutenant, and I recommend that the following be added to the Military Academy bill :

Provided, That from and after the passage of this act, the master of the sword at the United States Military Academy shall have the rank and receive the pay and emoluments of a first lieutenant of infantry.

Mr. Herman J. Koehler, who at present occupies the position of sword-master, performs also the duties of instructor in gymnastics and swimming. He is faithful, energetic, and well qualified for his important work.

THE U. S. MILITARY ACADEMY BAND.

By the act of March 3, 1875, the Military Academy band consisted of one teacher of music and forty enlisted musicians. Of the latter, ten received \$34 per month and the remaining thirty received \$30 per month, together with the usual allowances of enlisted men.

By the act of March 3, 1877, the band was reduced to one teacher of music and twenty-four enlisted men, six of whom receive \$34 per month, six \$20 per month, and the remaining twelve \$17 per month, with the usual allowances of enlisted men.

This is the present status of the band, and it ought only to be necessary to invite attention to it and to the earnest appeals for its improvement by various Boards of Visitors to obtain the necessary legislation for its increase.

Many of the members of the band are excellent musicians and men with families, and as they improve in their profession and see their children growing up around them, it is natural that the temptation to better their condition in civil life affects them and they not only decline to re-enlist, but some endeavor to obtain their discharge, while occasionally one, I regret to say, forgetting the sanctity of his oath of enlistment, deserts the service of the Government.

I earnestly beg that something may be done for the band and ask that such action be taken as may be deemed best to urge upon Congress the passage of the bill for its reorganization, which has been favorably reported by the House Committee on Military Affairs.

THE ARTILLERY OF THE POST.

One battery of the new 3.2-inch field-guns has been furnished during the year, and another is absolutely necessary.

During the short period allowed each year for field-artillery drill, instruction as cannoneers must be given at the same time to both the third and fourth classes, aggregating usually about one hundred and fifty men. One battery is used for light artillery, the other for foot artillery. At present, in order to keep up the drills, one class must use the old 3-inch muzzle-loading guns while the other is being instructed with the new 3.2-inch breech-loader. I earnestly recommend that another battery of the 3.2-inch guns be furnished for this post at the earliest practicable day.

Attention is invited to the interesting report of First Lieut. J. D. C. Hoskins, Third Artillery, senior instructor of artillery tactics, transmitted herewith, marked B.

Lieutenant Hoskins very properly complains of the carriages used in the sea-coast battery and the guns of the siege battery. The former he describes as follows:

At the sea-coast battery the cadets use three 8-inch muzzle-loading rifles (converted 10-inch smooth-bore Rodman guns), two 15-inch smooth-bore Rodman guns, and one 13-inch mortar.

No two pieces in this battery are mounted on carriages of the same pattern, which fact renders a uniform system of instruction impossible.

For effective work here guns of the same class should be mounted upon modern carriages, uniform in construction.

I cordially concur in the views of Lieutenant Hoskins. It is high time that this important military institution, which annually turns out from fifty to sixty-five young officers, should be equipped with everything incident to a modern armament.

The condition of the siege battery is much worse than that of the sea-coast battery.

During the past few years three guns have burst at this battery, as follows: April 25, 1876, a 4½ inch rifled gun burst at the one hundred and sixty-second round; July 16, 1881, a 30-pounder Parrott gun burst at the two hundred and twenty-second round; April 11, 1889, a 30-pounder Parrott gun burst at the three hundred and twenty-second round.

Fortunately no cadets were struck by the fragments, although there were some narrow escapes and in some instances the drums of the ears were more or less injured.

After the last explosion the battery of 30-pounder Parrott guns was condemned, and the Ordnance Department, in October, 1889, supplied another battery of old 4½-inch rifled guns.

Upon calling for the history of these guns I was informed that it was unknown, but that they had been selected as the best of a lot on hand at the New York arsenal, sent there from the Washington arsenal some years before. I was further informed that some guns of this pattern had recently burst.

An examination of the guns showed that one of them was made in 1861 and the others in 1863, and they evidently had been used during the war of the rebellion.

By authority of the Secretary of War I directed that the guns should not be fired at drill, as I believed it would be absolutely criminal on my part to endanger unnecessarily the lives of cadets by practicing with these old and obsolete pieces,

I earnestly recommend that new 5-inch breech-loading steel guns be furnished for this battery at the earliest practicable moment.

MEN AND HORSES FOR THE LIGHT BATTERY.

For many years past the men of the cavalry detachment have acted as drivers at light-battery drill, while the cavalry horses, generally too light for the purpose, have been used for hauling the pieces and caissons.

It is time that the battery instruction should be placed upon an independent footing, and I respectfully recommend that fifty draught horses be furnished as soon as practicable for use with the light battery and that a detachment of thirty artillerymen for similar purpose be ordered to this post at an early day.

This detachment should consist of two sergeants, two corporals, one blacksmith and farrier, one trumpeter, twenty-four privates.

It is believed that quarters for these men can be arranged in the new cavalry barracks about to be constructed, and that the present stables, with some minor changes and improvements, can be made available for the animals.

At artillery drills the chiefs of platoons, sections, line of caissons, etc., could be provided with horses from those now used for cavalry purposes, and when necessary the artillery horses could be used in the preliminary instruction of cadets in riding.

The artillerymen could also be used for post guard duty and for assisting in maintaining the heavy batteries in good order.

COMPANY E, BATTALION OF ENGINEERS.

This excellent company, composed at present of eighty-one men and commanded by Capt. Geo. McC. Derby, Corps of Engineers, is in a high state of discipline and efficiency.

Authority was granted over a year ago to increase it from fifty to one hundred men, but up to this date a sufficient number of acceptable candidates have not presented themselves for enlistment.

The company has charge of the repair and preservation of all forts and batteries and of the ponton train and assists in the instruction of the Corps of Cadets in practical military engineering and signaling. The attention given by the officers to the care and welfare of the men deserves special commendation.

The building occupied as quarters by the unmarried men is a model of neatness and comfort.

THE CAVALRY DETACHMENT AND HORSES.

The number of horses authorized for use in the instruction of cadets is eighty-six. At present there are only sixty-seven available. These, as heretofore stated, are not only employed at cavalry drill, but also in hauling guns and caissons at artillery drill. As a rule they are not well adapted to the purpose desired, owing to the fact that it seems almost impossible to obtain the most suitable horses for the price authorized to be paid.

To care for these horses and to aid in the instruction of cadets at cavalry and artillery drills, and instruction in riding in the riding hall during the winter, there are sixty-eight enlisted men, known as the U. S. Military Academy detachment of cavalry. These men have a

company organization and are under the immediate command of the senior instructor in cavalry, who has, however, heretofore had no other officer on duty with him to aid in the management of the detachment.

As a rule the men of the detachment are faithful and diligent in the discharge of their duties. When the new barracks are completed it is hoped their condition will be greatly improved.

THE DETACHMENT OF SERVICE MEN IN THE QUARTERMASTER'S DEPARTMENT.

The military post of West Point has a population of about thirteen hundred souls, consisting of officers of the Army and their families, the Corps of Cadets, the enlisted men stationed at the post with their families, and a number of resident civilians connected in a greater or less degree with the Military Academy.

For the general care and police of the post, care of gas, fuel, and water-supply, ordinary repairs of buildings, roads, fences, paths, etc., attendants in various academic departments, duty in the library and chapel, clerks in the adjutant's and quartermaster's offices, etc., there is a detachment of one hundred and seventeen men formerly known as the U. S. Military Academy detachment of artillery, but now known as the detachment of service men in the Quartermaster's Department.

These men are not soldiers in the ordinary acceptation of that term, but are clerks, overseers, mechanics, watchmen, janitors, and laborers. They are neither armed nor equipped as soldiers, nor until recently had they ever been drilled as such. They are constantly engaged in their duties as janitors in the various departments of instruction, as clerks in the offices of the post adjutant and post quartermaster, and as carpenters, masons, stone cutters, painters, glaziers, plumbers, blacksmiths, laborers, etc.

It is impossible at this large post for these men to become drilled soldiers and at the same time perform the duties for which they were enlisted. Many of them have served from ten to thirty years at West Point, and one of them, Private André Freis, the assistant librarian, now seventy years of age, is in his twelfth enlistment, having been about fifty years in the service and forty-five years connected with the U. S. Military Academy library. Private Freis is a man of the highest character, and has enjoyed the respect and esteem of every graduate of the academy for nearly a half century.

PUBLIC BUILDINGS, ETC.

1.—NEW ACADEMIC BUILDING AND GYMNASIUM.

By the act of Congress approved March 3, 1889, an appropriation was made for a new academic building and a new gymnasium at the U. S. Military Academy.

Upon assuming command of this post I found the subject had received the careful consideration of the Academic Board and that general plans of a very satisfactory character had been prepared by the professor of drawing under the direction of the board.

The sites for the new structures had been selected by the Secretary of War, in accordance with the terms of the law, the new academic building to occupy that of the present one, necessitating the demolition of the latter, and the gymnasium to be situated just west of cadet barracks.

The important character of these new structures demanded, in the opinion of the Academic Board, the attention of an expert architect, as every officer at the academy was fully engaged with his own important duties.

By authority of the Secretary of War Mr. Richard M. Hunt, of New York, an architect of the highest reputation, was at once employed and by March, 1890, satisfactory plans and specifications were completed for the gymnasium and had received the approval of the Secretary of War.

Proposals for constructing the building were invited March 26, but upon opening the bids on April 26 it was found that no satisfactory offer had been received.

New proposals were immediately invited, and at the opening of bids on May 26 the contract was awarded to Mr. John Sheehan, of New Rochelle, N. Y., for a cut-stone masonry structure, complete, for the sum of \$87,800. Work was commenced June 17 and is now progressing quite satisfactorily.

The architect supervises the construction of the building and the United States is also represented upon the work by Capt. Geo. McC. Derby, Corps of Engineers, who makes daily inspections to see that the specifications are strictly carried out.

Under the terms of the contract this building must be completed by June 15, 1891.

Various plans for the new academic building have been submitted by the architect from time to time, but one of which has met with the approval of the Board. The rough estimate for the approved plan, submitted by the architect, exceeded the amount of available funds, but with the hope that the estimate might be reduced by more accurate calculations and a bid received for building the structure which could be accepted, the Academic Board directed the architect to complete the drawings and estimates for the plan which was acceptable, preparing at the same time alternative plans for a building which it seems probable can be constructed for the amount available.

The architect is now engaged upon this work, the new building to occupy the site of the present academic building.

It is hoped that the plans will be prepared and approved at an early day in order that proposals may be invited and the contract awarded during the coming autumn.

2.—NEW BUILDINGS AUTHORIZED BY THE ACT OF JUNE 20, 1890.

During the coming year it is proposed to erect at this post a hospital for enlisted men, new cavalry barracks, a new store-house for quartermaster supplies, a band-practice room, two sets of quarters for commissioned officers, ten sets of quarters for enlisted men, and quarters for a watchman at the south dock.

The cavalry barracks will be located near the riding hall, the officers' quarters between the cadet hospital and the south gate, the quartermaster store-house on the site of the old frame building near the quartermaster's shops, the band-practice room just west of band barracks, the new hospital on the site of the cavalry garden at the western extremity of the post, the enlisted men's quarters on high ground in the vicinity of the post school-house, and the quarters for the watchman near the south dock. Plans and specifications for these new buildings have been prepared and the work will be pushed forward as rapidly as circumstances will permit.

THE BATTLE MONUMENT.

In 1863, during the progress of the war of the rebellion, a subscription was raised for the erection of a monument at West Point, N. Y., in memory of the officers and enlisted men of the regular Army who were killed in action or died of wounds received in action during the war.

Upon assuming command of the Military Academy I found that this fund had accumulated so that the sum of about \$50,000 was available for the monument.

Action was at once taken and, after a careful consideration of the subject, committees were appointed, and it was finally determined to erect a monument upon the plain southwest of and about 100 yards from Trophy Point. Competitive plans were invited from four firms of architects, eminent in the profession. These plans will probably be presented during the month of October, and will be submitted to a committee consisting of four professors of the Military Academy and three distinguished architects or sculptors, who will select that deemed best for the object in view. It is hoped that the monument will be completed before the close of the present fiscal year.

SURVEY OF THE RESERVATION.

At such time as could be spared from his other duties, First Lieut. John Biddle, of the Corps of Engineers, has been engaged during the past year in marking the boundary lines of the reservation.

He has located the corners, measured the boundary lines, and determined their azimuths by connecting with a secondary triangle of the U. S. Coast and Geodetic survey; he has surveyed the boundary lines of the Kinsley addition, replaced the stone monuments at corners of the reservation by old iron guns sunk in the ground to their trunnions, and completed a slashing about 20 feet wide through the woods around the entire reservation.

THE KINSLEY ADDITION.

By the act of Congress approved March 2, 1889, an appropriation was made for the purchase of 225 acres of land directly south of the West Point reservation, known as the estate of the late Edward V. Kinsley. The purchase was finally consummated in the fall of 1889, and the land is now a portion of this military post. There is a large house upon it which is in very poor condition, but which, whenever funds are available, can be made comfortable as quarters for officers, or it might be rented for hotel purposes.

THE CEMETERY.

The West Point cemetery contains not only the remains of officers, cadets, enlisted men, and resident civilians who have died in past years at this post, but is also honored with being the final resting place of some of the most eminent soldiers of the Republic.

I have recently extended its limits by transferring the cadet vegetable garden to the Kinsley addition and including the former site thereof within the cemetery grounds, now containing about 14 acres. Much labor will be required to improve the new portion and make it correspond with the old cemetery, which was highly improved some years since through the energy and skill of Maj. Tully McCrea, of the artillery, who, at the time, was acting as post quartermaster.

It is earnestly hoped that sufficient funds for the work may be obtained at an early day.

WATER-SUPPLY.

The source of the water-supply of the post of West Point is the rainfall on the hills and valleys surrounding the reservoirs.

There are five reservoirs, with capacity as follows:

	Gallons.
1. Round Pond.....	48,000,000
2. Delafield Pond.....	9,000,000
3. Sinclair Pond.....	1,300,000
4. Crow-Nest Pond.....	300,000
5. Cascades Dam Pond.....	500

Only the second, fourth, and fifth are ordinarily used, the other two being held in reserve for emergencies, as they can not be made available without filtering, and even then are not very satisfactory.

Measurements made about two years ago showed the daily consumption to be 359,000 gallons in winter, 247,000 gallons in the spring, and 296,000 gallons in summer. The excess in winter is due to the fact that the supply is ample, and faucets are left open to prevent freezing of the pipes.

During the past month a careful measurement was made of the amount used between 6 p. m. August 7 and 6 p. m. August 14. The result was 1,890,000 gallons, or 270,000 gallons per diem, an average per capita of about 225 gallons.

The reservoirs and the water-house are under the direct control of the instructor of practical military engineering, whose jurisdiction ends at the valves outside the water-house; the post quartermaster assumes charge at the valves and is responsible for the distribution of the water throughout the post.

A description of the water-pipes connecting the various reservoirs and of the various supply-pipes, valves, and hydrants will be found in the interesting report of Capt. George McC. Derby, Corps of Engineers, dated January 17, 1890, submitted herewith, marked C.

During the past year the water-supply has been ample and of excellent quality. It has only been necessary on one occasion to draw upon the reserve at Round Pond, and then only for three days during the latter part of July, 1890.

No extensive repairs were required during the year. The Crow-Nest reservoir was emptied and cleaned and the water was drawn off from Sinclair Pond and a small leak in the dam repaired.

In December, 1889, at my request, careful analyses were made of the drinking water by Prof. S. E. Tillman, of the department of chemistry, mineralogy, and geology, assisted by First Lieut. John P. Wisser, First Artillery, with most satisfactory results.

Professor Tillman concluded his report as follows:

In conclusion I may state that the results of the analyses of the water at this time, considered as a whole and taken in connection with the developments during the analyses, which should always be considered with the results, show that the waters are of excellent quality.

In the spring of 1890 analyses were made by Assistant Surgeon S. Q. Robinson, U. S. Army, of the water of the various springs in the vicinity of the quarters of the enlisted men of the post.

The result of these analyses showed that while the water was not as good, by any means, as that from the reservoirs, it was still good enough for drinking purposes, and Dr. Robinson reported that it was unnecessary to prohibit its use.

PROPOSED ELECTRIC-LIGHT PLANT.

Complaint has been made from time to time of the light furnished for the use of the cadets of the Military Academy, and more or less trouble has occurred in the last few years from injury to eye-sight in studying at night. In order that I might have a plan for a complete electric light and power plant for the Military Academy, Lieut. John Millis, of the Corps of Engineers, a well-known electrical expert, kindly agreed to make a study of the subject and to prepare the necessary plan, specifications, and estimates.

At his own expense Lieutenant Millis visited West Point and spent several days in a careful examination of the locality.

His report, submitted herewith, marked D, is replete with useful and important information, and his estimates are the result of careful investigation.

He very properly states as follows:

The first considerations are, of course, the advantages and the adaptability of the proposed system to the requirements of the cadets and to what may be termed the academy proper.

Of the importance to the Corps of Cadets, a selected class of students, undergoing training and instruction for the military profession, little need be said, particularly when it is remembered that the greater portion of the study which the exacting course of the academy requires must be done by artificial light and that notwithstanding the rigid examinations regarding eye-sight to which candidates are subjected, failures in the course are not infrequent, which are directly attributable to impaired vision.

Lieutenant Millis further reports that—

The plan contemplates a system of electric lighting which, while being adapted to the peculiar conditions now existing, will admit of extension as future needs may require, which will eventually, if not when first established, replace all other methods of illumination in the academy buildings and grounds, and which will also, as a secondary consideration, be adapted to such requirements for the distribution of power as now exist or may arise in the future.

The plan proposes a complete set of electric lights for the cadet barracks and other buildings of the institution, including the academic building, Grant Hall, library, chapel, hospital, riding-hall, gymnasium, observatory, officers' quarters, etc.; also the soldiers' barracks, quarters, reading rooms, and hospital; the hotel, head-quarters building, shops, store-houses, guard-houses, laundries, stables, academy grounds, and the cadet camp.

It will be necessary to construct a central-station building, complete, to contain engine-room, boiler-room, store-room, etc. It is proposed to locate this building near the north end of the tunnel of the West Shore Railroad Company.

The plant will be arranged for 3,500 incandescent lamps of 16 candle-power and 10 arc lamps of 2,000 candle-power each.

The estimated cost of the entire plant is \$69,000 and the cost per annum of running it is placed at \$11,000.

Attention is specially invited to this subject. The plan is brought forward in the interest of the cadets at the U. S. Military Academy, and it is earnestly recommended that Congress may appropriate the necessary funds for the purpose at an early day.

DATE OF ASSIGNING AND RELIEVING OFFICERS AT THE MILITARY ACADEMY.

It has been the custom in years past to make the changes in the details for duty at the U. S. Military Academy so that they may take effect on August 28, four days before the commencement of academic

work. The result has been that the officers, as a rule, do not vacate their quarters until the day they are relieved, while their successors are obliged to quarter their families at considerable expense at the hotel for a short time, and while trying to get settled are also very busy in their efforts to prepare themselves for their duties as instructors.

I recommend that hereafter, except in the department of tactics, the officers whose tours of duty are drawing to a close shall be relieved on August 8 of each year and that the new details be required to report not later than August 15. This will give at least two weeks to get settled before the commencement of the academic year.

CLERKS IN THE OFFICE OF THE POST ADJUTANT AND THE POST QUARTERMASTER.

I respectfully invite attention to the recommendation contained in the report of the Board of Visitors for 1889, in regard to the retirement on three-quarters pay of Mr. Francis Newlands and Mr. William Ward, the clerks in the office of the post quartermaster and the post adjutant.

Mr. Newlands has given the best years of his life to his duties, having served as clerk at the academy for over forty-five years. He is now quite infirm, and it will be an act of simple justice to an old and faithful employé to permit him to retire at once on a pension of \$1,125 per annum, three-fourths of the pay he now receives.

Mr. William Ward has served about forty years at the academy and has rendered valuable service to the institution. He should be accorded the same privilege.

It is recommended that the following be inserted in the Military Academy appropriation bill:

Provided, That Mr. Francis Newlands and Mr. William Ward may each, upon his own application, be retired from active service upon a pension of three-fourths of the pay now drawn by them.

In case Congress deems it best not to permit such retirement or pension, then I earnestly recommend that one additional clerk each be allowed for the adjutant and the quartermaster to assist them in their laborious duties, at a salary of \$1,200 per annum. Provision was made for two such clerks in the Military Academy appropriation bill for the present fiscal year as it passed the House of Representatives, but it was not in the bill when it became a law.

I desire to invite special attention to the estimates submitted for the next fiscal year. They have been prepared under my personal supervision, and there is not a single item that is not deemed by me absolutely necessary for the welfare and prosperity of the Military Academy. I feel justified in urging that they all may receive favorable consideration.

In conclusion I have to express my high appreciation of the earnest, faithful, and intelligent assistance I have received in the discharge of my official duties during the past year from every professor and officer connected with the Academy, and my gratification at being able to report the Corps of Cadets in excellent condition as regards health, discipline, drill, and instruction.

Very respectfully, your obedient servant,

JOHN M. WILSON,

Colonel of Engineers, Superintendent U. S. Military Academy.

The ADJUTANT-GENERAL, U. S. ARMY,
Washington, D. C.

A.

CADET HOSPITAL, U. S. MILITARY ACADEMY,
West Point, N. Y., September 1, 1890.

SIR: In compliance with instructions from your office that I "prepare and submit a statement of the condition and work of the Medical Department of the U. S. Military Academy and Post of West Point, N. Y., during the past year," ending June 30, 1890, I have the honor to submit the following report:

The following medical officers have been on duty during the year, viz:

Maj. H. R. Tilton, surgeon, U. S. Army, post surgeon from beginning of year (July 1, 1889), to February 22, 1890.

Maj. Henry McElderry, surgeon, U. S. Army, post surgeon from February 22, 1890, to end of year (June 30, 1890).

Capt. William L. Kneedler, assistant surgeon, U. S. Army, from beginning of year (July 1, 1889), to March 17, 1890.

Capt. Samuel Q. Robinson, assistant surgeon, U. S. Army, on temporary duty from March 4, 1890, to end of year (June 30, 1890).

Maj. Robert H. White, surgeon, U. S. Army, on temporary duty as post surgeon from April 27, 1890, to June 7, 1890, during the temporary absence of Major McElderry on detached duty in New York City and seven days leave.

Acting Assistant Surgeon William Penn Compton, U. S. Army, from March 18, 1890, to end of year (June 30, 1890).

The duties of the medical officers have been divided as follows, viz: The post surgeon has charge of the Cadet Hospital and sick-call and general administrative affairs of the Medical Department of the Academy and Post and of such officers and their families as may call on him for professional advice. The first assistant has charge of the Soldiers' Hospital and such officers and their families as may call on him for treatment. He also personally examines all recruits enlisted at this post. The second assistant has professional charge of the families of enlisted men and employes living on the reservation.

The following table shows the average strength of the command for the year:

Officers.....	49
Cadets.....	254
Enlisted men.....	333
Civilians (738 Soldiers' Hospital, 367 Cadet Hospital).....	1,105

The following table shows the number of cases treated during the year:

Officers (1 wounded, 31 sick).....	32
Cadets in hospital (58 wounded, 332 sick).....	440
Cadets, approximate number treated not on sick report but excused from some duty.....	1,854
Cadets treated in quarters, not excused.....	2,340
Enlisted men (86 wounded, 448 sick).....	534
Civilians on reservation, men, women and children, treated.....	2,292

The appended tables, marked A and B, show the character of the cases of disease for the year, respectively, among officers and cadets.

Of the total number of cases among civilians on the reservation 466 are recorded at the Cadet Hospital as having occurred among officers' families, the prevailing diseases among whom are recorded as miasmatic diseases, diseases of the respiratory and digestive systems, sewer-gas poisoning, diphtheric scarlitina and varioloid, as shown by table appended marked C. There was one death among this class of patients, an infant thirteen days old.

There were 1,826 cases of disease treated among civilians at the Soldiers' Hospital, and of this number there were 74 cases of contagious disease as follows, viz:

Diphtheria.....	20
Meningitis.....	1
Mumps.....	6
Scarlet fever.....	47
Total.....	74

Deaths..... 19

The other prevailing diseases among this class of patients were miasmatic diseases, diseases of the respiratory and digestive systems, as indicated in appended table marked D. The character of diseases among soldiers is shown in appendix marked E.

There were no deaths during the year among the officers, and but one among the enlisted men.

Two deaths are recorded as having occurred during the year among the Corps of Cadets, viz, one from malarial fever and one from apoplexy.

Twenty-seven births are recorded as having taken place on the reservation during the year.

Two thousand six hundred and twenty-five prescriptions are recorded at the Cadet Hospital as having been put up during the year, 250 for officers and 2,375 for others.

Four thousand and thirteen prescriptions are recorded at the Soldiers' Hospital as having been put up during the year.

One hundred and ninety-six recruits were examined at the Soldiers' Hospital during the year.

One hundred and forty-four vaccinations were performed on the reservation during the year.

The clerical work, dispensing of medicines, cooking and nursing, in the Cadet Hospital and Soldiers' Hospital during the year have been satisfactorily performed by members of the Hospital Corps.

Besides the regular monthly sanitary reports and recommendations forwarded at the end of each month to the post adjutant by the post surgeon and assistant surgeon in charge of Soldiers' Hospital, as required by paragraph 1642, A. R., the following special sanitary reports were forwarded during the year to the post adjutant, viz: August 12, 1889, by Assistant Surgeon Kneedler, regarding overcrowding of certain married soldiers' quarters, and specifying three families as especially overcrowded and deserving of consideration (condition much improved). March 5, 1890, by post surgeon regarding old plumbing fixtures and defective plumbing arrangements in Cadet Hospital (\$2,500 appropriated for the purpose—being \$1,600 less than originally estimated for).

The following sanitary recommendations were made by the medical officers of the post during the year in the regular monthly sanitary reports, viz:

July 31, 1889, by Assistant Surgeon Kneedler: Need of proper water-closet facilities for soldier's families. (Remedied.)

July 31, 1889, by Assistant Surgeon Kneedler: Need of repairs to bath-house in Logtown, for use of soldiers' families. (Remedied.)

July 31, 1889, by Assistant Surgeon Kneedler: Need of extension of water-supply pipes of post to Rugertown for use of families of enlisted men. (Remedied in a great measure.)

January 31, 1890, by Assistant Surgeon Kneedler: Reports concerning bad sanitary condition of privy in rear of cavalry stables. (Remedied.)

March 31, 1890, by post surgeon: Reports concerning the bad sanitary condition of the cadet sinks and officers' quarters from bad plumbing arrangements and old style pan water-closets, without cisterns, the water for flushing being derived direct from the water-pipes; refers to the danger of contaminating the water supply of the post thereby; calls attention to there being no means to properly and systematically flush the sewers of post, and recommends automatic flushing tanks; calls attention to the report and recommendations of the Board of Visitors of 1884, regarding these matters, and recommends that their recommendations be carried out. (Estimates ordered to be prepared for next annual estimate to cover these recommendations.)

The present Superintendent has uniformly approved the recommendations made by the medical officers on duty at the post, and has done all in his power to carry them out. The sanitary condition of the families of enlisted men as to a better water supply and as to overcrowding in their quarters, better privies, etc., has been very materially improved since he assumed charge of the post, and it was by his prompt action that the appropriation for the improvement of the plumbing of the Cadet Hospital was obtained. Much, however, remains to be done to put the post of West Point in a first-class sanitary condition. With this view, estimates have been ordered prepared by the Superintendent to carry out the various sanitary recommendations of the post surgeon for the action of higher authority, and of Congress; and it is hoped that the necessary funds may be promptly provided for this purpose.

When the new Soldiers' Hospital shall have been built, for which \$30,000 has been already appropriated by Congress, and the improvements to the plumbing arrangements in Cadet Hospital shall have been finished as recommended by the post surgeon, and as originally estimated for by the post quartermaster, and with three medical officers stationed at the post, the condition of the Medical Department of the Army at West Point will be in every way satisfactory.

Very respectfully, your obedient servant,

HENRY McELDERRY,
Major and Surgeon, U. S. Army, Post Surgeon.

The POST ADJUTANT,
Present.

Official copy.

J. M. CARSON, JR.,
Second Lieutenant, Fifth Cavalry, Adjutant.

HEADQUARTERS U. S. MILITARY ACADEMY,
September 4, 1890.

APPENDIX A.

Summary of diseases treated in quarters among officers stationed at U. S. Military Academy, West Point, N. Y., from July 1, 1889, to June 30, 1890, both inclusive.

Diseases.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Acute tonsillitis	1				1					1			3
Acute bronchitis				2									2
Acute indigestion					1								1
Sub-acute rheumatism	1	1									1		4
Malarial fever			1							1	1		2
Influenza					1	3	7	4					14
Contusion						1							1
Neuralgia								1					1
Intestinal colic									1				1
Anorexia										1			1
Lumbago										1			1
Acute urethritis												1	1
Total	2	1	1	2	2	5	7	5	1	4	1	1	32

No deaths during the year.

HENRY McELDERRY.

Major and Surgeon, U. S. Army, Post Surgeon.

CADET HOSPITAL, U. S. MILITARY ACADEMY,

West Point, N. Y., July 31, 1890.

Official copy.

J. M. CARSON, JR.,

Second Lieutenant, Fifth Cavalry, Adjutant.

HEADQUARTERS U. S. MILITARY ACADEMY,

September 4, 1890.

APPENDIX B.

Summary of diseases treated in hospital among the Corps of Cadets, U. S. Military Academy, West Point, N. Y., from July 1, 1889, to June 30, 1890.

Diseases.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.	Deaths.
Acute catarrh	2	2	1	1	1	1	1	1	1	1	1	1	10	.....
Acute tonsillitis	1	1	1	1	3	1	4	14	8	1	2	36	8	.....
Acute bronchitis	1	1	3	1	1	1	1	1	1	1	1	1	8	.....
Acute indigestion	2	7	1	5	3	1	1	1	1	1	1	24	1	.....
Intestinal colic	1	3	2	1	2	1	1	1	1	1	1	8	1	.....
Acute diarrhoea	7	1	1	6	1	2	2	2	1	1	1	17	1	.....
Malarial fevers	5	8	8	4	1	2	3	2	1	1	4	39	1	.....
Mumps	1	1	1	1	1	1	6	8	6	2	20	20	1	.....
Scarlet fever	1	1	1	1	1	1	1	1	1	1	1	5	1	.....
Diphtheria	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
Rheumatism	3	2	1	1	1	1	1	1	1	1	1	9	1	.....
Headache	3	1	1	2	3	2	3	7	7	6	34	3	1	.....
Syncope	1	1	1	1	1	1	1	1	1	1	1	3	1	.....
Apoplexy	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
Rhus poisoning	1	1	1	1	1	1	1	1	1	1	1	3	3	.....
Conjunctivitis	1	1	1	1	1	1	1	1	1	1	1	8	1	.....
Odontalgia	1	1	1	1	1	1	3	1	1	1	1	9	1	.....
Boils	4	3	2	3	3	7	2	2	4	2	32	6	1	.....
Exhaustion	2	2	1	1	1	1	1	1	1	1	6	6	1	.....
Piles	1	1	1	1	1	1	1	1	1	1	2	2	1	.....
Vaccina	1	4	1	1	1	1	1	1	1	1	4	4	1	.....
Neuralgia	1	2	1	1	1	1	1	1	1	1	1	9	1	.....
Skin diseases	1	2	2	1	1	1	1	1	1	1	1	4	1	.....
Hæmoptysis	1	1	1	1	1	1	1	1	1	1	1	2	1	.....
Influenza	1	1	1	1	1	21	50	5	1	1	76	76	1	.....
Insomnia	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
Ulcerated sore throat	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
Enlarged glands	1	1	1	1	1	1	1	1	1	1	1	2	1	.....
Phthisis pulmonalis	1	1	1	1	1	1	1	1	1	1	1	2	1	.....
For disinfection	1	1	1	1	1	1	1	1	1	1	1	3	1	.....
Vertigo	1	1	1	1	1	1	1	1	1	1	1	2	1	.....
Orethritis	1	1	1	1	1	1	1	1	1	1	1	1	1	.....
Total	31	35	18	17	26	38	68	32	41	24	32	20	382	.....
Injuries	8	5	5	8	3	5	3	6	3	7	5	58	58	.....
Total	39	40	18	22	34	41	73	35	47	27	39	25	440	2

HENRY McELDERRY,

Major and Surgeon, U. S. Army, Post Surgeon.

CADET HOSPITAL, U. S. MILITARY ACADEMY,
West Point, N. Y., July 31, 1890.

Official copy.

J. M. CARSON, JR.,
Second Lieutenant, Fifth Cavalry, Adjutant

HEADQUARTERS U. S. MILITARY ACADEMY,
September 4, 1890.

APPENDIX C.

Summary of cases treated among civilians attached to the command recorded at the Cadet Hospital, U. S. Military Academy, West Point, N. Y., from July 1, 1889, to June 30, 1890, both inclusive.

[Prevailing diseases were: Miasmatic diseases, diseases of respiratory and digestive systems; sewer gas poisoning, 13; diphtheretic scarletina, 1; varioloid, 1.]

July	61	February	42
August	40	March	27
September	33	April	16
October	59	May	14
November	34	June	12
December	58		
January	70	Total	466

One death occurred during the year, on April 28, 1890, age thirteen days; child of Lieutenant Rowan, U. S. Army.

HENRY MCELDERRY,
Major and Surgeon, U. S. Army, Post Surgeon.

CADET HOSPITAL U. S. MILITARY ACADEMY,
West Point, N. Y., July 31, 1890.

Official copy.

J. M. CARSON, JR.,
Second Lieutenant, Fifth Cavalry, Adjutant.

HEADQUARTERS U. S. MILITARY ACADEMY,
September 4, 1890.

APPENDIX D.

List of diseases occurring among civilians who received medical treatment from the Soldiers' Hospital, West Point, N. Y., during the fiscal year ending June 30, 1890.

Contagious diseases.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Diphtheria					6			13	1				20
Meningitis	1												1
Mumps					2	1	1	2					6
Scarlet fever		3		3	4	7	17	1	2	10			47
Total	1	3		3	12	8	18	16	3	10			74

Number of deaths occurring among diseases enumerated above, 19.

Prevailing diseases were: Miasmatic diseases, diseases of the respiratory and digestive systems, and contagious diseases. The latter, although separately given, are included in the total. (See No. 5.)

Respectfully submitted.

WM. FITZHUGH CARTER,
Captain and Assistant Surgeon, U. S. Army.

SOLDIERS' HOSPITAL,
West Point, N. Y., August 9, 1890.

Official copy.

J. M. CARSON, JR.,
Second Lieutenant, Fifth Cavalry, Adjutant.

HEADQUARTERS U. S. MILITARY ACADEMY,
September 4, 1890.

APPENDIX E.

List of diseases occurring among enlisted men treated in hospital and quarters, at Soldiers' Hospital, West Point, N. Y., during fiscal year ending June 30, 1890.

Diseases.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total.
Abscess					1	1	2		1	1		6	12
Amblyopia, and hypermetropia											2	1	3
Acute bronchitis		1	5	6	5	4		2	4	5	1	3	36
Acute catarrh			2	1									3
Acute conjunctivitis	1								1	1	4	2	9
Acute cystitis	1							1	1				4
Acute diarrhea	3		1			1		6	3			1	17
Acute dysentery	1							1					2
Acute dyspepsia		1			2							3	6
Acute gastritis	1	3							2				6
Acute orchitis		1							2				3
Acute pharyngitis												1	1
Acute rheumatism	1	3	2	5		4		3	1	1	2	4	26
Acute tonsillitis		2	2	1	2	3	1	1	4	1	2	1	20
Carbuncle					1								1
Cholera morbus	6	2											8
Colic	7	2	4			1			2	1	1	4	22
Constipation					1					1			2
Coryza				1									1
Dermatitis (rhus)	1										3	1	5
Epilepsy							1						1
General debility					1						1		2
Gonorrhoea										1	1		2
Headache			1		1				2			6	10
Hemorrhoids	1					1						1	3
Hyperidrosis												2	2
Inflammation, lachrymal canal												1	1
Inflammation, spermatic cord									1				1
Influenza							129	7					136
Lumbago			2		1							2	7
Malarial fever	10	9	3	2	1	3		2		4	1	4	37
Neuralgia			1		1	1			1				4
Otitis	1											1	2
Pleurisy										1	1		2
Pleurodynia									1				1
Pneumonia				1						1	1		3
Poisoning by sewer air		1											1
Remittent fever			1	1									2
Scleratitis													1
Skin diseases	1	1	1	3		3	2	2	4		4		21
Torticollis								1				1	2
Vaccina										2	17		19
Vertigo									1				1
Total diseases	35	26	25	22	17	23	134	19	37	23	41	46	448
Injuries	3	6	5	7	4	4	5	6	2	13	6	25	88
Total treated	38	32	30	29	21	27	139	25	39	36	47	71	534

Number of deaths occurring among diseases enumerated above, 1.

Respectfully submitted.

WM. FITZHUGH CARTER,
Captain and Assistant Surgeon, U. S. Army.

Official copy.

J. M. CARSON, JR.,
Second Lieutenant, Fifth Cavalry, Adjutant.

HEADQUARTERS U. S. MILITARY ACADEMY,
September 4, 1890.

B.

WEST POINT, N. Y., *October 22, 1889.*

SIR: Agreeably to a verbal invitation of the Superintendent, I have the honor to submit a few facts and suggestions regarding artillery matters at the Military Academy.

The artillery equipment used by the cadets belongs exclusively to the instructor of ordnance. As far as quantity is concerned it is ample, but its pattern is obsolete.

At the sea-coast battery the cadets use three 8-inch M. L. rifles (converted 10-inch S. B. Rodman guns), two 15-inch S. B. Rodman guns, and one 13-inch mortar. No two of the pieces in this battery are mounted on carriages of the same pattern, which fact renders a uniform system of instruction impossible. For effective work here guns of the same class should be mounted on carriages modern and uniform in construction.

At the siege battery instruction is entirely suspended this month, for the reason that the present armament of 30-pounder Parrott rifles was, in April last, condemned, and new 4.5-inch cast-iron siege rifles recommended to replace it have but just been supplied.

At the mortar battery the armament consists of three 10-inch and three 8-inch mortars. Were all the pieces at this battery uniform in caliber (10-inch) the instruction would be more systematic and satisfactory.

The field artillery consists of two batteries of 3-inch M. L. rifles (six guns each) and one battery of six 12-pounder (Napoleon) guns. One of the 3-inch batteries, when manned and horsed by cavalry soldiers and horses, is used in the instruction of cadets, as a mounted battery. The harness for this battery is under the exclusive care and control of the instructor of cavalry tactics.

All of these batteries, together with the implements and equipments pertaining thereto, should belong exclusively to the tactical department.

The enlisted men who act as drivers at mounted artillery drill belong to the cavalry detachment. They are totally uninstructed in all that pertains to artillery, and it is impracticable to so instruct them. As artillery soldiers they are negative quantities and entirely beyond the control of the instructor of artillery in the matter of progressive instruction and continuous discipline.

The horses used at the drill are purchased with an exclusive view to their adaptability to cavalry purposes. They are too small and light for battery work aside from the fact that for the greater part of the year they are promiscuously ridden by two hundred inexperienced boys.

The various uses to which they are, sometimes daily, subjected tends to, and to a great extent does, unfit them for satisfactory work as either artillery or cavalry horses, the training for the one purpose undoing the labor expended on them to make them efficient for the other. A fair degree of efficiency must be attained on the part of drivers and horses before the instruction proper of the cadet can begin, and much time is lost at each season's drill in an endeavor to approximate to this point.

This is all the more important because of the limited time allotted for the instruction of cadets in the practical duties of artillerymen. In the spring and fall of the year (April and October), leaving out Saturday and Sunday, the maximum number of drills in either does not exceed twenty-three, and on account of the variability of the weather rarely as many can be had. The first class attends in squads of eleven each drill-day. In the present class there are fifty-five members, so that at most each member will attend four drills during the month. Each must in turn occupy and be instructed in the duties of "platoon," "section," and "line" commander and "guidon." A very simple calculation will here serve to demonstrate the amount of knowledge attained by the cadet in the duties of any one of these positions at the end of the season's drill. The summer season (a part of July and August) of six drills a week is slightly more favorable during the last; the maximum number of drills attended by any one cadet of the first class was eight, the minimum two.

This, I think, will suffice to make clear the necessity for a radical change in the status of the artillery as a co-ordinate branch of instruction at the Military Academy. Its status should be an independent one in all respects and not, as now, dependent on two departments, one remotely the other in no way related to practical artillery. To put the mounted battery on an independent basis I would suggest a distinct detachment of artillery soldiers and horses, having the same status as the company of engineers and detachment of cavalry now attached to the Academy, sufficient in number to man and horse a six-gun battery and to perform such other artillery duties as may be necessary at the batteries of position. This would, of course, necessitate the erection of barracks, stables, gun-sheds, etc., for which the recently acquired land on the south may be available.

Another idea has frequently occurred to me, that is, the stationing at this post of one of the regular batteries (mounted), but the practicability and advisability of

this are questions in my mind. The commander of a regular mounted battery is a fairly independent officer. He would bring with him a full complement of subaltern officers, themselves attached to his battery for instruction. The introduction of this body of officers remotely, if in any degree, feeling themselves a part of the institution, would it be conducive to the best interests of the Academy? The colonel to whose regiment such battery belonged might feel his prerogatives endangered. All things considered, I favor the independent detachment; to belong exclusively to the Military Academy.

It may not be amiss to mention here the fact that a new light artillery drill-book is now in the hands of the Public Printer, the issue of which, by authority of the War Department, may be reasonably expected before the close of the year. This will relegate our antiquated field guns and carriages to oblivion, and deal only with the new 3.2-inch B. L. steel rifle mounted on a steel carriage. In anticipation of this, I would suggest that requisition be made on the Ordnance Department for two batteries of the new rifles at once, to replace the two old 3-inch batteries. The battery of 12-pounders should be retained for saluting purposes.

Very respectfully, your obedient servant,

J. D. C. HOSKINS,

First Lieutenant, Third Artillery, Senior Assistant Instructor of Artillery Tactics.
The ADJUTANT U. S. MILITARY ACADEMY,
West Point, N. Y.

[First indorsement.]

HEADQUARTERS UNITED STATES CORPS CADETS,
West Point, N. Y., October 24, 1889.

Respectfully forwarded to Headquarters U. S. Military Academy. The views herein expressed are approved. The subject has been advanced time and again.

So much as refers to the horses and enlisted men of the mounted detachment accords with representations repeatedly made by the senior assistant instructor of cavalry, to whose communications on this and kindred subjects, probably on file at post headquarters, attention is respectfully invited.

Considering the amount of hard work required of the enlisted men of the mounted detachment, it is thought highly creditable to them that they should be found as capable as they are at light battery drill. A separate artillery detachment, composed of soldiers and not laborers, is much needed, and it is desirable that they be not a part of any regiment, thus doing away with the necessity of providing quarters for additional officers and their families.

H. S. HAWKINS,

Lieutenant-Colonel Twenty-third Infantry, Commandant of Cadets.

A true copy.

J. M. CARSON, JR.,

Second Lieutenant, Fifth Cavalry, Adjutant U. S. Military Academy.

C.

WEST POINT, N. Y., *January 17, 1890.*

SIR: In accordance with instructions contained in your letter of the 31st ultimo, I have the honor to submit the following answers to your inquiries in regard to the water supply of this post:

I.—*Length, character, and dimensions of pipes connecting Round Pond, Sinclair reservoir, Cro' Nest reservoir, and Cascade reservoir with Delafield reservoir.*

	Cast-iron pipe.	Dimensions.
	<i>Feet.</i>	<i>Inches.</i>
Round Pond to Delafield reservoir.....	20,698	6
Cascade to point on Round Pond pipe-line 7,558 feet from Delafield reservoir.....	150	6
Cro' Nest reservoir to water-house.....	4,125	6
Sinclair reservoir to Cro' Nest pipe.....	150	4
From Delafield reservoir to filter-house.....	390	12
From point 160 feet above water-house on the Cro' Nest pipe, to filter.....	90	6
From point 400 feet above Delafield reservoir to filter-house.....	246	4

About 60 feet from filter-house the 12-inch pipe, leading thereto from Delafield reservoir, is divided into two branches, one of which (a 6-inch cast-iron pipe) runs into

the filter-house, and the other (a 4-inch cast-iron pipe) is fitted with valves and connections to carry water either to the water-house or direct to the post in case of fire.

II.—*Number, length, and dimensions of all supply pipes running from Delafield reservoir or any other distributing reservoir for actual supply purposes.*

(1) From water-house to northwest angle of cadet barracks, 3,559 feet cast-iron pipe, 12-inch.

(2) A 7-inch cast-iron pipe is connected by a coarse joint with the 12-inch pipe from water-house at a point near Lieutenant Dodds' quarters; the side of the cross towards the cemetery being connected with a 4-inch cast-iron pipe running in that direction.

The 12-inch main pipe turns and runs down the road parallel with the 7-inch main from cross joint until the northwest corner of the cadet barracks is reached, where they are again united.

From opposite northwest corner of cadet barracks to a point opposite Mr. Newland's quarters, 2,325 feet cast-iron pipe, 7-inch.

Camptown is supplied on the side next the river, except the hospital buildings, by a 1-inch lead pipe running from a well opposite the soldiers' hospital. The other side of the street and the hospital are supplied by a 1½-inch iron pipe tapped on a 4-inch branch from Professor Michie's quarters, near cavalry barracks.

A 2-inch cast-iron pipe tapped on 7-inch main near Lieutenant Dodds' quarters supplies water to the engineer barracks. The 4-inch pipe to the cemetery is tapped in two places, near the top of Laundry Hill by a 2-inch pipe to supply water to Logtown and the laundry, and a few feet east of that point by a 1½-inch pipe to supply the new quarters east of Logtown. The houses at the north end of Logtown are supplied by a 1-inch galvanized-iron pipe from near the quarters occupied by Sergeant Malone of the artillery detachment.

Each of these supply pipes is fitted with a stop-cock of appropriate size to shut off the water in case of need.

A 4-inch pipe (cast-iron) from 7-inch main at academic building to northwest corner of chapel, and running thence to West Point Hotel, 1,500 feet.

Cadet and artillery gardens are supplied by a line composed of pipe of sizes from 4-inch to 1½-inch, running from Cro' Nest pipe near magazine. Engineer garden is supplied by 2-inch wrought-iron pipe, tapped on Cro' Nest pipe 100 feet from dam. Each of these pipes has a stop-cock near point where it taps the supply pipe.

III.—*The number of valves, dimensions and locations, Round Pond pipe, including Cascade and filter-house connections.*

	Valves.	Inches.
At Cascade dam	1	6
On 4-inch pipe connecting Round Pond pipe line with filter at a point 400 feet above Delafield dam	1	4
Below this connection on Round Pond pipe	1	6
Cro' Nest and Sinclair:		
At a point 50 feet from Cro' Nest dam	1	6
At a point 50 feet from Sinclair dam	1	4
At "Y" where Cro' Nest and Sinclair pipe separates into two branches 160 feet	2	6
Above water-house:		
Waste pipe from filter	1	6
Waste pipe from water-house	1	6
In valve-house between Delafield reservoir and the filter-house	1	*7
On 6-inch branch of 12-inch pipe from Delafield reservoir to filter	1	12
On 4-inch branch of 12-inch pipe from Delafield reservoir to water-house close to water-house wall	1	6
On above 4-inch branch to control direct supply to post 10 feet from center of west wall of water-house	1	4
On same branch where it turns to connect with 12-inch supply pipe from water-house about 40 feet southeast of house	1	4
On 12-inch pipe (main) about 40 feet from end wall of water-house	1	12
On 4-inch pipe to cemetery, about 40 feet above cross-joint, near Lieutenant Dodds' quarters	1	4
Twelve feet below turn near cross-joint on 12-inch main	1	12
At northwest corner of cadet barracks, to close 12-inch main where it connects with 7-inch main through a short length of 8-inch pipe	1	12
On 7-inch main opposite interval between Lieutenant Biddle's quarters and northwest corner of cadet barracks	1	8
Opposite north end of cadet mess-hall	1	7
Opposite north end of old hospital	1	7
On 4-inch main to hotel, from chapel at northwest corner of chapel	1	4

* The 7-inch valve is for letting off waste from Delafield reservoir.

† Stop.

‡ Closed except when water-house is empty or in case of fire.

§ This valve is closed.

IV.—Number of hydrants and location.

	Hydrant.
On 4-inch pipe to cemetery :	
Near Lieutenant Dodds' quarters	1
On upper road above laundry	1
On upper road near junction of road from laundry	1
On road to cemetery, opposite Sergeant Malone's quarters in Logtown	1
On sidewalk opposite Professor Andrews' quarters	1
At Colonel Wilson's quarters	1
At Captain Williams' quarters	1
Near east end of cadet barracks	1
Between east door and northeast corner of academic building	1
Between officers' mess and new hospital	1
At Colonel Winthrop's quarters	1
At Mr. Newland's quarters	1
On 4-inch pipe from chapel connecting with 7-inch main at corner of academic building :	
At West Point Hotel	1
On 4-inch pipe connecting with 7-inch main at Professor Michie's quarters :	
Between soldiers' chapel and artillery barracks	1
At southeast corner of cavalry barracks	1
On 12-inch main :	
At Professor Andrews' quarters, crest of slope	1
At Colonel Wilson's quarters	1
At Captain Williams' quarters	1
Total	18

The exact point where my jurisdiction ends and that of the quartermaster commences has never been officially determined by orders from headquarters. My understanding of it is, however, and I believe Captain Williams is of the same mind, that I bring the water on the post and he distributes it, and that my jurisdiction ends at the valves around the water-house.

All of the information herein given relating to mains and hydrants for the distribution of the water supply after leaving the water-house has been compiled from statements made by Mr. Richards, who was directed by the quartermaster to furnish me the data called for in your letter of the 31st ultimo, his office not having time to make the compilation.

Very respectfully, your obedient servant,

GEO. MCC. DERBY,

Captain of Engineers, in charge of Water Supply.

The ADJUTANT OF THE ACADEMY.

A true copy.

J. M. CARSON, JR.,

Second Lieutenant, Fifth Cavalry, Adjutant U. S. Military Academy.

D.

UNITED STATES GENERAL LIGHT-HOUSE DEPOT,
OFFICE OF U. S. LIGHT-HOUSE ENGINEER, THIRD DISTRICT,
Tompkinsville, N. Y., May 31, 1890.

SIR: In compliance with your request, I have the honor to submit the following outline plan, estimates, and specifications for an electric light and power-plant for the U. S. Military Academy at West Point, N. Y.

The plan proposed contemplates a system of electric lighting which, while being adapted to the peculiar conditions now existing, will readily admit of extension as future needs may require; which will eventually, if not at first established, replace all other methods of illumination in the Academy buildings and grounds, and which will also, as a secondary consideration, be adapted to such requirements for the distribution of power as now exist or may arise in the future.

With the above objects in view, the estimates comprise, first, a complete system of electric lamps for cadet barracks and other buildings of the Academy where artificial lights are used, including the academic building, the cadet mess-hall, the library the chapel, the cadet hospital, the riding hall, the gymnasium, the observatory, and the bath-room, sinks, etc.

There are also included electric lamps for the soldiers' barracks, quarters, reading and amusement rooms, and soldiers' hospital; for the officers' mess-hall and quarters, for the quarters of civil employés, for the hotel and headquarters building, for the various shops, store-houses, guard-houses, laundries, stables, etc., and for lighting the Academy grounds and the cadet camp.

The electric plant necessary to operate such a system of lights would, in addition, furnish a very advantageous and economical method of distributing mechanical power by means of electric motors to the various work-shops, laboratories, etc., where steam-engines or other motors are now employed or where power may be eventually required.

The first considerations are of course the advantages and the adaptability of the proposed system to the requirements of the cadets and to what may be termed the Academy proper. Of the importance to the Corps of Cadets—a selected class of students undergoing training and instruction for the military profession—of the most perfect known method of artificial illumination little need be said, particularly when it is remembered that a greater portion of the study which the exacting course of the Academy requires must be done by artificial light, and that, notwithstanding the rigid examinations regarding eye-sight, to which candidates for admission are subjected, failures in the course which are directly attributable to impaired vision are not infrequent. It is now generally conceded that the incandescent lamp is the most perfect known device for interior illumination and particularly for purposes of reading and study. Its great superiority over gas, oil, or other lamps as regards safety from fire, the favorable color of the light, and particularly its freedom from heat and unhealthy products of combustion, are now too well known to require detailed explanation here.

Since the majority of the lamps to be established are for interior illumination, the proposed plant will of course consist mainly of the incandescent system, and the conditions are such as to render the "central-station" plan best adapted to the requirements, as the buildings to be lighted are considerably scattered and there are not sufficient number of large separate buildings to justify establishing several separate or "isolated" plants.

A single station for all the generators and the steam power being decided upon, its location is determined by the following considerations: It should be easy of access from the river and from the railroad, in order to facilitate the delivery of machinery, coal, and other materials and supplies, and it should also be placed where there is a supply of water, where ashes may be readily disposed of, and where the unavoidable dirt, smoke, and noise of the machinery will not be objectionable. A central location with respect to the buildings to be lighted is of course desirable.

An examination shows that there is no existing building on the reservation fulfilling these conditions which is also of sufficient size and adapted to the other requirements of a central station, and it is therefore proposed to erect a new building on a site west of the railroad track and near the northern end of the tunnel. It is believed that this location offers a better combination of favorable conditions and fewer unfavorable ones than any other site available.

With the central station at this point, the cadet barracks and Academy proper will be at a distance of about half a mile. The hotel and the "center of distribution" for the officers' quarters north of cadet barracks will be about a quarter of a mile distant. The center of distribution for the officers' quarters south of cadet barracks will be at a distance of three-quarters of a mile, while that for the soldiers' barracks and quarters, the soldiers' hospital, etc., will be only an eighth of a mile from the station.

The most distant lamps will be those at the south guard-house and in the officers' quarters near by, which are about 1 mile from the site proposed for the central station.

For a large incandescent plant, where the lamps are so widely scattered and where conductors of such varying lengths are required, the "direct" or continuous current system is not well adapted, since for the long circuits very heavy conductors would be necessary in order to insure uniformity in the brightness of the lamps and economical working, a number of generators would have to be employed, each adapted to a group of lamps requiring about the same length of circuit. It has therefore been decided to adopt the "secondary" or alternating current system throughout, in which the above objections are mainly obviated. The secondary system will afford sufficient flexibility to meet the requirements of the service, while for long circuits it is more economical in first cost of line construction and in expense of operation.

The estimate of the total number of lamps required is based upon the number of gas-burners now in use, which is 2,745. Besides the gas-burners there are also employed in the soldiers' barracks and other buildings a considerable number of oil lamps, which it is proposed to replace by electric lamps, and in the cadet barracks it is proposed to put two lamps in each room where only one gas-burner has been furnished heretofore. The new academy and gymnasium buildings will also require additional lights, and a number of the existing gas-lamps, particularly those used for

lighting the grounds, will be replaced by electric lamps of greater power than the standard 16 candles. It is also probable that in establishing the new system more efficient lighting will be called for in other localities where gas or oil is now used, requiring more burners than are now employed, so that the estimate is made for a total of 3,500 16-candle lamps, of which it is calculated that the greatest number that will be in operation at any one time will not exceed 2,000.

The central station building is to be a plain brick structure with brick chimney and metal or slate roof, and while not intended to be fire-proof it will not be easily combustible. It is to have a room for the engines and electric apparatus, a separate boiler-room, rooms for oil, stores, etc., and a coal-shed. Owing to the great irregularity of the service required, both the steam-power and the electric generators will have to be designed for unusual "flexibility." During the summer encampment the lamps in cadet barracks and in many other of the academy buildings, as well as a large portion of those in the officers' quarters, will not be used, while the demand for lights at the hotel and in the cadet camp will of course be greater than at other times of the year. In the winter season, when the total number of lamps in use will be greatest, the number in operation at different times of the night will be exceedingly variable.

The maximum "load" will begin soon after the return of the cadets from supper and will continue till "taps," when a large number of lamps are extinguished and the load will be greatly diminished. A considerable number will be required in officers' quarters, etc., until midnight, but comparatively few, including those used for lighting the grounds and in certain hallways in hospitals, etc., will be operated all night. For a service of such a variable nature a number of generators with engines and boilers to correspond are evidently preferable to one or two generators of large capacity with large power units, and for this reason the high-speed, non-condensing type of engine with direct belting to the dynamos is recommended; though, for a plant of this size where the service is more regular, compound condensing engines or engines of the Corliss type would be the more economical, as the greater first cost would be over-balanced by the saving in cost of fuel and other operating expenses.

For cadet barracks the importance of an uninterrupted service is such that this circuit should have its special generating apparatus, which should be in duplicate, but it will not be necessary to provide special duplicate engines, since there will always be a reserve of power, and interruptions due to accidents to the steam apparatus are not so liable to occur. Three boilers are provided for, one of which is ordinarily to be held in reserve. Should it be necessary other less important circuits could be shut off in order to keep the lamps at cadet barracks in operation.

For the generators to operate the other circuits, duplicate armatures only are contemplated.

For the outside circuits in general overhead wires supported on poles will be used, since it is not believed that the requirements are such as to justify the increased expense of underground conduits, except perhaps in a few special localities. Conductors are to be covered throughout with best gum insulation, and poles, cross-beams, brackets, etc., are to be smoothly finished and painted. The very best methods and machinery known for overhead-line construction will be required in order to insure safety and reliability in the circuits.

All interior wiring is to be "concealed work" wherever practicable, and where not, molding strips are to be used to cover the wires. No "cleat work" or exposed wires is to be permitted, except in basements and other special localities where the conditions may render this method of wiring preferable. For each cadet-room it is proposed to supply two portable adjustable table lamps with flexible conducting cords and shades. This will give each cadet a light for his individual use and under his individual control, and in case one lamp becomes extinguished no great inconvenience will result.

In other cases where practicable the lamps are to be placed on existing gas-fixtures without interfering with the use of the gas. In the new buildings to be erected and in certain other cases, new fixtures adapted to the electric lamps alone will be required.

A small arc light plant for lighting the riding hall and for other uses where arc lamps may be required is included and a number of motors are provided for.

A complete outfit of measuring and test instruments will also be furnished with the apparatus.

Assuming that the work is to be done by contract, it is recommended that separate advertisements be issued for the station building, for the steam-power apparatus, and for the electric plant complete, respectively. The specifications conform to this recommendation, and they prescribe the methods of inspection and test of all material and apparatus during construction, and the final test of the completed plant in operation before acceptance.

The estimates of cost are based upon the best information obtainable, from the experience of this office in similar work, and from consultation with reliable companies

engaged in the business. These estimates are necessarily somewhat general in their nature, but they are believed to be at least approximately correct, and it is probable that the actual cost will fall within the amounts given if competition is secured by the usual advertisements inviting proposals.

I desire to acknowledge the many courtesies extended to me by Capt. C. W. Williams, quartermaster of the Academy, who has supplied complete information concerning the present gas plant, and in many other ways facilitated the preparation of this report.

Very respectfully, your obedient servant,

JOHN MILLIS,
First Lieutenant of Engineers, U. S. Army.

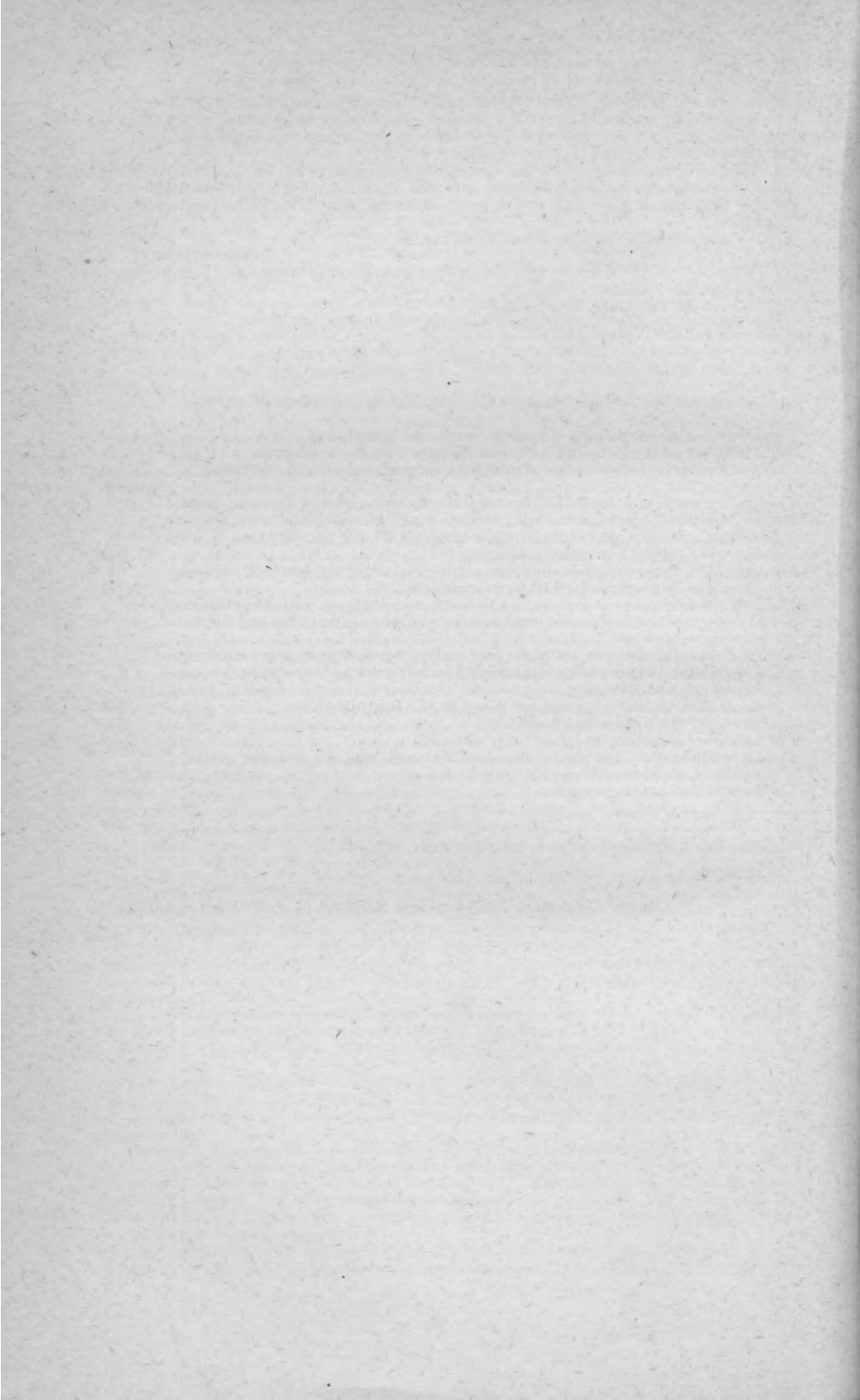
Col. JOHN M. WILSON,
*Corps of Engineers, U. S. Army,
Superintendent U. S. Military Academy, West Point, N. Y.*

Estimate for electric-light plant for the U. S. Military Academy, West Point, N. Y.

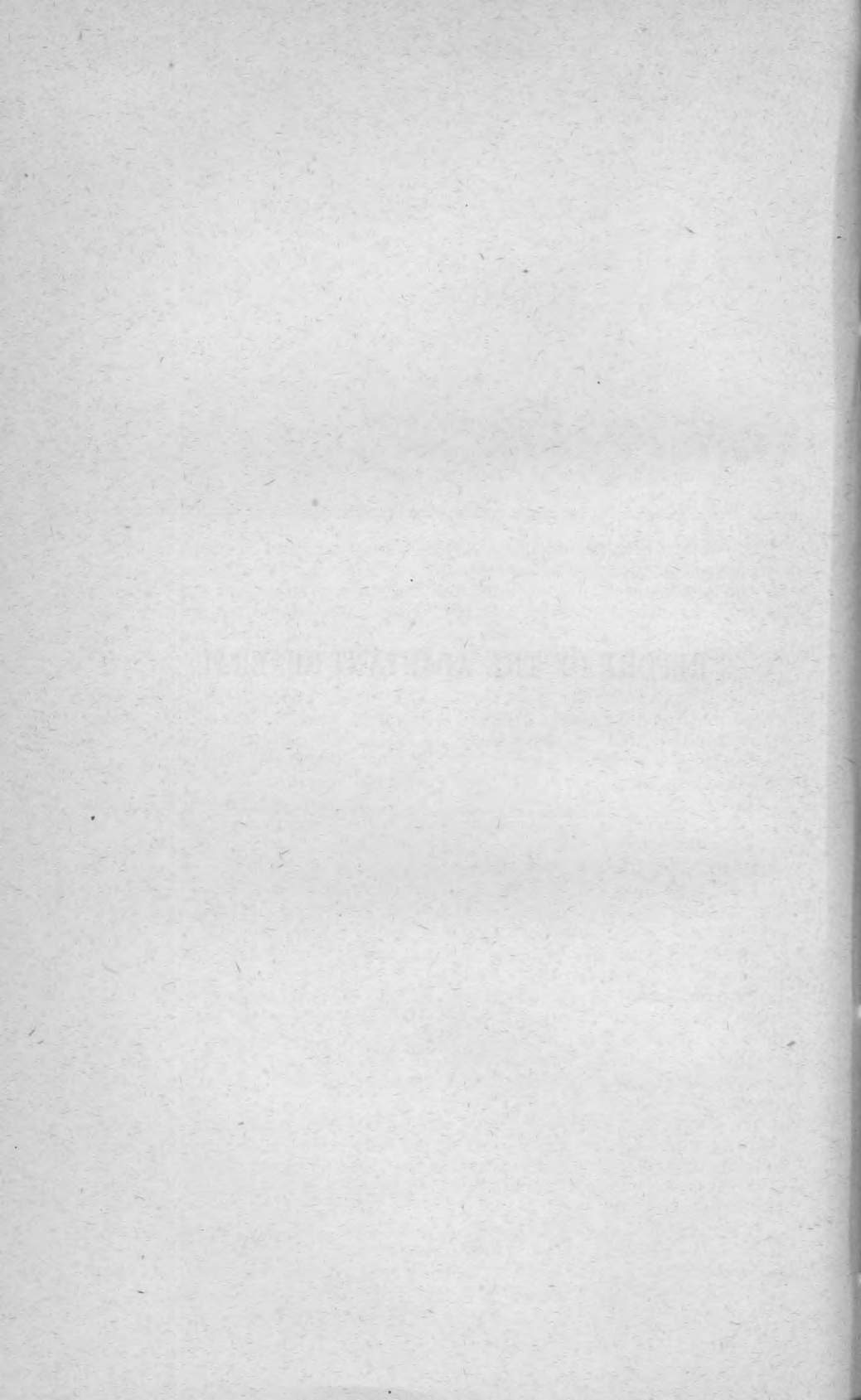
Total number of lamps of 16-candle-power to be established.....	3,500
Total number of arc lamps of 2,000 candle-power to be established.....	10
Greatest number of incandescent lamps to be operated at any one time.....	2,000
<hr/>	
For brick central station building complete, to contain engine-room, boiler-room, coal shed, store-rooms, etc., to have brick chimney and non-combustible roof covering, and including grading and filling, construction of necessary road-piping for water supply, etc	\$7,500
For three 100 horse-power boilers and setting, with pump, heaters, chimney connections, piping, and all fixtures complete.....	6,000
For two 100 horse-power and one 60 horse-power engines, with foundations complete, steam and exhaust connections and piping, belting, and all fixtures and accessories.....	7,500
For two 750-light and two 500-light alternating current dynamos with exciters, regulators, switch-board and switches, cut-outs, safety apparatus, test instruments, and all wiring, connections, and electrical apparatus of all kinds connected with the incandescent plant at the central station.....	8,500
For ten-lamp arc-light plant complete	1,100
For outside conductors and pole lines complete	6,500
For all incandescent lamps, shades, and fixtures, and all interior wiring, converters, and connections for 3,500 lamps	28,000
For motors and contingencies	4,000
<hr/>	
Total.....	69,100
Estimated operating expenses, total per year, \$11,000.	

A true copy.

J. M. CARSON, JR.,
Second Lieutenant, Fifth Cavalry, Adjutant U. S. Military Academy.



REPORT OF THE ADJUTANT-GENERAL.



ANNUAL REPORT
OF
THE ADJUTANT-GENERAL.

WAR DEPARTMENT,
ADJUTANT-GENERAL'S OFFICE,
Washington, October 7, 1890.

SIR: I have the honor to submit the annual report of this office for the year ended September 30, 1890.

MILITARY COLLEGES

The data in the statement herewith, tabulated from the reports of the officers performing the duties of professor of military science and tactics at the enumerated universities and colleges, give gratifying evidence of the increasing interest manifested by the college authorities in a course of studies and exercises that, in addition to imparting military knowledge, tend so directly to develop obedient submission to authority and manliness of deportment.

The average number of students over fifteen years of age attending these institutions during the past scholastic year was 11,649, of whom 811 attended artillery drills and 5,014 infantry drills. The total number of pupils reported as having received military instruction during the last quarter of the school year is 6,005.

One of the obstacles, pointed out in former reports, to a thoroughly satisfactory military department (fewness of number of students) is steadily decreasing. While, in the last annual report on this subject, at twelve institutions the average attendance of students of suitable age was less than 100, and at five of them it fell below 50, it is gratifying to note that only nine colleges have less than 100, and but three where the average attendance falls below 50.

The aptitude of students for military studies and exercises is very good and, in the great majority of cases, is stimulated by the active interest manifested by the respective faculty of the universities and colleges; but there still remains a few instances where the latter exhibit only moderate or small interest in the military department, evidencing on their part a lack of appreciation of the advantages offered them by the law authorizing the detail of officers of the Army as military professors.

The best results will not be obtained until each university or college favored with an army detail makes military drill and instruction compulsory upon all male students of proper age who are physically able and, in addition, provides adequate facilities for in-door drills during the winter months.

It is suggested that officers acting as military professors be not relieved from duty earlier than two weeks after the arrival of their successors, in order to relieve the latter from the embarrassing uncertainty consequent on their entry upon routine work for which no rules are laid down.

Tabulated statement from reports of professors of military science and tactics, showing average attendance of students at universities and colleges.

Universities and colleges.	Average number of students.			Attendance at—		Total number that received military instruction during the last quarter.	Aptitude of pupils.	Interest manifested by—	
	Over 15 years of age.	Under 15 years of age.	Total.	Artillery drills.	Infantry drills.			Students.	Faculty.
Agricultural and Mechanical College, Auburn, Ala.....	223	7	230	67	172	192	Fine.....	Very satisfactory...	Fair.
Arkansas Industrial University, Fayetteville.....	216	13	229	.....	144	144	Good.....	Good.....	Good.
University of California, Berkeley.....	270	.....	270	.....	192	235	Very good.....	do.....	Fair.
Agricultural College of Colorado, Fort Collins.....	41	2	43	37	37	47	Good.....	do.....	Excellent.
Sheffield Scientific School of Yale University, New Haven, Conn.....	355	.....	355	Not given	.....	.....	Superior.....	Highly satisfactory.	Decidedly good.
Delaware College, Newark.....	90	23	113	18	68	77	Very good.....	Very good.....	Very good.
North Georgia Agricultural College, Dahlonega.....	98	13	111	16	73	79	Fair.....	Very fair.....	Fair.
University of Illinois, Champaign.....	330	.....	330	20	221	.....	Good.....	Fair.....	Good.
Knox College, Galesburgh, Ill.....	200	10	210	.....	39	51	Fair.....	do.....	Moderate.
Purdue University, Lafayette, Ind.....	280	8	288	14	44	79	Very good.....	Quite good.....	By the majority, good.
Cornell College, Mount Vernon, Iowa.....	405	1	406	.....	191	211	Excellent.....	Above the average.	Fair and increasing.
State University of Iowa, Iowa City.....	146	.....	146	16	96	140	do.....	Satisfactory.....	Satisfactory.
Kansas State Agricultural College, Manhattan.....	236	.....	236	15	105	136	Good.....	Good.....	Fair.
Agricultural and Mechanical College of Kentucky, Lexington.....	178	2	180	18	116	180	do.....	do.....	Fairly good.
Louisiana State University and Agricultural and Mechanical College, Baton Rouge.....	105	.....	105	.....	95	110	Fair.....	Fair.....	Good.
Maine State College of Agriculture and the Mechanical Arts, Orono.....	111	.....	111	.....	88	106	Good.....	Excellent.....	Excellent.
Maryland Agricultural College, Prince George's County.....	28	4	32	.....	24	34	do.....	Good.....	Little.
St. John's College, Annapolis, Md.....	87	26	113	.....	105	105	Considerable.....	Satisfactory.....	Satisfactory.
Massachusetts Agricultural College, Amherst.....	96	.....	96	22	67	96	Good.....	Good.....	Excellent.
Michigan Agricultural College, Lansing.....	205	.....	205	14	150	192	Excellent.....	do.....	Good.
Michigan Military College, Orchard Lake.....	154	6	160	153	153	160	do.....	Excellent.....	Excellent.
University of Minnesota, Minneapolis.....	700	.....	700	11	65	99	Good.....	Fair.....	Very small.
Agricultural and Mechanical College of Mississippi, near Starkville.....	200	.....	200	24	32	214	do.....	Good.....	Good.
Missouri Military School, Columbia.....	450	.....	450	13	70	120	do.....	do.....	Do.
University of Nebraska, Lincoln.....	180	7	187	16	110	118	do.....	Very great.....	Not as great as it should be.
Nevada State University, Reno.....	100	.....	100	.....	29	33	do.....	Great.....	Great.
Rutgers College, New Brunswick, N. J.....	175	.....	175	.....	59	72	do.....	Good and increasing	Good.
Cathedral School of St. Paul, Garden City, N. Y.....	67	28	95	.....	93	95	do.....	Fair.....	Fair.
Cornell University, Ithaca, N. Y.....	1,133	.....	1,133	20	322	404	do.....	Good.....	Do

St. John's College, Fordham, N. Y.	159	73	232	97	197	Fair	Fair	Great.
Bingham School, Orange County, N. C.	128	11	139	133	137	Good	do	Good.
University of North Dakota, Grand Forks	41	1	42	40	40	do	Excellent	Do
Ohio Normal University, Ada	720		720	16	129	do	Great	Very good.
Ohio State University, Columbus	340		340	16	160	do	Fairly good	Good.
University of Wooster, Wooster, Ohio	273		273	15	136	do	Good	Fair.
Allegheny College, Meadville, Pa.	170		170	18	32	Average	Below average	Average.
Pennsylvania Military Academy, Chester	138	7	145	40	141	Excellent	Excellent	Good.
Pennsylvania State College, Center County	100	4	104	30	53	Good	Great	Very great.
South Carolina Military Academy, Charleston	123		123	36	104	Very good	Satisfactory	Fair.
South Dakota Agricultural College, Brookings	150	2	152		39	Considerable	Active	Considerable.
University of the South, Sewanee, Tenn.	177	16	193		36	Excellent	Great	Fair.
University of Tennessee, Knoxville	153		153		122	Good	Marked	Favorable.
Agricultural and Mechanical College of Texas, College Station	178	10	188	22	178	Excellent	Excellent	Fair.
Norwich University, Northfield, Vt	54		54	48	54	Good	do	Excellent.
University of Vermont, Burlington	125		125	11	63	do	Good	Fair.
Virginia Agricultural and Mechanical College, Blacksburgh	139		139		104	Very good	Very good	Good.
West Virginia University, Morgantown	185	1	186	37	96	Excellent	Excellent	Do
University of Wisconsin, Madison	675		675		152	do	Fairly satisfactory	Satisfactory.
De Pauw University, Greencastle, Ind	800		800	23	136	Good	Great	Good.

FUEL.

While under existing laws and regulations public quarters are furnished to officers of the Army, they are compelled to purchase the fuel needed for their own use and necessary to make such quarters habitable—a system under which accidents of the service play too great a part in an officer's expenses. In most of the European armies public quarters are not only heated but lighted at the expense of the government, and in simple justice to our officers I earnestly recommend that a reasonable allowance of fuel, proportioned, as public quarters are now, to the rank of officers and with due regard to increased needs in high latitudes, be furnished free of expense to them.

REWARD FOR THE ARREST OF DESERTERS.

Great care and consideration has heretofore been given to the ascertainment of the real and alleged causes of desertion in the Army, but I am convinced that the real primary cause is the almost certain immunity of the offender from arrest. The reward of \$30 offered for the arrest of deserters, under paragraph 122 of the Regulations, is "to be considered as full remuneration for all expenses incurred in apprehension, holding, and delivery" of the offender, and has proved totally inadequate to secure the end in view, as is abundantly proved by the very small percentage of arrests to the total number of desertions in any one year.

It is an axiom that prevention of crime is to be preferred to its punishment, and the greatest preventive against the commission of crime is the certainty that prompt arrest will inevitably bring the offender to the bar of justice. Considering the ever increasing facilities for rapid travel it can not be ignored that the assurance that a few hours will place the offender beyond fear of pursuit and arrest has been the first cause of many desertions. I beg, therefore, to earnestly recommend that the present reward be increased to \$100, a sum which in many cases, after the deduction of the expenses incident to apprehension, holding, and delivery, will only fairly compensate the civil officer or citizen making the arrest.

PAY OF NON-COMMISSIONED OFFICERS.

The eminent justice of assimilating the pay of the non-commissioned officers to the importance of the duties and responsibilities of their respective grades is so closely connected with the best interests of the Army that I feel it to be my duty to call attention to this important subject.

A bill was introduced in Congress during the session just ended embodying the recommendations heretofore made by this office, but, from causes extraneous to its merits, the measure failed to become a law. I beg to recommend most earnestly that the attention of Congress be called to this measure with a view to legislative action that will secure to this valuable class of men a rate of compensation that will remove the present military anomaly in their case of rank without adequate pay.

The position of non-commissioned officer is one demanding on his part intelligence, integrity, and the possession of high soldierly qualities. The pay now attached to the several grades of this class of officers is not only without incentive to the men best fitted for the position, but the very acceptance of that position works pecuniary loss as compared

with the pay received by the man in the ranks who is employed on extra pay. That this condition of things should be remedied at the earliest moment is demanded by proper regard for the discipline, efficiency, and *morale* of the Army.

THE MILITARY PRISON.

The annual reports submitted by the commandant of the Military Prison at Fort Leavenworth, Kans., show a satisfactory condition and commendable progress during the fiscal year ended June 30, 1890, in all matters for which the officers of the prison were responsible. The number of prisoners June 30, 1889, was 472, and 328 were received during the past year, making a total of 797. Of these 164 were discharged on the expiration of their respective terms of confinement, 145 were released under orders remitting a part of their sentences, and 7 escaped, leaving 481 prisoners in confinement June 30, 1890.

Labor upon new buildings was comparatively limited during the past year, and the improvements and necessary repairs received a larger share of attention than it had been possible to give heretofore. The work of improvement in conveniences and facilities of all kinds, suggested by the experience of past years, appears to have been carried on in the interest of the prisoners and of the enlisted men on duty as guards at the prison.

The regular work by prisoners, which is the important interest of the institution (inasmuch as by it personal benefit is derived and the expense of maintaining the prison is diminished), is exhibited in detail in the report of the commandant and the subreports accompanying it. The total number of days' labor performed is 157,298½, of which 54,821 days were skilled labor and 102,477½ days were ordinary labor. At the rate allowed as a charge for this labor (50 cents per day for skilled and 35 cents per day for ordinary) this represents \$63,277.62½; but as no funds are realized except a very small sum for labor in the nature of personal service, and no credit is entered upon any money account for labor performed for the prison, the actual credit shown upon the official records is only a little more than two-fifths of the sum mentioned above. The account of the prison with the Quartermaster's Department shows that the amount due the prison June 30, 1889, was \$206,894.38. The labor performed for that department during the year ended June 30, 1890, was represented by a credit of \$27,829.81, and the value of the quartermaster's supplies drawn and charged against the account was \$11,198.94, leaving the sum of \$223,525.25 to the credit of the prison June 30, 1890. The prison mess-fund account shows that the amount on hand June 30, 1889, was \$995.11; there was received during the year for savings of rations and sale of produce \$6,038.59; the expenditures were \$4,703.09; leaving a balance on hand June 30, 1890, of \$2,330.61. The expenditures from this fund are for articles, supplies, or services for the benefit of the prisoners, and whenever the balance on hand is large it is turned into the United States Treasury.

The prison-fund account shows receipts for prisoners' labor and sales of scrap material from the shops of \$1,439.19; all of which was turned into the United States Treasury. The products from the farm were in abundant quantity, and materially supplemented the supplies purchased for the prison, so that the appropriation by Congress was not all needed. This appropriation was \$92,840, but from this balance must be deducted the sum of \$6,392.11 remaining to the credit of the item for transportation of discharged prisoners at the prison and at military posts, leaving

\$5,586.65 as the actual saving from the appropriation for the subsistence of the prisoners, and which must have been expended had the farm products not been available.

The record of the special department of the prison under the charge of the medical officer is remarkable in the fact that not a single death occurred during the year. There were a number of cases of influenza at the time the epidemic prevailed throughout the country during the last winter and spring, but none resulted fatally.

The commandant reports that—

The large number of discharges and of reductions of sentences, and especially the discussion throughout the newspapers and journals of the country regarding an amnesty for deserters, produced a spirit of very great restlessness, which resulted in numerous breaches of the prison rules, and in a few cases insubordination.

These numerous discharges and reductions of sentence by the War Department, made in order to readjust sentences, have given the prisoners the false idea that, whether their conduct were satisfactory or not, their sentences long or short, their characters good or bad, they would be favored if they could get a hearing, and that the prison officials alone stood in the way of such hearing. Nor did a hearing before the prison commission or the inspector at all satisfy some prisoners. The result of such ideas has been the surreptitious sending out of numerous letters, in violation of law, chiefly addressed to his excellency the President. The vicious conduct resulting from such sentiments, however, have infected comparatively few, and these were prisoners of the worst character. The usual quiet and good behavior among the prisoners will doubtless be resumed as soon as the readjustment of sentences is finished.

The commandant recommends that orders for the release or discharge of prisoners prior to the expiration of their full terms of confinement be so framed as to require that the time forfeited by misconduct be made good. This condition governed while the action upon questions of clemency was under the direction of the Adjutant-General, but these cases were transferred to the Judge-Advocate-General early in March, 1890.

The prison school has been successful under the direction of the chaplain, who thinks that if it could be held on some other day than Sunday still better results would be obtained. There is no doubt that prisoners who work during the entire week object to any rule that seems to demand any application of physical or mental power on the "day of rest," but, unless the school can be held every day and a portion of those who attend be excused from work for that purpose a part of each week-day, so that all would have the advantage of one school session in the week, the present system must be continued.

GOVERNMENT HOSPITAL FOR THE INSANE.

The following is a list of persons committed to the Government Hospital for the Insane, under the orders of the honorable the Secretary of War, from October 1, 1889, to October 1, 1890:

Officers of the U. S. Army	3
Officers of the U. S. Army (retired)	2
Enlisted men of the U. S. Army	30
Military convicts	1
Total	36

WORKING OF THE OFFICE.

The clerical and other force of this office, under the provisions of the act making appropriations for the legislative, executive, and judicial expenses of the Government for the year ending June 30, 1891, is as fol-

lows: One chief clerk, fifteen clerks of class 4, seventeen clerks of class 3, twenty-one clerks of class 2, eighty-three clerks of class 1, nine clerks of class \$1,000, four messengers, twenty assistant messengers, and three watchmen.

Excluding the Confederate Archives Division, which furnishes on call of the President, Congress, the various bureaus of the Executive Departments, and the Court of Claims information concerning the loyalty of the numerous claimants for property taken by the United States during the late war, etc., the clerical force of this office is actively and usefully employed on work pertaining to the administration of affairs affecting the Regular Army or peace establishment, including the recruiting service. In addition to this, the Regular Army Rolls Division is largely employed in making reports to the Pension and other offices, and also the Second Auditor of the Treasury, to enable the latter to settle amounts due the Soldiers' Home arising from forfeitures of pay, etc., by sentence of courts-martial or by desertion. The work of this division in this matter is exhibited in the following table :

	On hand July 1, 1889.	Received.	Finished.	On hand October 1, 1890.
Commissioner of Pensions.....	24	7,502	7,526	.....
Second Auditor.....	1	26,392	26,393	.....
Third and Fourth Auditors.....		11	11	.....
Second Comptroller.....	1	30	31	.....
General Land Office.....		81	81	.....
Paymaster-General.....	5	355	360	.....
Quartermaster-General.....		37	37	.....
Commissary-General of Subsistence.....		59	59	.....
Total.....	31	34,467	34,498	.....

I take pleasure, in closing this report, to record my appreciation of the general intelligence, zeal, and efficiency of the clerks of the Adjutant-General's Office.

Respectfully submitted.

CHAUNCEY MCKEEVER,
Acting Adjutant-General.

Hon. REDFIELD PROCTOR,
Secretary of War.

MILITARY PRISON REPORTS.

COMMANDANT'S OFFICE, U. S. MILITARY PRISON,
Fort Leavenworth, Kans., July 16, 1890.

SIR: I have the honor to transmit herewith the annual reports of the prison surgeon, chaplain, executive officer, commanding officer of the Provost Guard, quartermaster, and commissary, together with the different tabulated statements showing the number of prisoners received, discharged, their offenses, age, nativity, occupation, etc., and the amount of work performed by them.

Since my last report First Lieut. George F. Cooke, Fifteenth Infantry, then acting assistant quartermaster, and Capt. George S. Hoyt, assistant quartermaster, U. S. Army, then first lieutenant, Eighteenth Infantry, executive officer, have been relieved from duty at the prison and have been replaced by First Lieut. W. E. Almy, Fifth Cavalry, and First Lieut. B. H. Gilman, Thirteenth Infantry, respectively.

Permanent improvements have been made in and around the prison during the past year as follows:

(1) A large part of the prison buildings repainted.

(2) A new stone shed, brick, 50 by 30 feet, by 8 feet high, with raised-seam tin roof, has been built out of brick manufactured on the reservation by the depot quartermaster by prison labor. Into this building the steam was introduced, adding to the comfort of the stone-masons and cutters. Steam is also extended into the latrines and paint-shop.

(3) The garret above the prison offices has been fitted up into rooms, giving five rooms, two large ones for photograph gallery and printing office, also offices for the prison quartermaster and clerks. The photograph gallery has been fitted out with a dark room, sky-light, water-trough, etc. A new roof of Cortwright shingles has replaced the wooden shingle roof over the office building.

(4) The room formerly used for a dormitory for the third class has had a hard maple floor laid and iron cells constructed of corrugated iron, sides and back, and open iron bars front and above. These are to replace the old wooden cells, which are close and unwholesome, and in past times largely infected with vermin. The new cells are forty-two in number, 6 feet 6 inches by 4 feet, by 6 feet 6 inches high, perfectly ventilated. The old cells will be torn out, the room refloored and used as a dormitory.

(5) The comfort of the guard has been much added to by ceiling their amusement-room, dining-room, and kitchen. Their dormitory is now being plastered and ceiled. The office and store-room which was in the south end, cutting off half the southern breeze, has been removed, and will be placed on either side of a stone partition which marked the limit of the original stone building to which a new part was added. This will not interfere with the circulation of the air at all. An additional stair-way has been put in, leading down into the dining-room. The single stair did not, in my opinion, allow a sufficiently rapid egress in case of fire or disturbance.

(6) Six stone stair-ways have replaced wooden ones leading into the guard's quarters, night guard-room, dining-room, and into the guard cellar, and into solitary-cell basement. Three stone stair-ways also have replaced wooden stairs along the pavement leading down the hill in front of the officers' quarters, and two new stone crossings put down. The walks about the prison have been mostly replaced by the vitrified brick, the rest repaired with the old brick.

(7) The unsightly rocky hill north of the Missouri Pacific Railroad depot has been graded and the plot of ground sodded. A row of hard maple trees, grown on the reservation, has been planted from the Rapid Transit around to the Missouri Pacific Railroad depot.

(8) The stone partition dividing the carpenter shop has been removed, adding to the convenience of supervision and giving more room, without injury to the security of the building.

(9) The drainage from the prison lavatories and kitchen is carried out west and has run along a drive; the soap, etc., rendering this offensive, a sewer has been laid some 1,750 feet that carries it underground.

(10) Four small houses, formerly occupied by employes and married men, who have vacated them, have been torn down. An old building formerly used as a hop-room for the guard, but no longer used, has also been torn down. The employes and married men now occupying quarters are in close proximity to the prison and more conveniently located.

(11) A floor of round wooden blocks, cut from timber on farm land, has been laid in the wheelwright-shop, and a paint-shop for painting wagons and other bulky articles has been partitioned off in the same shop.

(12) The room of the day sergeant has been floored, ceiled, and plastered. The day guard-room has also been plastered and ceiled.

(13) A root-house of stone, 40 feet square, has been built, with partition and double arches of cut stone. The whole is covered with dirt and sodded, the highest point covered by 18 inches of soil, sodded. This is on the hill-side northeast of the prison and well drained.

(14) The prisoners' cemetery has been improved by new headstones, cut out of limestone from the prison quarry, which have been placed at all the graves; blue grass planted within the inclosure; and a hedge planted around the lot. This relieves the desolate look it presented previously.

The above represent only the chief improvements and but a small portion of the regular work of the prisoners about the prison. Besides the foregoing, a large amount of more or less skilled work, such as road making, etc., has been done for the post of Fort Leavenworth and the former department headquarter grounds.

It seems desirable to extend considerably the industry of mat making. For this purpose it is only needed that old rope of any kind, such as is often condemned in large quantities at cavalry posts especially, should be turned into the prison. This has been recommended, and the rope condemned at Forts Leavenworth and Riley has been ordered turned into the prison, but as yet none has been received except from the depot on removal of the depot quartermaster. I recommend that all such rope at contiguous posts be turned into the prison, the mats to be turned over for use by the Quartermaster's Department.

An attempt will also be made to utilize the rags from the tailor-shop in the manufacture of rag carpet and mats for Army use.

The report of the prison Quartermaster, herewith, gives in detail the work done in the different shops for the Quartermaster's Department.

The prices given for the soldiers' boots and shoes for issue include the prison labor, and no deduction is made for the amount turned into treasury from the sale of scrap leather. The amount actually paid by the Government per pair for the shoes or boots is to be found by excluding both these amounts. The amount realized from the sale of scrap leather, which goes back to the treasury, and the cost of transportation must be considered in comparing prison shoes with those purchased by contract in the East.

The prices, taking credit for scrap leather sold, are as follows:

Cavalry boots, sewed	\$3.22
Campaign shoes, sewed	1.96
Boots, brass screwed	2.27
Shoes, brass screwed	1.62

And deducting cost of prison labor, at 50 cents per day:

Cavalry boots, sewed	2.87
Campaign shoes, sewed	1.80
Boots, brass screwed	2.11
Shoes, brass screwed	1.52

There were made several years ago 1,000 brass-screwed calf-skin or post shoes for trial. Though the reports from them were meager, there is reason to believe they were durable and satisfactory. I concur in the recommendation of the prison quartermaster, that a limited number of these shoes be made for issue and further trial.

The amount of shop labor called for by the Quartermaster's Department having been less than usual, a considerable addition has been made to the sum earned by labor in the shops for officers and soldiers, paid for as required by the prison regulations, the total being \$1,063.16.

The following exhibit shows receipts and expenditures for the past year, viz :

Items.	Appropriated.	Expended.	Balance unexpended.
Subsistence	\$25,100.00	\$23,462.24	\$1,637.76
Tobacco	540.00	539.98	.02
Illuminating oil	700.00	73.18	626.82
Storage and hay for bedding	3,000.00	2,197.60	802.40
Stationery	1,000.00	1,000.00	.....
Fuel and general supplies	20,000.00	19,964.19	35.81
Medical supplies	2,000.00	2,000.00	.....
Advertising	200.00	11.40	188.60
Apprehension of escaped prisoners	300.00	150.00	150.00
Prisoners' clothing and donations	9,400.00	8,952.34	447.66
Employés and extra-duty pay	18,100.00	16,406.87	1,693.13
Buildings	5,000.00	4,985.55	4.45
Transportation of discharged prisoners	7,500.00	1,107.89	6,392.11
Total	92,840.00	80,861.24	11,978.76

Expenditures last fiscal year (1889)	\$79,818.92
Expenditures this fiscal year less transportation (1890)	79,753.35
Expenditures less this year (1890)	65.57

Of above balance (\$11,978.76), \$6,392.11 is for transportation of discharged prisoners, leaving a balance of appropriation for prison proper of \$5,586.65.

Appropriation for support of prison for fiscal year 1889 (on account of transportation of discharged prisoners):

Items.	Appropriated.	Expended.	Balance unexpended.
Transportation of discharged prisoners	\$2,500.00	\$691.48	\$1,808.52
Total	2,500.00	691.48	1,808.52

Above balance turned into Treasury June 30, 1890 (\$1,808.52).

Number of donations sent to posts: 199, at \$5 each, \$995; 199 suits of clothing for post prisoners at discharge.

Prison mess-fund:

Amount on hand June 30, 1889	\$995.11
Received during the year	6,038.59

Total	7,033.70
Expended during the year	4,703.09

Balance on hand June 30, 1890	2,330.61
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Expenditures:

Library books	309.92
Chapel books, etc	60.90
Gain of fund during year	1,335.50

Prison-fund account, fiscal year 1890:

Received by prisoners' labor	1,063.16
Sale of rags	156.75
Sale of scrap copper, iron, etc	219.28

Total turned into Treasury	1,439.19
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Receipts from above sources last fiscal year, \$593.02. Increase this year, \$864.17.

The sum of \$10.67 was received from sale of condemned property at public auction and turned into the Treasury.

The following is the account of the prison with the Quartermaster's Department for labor performed :

Due prison June 30, 1889	\$206, 894. 38	
To labor performed during year	27, 829. 81	
	<hr/>	\$234, 724. 19
Credit by quartermaster's stores received during year.....	431. 74	
By clothing, camp and garrison equipage received during the year.....	10, 767. 20	
	<hr/>	11, 198. 94
Due prison June 30, 1890.....		223, 525. 25

Of clothing, camp and garrison equipage received the following items are included in the above:

7,500 pairs field shoes, at \$1.03 per pair	\$7, 725. 00
3,000 campaign hats, at 65 cents.....	1, 950. 00
	<hr/>
Total.....	9, 675. 00

These were received for issue to prisoners by order of the honorable the Secretary of War.

As anticipated, the yield of the farm last year was the greatest ever known. In the present drought continues the crop will be a failure the present season. We have, however, already had a yield of wheat, which was sold on the field under informal proposals and contract for \$950 since the 30th ultimo.

The receipts for the past year were as follows:

Wheat.....	bushels..	2, 400
Corn	do.....	5, 000
Oats	do.....	1, 400
Potatoes, Irish	do.....	10, 464
Beets.....	do.....	706
Carrots.....	do.....	380
Cucumbers	do.....	60
Lettuce	do.....	174
Parsnips	do.....	400
Okra.....	do.....	58
Spinnach.....	do.....	150
Turnips	do.....	300
Cabbage	heads..	81, 650
Beans.....	bushels..	96
Corn, sweet.....	do.....	400
Kohl-rabi.....	do.....	84
Onions	do.....	456
Peas	do.....	100
Radishes	do.....	141
Squash	do.....	200
Tomatoes	do.....	425
Strawberries.....	quarts..	810

We have planted this year 80 acres of corn, 4 acres of oats, 85 acres of potatoes, 3 acres of turnips, and 20 acres of small vegetables.

Heretofore the provost guard has had a separate garden, thereby almost doubling the work. The two gardens were consolidated during the past year, an equitable distribution being made to both guard and prisoners of the products of the single garden.

Clearing of the bottom lands has been continued during the winter, with a yield of 310½ cords of wood, which has been taken up on the returns and accounted for.

The gratifying fact will be noted from the report of the prison surgeon that not a single death has occurred among guards or prisoners during the year, although a very severe epidemic passed over this, as other places, and that the general health has been excellent; all of which is largely due to the skill, care, and attention of the prison surgeon.

From the reports of the executive officer and commanding officer of the provost guard it appears that the discipline of the guard has been good. Guards doing duty within the walls are armed with clubs instead of pistols, the guards on the walls being armed with shotguns. This is in conformity with the experience and practice of similar institutions. Fire-arms within the walls are objectionable as unnecessary when the walls are guarded from liability to accidents, from possibility of disarmament by desperate prisoners, and from being of unnecessarily dangerous character if used as clubs. The policeman's club answers all the purposes requisite

when force is needed, as it must be at times; nor is the club open to any of the objections stated. The lack of uniformity in the arms of the guard is very objectionable, and I recommend that authority be given to turn in the English and Parker shotguns and to draw repeating Spencer shotguns, which have proved very satisfactory.

The amusement-room or canteen of the guard has proved a decided success, socially as well as financially.

The report of the prison commissary shows that the law requiring that the prisoners be supplied with sufficient and wholesome food has been fully complied with. It has been found that granite table-service, by reason of its great durability, is more economical and better than either tin or crockery, and it has been therefore purchased for plates.

The report of the prison chaplain shows that the secular school continues to be completely successful in so far as it was designed to go in educating the more illiterate prisoners. The books of the library are much used and wear out rapidly. No appropriation is asked or needed for its replenishment, because the prison regulations authorize this to be done out of the prison mess-fund.

The behavior of the prisoners during the first six months of the past year was, with slight exceptions, quite satisfactory. During the last half of the year, however, the maintenance of discipline has required the utmost exertion of the prison officials. The large number of discharges and of reductions of sentences, and especially the discussion throughout the newspapers and journals of the country regarding an amnesty for deserters, produced a spirit of very great restlessness, which resulted in numerous breaches of the prison rules, and in a few cases insubordination. These numerous discharges and reductions of sentence by the War Department, made in order to readjust sentences, have given the prisoners the false idea that, whether their conduct were satisfactory or not, their sentences long or short, their characters good or bad, they would be favored if they could get a hearing, and that the prison officials alone stood in the way of such hearing. Nor did a hearing before the prison commission or the inspector at all satisfy some prisoners. The result of such ideas has been the surreptitious sending out of numerous letters, in violation of law, chiefly addressed to his excellency the President. The vicious conduct resulting from such sentiments, however, has infected comparatively few, and these were prisoners of the worst character. The usual quiet and good behavior among the prisoners will doubtless be resumed as soon as the readjustment of sentences is finished.

Until recently a rule had almost invariably prevailed which required that prisoners released for special reasons should serve out the time forfeited for misconduct in prison. This proved a great aid in maintaining discipline, and would seem especially desirable and just in a prison when remissions of sentence are so frequent; that is, that the time of release should partly depend on a prisoner's conduct. It would operate to any great extent only against the worst cases in the prison. I strongly recommend that the former custom be resumed as soon as possible, and that in all cases of special discharge or remission of sentence, where it is practicable, the proviso be added, "or as soon thereafter as the rules governing forfeiture of time for misconduct will permit."

Seven prisoners escaped during the year and six were recaptured. In addition, one escaped prisoner, John T. Garvey, No. 407, is located in the Missouri State penitentiary, at Jefferson City. Exclusive of the latter, the escapes and recaptures are equal during the last two years and a half. No prisoners have been sent to the Insane Asylum during the past year.

I invite attention to the recommendation recently made that all dishonorably discharged soldiers serving sentence at posts be clothed in the same uniform as is worn by the prisoners confined in this prison. The clothing can be made in the prison tailor-shop, as is done for the prisoners confined at Alcatraz Island, at a small expense.

The officers on duty at the prison have been faithful, zealous, and attentive to their duties, which have, in my opinion, never been better performed than during the past year.

Very respectfully, your obedient servant,

J. W. POPE,

Captain and A. Q. M., U. S. Army, Commandant.

THE ADJUTANT-GENERAL, U. S. ARMY,
Washington, D. C.

LEAVENWORTH MILITARY PRISON,
OFFICE OF THE PRISON SURGEON, July 3, 1890.

SIR: I have the honor to report that the health of the provost guard and that of the military prisoners during the year ending June 30 has been, as heretofore, satisfactory.

In the month of December, 1889, epidemic influenza, or "la grippe," which had been reported as prevalent in northern Europe, and later in the Eastern States, made

its appearance among the prisoners, and during the months of January, February, and March many cases occurred, some of which were of a severe type. Relapses were not uncommon, and in some instances the depressing effects of the disease remained for a long time after convalescence had been established. Although presenting a considerable variety of symptoms, there was in nearly all cases an initial chill, followed by pyrexia, severe myalgia, headache, great muscular soreness and weakness, vomiting, and diarrhea. The usual concomitant of sporadic cases of influenza, viz, congestion of the respiratory mucous membrane, was not present in a considerable percentage. In consequence of this epidemic the percentage of sick is somewhat larger than in former years.

Six cases of enteric fever have been treated in the prison hospital during the year, and several cases of pneumonia. There has been no mortality from any cause. The sanitary condition of the buildings and grounds is very good, constant and intelligent supervision being given thereto.

Mean strength and percentage of sick is shown by the following table:

	Mean strength.	Percentage of sick.
Commissioned officers and enlisted men	118	2.08
United States military prisoners.....	518	1.75
Civilian employes	18	.40
Women and children	100	2.60
Total	754	

Very respectfully, your obedient servant,

J. P. WRIGHT,

Lieutenant-Colonel and Surgeon, U. S. Army, Prison Surgeon.

The PRISON ADJUTANT.

CHAPLAIN'S OFFICE, U. S. MILITARY PRISON,
Fort Leavenworth, Kans., June 30, 1890.

SIR: In submitting my annual report for the fiscal year ending June 30, 1890, I beg leave to call attention to the tabular statement hereto attached.

I feel that my work among the prisoners has not been wholly void of good. The chapel services have been (although voluntary) exceedingly well attended, the prisoners enjoying the song service thoroughly, and apparently not finding much fault with the preaching, as the same ones attended regularly, when not on duty or sick. I have talked freely in private with many of them, and they have acknowledged the fruitless course of their career and expressed a strong determination to change and redeem the past, if possible.

The temperance organization has been a good, strong adjunct to the reformatory work, and Mrs. Chase, who inaugurated it, with her collaborators, deserves the gratitude not only of these men but of all lovers of peace and good order. Over 300 men have declared themselves as henceforth total abstainers from all intoxicants, and to the best of their ability workers in the interest of sobriety. The holidays have been turned into social channels, the few making it as pleasant as possible for the many.

The secular school has proved more of a success than was even anticipated by the most enthusiastic, and the general opposition which was at first manifested has quite or almost disappeared. If the authorities could see their way clear to hold it on some other day than Sunday, I think the effect would still be greatly for the better.

The library has been perceptibly increased, and the report of books drawn and their character gives one a kind of bird's-eye view of the trend and scope of mind here, even under the tension and restraint of prison life.

The chapel also has been supplied with new hymnals, and the orchestra and choir is just now, perhaps, the best we have ever had.

Always striving for better results than the past indicates,

I have the honor to be, very respectfully, your obedient servant,

J. B. McCLEERY,

Chaplain, U. S. Army.

The ADJUTANT U. S. MILITARY PRISON.

Number of prisoners received from July 1, 1889, to June 30, 1890.—Deserters, 265; other offenses, 57; total, 322.

Religion.—Protestant, 195; Catholic, 122; Hebrew, 2.

Nativity.—United States: Alabama, 1; Connecticut, 3; District of Columbia, 2;

Florida, 1; Georgia, 3; Illinois, 9; Indiana, 16; Iowa, 3; Kansas, 1; Kentucky, 5; Louisiana, 1; Maine, 3; Maryland, 12; Massachusetts, 19; Minnesota, 1; Michigan, 8; Missouri, 5; Mississippi, 1; New Hampshire, 1; New Jersey, 14; New York, 45; Nebraska, 1; Ohio, 20; Pennsylvania, 33; Rhode Island, 5; South Carolina, 2; Tennessee, 3; Utah Territory, 1; Vermont, 1; Virginia, 5; West Virginia, 3; Wisconsin, 1; Foreign: Austria, 3; British Possessions, 13; Denmark, 1; England, 13; France, 2; Germany, 23; Holland, 1; Ireland, 31; Jamaica, 1; Russia, 1; Scotland, 1; Switzerland, 3.

Causes for enlistment in Army.—To soldier, 263; for a commission, 3; to learn music, 1; to learn language, 1; drink, 14; to lead a new life, 1; trouble, 13; unsettled mind, 2; to see country, 1; out of work, 17; discouraged, 4; better their condition, 2. Of these, are married, 36; unmarried, 286. Of these 265 deserters 13 are repeaters.

Occupation prior to enlistment.—Clerks, 10; musicians, 8; laborers, 3; sailors, 5; mechanics, 137; other occupations, 159.

Causes for desertion.—Drink, 76; bad food, 5; trouble, 24; dissatisfied, 41; too much work, 7; fear, 3; did not desert, 10; did not like climate, 2; lonesome, 7; trouble with officers, 49; no cause, 10; women, 1; sickness, 23; debts, 2; homesick, 5.

Where raised.—City, 225; town, 32; country, 65.

First enlistment, 259; more than one enlistment, 63; enlisted under right name, 278, enlisted under *alias*, 44.

Educational.—Able to read, 279; unable to read, 27; slight knowledge of reading, 16; able to write, 278; unable to write, 28; slight knowledge of writing, 16.

Library report.—Number of books on hand: July 1, 1889, 3,043; June 30, 1890, 3,303. Total number of books drawn from July 1, 1889, to June 30, 1890, 13,931. Biographical, 593; miscellany, 1,174; historical, 558; religious, 165; light literature, 8,701; scientific, 396; magazine, 1,968; travel, 376.

Prisoners' letters mailed during fiscal year commencing July 1, 1889; ending June 30, 1890.

Month.	Domestic.	Foreign.	Total.	Month.	Domestic.	Foreign.	Total.
July	497	27	524	February	609	20	629
August	505	24	529	March	666	20	686
September	577	24	601	April	622	18	640
October	574	30	604	May	552	16	568
November	622	25	647	June	431	19	450
December	751	32	783	Total	7,007	278	7,285
January	621	23	644				

SCHOOL REPORT.

The prison school was opened November 18, 1888.

Total number of prisoners received during fiscal year, 322; number of prisoners too old to attend school, 3; number of prisoners received who could pass examination, 140; number of prisoners detailed for teachers since July 1, 1889, 27; number of prisoners admitted to school since July 1, 1889, 93; number of prisoners who have graduated, 30; number of prisoners dismissed from school, 8; discharged, 18; paroled, 11; number of prisoners obtaining highest average (100 per cent.), 16.

Total strength of classes during fiscal year.

Month.	P I.	P. II.	P. III.	P. IV.	E. I.	E. II.	E. III.	A. I.	A. II.	A. III.	Total.
July, 1889	10	10	10	10	10	10	10	10	10	10	100
August, 1889	10	10	10	10	10	10	10	8	9	10	97
September, 1889	10	10	10	10	9	70	10	8	9	10	96
October, 1889	10	10	10	10	10	10	10	10	10	10	100
November, 1889	10	10	10	10	10	10	10	9	10	10	99
December, 1889	10	10	10	10	10	10	10	8	10	9	97
January, 1890	10	10	9	9	10	10	10	10	10	10	98
February, 1890	10	10	9	9	10	9	10	10	9	10	96
March, 1890	9	10	10	9	10	8	10	9	9	10	94
April, 1890	10	10	10	10	10	10	10	10	10	10	100
May, 1890	10	10	9	10	10	7	10	10	10	10	96
June, 1890	10	10	10	10	10	9	9	10	10	10	98

Average attendance, 97.7 per cent.

OFFICE OF EXECUTIVE OFFICER, U. S. MILITARY PRISON,
Fort Leavenworth, Kans., June 30, 1890.

SIR: I have the honor to submit the following report for that portion of the year ending June 30, 1890, that I have been on duty as executive officer of this prison, viz, December 1, 1889, to June 30, 1890. During this period I have made daily inspections of all parts of the prison, and have carefully noted the discipline of the prisoners and guard and the police of the different buildings and grounds:

The discipline of the prisoners I have found, as a rule, to be excellent, the serious violations of the prison rules being confined almost entirely to a few incorrigibles, upon whom the punishments allowed to be inflicted seem to have little or no permanent effect.

The police of the prison buildings and grounds I have found to be excellent. It would be hard to improve upon.

The members of the provost guard are well disciplined and instructed, and their behavior, both on and off duty, is excellent. The non-commissioned officers I consider a very superior lot of men.

The civilian foremen are attentive to their duties. I have had, I think, but one occasion to report a violation of prison rules by them.

Very respectfully, your obedient servant,

B. H. GILMAN,

First Lieutenant, Thirteenth Infantry, Executive Officer.

The ADJUTANT U. S. MILITARY PRISON.

OFFICE COMMANDING OFFICER PROVOST GUARD,
U. S. MILITARY PRISON,
Fort Leavenworth, Kans., July 1, 1890.

SIR: I have the honor to submit the following report on the provost guard for the past year:

The method of recruiting the guard by voluntary transfers of soldiers of the line who have served one enlistment, with character "excellent," has worked satisfactory, and it is believed can not be improved.

Discipline.—The discipline and instruction of the guard has been excellent. Without a thoroughly disciplined and instructed guard it would be impossible to enforce prison discipline, for all discipline is ultimately applied through members of the guard. For three pay days during the year there have been none of the usual breaches of discipline connected with that occasion. For a body of one hundred men this is a remarkable record.

Canteen.—In July, 1889, a canteen was established in the guard's quarter. No liquors or beverages of any kind are sold in the canteen. A good stock of tobacco, cigars, pipes, soap, blacking, brushes, and matches is kept on hand. The canteen has a very good pool-table and a billiard-table. A large number of magazines and newspapers are subscribed for from the canteen fund, and also by a literary club of members of the guard. The canteen has been a great source of pleasure and amusement to the men, and by giving them amusement at home has kept them away from places where liquor was sold, and has exercised a very beneficial influence on their general discipline. The canteen is well equipped with anything practicable for such an institution to have, and is now out of debt, and has a fund of \$217 in bank. The canteen accounts are kept by the commanding officer of the guard, and audited at the end of each month by the commandant. There is a "canteen council" of three members of the guard elected every six months, whose duty it is to advise with the commanding officer of the guard as to the best method of expending the canteen fund.

Arms.—The guard is at present armed with three different kinds of shotguns—46 D. B., English; 20 D. B., Parker; and 44 Spencer repeating shotguns. This requires three different kinds of ammunition, and also objectionable on account of lack of uniformity. The armament of the guard would be greatly improved if the English and Parker guns were replaced by the Spencer repeating guns. The English and Parker guns could be issued to companies for hunting.

During this year the sentries on duty within the walls have been armed with the policeman's club in place of the revolver.

Very respectfully, your obedient servant,

R. K. EVANS,

First Lieutenant, Twelfth Infantry, Comdg. Provost Guard.

The ADJUTANT U. S. MILITARY PRISON,
Fort Leavenworth, Kans.

ACTING ASSISTANT QUARTERMASTER'S OFFICE,
Q. M. DEPARTMENT OF THE U. S. MILITARY PRISON,
Fort Leavenworth, Kans., June 30, 1890.

SIR: I have the honor to render the following report of operations conducted by the quartermaster's department during the fiscal year ending June 30, 1890:

I was assigned to duty as acting assistant quartermaster at this prison by Orders No. 70, dated U. S. Military Prison, Fort Leavenworth, Kans., October 1, 1889, and have performed the duties continuously since that time.

SHOE-SHOP.

There are employed in this shop one inspector, at \$116.66 per month; three foremen at \$100 per month (one machinist is also employed, at \$100 per month, and paid from the prison appropriation in the sundry civil bill); prisoners, varying from 60 to 61, amounting to 18,565 days' labor, at 50 cents per day; total value of labor, \$9,282.50.

Manufactured during the year: 3,579 pairs of sewed cavalry boots, 2,056 pairs of old-style brass-screwed boots, 31,282 pairs of sewed campaign shoes, 1,362 pairs of old-style, brass-screwed shoes, 37 pairs of officers' regulation boots, and 36 pairs of officers' shoes.

The prices of above articles are as follows: Sewed cavalry boots, \$3.23 per pair; brass-screwed boots, \$2.29 per pair; sewed campaign shoes, \$1.98 per pair; brass-screwed shoes, \$1.63 per pair; officers' shoes, \$3.10 per pair; officers' regulation boots, \$6.15 per pair.

The system of manufactures has been changed and made to conform to the most improved methods; all the machines have been moved and placed upon two long platforms, so that work would move more continuously through the shop and pass into the packing-room without the unnecessary labor of carrying back and forth from machine to machine, as has been done heretofore. A tubular rivet is now set in the corner of the seam in campaign shoes where the vamps and quarters are joined together, preventing the ripping of this seam.

The manufacture of calf-skin boots and shoes for officers of the Army has again been authorized, and these boots and shoes find much favor. Application has been made to me in regard to the possibility of obtaining the calf-skin post shoe for enlisted men. This supply, unfortunately, has been discontinued, and I strongly recommend the re-issue (substituting the brass screwing for sewing), by which means a good, serviceable, and economical shoe can be supplied our enlisted men.

HARNESS-SHOP.

There are employed in this shop one foreman, at \$100 per month, and nine to ten prisoners, or 2,816½ days' labor, at 50 cents per day; total value, \$1,408.25.

Manufactured during the year: 78 single sets wagon wheel-harness, at \$13.59 per single set; 119 single sets wagon lead-harness, at \$9.75 per single set; 184 single sets ambulance wheel-harness, at \$16.55 per single set; 176 single sets ambulance lead-harness, at \$14.75 per single set; 25 sets cart-harness, at \$15.93 per set; 4 sets buck-board-harness, at \$25.18 per set; 2 sets spring-wagon harness, at \$16.55 per single set; 10 single sets truck wheel-harness, at \$21.01 per single set; 6 sets express-wagon harness, at \$22.70 per single set; 14 ambulance-bridles, at \$1.51 each; 12 chain-pipes, wagon-harness, at 23 cents each; 343 halter-straps, at 26 cents each; 3 halters and straps, at \$1.14 each; 2 sets cart-lines, at \$1.11 per set; 22 sets wheel-lines for ambulance-harness, at \$1.49 per set; 8 sets lead-lines for ambulance-harness, at \$2.06 per set; 12 ambulance-pads, at 90 cents each; 4 sets ambulance-breechings, at \$2.15; 2 sets wagon-breechings, at \$2.76; 4 back-bands for wagon-harness, at \$1.01; 6 belly-bands for wagon-harness, at 75 cents; 2 pairs hames, with tugs, at \$4.22 per pair; 18 stirrup-straps, at 40 cents per pair; 1 pair neck-yoke straps, at 97 cents; 6 check-lines, at 71 cents each; 55 breast-straps, at 48 cents each; 242 hame-straps, at 9 cents each; 46 wagon-saddles, at \$5.05 each; 66 surcingles, at \$1.01 each; 6 pole-straps, at \$1.42 each; 11 pairs ambulance-traces, at \$3.56 per pair; 6 side-lines, at 59 cents each; 51 riding-saddles, at \$11.01 each; 2 check-reins, at 23 cents each.

Our manufactures in this shop are confined to a limited number of kinds of harness needing plump, well-trimmed, even sides of leather, and as a result the quartermaster leather invoiced on two occasions from the depot has proved unsatisfactory. The leather invoiced has been very good of the kind, but it is not what we want. Our line-leather must be particularly heavy and even, with heavy shoulders, and running out solid into the belly, otherwise the price of our harness would be materially increased on account of the increase in loss by scrap. Bridle-leather can not be used as line-leather, and, as a consequence, I have had to return to the depot the amount of bridle invoiced as line leather.

TIN-SHOP.

There are employed in this shop one foreman, at \$100 per month, and eight to nine prisoners, or 2,560½ days' labor, at 50 cents per day; total value, \$1,280.25.

Manufactured during the year: The following articles were manufactured at average cost set opposite each article: 903 tin wash-boilers (A. R.), at \$1.30 each; 394 tin coffee-boilers (A. R.), at 66 cents each; 765 tin tea-kettles (A. R.), 60 cents each; 171 tin steamers (round, A. R.), at 29 cents each; 10 tin steamers (square), at 56 cents each; 131 tin pot-covers (A. R.), at 6 cents each; 470 sheet-iron bake-pans (A. R.), large, at 36 cents each; 424 sheet-iron bake-pans (A. R.), small, at 23 cents each; 967 tin boilers (square), at \$1.94 each; 12 tin boilers (square), coffee, at \$2.12 each; 13 copper boilers (square), at \$5.49 each; 336 tin boilers (round), at \$1.82 each; 47 tin coffee-pots, at 50 cents each; 10 tin tea-pots, at 48 cents each; 13 tin tea-kettles, at 63 cents each; 1 copper tea-kettle, at \$1.14; 1,010 sheet-iron bake-pans, assorted, at 42 cents each; 1 tin strainer, at \$1.13; 2 tin sauce-pans, at 57 cents each; 15 tin dish-pans, 96 cents each; 19,821 joints of common stove-pipe, at 13 cents each; 171 joints of Russia stove-pipe, at 42 cents each; 3,164 common stove-pipe elbows, at 16 cents each; 3 Russia stove-pipe elbows, at 34 cents each; 24 T-joints, common, at 25 cents each; 59 tin stove-pipe collars, at 4 cents each; 56 tin flue-stoppers, at 8 cents each; 144 tin flue-stoppers, ventilating, at 11 cents each; 1 tin scoop, at 53 cents; 50 dampers, at 7 cents each; 2 tin cullenders, at \$1 each; 30 tin stew-pans, at 53 cents each; 1 sheet-iron field stove, at \$6.47; 134 tin dippers, at 20 cents each; 12 sheet-iron "Buzzacott" ovens, at \$6.53 each.

BROOM-SHOP.

There were employed in this shop four to five prisoners; total number of days' labor, 1,262, at 50 cents per day, \$631.

Manufactured during the year: 20,916 corn brooms, at cost of 11 cents each; 6,024 whisk brooms, at cost of 4 cents each.

CARPENTER-SHOP.

In this shop there have been employed nine to ten prisoners; total number of days' labor, 3,032½, at 50 cents per day; total value, \$1,516.25.

During the year a change was made in the manufacture of mess tables and benches by substituting poplar for pine lumber, thereby saving at least \$10 per thousand feet on all lumber used in such manufacture. Samples of stools have been submitted to the Quartermaster-General to take the place of mess benches (of the two samples submitted the one having a 2-inch seat has been adopted), being supplied with iron cross-roads and a cap-rest.

Experience of the past year has shown that the indurated fiber chair-seat was not suitable for Army use, and the use of the same has been discontinued. It has been found necessary to use round steel-wire nails instead of brass-headed furniture nails in fastening perforated veneer and vulcanized fiber seats on to the seat frames in manufacturing barrack chairs.

The manufacture of mess-hall furniture for Fort Riley, Kans., interfered very materially with orders from other posts for the manufacture of mess tables and benches, etc., in the carpenter-shop, as we had only two clamps for doing the gluing on such work. By the addition of two new clamps (one purchased from the prison appropriation and one from the appropriation for incidental expenses) the capacity of the shop has been more than doubled.

The following articles were manufactured, at average cost set opposite each article: 1,295 barrack chairs, indurated seats, 81 cents each; 1,324 barrack chairs, vulcanized seats, \$1.08 each; 1,322 barrack chairs, perforated seats, 62 cents each; 134 mess-tables, pine, average price \$5.79 each; 304 mess-tables, poplar, average price \$4.55 each; 235 mess-benches, pine, average price \$2.19 each; 265 mess-benches, poplar, average price \$1.72 each; 25 company field desks, \$7.32 each; 185 standing lockers, \$5.74 each; 2 folding mess-tables, \$4.02 each; 4 folding mess-benches, \$2.70 each; 1,000 stable brooms, 16 cents each; 230 handles for stable brooms, 7 cents each; 144 camp-stools, 36 cents each.

TAILOR-SHOP.

Seven hundred and twenty-one and one-half days' prison labor, at 50 cents per day, amounting to \$360.75, employed in making the following clothing for prisoners at Alcatraz Island, California: 282 coats, at \$2.41 each; 301 pairs pants, at \$1.66 per pair; 467 shirts, at \$1.29 each; 487 pairs drawers, at 36 cents per pair; 450 stockings, at 28 cents per pair.

A considerable saving has been made in the item of socks during the past year, owing to the plan of having them cut off above the heel when badly worn and re-footed by the knitting-machine instead of being thrown aside and condemned as heretofore.

BLACKSMITH-SHOP.

There were employed 1,010½ days' labor, at 50 cents per day, amounting to \$505.25.

Manufactured during year: 3,941 sets bolts for barrack chairs; 185 sets bolts for standing lockers; 25 sets irons for company field-desks; 438 sets of table legs; 500 sets of bench legs.

The following labor was performed by prisoners for the post quartermaster, Fort Leavenworth, Kans.:

1,229½ days' skilled labor, at 50 cents per day.....	\$614.63
34,685½ days' unskilled labor, at 35 cents per day.....	12,139.93
Total	12,754.56

TOTAL LABOR.

The total amount of skilled labor employed by the Quartermaster's Department is 31,197½ days, at 50 cents per day.....	15,598.63
The total amount of unskilled labor, consisting of that done by prisoners turned over as laborers to the depot and post quartermasters, is 34,685½ days, at 35 cents per day.....	12,139.93
Total	27,738.56

RECEIPTS.

Sales to officers of fuel, forage, and mineral oil.....	622.99
Sales to officers of boots and shoes.....	365.42
Sales to officers of miscellaneous quartermaster's stores.....	8.38
Sales of scrap leather.....	} 739.73
Sale of sacks with scrap leather.....	
Receipts from miscellaneous prison labor.....	58.38
Total	1,794.90

EXPENDITURES.

The disbursements of the Quartermaster's Department made during the fiscal year are as follows:

Regular supplies (tin-ware, etc.).....	\$8,091.25
Incidental expenses (mess-tables, benches, clerical services, etc.).....	5,139.02
Transportation of the Army (harness, field-desks, etc.).....	3,071.21
Clothing and equipage (boots, shoes, chairs, etc.).....	88,821.92
Shooting galleries and ranges, stationery, and record cases for Fort Riley, Kans.....	43.05
Total	105,166.45

Of the above the following was paid on account of clothing and equipage out of appropriation for fiscal year 1888-'89, viz: \$368.02.

There have been transported from this prison to general depots of the Quartermaster's Department and to various posts 650,256 pounds of freight, on 1,014 bills of lading.

There have been 540 transportation requests issued, covering the transportation of 560 persons (prisoners returning to last place of enlistment and escorts returning to their proper station).

Very respectfully, your obedient servant.

WM. E. ALMY,

First Lieutenant, Fifth Cavalry, A. A. Q. M.

The ADJUTANT U. S. MILITARY PRISON,
Fort Leavenworth, Kans.

OFFICE OF THE ASSISTANT COMMISSARY OF SUBSISTENCE,
U. S. MILITARY PRISON,
Fort Leavenworth, Kans., July 12, 1890.

SIR: I have the honor to report that I have been on duty at the prison as acting commissary of subsistence during the whole of the fiscal year 1890, under the provisions of Orders, No. 21, U. S. Military Prison, May 1, 1888.

The subsistence supplies (articles of the ration) purchased by me for the use of the prison have been, with the exception of fresh beef, purchased wholly from the Subsistence Department, under authority conferred by the honorable the Secretary of War in a letter from the Commissary-General of Subsistence, dated September 13, 1876, and have been invariably in excellent condition and of the best quality. K. B. Armour, of the Armour Packing Company, of Kansas City, Mo., was contractor for the supply of fresh beef, and gave entire satisfaction.

The number of rations issued during the year were: To prisoners, 189,590; to civil employes, 2,555—total number of rations issued, 192,145. Daily average number of prisoners, 519 $\frac{1}{3}$; daily average number of civilian employes, 7; total cost of rations, \$23,462.24; average cost per ration, 12.21 cents.

The ration in bulk is as follows: Pork, 52,906 $\frac{1}{2}$ pounds; flour, 248,600 pounds; fresh beef, 151,948 $\frac{1}{2}$ pounds; beans, 15,125 pounds; rice, 9,123 pounds; tea, 1,317 pounds; vinegar, 1,881 gallons; soap, 7,682 pounds; pepper, 465 pounds; coffee, 12,624 pounds; sugar, 28,917 pounds; candles, 10 pounds; salt, 7,682 pounds.

Large purchases of corned beef, mutton, dried peas, hominy, potatoes, and other articles were made from the prison mess-fund. Cabbage, corn, beans, lettuce, radishes, okra, tomatoes, green peas, carrots, parsnips, etc., were all served in their season. A supply of cabbage, parsnips, carrots, and turnips were preserved through the winter and served to the men in January, February, and March of this year. Beets and sauerkraut lasted until April, and onions and potatoes were had continuously throughout the year. A supply of green tomatoes, peppers, and cucumbers were put up and relished during the winter. Hogs raised and fattened in the prison pens were killed from time to time and served fresh, in part, and the remainder corned.

The flour from the Subsistence Department is of excellent quality, and makes superior bread; 16 ounces of it will make 22 ounces of bread. The superior quality of the prison bread is much commented on by officers and others visiting the institution.

Special effort is made to give as much variety and change at dinner as is consistent, and no day has gone by during the year without a plentiful supply of vegetables, and as much food to each man as he desired to eat.

The order relative to food served to prisoners on restricted diet has been carefully complied with, and none has ever been served that has not been carefully weighed.

The service in the prison kitchen and mess hall is excellent, the food is well and carefully prepared and cooked, and served cleanly and impartially to all. Every meal throughout the year has been ready and served on time.

No complaints of insufficient food or bad cooking have been made (complaints respectfully presented being permitted under the prison rules).

Twenty-five minutes are allowed for each meal except supper, when men, by classes, are dismissed by order of the officer of the day.

The officer of the day, the commissary sergeant, and four privates of the provost guard (sentries) are present at each meal to maintain good order and discipline.

The subsistence store-room, prison kitchen and mess-hall, bakery, and butcher-shop are inspected by the commandant, attended by the officers of the prison, every Sunday morning, and at other times unattended. The executive officer makes a daily inspection, and quite often I am through them and find them models of cleanliness and order. I have, at the close of each month, made a correct and careful inventory of all subsistence stores on hand, as required by paragraph 1352, Army Regulations.

The kitchen utensils and mess kit are all good of their kind, and well kept and cared for.

Tobacco furnished to the commandant for distribution to prisoners engaged in special or excessive hard labor was 1,159.2 pounds, and the cost thereof was \$402.12.

Commissary Sergeant Wm. H. Northwood efficiently and zealously performs all the varied duties required of him under the detail.

Very respectfully, your obedient servant,

C. W. MASON,

First Lieutenant, Fourth Infantry, Prison A. C. S.

THE ADJUTANT U. S. MILITARY PRISON,
Fort Leavenworth, Kans.

U. S. MILITARY PRISON,
Fort Leavenworth, Kans., July 16, 1890.

The following statement, showing the number of prisoners in confinement in the United States military prison, Fort Leavenworth, Kans., on the 30th day of June, 1890, received from the different organizations of the Army, the departments from which sentenced, terms of sentences, together with their ages, nativities, and occupations, is respectfully submitted.

J. W. POPE,
Captain and A. Q. M., U. S. Army, Commandant.

Number of prisoners in confinement on the 30th day of June, 1890, 481.

Of the number of prisoners confined there were sentenced from the different regiments as follows: First Cavalry, 14; Second Cavalry, 2; Third Cavalry, 18; Fourth Cavalry, 7; Fifth Cavalry, 16; Sixth Cavalry, 15; Seventh Cavalry, 15; Eighth Cavalry, 21; Ninth Cavalry, 21; Tenth Cavalry, 1—making a total from the cavalry arm of 130. First Artillery, 2; Second Artillery, 9; Third Artillery, 13; Fourth Artillery, 9; Fifth Artillery, 15—making a total from the artillery arm of 48. First Infantry, 1; Second Infantry, 3; Third Infantry, 8; Fourth Infantry, 3; Fifth Infantry, 9; Sixth Infantry, 9; Seventh Infantry, 16; Eighth Infantry, 9; Ninth Infantry, 12; Tenth Infantry, 15; Eleventh Infantry, 6; Twelfth Infantry, 13; Thirteenth Infantry, 9; Fourteenth Infantry, 2; Fifteenth Infantry, 12; Sixteenth Infantry, 5; Seventeenth Infantry, 5; Eighteenth Infantry, 10; Nineteenth Infantry, 10; Twentieth Infantry, 11; Twenty-first Infantry, 19; Twenty-second Infantry, 16; Twenty-third Infantry, 3; Twenty-fourth Infantry, 1; Twenty-fifth Infantry, 3—making a total from the infantry arm of 210. Battalion of engineers, 8; provost-guard, 1; hospital corps, 5; ordnance department, 1; commissary sergeant, U. S. Army, 1; recruits, mounted service, 47; recruits, general service, 30—the whole making a grand total of 481.

Of the number of prisoners confined there were sent from the different departments as follows: War, 133; Platte, 81; Dakota, 65; Atlantic, 78; Missouri, 75; Texas, 38; Arizona, 11—total, 481.

The following represent the various charges upon which the prisoners were tried and sentenced: Desertion, 305; desertion and desertion, 5; desertion, desertion, and desertion, 1; desertion, desertion, and fiftieth Article of War, 1; desertion, desertion, and sixty-second Article of War, 3; desertion and seventeenth Article of War, 35; desertion and seventeenth and thirty-ninth Articles of War, 1; desertion and seventeenth and sixtieth Articles of War, 5; desertion and seventeenth and sixty-second Articles of War, 16; desertion and seventeenth, thirty-second, and sixty-second Articles of War, 1; desertion and seventeenth, fortieth, and sixty-second Articles of War, 1; desertion and fiftieth Article of War, 5; desertion and sixtieth Article of War, 5; desertion and sixty-second Article of War, 17; desertion and fortieth and sixtieth Articles of War, 1; desertion and fortieth and sixty-second Articles of War, 1; desertion and sixtieth and sixty-second Articles of War, 3; desertion and twenty-first and sixty-second Articles of War, 1; desertion and thirty-eighth and sixty-second Articles of War, 1; desertion and thirty-ninth and sixtieth Articles of War, 2; desertion and theft, 2; violation of the twenty-first Article of War, 1; violation of the twentieth and twenty-first Articles of War, 1; violation of the twenty-first and sixty-second Articles of War, 4; violation of the twentieth, twenty-first, and sixty-second Articles of War, 3; violation of the twenty-first, thirty-second, and sixty-second Articles of War, 3; violation of the twenty-first, twenty-fourth, and sixty-second Articles of War, 1; violation of the thirty-eighth Article of War, 1; violation of the thirty-eighth and fortieth Articles of War, 1; violation of the thirty-eighth and sixty-second Articles of War, 1; violation of the thirty-eighth, thirty-ninth, and sixty-second Articles of War, 1; violation of the sixtieth Article of War, 2; violation of the sixty-second Article of War, 34; violation of the sixty-second and twentieth Articles of War, 2; violation of the sixty-second, thirty-second, thirty-third, and seventeenth Articles of War, 5; theft, 9—total, 481.

The following are the terms of sentences and number of prisoners undergoing confinement under each term: One year, 25; one year and six months, 6; one year and eleven months, 7; two years, 122; two years and three months, 7; two years and six months, 28; two years and ten months, 5; three years, 157; three years and three months, 2; three years and six months, 1; three years and eleven months, 4; four years, 54; four years and six months, 3; four years and eleven months, 3; five years, 40; five years and two months, 1; five years and four months, 1; five years and seven months, 2; six years, 5; seven years, 5; seven years and six months, 1; eight years, 1; ten years, 1—total, 481.

The approximate ages of the prisoners confined in the prison are shown by the following: Between nineteen and twenty-one years, 2; between twenty-one and twenty-five years, 193; between twenty-five and thirty years, 298; between thirty and thirty-

five years, 62; between thirty-five and forty years, 12; between forty and forty-five years, 3; between forty-five and fifty years, 1—total, 481.

Of the prisoners here confined the nativity, as claimed by them, is as follows: Australia, 1; Austria, 6; Canada, 14; England, 22; Germany, 36; Holland, 3; Ireland, 51; Prussia, 1; Russia, 1; Nova Scotia, 4; Scotland, 1; Sweden, 5; Switzerland, 3; Wales, 1; United States, 332—total, 481.

The following occupations are represented: Artists, 1; bakers, 10; blacksmiths, 15; barbers, 21; boiler-makers, 1; book-keepers, 3; brass-finishers, 1; bricklayers, 2; broom-makers, 2; brush-makers, 1; butchers, 7; carpenters, 10; cigar-makers, 3; clerks, 27; cloth-finishers, 1; coopers, 2; coachmen, 2; cooks, 12; dentists, 1; engineers, 5; farmers, 29; firemen, 5; file-cutters, 4; harness-makers, 5; hostlers, 15; iron-molders, 6; jewelers, 1; laborers, 146; machinists, 5; morocco-dressers, 2; millers, 1; miners, 1; musicians, 11; nickle-platers, 2; painters, 26; paper-hangers, 2; plasterers, 1; plumbers, 4; puddlers, 2; railroad men, 4; sailors, 10; salesmen, 2; school-teachers, 1; stone-cutters, 9; stone-masons, 1; soldiers, 3; tailors, 8; teamsters, 35; tinsmiths, 3; telegraph operators, 3; waiters, 3; wheelwrights, 2; weavers, 2—total, 481.

Annual report of alterations in prisoners and prison labor performed at the United States Military Prison, Fort Leavenworth, Kans., during the fiscal year ending June 30, 1890.

Date.	In prison.		Gain.			Loss.				Sentence mitigated.
	Aggregate.	Aggregate last re- port.	By transfer.	From escape.	Aggregate.	Discharged.			Aggregate.	
						By expiration of sentence.	By order.	Escaped.		
July 31, 1889.....	456	486	11	.....	11	12	14	1	27	21
August 31, 1889.....	483	472	43	* 1	44	12	3	2	17	18
September 30, 1889.....	499	476	40	1	41	16	8	1	25	14
October 31, 1889.....	516	455	34	1	35	8	8	2	18	5
November 30, 1889.....	517	456	16	.....	16	10	5	.....	15	10
December 31, 1889.....	538	452	37	.....	37	12	4	.....	16	14
January 31, 1890.....	556	473	45	1	46	16	12	.....	28	5
February 28, 1890.....	569	464	35	1	36	12	11	.....	23	2
March 31, 1890.....	550	469	16	.....	16	13	22	.....	35	68
April 30, 1890.....	540	470	21	.....	21	15	16	.....	31	38
May 31, 1890.....	523	462	13	1	14	16	14	1	31	80
June 30, 1890.....	481	472	8	.....	8	22	28	.....	50	55
Total	6, 228	5, 616	310	6	325	164	145	7	316	330

RECAPITULATION.

In prison June 30, 1889.....	472
Received since.....	325
	797
Loss:	
Discharged by expiration term of sentence.....	164
Discharged by order.....	145
Escaped.....	7
	316
Remaining in prison June 30, 1890.....	481

Prison labor performed.

During—	For Quartermaster's Department.								
	For depot and post quartermasters.		Manufacturing department.						
	Skilled.	Unskilled.	Shoeshop.	Harnessshop.	Tinshop.	Broomshop.	Car-penter-shop.	Tailor-shop.	Blacksmith-shop.
	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.	Days.
July, 1889.....	26½	2,756	1,714	358	210	213½	227	.....	58
August, 1889.....	253½	2,527	1,695	339	195½	157½	253	.....	97
September, 1889.....	106	2,512	1,597	342	207	147	225	.....	125
October, 1889.....	95	2,679	1,675	231	253	162	276	.....	165½
November, 1889.....	392	2,756½	1,489	377	229	75	312½	.....	68½
December, 1889.....	58	3,230	1,490	158	246	75	332½	.....	153½
January, 1890.....	77½	3,943½	1,606½	163	181	77	307	.....	54
February, 1890.....	90½	3,523½	1,026½	141½	150	100	183	236½	56
March, 1890.....	32½	3,678	1,627½	180	187	100	293	80	45
April, 1890.....	66½	2,634½	1,382½	161	451	75	222½	179	125
May, 1890.....	19	2,306½	1,553	193	238	77	212	179	62
June, 1890.....	194	2,139	1,700	173	13	3	189	47	1
Total.....	1,411½	34,085½	18,565	2,816½	2,560½	1,262	3,032½	721½	1,010½

During—	Total labor performed for Quartermaster's Department.		Labor performed for prison.		Total labor performed.		Aggregate labor performed.
	Skilled.	Unskilled.	Skilled.	Unskilled.	Skilled.	Unskilled.	
	Days.	Days.	Days.	Days.	Days.	Days.	Days.
July, 1889.....	2,807½	2,756	1,811½	4,820½	4,619	7,585½	12,204½
August, 1889.....	2,090½	2,527	1,298	5,089	4,288½	7,628	11,914½
September, 1889.....	2,749	2,512	1,780	5,103	4,629	7,615	12,144
October, 1889.....	2,857½	2,679	2,115½	5,745	4,973	8,424	13,397
November, 1889.....	2,943	2,756½	1,905	4,828	4,848	7,584½	12,433½
December, 1889.....	2,522	3,230	2,459	5,204	4,981	8,434	13,415
January, 1890.....	2,466	3,943½	2,170	5,509	4,636	9,452½	14,083½
February, 1890.....	1,984	3,523½	1,774½	5,486½	3,758½	9,010	12,768½
March, 1890.....	2,545	3,678	2,170	6,106	4,715	9,784	14,449
April, 1890.....	2,662½	2,634½	1,877½	6,786	4,540	9,420½	13,960½
May, 1890.....	2,533	2,306½	1,961½	6,672	4,494½	8,978½	13,473
June, 1890.....	2,320	2,139	2,118½	6,424	4,438½	8,563	13,001½
Total.....	31,379½	34,085½	23,441½	67,792	54,821	102,477½	157,298½

Average number of prisoners employed daily throughout the year of 308 working days:

Mechanics, or skilled labor..... 177.99

Laborers, or unskilled labor..... 332.72

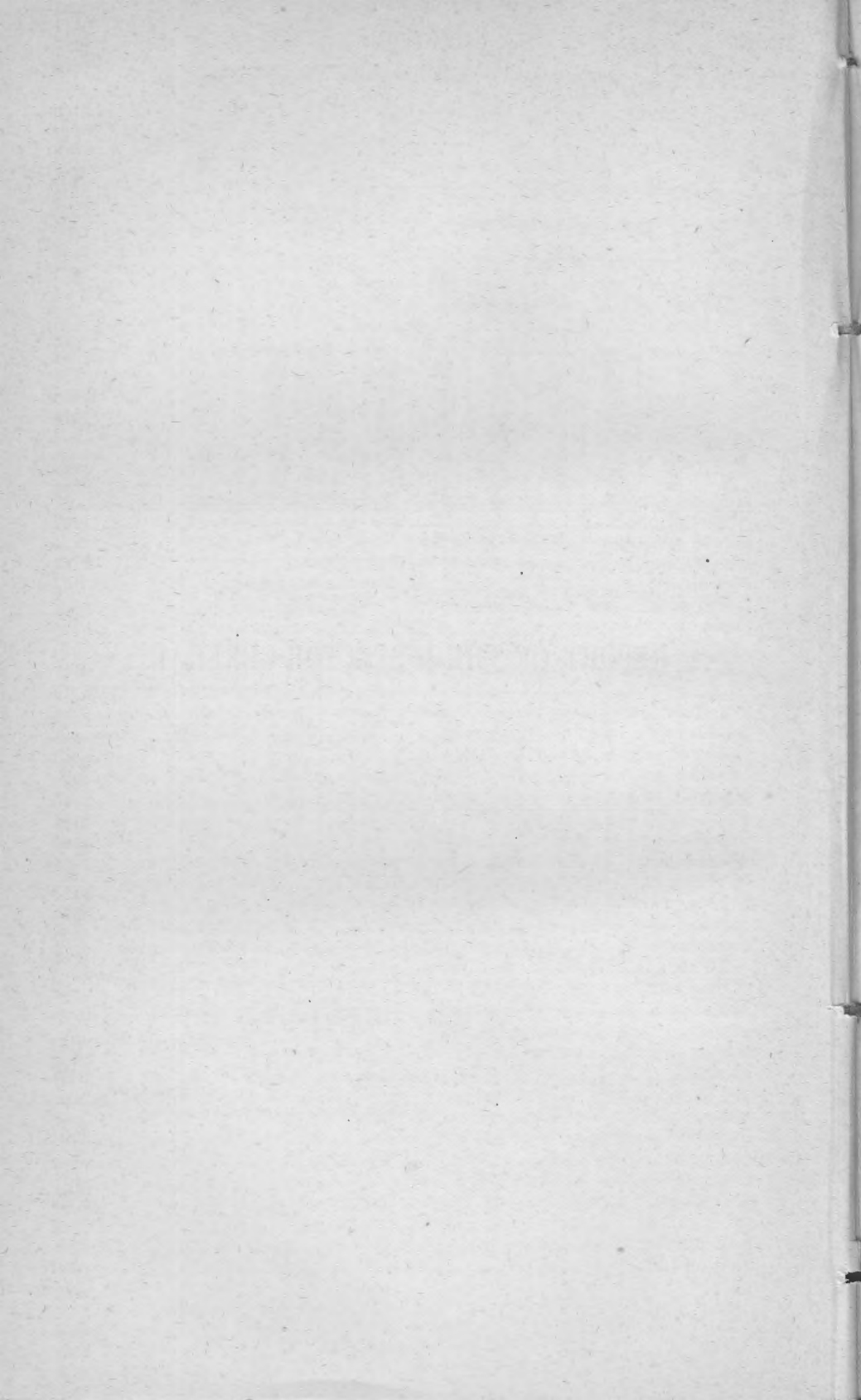
Total..... 510.71

Average number of prisoners in confinement per month, 519.

Respectfully submitted.

J. W. POPE,
Captain and A. Q. M., U. S. Army, Commandant.U. S. MILITARY PRISON,
Fort Leavenworth, Kans., July 16, 1890.

REPORT OF THE INSPECTOR-GENERAL.



REPORT
OF THE
INSPECTOR-GENERAL OF THE ARMY.

WAR DEPARTMENT,
INSPECTOR-GENERAL'S OFFICE,
Washington, D. C., October 7, 1890.

SIR: In accordance with the custom which prevailed in the Adjutant-General's Department concerning the inspection of the encampments of State militia, I have the honor to submit the following annual report of the operations of the Inspector-General's Department on that subject, to which are added certain other matters, such as the reports concerning the military branch at institutions where army officers are detailed under section 1225, Revised Statutes; the inspection of the money accounts of disbursing officers of the Army, etc.

Inspection and Instru-
ction of the Volunteer
Militia.

The general policy of our nation has always opposed, and will ever continue to oppose, the maintenance of a large standing or regular army. Our graphical position with reference to other powers is such that the possibility of war at any time is very remote; and the sudden precipitation of such conditions is almost impossible. A regular establishment of sufficient strength to contend unaided by the militia with any declared enemy has never existed. Therefore we may never hope for a permanent army strong enough even to bear unaided the first shock of hostile demonstration from any power likely to invade our borders, much less to fight a war to a successful termination, or to invade the territory of another power. We must, therefore, recognize and admit the fact that hereafter, as heretofore, our wars must be fought by the militia; and the regular Army will hereafter, as heretofore, become the organizers, leaders, and commanders of this great army.

The organizations of the regular establishment, filled from the ranks of this army, become a part of it in all except in its designation as Regulars. Each succeeding war since the establishment of the Government has demonstrated, through the excessive waste of life and money incident upon a lack of intelligent primary *instruction and organization*, the evils of the short-sighted and wicked policy of neglecting these essentials during the periods of national serenity. To the nation there is no interest of more vital importance than the proper organization and instruction of the militia, and no class of individuals can be more interested therein than the officers of the regular Army; because to them will fall the responsible duty of organizing, equipping, and mobilizing this mass of men, and their fortunes must be indissolubly joined together for success or failure as comrades in any great adventure of war. Since the last great war of the rebellion greater zeal and interest has been manifested in military subjects throughout

the nation generally than ever before; but this interest was specially developed by perpetuating the military spirit and reminiscence of the war, and is maintained through the personal efforts of the members of the several organizations, while receiving little or no encouragement from the States, or from the General Government.

The first serious complication, the great riots of 1877, exposed the weakness and inefficiency of the militia at some localities, but at the same time attracted to them the attention of the people; and better organization followed. Assistance and instruction was asked by some of the States from the regular Army, which was freely and cordially supplied; but no system has as yet been developed by which this assistance may be distributed regularly and by uniform methods, or the results compared and utilized for subsequent improvement. This assistance from the Army has been given upon the request of the governors of the several States, asking in various forms for inspectors, instructors, etc., frequently naming the officer whom they desired to secure. As these requests multiplied, and the necessity for a careful supervision of the work appeared, the Secretary of War assigned this onerous duty of formulating instructions for officers assigned to the inspection and instruction of militia, and of receiving, considering, and distributing their reports, to the Inspector-General of the Army. About the time this order was made the Association of the National Guard of the United States met in convention in the city of Washington, which afforded an excellent opportunity to elicit the views of the representatives from all the States on the subject of inspection or instruction by officers of the Army. This office was favored with visits from the president of the association and other prominent representatives of the National Guard; and later a number of these gentlemen were invited to express their views and indicate their wishes as to the best course to be pursued and methods to be adopted in the inspection and instruction of the National Guard by Army officers at their annual encampments. Valuable responses were received from General George W. Wingate, president National Guard Association, United States; General Albert Ordway, commanding District of Columbia militia; Col. W. L. Chase, inspector-general State of Massachusetts, and Lieut. Col. T. F. Edmands, commanding First Corps Cadets, Massachusetts Volunteer Militia. The letter of instruction to inspecting officers was made to conform as far as practicable to the views and suggestions expressed by these gentlemen.

Officers of the Army to inspect and instruct the troops at their annual encampment were asked for by the States mentioned in the following table, which gives the place and date of holding the encampment, with other data:

Inspection of National Guard, 1890.

State and place.	Date of encampment, 1890.	Officers detailed.	No. of order, 1890.	Date of issue of instructions, 1890.
Alabama:				
Montgomery.....	June 23 to 30	Lieut. L. G. Berry, Fourth Artillery.....	(*)	June 20
Selma.....	July 9 to 16	Lieut. S. W. Taylor, Fourth Artillery ...	149	July 5
Delaware:				
Brandywine Springs...	July 26 to Aug. 2.	Lieut. G. LeR. Brown, Eleventh Infantry.	133	June 12
Georgia:				
Augusta.....	June 16 to 21	Lieut. C. P. Terrett, Eighth Infantry....	101	June 9
Indiana:				
South Bend.....	Aug. 4 to 9	Capt. C. G. Penney, Sixth Infantry.....	(†)	July 30

* Telegram of June 18.

† Letter of July 28.

Inspection of National Guard, 1890—Continued.

State and place.	Date of encampment, 1890.	Officers detailed.	No. of order, 1890.	Date of issue of instructions, 1890.
Kentucky: Cumberland Gap.....	July 21 to 28	No officer available .....	.....	.....
Maine: Angusta.....	June 28 to July 4.	Lieut. E. W. Howe, Seventeenth Infantry.	131	June 12
Michigan: Battle Creek.....	July 23 to 29	Col. C. H. Smith, Nineteenth Infantry...	156	July 15
Missouri: Excelsior Springs.....	July 21 to 28	Capt. J. F. Stretch, Tenth Infantry	163	July 21
New Hampshire: Concord	June 14 to 20	Col. L. L. Langdon, First Artillery	111	June 13
New York: Peekskill	July 5 to Aug. 23.	Lieut. Col. R. H. Jackson, Fourth Artillery.	108	June 20
Pennsylvania: Mount Gretna	July 18 to 26	Lieut. Col. H. C. Corbin, assistant adjutant-general. Capt. J. G. Ramsay, Second Artillery.... Capt. C. B. Sears, Engineers.....	144 144 168	July 3 June 26 July 21
Texas: San Antonio.....	July 7 to 12	Maj. E. C. Woodruff, Fifth Infantry	152	July 2
Vermont: Bradford	Aug. 19 to 24	Lieut. S. M. Foote, Fourth Artillery.....	131	June 12
Wisconsin: Camp Douglas..... Oconto..... Oconomowoc.....	July 7 to 26) Aug. 11 to 16) Aug. 11 to 16)	Col. E. C. Mason, Third Infantry	145	June 30

Other States, however, were supplied with assistance from the Army by the assignment of officers for duty in connection with the organization and instruction of the militia, but were not required to report to this office. The following is a return of the State troops inspected in their encampment.

Return of troops by States at the various encampments in 1890.

State.	Encampment.	Force present in camp.							Aggregate.	
		General staff.	Field and staff.	Non-commissioned staff.	Company officers.	Sergeants, corporals, and privates.	Total officers.	Total enlisted men.		
Alabama.....	Montgomery.....	.....	*8	*4	*33	*370	41	374	415
Do.....	Selma.....	.....	6	*4	*31	*543	*37	547	584
Delaware.....	Brandywine Springs.....	.....	†20	5	30	389	56	394	444
Georgia.....	Angusta.....	.....	.....	.....	.....	118	1,070	1,188	1,188
Indiana.....	South Bend.....	.....	.....	.....	.....	145	1,413	1,558	1,558
Maine.....	Angusta.....	8	14	16	48	665	70	681	751
Michigan.....	Battle Creek.....	10	31	16	107	1,726	148	1,742	1,890
Missouri.....	Excelsior Springs.....	.....	†14	.....	23	294	37	294	331
New Hampshire.....	Concord.....	10	*20	*22	*70	*785	100	807	907
New York.....	Peekskill.....	.....	.....	.....	.....	.....	209	4,731	5,000
Pennsylvania.....	Mount Gretna.....	.....	†198	169	385	7,296	583	7,465	8,048
Texas.....	San Antonio.....	15	25	12	94	1,008	134	1,020	1,154
Vermont.....	Bradford.....	.....	.....	.....	.....	.....	.....	.....	.....
Wisconsin.....	Camp Douglas.....	.....	.....	.....	.....	.....	.....	1,499	.....
Do.....	Oconto.....	.....	.....	.....	.....	.....	.....	744	.....
Do.....	Oconomowoc.....	.....	.....	.....	.....	.....	.....	58	.....
Total.....	43	*36	248	821	13,076	1,732	22,839	22,270

* Estimated. † General staff included. ‡ General and non-commissioned staff included.

Return of troops by States at the various encampments in 1890—Continued.

States.	Encampment.	Force ordered into camp.			Per cent. present.			Officer commanding camp.
		Officers.	Enlisted men.	Aggregate.	Officers.	Enlisted men.	Total.	
Alabama	Montgomery	50	771	821	82.0	48.5	50.5	Col. Thomas G. Jones, Second Regiment.
Do.....	Selma.....	*43	*660	703	86.0	82.9	83.1	Col. W. W. Quarles, Third Regiment.
Delaware.....	Brandywine Springs.....	55	493	548	90.9	79.9	81.0	Gen. R. R. Kenney, adjutant-general.
Georgia.....	Augusta.....	.....	.....	.....	.....	.....	.....	Col. George A. Mercer.
Indiana.....	South Bend.....	145	1,413	1,458	100.0	100.0	100.0	Brigadier-General Ruckle, adjutant-general.
Maine.....	Augusta.....	72	819	891	97.2	83.2	84.3	Brig. Gen. H. L. Mitchell.
Michigan.....	Battle Creek.....	150	1,833	1,983	98.7	95.0	95.3	Brig. Gen. Charles S. Brown.
Missouri.....	Excelsior Springs.....	42	557	599	88.1	52.8	56.9	Brig. Gen. J. A. Wickam, adjutant-general.
New Hampshire.....	Concord.....	107	1,020	1,127	93.5	79.1	80.5	Brig. Gen. Joab N. Patterson.
New York.....	Peekskill.....	297	6,069	6,366	90.6	77.9	78.5	Maj. Gen. Josiah Porter, adjutant-general.
Pennsylvania.....	Mount Gretna.....	618	7,811	8,429	94.3	95.6	95.5	Brig. Gen. George K. Snowden.
Texas.....	San Antonio.....	155	1,491	1,646	86.4	68.4	69.8	Maj.-Gen. A. S. Roberts.
Vermont.....	Bradford.....	.....	.....	.....	.....	.....	.....	General W. L. Greenleaf.
Wisconsin.....	Camp Douglas.....	.....	2,141	.....	.....	70.0	.....
Do.....	Oconto.....	.....	1,088	.....	.....	68.7	.....
Do.....	Oconomowoc.....	.....	105	.....	.....	50.0	.....
Total.....	.....	1,734	26,266	24,771	83.1	82.9	85.1	

* Estimated.

During the brief period the inspecting officers were engaged with their duties no opportunity occurred to observe any other of the troops of the State than those participating in the encampment.

The reports of these inspections are interesting, and are submitted herewith. (Supplement 1.) These reports affirm the inspector's readiness to impart all desired instruction and information; that information was generally eagerly sought and accepted; and that such criticisms as were made were received in the proper spirit, and the faults pointed out were speedily corrected. In some instances tactical problems were practically solved, with very satisfactory results. The organization and equipment does not appear uniform in some of the States, or throughout the States. Instruction and discipline is not generally as good as it reasonably should be. It is noted in some instances that the laxity of discipline permitted undignified and disorderly excesses. Improvement in just such matters is the purpose, and is sure to be the result, of National Guard organization. And some regiments are famous for their admirable instruction.

The uniform is generally the undress of the Army, but many exceptions are noted, some to the extent of being quite unsuitable for practical use in the field. The arms are of Springfield pattern, but not all the latest model; some are noted as unserviceable, and the majority reported in bad condition. The accouterments are also generally noted as neglected. Target practice has been habitually held, but limited in extent and range. The proficiency, particularly in some of the States where the militia have had substantial organization for a number of years, is very gratifying. And a movement in this direction, exemplified at Camp Douglas this summer, gives promise of perfect success in the States of

the Northwest. Attention is invited to the report of Capt. S. E. Blunt, Ordnance Department, which contains a method arranged expressly for the militia, and which is commended.

The quality and quantity of camp and garrison equipage is satisfactory in but few of the States. Only a few have supply departments practically organized. None of the States possess any facilities for concentrating their troops other than by the railroad lines within their borders, and none are reported as having any special laws relating to, or governing the use of the railroads for this purpose, but it is understood some such laws exist. Generally the organized militia of each State is distributed among the principal towns, few having more than one company. In the larger cities armories are supplied, but in some of the States even this convenience is not generally furnished, and little or no means for instruction exists except what is provided by the organizations, and then few are instructed beyond the school of the company and manual. The military enthusiasm and patriotism which enables these organizations to overcome so many obstacles deserves warm commendation.

The officers are generally reported intelligent, zealous, and enthusiastic. There is a unanimity of expression as to the benefit and usefulness of officers of the Army as inspectors and instructors of the militia, and a cordial and grateful acknowledgment of it from all the States; in some instances this appreciation has been made the subject of most flattering letters of acknowledgment. Criticisms and recommendations are numerous, and vary according to the circumstances and conditions. The general results of the inspections during the past year suggest consideration of the propriety of supplying to each governor who may apply, the permanent services of one or more officers of the Army of tact and experience; and it would perhaps be better if the governors would leave the selection to the War Department, where the qualifications and adaptability of the officer for such duties are perhaps better known. If officers are to be detailed only for the encampment, and when requested by the governor, it is suggested that the application be filed at as early a date as possible, that a suitable selection may be made, instructions given, and the officer afforded an opportunity to prepare himself for the special work required of him. The haste in some of the details causes unnecessary discomforts. Encampments, where practicable, should be for not less than two weeks. For the Southern States they should be at a season of the year when the weather will permit active work through the whole day. Work in camp should be confined to such exercises as can not be had at other times. More attention should be given to the practical incidents of troops in the field in campaign. The ration only should be supplied, and should be prepared by the troops. Detachments of regiments or larger bodies should be sent from camp for twenty-four hours or more, men carrying their blanket and rations. Such detachments could be utilized for tactical lessons. There seems to be no division of opinion as to the great advantage to the militia of having regular troops encamp with them. That there has been great improvement in the condition of the militia during the past few years there is no doubt, but that there is still room for much greater improvement, no one will dispute. The militia are indebted to themselves for what they are, and must depend upon their own efforts for the future, and their efforts are crystallizing. Soon the States and General Government must recognize the vital importance of the great question, and by amended laws and liberal appropriations, maintain a reserve from the militia of the nation commensurate with its greatness.

Perhaps we may quote what has been said about another organization of volunteers :

It has been truly said by more than one distinguished soldier, "A corps will certainly be trained for the sort of inspection it will have to undergo." This is inevitable. * * * Therefore the great, the predominating responsibility rests with those who conduct inspections, and those who issue to them their orders, how the inspections are to be conducted. * * * They look forward to doing inspection in close touch form, and they therefore ignore and forget everything which does not work towards that. It must be so, and it always will be so, until the commanding officers come to know that what they will be inspected in is the work of the field and not the show of the parade. * * * Therefore it is essential that a thorough change be made in the inspection if there is to be any hope of taking our infantry training finally out of the groove of the obsolete and the, for that reason, useless. Until this fundamental matter is dealt with, all practical improvement must be halting and feeble. * * * The day of processional advance by the executive word of the commanding officer of the battalion is past, and even the captain must rely on the leading of sub-units of his company by others. * * * It is obvious that no system which availed us formerly can avail us now, without great modification. * * * It is essential that under modern conditions the officer in whom the soldier shall most believe shall be the company officer, and to this end he should feel that it is under the hand of that officer that he is growing into a capable soldier. * * * The company commander must in turn rely for direct leading of its fractions upon those below him. * * * External order may be less possible than formerly in the combat, but the attainment in the ranks of an orderly and therefore steady mind in the matter of fire must be striven after with an energy that never flags and a perseverance that never yields. * * * Therefore let it be the rule of the exercise ground that no body of men, small or great, shall on any occasion leave it without having acquired some additional fire discipline by having the orders for fire rung out to them in clear tones by the commanders of the smaller units and by their being made to go methodically through those small details of loading and adjusting sights, and pressing the triggers upon which marksmanship depends for application of its skill. * * * The education of the soldier depends greatly upon the education of the officer, and you can not commence the education of the officer too young. * * * There are certain principles which underlie all drill which are practically immutable. * * * The group system becomes the antidote to the bane of chaos, to the bane of every shooter doing exactly that which is right in his own eyes. * * * In night operations you must have density of formation, and you must not allow men to straggle in order that they may get along more comfortably. * * * Discipline has to be carried into the very limbs of a man. * * * Give us something that shall be directly connected with war, and shall bring us up more closely to what we have to do in actual fighting. * * * Seeing and inspecting what troops can do on their ranges in the way of shooting, or in broken ground in carrying out some minor maneuvers, is much preferred to seeing them march past either at the double or any other pace. * * * Make these inspections a reality in future—a searching inquiry into—not the parade possibilities of a battalion, but into the real military and fighting efficiency of the officers and men in it.

The following interesting article is from the pen of General George W. Wingate, president of the National Guard Association of the United States, and, though received since my report was written, is submitted with it :

History of the Improvement in the National Guard. Before the war of the rebellion, a comparatively few of the Northern States had any militia worthy of the name. In many, the old "training days" had brought the name into contempt.

Massachusetts had probably the best equipped and organized of any. New York had a very large force on paper (19,000 men, with 8 major and 28 brigadier-generals and 63 regiments), but with the exception of a few "crack" organizations in the large cities, the standard of efficiency was very low.

At first organizations were independent companies which finally became amalgamated into regiments. In some regiments these still wore distinctive company uniforms (as is the case at present in some of the Southern States). In all cases the uniforms were more adapted for show than work. There was no pretense of any military knowledge of anything beyond formal drill. Camps were occasionally held, but they were military picnics. Discipline was poor and the men were at liberty, as is now the case with the English volunteers, to resign from the service when they saw fit, and fines imposed for delinquencies could not be enforced. This, however, was largely made up for by the *esprit de corps* of the organizations, which were then filled

up in the large cities by young men of high social positions. These not only unlearned themselves, but in many cases purchased their own arms and even fitted up and paid the rent of their own armories. With the exception of a few arsenals belonging to the States, there was scarcely an armory used by a regiment which was suitable for the purpose. The best were those in the city of New York, and these were situated over the public markets. The brigade and division organizations were wretched, the general officers having hardly any idea of their duties and exercising little influence.

At the outbreak of the war all the organized militia in the country at once volunteered and served as a rule three months, their ranks being filled to the maximum. In addition many new organizations in the different States were formed as "home guards," which as a rule also volunteered and served in the field. The militia was called out in '61, '62, and '63, and, in some instances, in '64.

After the first service in 1861, and during each following year, a large number of the officers and men of the different organizations joined the volunteers as non-commissioned officers and officers, and many rose to a high rank.

While the regiments of the National Guard learned in the service a great deal, they were still behind the present military standards. During its continuance the volunteering and the hard service reduced their numbers, recruiting becoming so difficult as those having military inclinations preferred to volunteer, that in 1864 the governor of New York issued a proclamation urging the necessity of keeping up the National Guard of that State.

At the close of the war in 1865, the National Guard sank to quite a low ebb. The public had been so accustomed to actual warfare that militia duty was looked down to. The men themselves had been under such a constant strain and had been required to make so many sacrifices in serving and in holding themselves in readiness for service that they dropped out of the service on all sides and recruits were difficult to obtain.

About 1868 an improvement began to manifest itself. Many officers who had distinguished themselves in the volunteer service accepted commissions in the militia of the various States. Their experience soon manifested itself in the introduction of military usages and discipline, and particularly in official correspondence and the method of keeping official books, which had been previously almost ignored. Inefficient organizations were disbanded. Public interest also began to revive, and the States began to recognize the duty of properly arming and equipping their militia.

In 1871 the new spirit which was showing itself in the National Guard manifested itself by the formation of the National Rifle Association; a manual of rifle practice (Wingate's) was issued, and in 1873 Creedmoor was opened and the first military rifle competitions organized under State auspices took place. Up to this time instruction in rifle practice was a thing unknown, and as a rule men served their terms of enlistment without firing a shot. Even those who had served in the field had received no systematic instruction in this respect, officers and men being equally ignorant. The system of rifle practice first introduced in New York, it was found, helped to popularize the National Guard, and was followed by New Jersey, Connecticut, and Pennsylvania, and by degrees throughout all the States having a uniformed militia. This was greatly encouraged in this respect by the interest which was shown by the Army, the engineers sending a team to the first matches held at Creedmoor in 1873, a system being adopted by the department commanders about 1876 and by the Army in 1877.

The introduction of rifle practice in the militia may be considered as marking the dividing line between the old "militia" methods and the present movement in the direction of practical military instruction and a high standard of efficiency. One of the most decided indications of this change was the assumption by the new troops of the title of "National Guard" and their objection to the term "militia." This of course does not include Massachusetts, whose troops are still proud to call themselves "The Massachusetts Volunteer Militia."

The railroad riots in 1876 were a forcible lesson of the necessity and value of an efficient national guard. Having such an organization, New York escaped the expense which other States were subjected to.

The losses sustained by Pennsylvania in Pittsburgh during these riots induced that State to thoroughly reorganize the National Guard and to bring it nearer to the model of the regular Army than any other state had previously done. They also led many States which had previously done nothing to take steps to provide an efficient National Guard. The riots in Cincinnati and Chicago also did much in this direction.

Camps of instruction, it is believed, were first started in Connecticut. An artillery camp at Fort Hamilton was held in 1878 where the batteries of New York were associated with the Army, and it proved of value. Since about 1880 camps have been generally introduced in all the States having an organized National Guard. There has been a steady advancement in their management in the direction of practical military service and better discipline, and they have been of the greatest service.

In January, 1878, the National Guard Association was formed for the purpose of

securing from Congress a modification of the obsolete law in regard to the militia, which since 1792 has been contained in the United States Revised Statutes. This association included, and still includes, the leading members of the National Guard in most of the States. Through its influence many publications were made in leading newspapers and magazines, in which the necessity of an effective militia was pointed out, many officers of national reputation contributing articles on this subject. In this way a strong public sentiment, particularly in the Middle and Eastern States, was gradually created in favor of the National Guard, and larger appropriations began to be made by these States for National-Guard purposes than had ever been the case in previous years. This gradually extended to the West.

On the other hand the tax-payers required that this appropriation should be expended to secure practical results. To secure this consolidation the wiping out of weak organizations and a reduction in number of higher officers has been relentlessly pursued. For example, before the war in New York the militia of New York was computed at 19,000, including several regiments (?) of cavalry. During the war it rose to 50,000. In 1868 forty-two regiments were disbanded. By 1879 the force was reduced to 20,000, and the latter was cut down in 1881 to about 10,000, the appropriation being, if anything, increased. Strict inspections, examination for promotion of commissioned and non-commissioned officers was required, signal corps established, suitable armories provided, field equipment issued, and State uniforms adopted.

As the States gave more aid to their troops, they felt justified in demanding more, and stricter discipline began to be instituted.

The Centennial parade in New York in 1889 may be considered as marking another important departure. Few of the spectators who witnessed it supposed that any such force of well-disciplined soldiers existed in the United States as participated in that parade; and the moral effect can not be estimated. It created for the National Guard a respect it never before had. It also had other effects. Those States that were represented by troops uniformed in the ancient style became impressed with the necessity of a practical service uniform. On the other hand it was thought by several of the States that some concession must be made to looks, and some more showy uniform adopted for parades than the blouse to secure the best results for their organization.

COLLEGES.

The precipitation of the war of the Rebellion first suggested the propriety of engrafting primary instruction in military science upon the regular course of study at some of the colleges in the country, and in the act passed July 2, 1862, donating lands for the establishment of colleges, etc., it was made one of the provisions that at these colleges military tactics should form a part of the regular course. In October, 1865, a retired officer of the Army was "authorized" to accept a professorship of military science and tactics. Following this event other officers on the retired list secured like concessions, and became the pioneers of this commendable enterprise. By act of July 28, 1866, the President was authorized to detail not to exceed twenty officers from the Army for this duty, and to supply arms, equipments, etc., to certain colleges. Subsequently the number of officers authorized to be detailed was increased to fifty; and there is now pending a bill providing for a still further increase of the number. It is a coincidence that this report is written on the twenty-fifth anniversary (October 7), of the day on which the first authority of which there is any record was given, permitting an officer of the Army to assume the patriotic duty of instructing the youth of the country in the science of his profession as a part of the education necessary to fit them for their duties as citizens of this great Nation. A history of the struggle for twenty-five years to establish and perfect this feature of college education, can not be detailed in this brief report.

More or less conflict of views occurred, and much opposition appeared from sources where only support and encouragement should have been found. At one time it appeared possible, even desirable, to

Military Science and Tactics at Institutions where Officers of the Army are Detailed under section 1225, Revised Statutes.

the Army that the laws granting to colleges its assistance, should be repealed. In the past two or three years, however, more interest and renewed vigor seems to have developed; until, through the efforts of a few strong characters, the past year has seen the good work fixed upon a solid basis, recognized and established, with uniform systems and methods. April 25, 1889, an order was promulgated assembling a board of competent and experienced officers "to consider the practicability of prescribing a uniform system of rules and regulations, and course of study for the guidance of officers detailed as professors of military science and tactics at colleges, universities, etc." This board met and entered upon an exhaustive consideration of the whole subject, submitted a full report with recommendations, which resulted in the issuing of General Order No. 15, and Circular "B," from the headquarters of the Army and War Department, dated respectively February 12 and 13, 1890. This order and circular seem to have been accepted by the authorities of each college interested.

The inspection of college military instruction was not placed in the hands of the Inspector-General until 1886, and until within the past year the inspections of these institutions were made dependent upon other duty requiring the inspector's presence in the vicinity of the college, thus curtailing much of their power for good. During the past year 51 colleges have been inspected and reported upon. These reports are submitted herewith. (Supplement 2.) Compared with those of any previous year, these reports are most gratifying and affirm the wisdom of the establishment of uniform regulations for all such institutions. It may be said that now for the first time this important duty is organized on principles which will admit of development; and henceforth better results may and should be expected.

Colonel Heyl, in his annual report says, touching this subject:

The discipline of the students and their interest in the military feature is good and growing better. The presidents and faculties also seem to take a greater interest in the military feature than formerly, and whenever practicable assist and encourage the commandants as much as in their power. The growing popularity of the military feature of most of these colleges meets with excellent results. The thorough training, the almost military discipline, both of teachers and pupils, affords an instructive and profitable study. At nine of these colleges military drill is compulsory, or partly so on certain classes, and in three it is voluntary upon the students. At four colleges no weight is given the military course, and in others, where it is rated the same as other studies, the time given the military course is limited.

At my inspections the students, with the exception of one college, presented a very soldierly appearance, and their drill was very good and much improved since last inspection. These colleges have in their possession 22 pieces of field artillery, they are generally old, being some of the war stock; 2,011 cadet rifles and equipments, these are kept in reasonably serviceable condition.

While at some of these colleges the military instruction given is nearly all that could be desired, at others it is not so satisfactory. * * * It should be counted as a study and given the same weight and time as other studies for graduation. Some course of instruction should be prescribed to insure uniformity, as different officers do not attach the same weight to the same subjects. * * *

The colleges should furnish proper and adequate facilities for indoor drill during the winter months; at present at some of the colleges drill has to be wholly or partly suspended during inclement weather. The act of 1862, section 4, endows State colleges, accepting conditions of said act, with land grants, the sale of which shall constitute a perpetual fund; the interest to be devoted to the maintenance of colleges and to teach certain studies, including military tactics. As far as I have been able to learn, only one college among those I have inspected has set aside a portion of the income of said endowment for the benefit of the military feature. The University of Illinois gives \$100 annually in addition to the necessary repairs needed.

Text-books on military science should be prescribed and students required to study them. Several of the colleges have adopted Lieut. H. T. Reed's book of tactics and are under the impression it is authorized from the fact that printed on the first page are the words "As authorized by the War Department." This is apt to convey the

idea that the War Department has authorized Lieutenant Reed to print and offer for sale his book of tactics.

The Government should furnish such blanks, in use in the Army, as are considered most important for the students to be familiar with; also a set of maps illustrating campaigns, and a copy of the recently published "Uniforms of the Army of the United States" should be furnished each college for use in its military department.

Giving more encouragement to graduates who have acquitted themselves well in the military department, such as appointing them commissioned officers by brevet (as is done at the University of Illinois) in the State militia by the governor, giving them preference over other civilians in appointments to the Army, or issuing a medal or two annually to each college by the War Department, to be competed for by the students taking the military course, would go far towards improving the military feature at these schools.

Annual competitive drills between companies and artillery detachments at different colleges, and allowing the college battalion to go each year several days in camp, are also suggestions which would not fail to be appreciated by the students, and is very interesting and worth witnessing.

A system of weekly inspections should be inaugurated at each college and each cadet be required to keep his piece and accouterments clean, if not otherwise provided for. Also, that a non-commissioned officer or retired soldier be detailed to care for arms, etc., and assist the officer in the instruction of cadets, etc.

Whatever system of punishment is adopted at any of these colleges should be strictly carried out, and any violation of orders or breach of discipline should be corrected at once.

It is recommended that the officers stationed at these colleges be not relieved until their successors have arrived and been present for at least two weeks, so as to make the change of instructors as smooth as possible and relieve the new officer of the embarrassment and the institution of the uncertainty consequent upon his entry upon routine work for which no rules are laid down.

Colonel Hughes in his report speaks in no uncertain language of the character and qualifications necessary in an officer charged with this duty, as follows:

There are twelve schools and colleges in this inspection to which army officers are detailed as professors of military science and tactics. The details are made from all arms of the service and one officer from the retired list. There seems to be a general impression that a college detail is a special favor and simply a pleasant detail. After an inspection of about one-half of all the colleges at which officers are on duty, I have concluded that the minds of army officers should be disabused of this idea, and made to understand that the detail is a very trying one and one that calls for much tact and very great patience to fill profitably and with credit.

In my opinion there is no position in the service to which lieutenants are assignable that is fraught with greater difficulties in its best management, or that bristles with more potential obstacles to success, than this one. The success or failure of his work depends almost entirely upon the personal influence he can exert over the student body. If the professor once gains a good footing and a personal hold he can depend upon being reasonably successful; but if he fails to gain the good-will and high esteem of the student body his efforts to accomplish good work will be utterly futile. For this reason I think an iron-bound rule that an officer shall be relieved at the end of three years of college duty is a mistake.

While the reports of inspectors this year are very encouraging, and calculated to enthuse the friends of this service, they must not lose sight of the fact that this is but the beginning of satisfactory results, and that much still remains to be criticised and remedied.

In submitting this subject I desire to repeat certain of my recommendations of last year as follows:

The military feature of these institutions certainly deserves further encouragement and assistance from the General Government. It is hoped they will receive generous attention, and that a number of officers will be commissioned from them into the Army through a series of years sufficient to demonstrate their merit, and that the slight necessary expenses of these experimental military stations will be wisely and generously met. The wording of the law establishing them shows clearly the intention to provide instruction not only for the ordinary requirements of peace, but, if necessary, for war. All has been done for these institu-

tions that under existing law was immediately within the power of the War Department during the past year, and a wide-spread and quite marked improvement is evident and progressing. The additional labor they bring this Department is about what fifty new posts would bring, rather more, perhaps, than the inspection of the militia has so far caused. But it is cheerfully and hopefully rendered. And it is recommended that the law allow the detail of one army officer for every million of inhabitants so the needs of the country may adjust themselves during our constant growth. More officers are needed now, and the law is too rigid to supply them when needed.

MONEY ACCOUNTS.

The reports of the inspection of money accounts received to June 30, 1890, since September 30, 1889, nine months, may be summarized as follows: Number of staff officers inspected 215; number of line officers inspected, 313; total, 528. Total number of inspections made, 1,088; average number of times each officer was inspected, 2.06.

The total amount expended and transferred covered by these inspections was \$51,800,618.44. The amount of the balances verified was \$5,859,006.71, of which the Treasurer and assistant treasurers held \$4,408,651.26; the national banks, \$1,340,161.36; cash on hand, \$81,847.24; stolen from Major Wham, paymaster, \$28,345.10.

Heretofore the practice has been to transmit to Congress the inspection reports received from date of last annual report to date of current one; but it is deemed better to accord with the general practice in matters of finance to consolidate these reports by fiscal years.

The total amount involved in these inspections, over \$57,500,000, for a period of about nine months, will give some idea of the large fiscal responsibility which attaches to the officers by whom these inspections were made. Over \$55,500,000 of the amount was inspected by the officers of this Department; the remainder by post commanders, nearly \$2,000,000.

In this connection it would seem proper to suggest that as the disbursements inspected by post commanders, and into the necessity, economy, and propriety of which they are called upon to inquire, are for the larger part expended upon their orders, such inspections should be made by a disinterested officer.

The small average number of times each officer was inspected is due to some extent to the deficiency in the mileage appropriation compelling the postponement of inspections which should have been made during the months of May and June until the beginning of the current fiscal year. This failure of mileage funds disarranges injuriously the prompt discharge of duties of the Department.

It is noted that the requirements of Army Regulations 681, that the bulk of public funds should be deposited with the Treasurer or an assistant treasurer, and the deposits in the designated depositories be restricted to local requirements, has been observed.

Of the large amount of cash reported on hand, \$81,847.24, there was held by officers of the Engineer Corps and their assistants \$36,150.83; by assistant commissaries, \$35,742.98; by acting assistant quartermasters, \$5,146.96, who are not bonded officers. While only about one-twelfth of their entire balance was reported cash in the hands of the acting assistant quartermasters, nearly one-half of the balance due from assistant commissaries was reported as actual cash. And it is not known that these officers have received the requisite authority in writing to hold such sums in their personal possession.

Act of April 20, 1874.

There has been assigned to this Department the duties required by the act of April 20, 1874, which is here quoted :

Be it enacted, etc., That it shall be the duty of the Secretary of War to cause frequent inquiries to be made as to the necessity, economy, and propriety of all disbursements made by disbursing officers of the Army, and as to their strict conformity to the law appropriating the money; also to ascertain whether the disbursing officers of the Army comply with the law in keeping their accounts and making their deposits; such inquiries to be made by officers of the inspection department of the Army, or others detailed for that purpose: *Provided,* That no officer so detailed shall be in any way connected with the department or corps making the disbursement.

SEC. 2. That the reports of such inspections shall be made out and forwarded to Congress with the annual report of the Secretary of War.

So inquiries are obligatory not only into the necessity and economy of all disbursements made by disbursing officers of the Army, but also their propriety and legality.

This is a broad scope of duty, and one which requires for its proper and intelligent performance a knowledge, a skill, and an experience attained only by long service and actual contact with the many needs and duties of the Army. It is believed there can be no honest doubt that these duties have been faithfully, creditably, and discreetly performed by the officers on duty in this Department during the past year, some of whom under the system of rotation will perform these duties no more.

To enable the Inspection Department to more fully carry out the spirit as well as the letter of the above act of April 20, 1874, wherein it is made the duty of this Department to ascertain if all disbursements by disbursing officers of the Army are made in strict conformity to the law appropriating the money, a new form of inspection report was prepared and submitted to the board of officers (appointed by paragraph 13, General Orders No. 55, March 8, 1889), consisting of one officer from each of the staff corps, for the purpose of revising the blank forms and the instructions for their preparation printed thereon. This form, now in use, was approved by that board, and subsequently, after a personal examination, by the Secretary of War. All officers charged with the inspection of money accounts were supplied with these blanks at the beginning of the fiscal year, and, to the end that the reports for the current fiscal year should be uniform and the data therein reported conform to records of the office, officers having the old form in their possession were requested to return them to this office and use in the future only the new form.

By this form the receipts and disbursements under each specific appropriation are shown, and the inspecting officer is not only enabled to ascertain if the disbursements made are proper charges, under the law, to the appropriation against which they have been entered by the disbursing officer, but also that the expenditures on account of any appropriation have not exceeded the amount in hand and available for that specific purpose. The practice of borrowing from one appropriation for the use of another is not countenanced by the law; it is distinctly prohibited. The emergencies under which it is claimed that the interests of the service require an evasion of the law, are, to a very large extent, not such emergencies as experience could not have anticipated and provided for in accordance with law.

Under the act of May 2, 1866 (Revised Statutes, 306), *Outstanding Checks.* the amounts of money represented by checks of disbursing officers drawn upon authorized depositories are not covered into the Treasury to the credit of the appropriation account, "Outstanding liabilities," until after the expiration of three full fiscal years from the date of the issue of the check. This enactment was made at a time

when communication to and from the money centers to the more remote parts of the country was slow and tedious and when the volume of currency was much below that of the present day. The experience of the past few years has shown that of the number of checks that are not paid within a year, but comparatively few are presented for payment within the next two years. Disbursing officers are required to report and carry forward from month to month a list of these outstanding checks, involving much clerical labor that can not be avoided so long as these balances remain to the disbursing officer's credit. And again, while the amounts represented by these checks are reported and held as a credit to the disbursing officer, it serves but to swell, in the case of national-bank depositories, the bank's holdings, without any benefit to the service, but rather to its detriment.

It is therefore recommended that the Secretary of the Treasury, under the authority given him by Revised Statutes 3645, be requested to issue and publish such regulations as will limit to one year the time for which an amount may be held in the depositories for the payment of a disbursing officer's check. If this be done, and a notice printed on the face of the check that it must be presented for payment within one year at the depository upon which it was drawn, a great saving of labor will be effected without prejudicing the rights of the payee of the check, as after the lapse of one year the check may be paid through the Treasury Department. But this matter is of sufficient importance to deserve a change in the law if that is deemed necessary to effect it.

It has been observed in the reports of the inspection of the money accounts of some disbursing officers of the Army that a portion of the balance of public funds for which they were accountable at date of inspection is reported as "in the hands of assistants." As these assistants are, as a rule, civilian employes, not bonded, this disposition of the public funds is questionable under the reading of the law and regulations on this subject.

Section 3648, Revised Statutes, prohibits the advance of public money in any case whatsoever, except such amounts to *disbursing officers* of the Government as may be necessary to the fulfillment of the public engagements, and under section 3620, it is made the duty of every disbursing officer having any public money intrusted to him for disbursement to deposit the same with an authorized depository, and to draw for the same only as it may be required for payments to be made *by him* in pursuance of law. These assistants can not be regarded in any sense as disbursing officers of the Government to whom advances may be made, nor can they be recognized as authorized custodians of the public funds. It may be claimed by the disbursing officer that he holds himself responsible to the Government for funds in the hands of his agents, no matter how distant from him the agent may be, but if this principle is adopted it saps the foundations of all the safeguards now thrown around the custody of the public funds in the military service.

There is authority (Revised Statutes, 3614) for the employment of special civilian agents, whenever it becomes necessary to employ such, for the disbursement of public money, but this same authority provides that such agents shall, before entering upon duty, give bond in such form and with such security as the head of the department or office employing them may approve. Agents when so employed and bonded become clothed with all the rights and responsibilities that attach to disbursing officers, to whom advances may be made, and, when authorized by the Secretary of War (Army Regulations, 680), they may keep public funds in their personal possession. Certainly the requirements and safeguards of the law can not be too scrupulously complied with,

and the men who handle the Government money in such amounts should be either commissioned or bonded officers of the Government.

Soldiers' Home. The law imposes on the Inspector-General an annual inspection of the management and accounts at the Old Soldiers' Home at Washington City. If those funds are specially sacred, being contributed by enlisted men for the maintenance of their injured and superannuated comrades, it is evident every safeguard should be given; and even more particularity should be exercised than in the expenditure of other public funds in the hands of bonded officers. Possibly an adequate number of officers should be furnished to do all the work to the best advantage and without cost to these funds, and commissioned officers should receive no direct benefit from such funds. If these principles are adopted a considerable saving can be effected in these disbursements, and the expenditures possibly be brought within the income, which certainly seems desirable. The demands upon the institution are very urgent, both for outdoor relief and residence, and the buildings are so full sometimes that the corridors are occupied.

Inspection Duty. As the law requires it, and every army has been driven to adopt some system of general inspections and inspectors, probably there can no longer be any question as to the necessity, propriety, universality, and character of the inspections of the personnel and material of the Army and of the accounts, made as required by law, by absolutely disinterested officers, who are properly organized and sustained and required to report with strict impartiality. Thus exact information upon any and every point relating to the Army reaches the highest authorities from two distinct sources, one, the person earnestly engaged in the work under way, and the other wholly disinterested, but experienced in observing Military work. The full and faithful performance of this disinterested duty can hardly meet with successful opposition, as it is a duty that can harm no one but inefficient or evil-doers and only and wholly subserves the public interests. Its benefits are numerous and unostentatious, and may often pass unnoted. It is a preventive as well as a cure. Even with the use of every means in our power to guard against them, some irregularities may occasionally occur in great public or private works; but the Army system, of which this protective duty is a part, prides itself on the deserved esteem it has won and the irreproachable excellence and honor it maintains. And you are aware of how our records are enlivened with generous praise of many officers whose character and ability give tone and have brought honor to the military service.

Assignments of Inspections contemplated by General Orders No. 95, A. G. O., 1890.

Paragraph 955, Army Regulations, as amended by General Orders 38, Adjutant-General's Office, 1890, provides that officers of this department, under instructions of the Secretary of War, shall, at least once each year, inspect the Military Academy, the schools of application, all depôts, rendezvous, armories, arsenals, fortifications, and public works of every kind under charge of or carried on by officers of the Army. This labor, covering the geographical area of nearly the whole country, is in addition to the various special investigations and the inspection of all posts and troops or property or accounts which the same officers are required to make under the orders of their respective division and department commanders, or under instructions from the War Department. General Orders No. 95, Adjutant-General's Office, 1890, make it the duty of the Inspector-General to keep division and department inspectors informed of the inspections under it which are to be made by them; and August 27, 1890, letters were sent to the several inspectors, with

your approval, making the following assignment under the order. In addition to this assignment, the inspectors-general were directed to inspect annually the public works within their inspection districts under the charge of the officers whose accounts they inspect. The extent, importance, and excellence of the old and new work they perform deserves attention.

TO THE INSPECTOR-GENERAL, DIVISION OF THE ATLANTIC:

The Military Academy at West Point; the Engineer School at Willets Point; the Artillery School, Fort Monroe; the penitentiary at Albany, N. Y.; all forts and military posts not garrisoned nor otherwise provided for, within the limits of the New England States and the States of New York and New Jersey (north of Trenton), and the following-named colleges, depots, recruiting rendezvous, national cemeteries, armories, and arsenals.

Colleges.—Maine State College, Orono, Me.; University of Vermont, Burlington, Vt.; Norwich University, Northfield, Vt.; Massachusetts Agricultural College, Amherst, Mass.; St. John's College, Fordham, N. Y.; Cathedral School of St. Paul's, Garden City (Long Island), N. Y.; Cornell University, Ithaca, N. Y.; Peekskill Military Academy, Peekskill, N. Y.; Sheffield Scientific School (Yale), New Haven, Conn.; Rutgers College, New Brunswick, N. J.; Allegheny College, Meadville, Pa.

Depots.—General depot, Quartermaster's Department, New York City; subsistence depots at New York City and Boston, Mass.; recruiting depot at David's Island, New York; engineer depot, at Willets Point, New York; medical purveying depot, New York City.

Recruiting rendezvous.—At Albany, N. Y.; Augusta, Me.; Boston, Mass., 2; Buffalo, N. Y.; Camden, N. J.; Providence, R. I.; New York City, 4; and all their branches (permanent and temporary).

National cemeteries.—At Cypress Hills, N. Y., and Woodlawn, N. Y.

Armories, arsenals, and depots.—National Armory, Springfield, Mass.; United States Powder Depot, Dover, N. J.; Kennebec Arsenal, Augusta, Me.; New York Arsenal, Governor's Island, N. Y.; Watertown Arsenal, Watertown, Mass.; Watervliet Arsenal, West Troy, N. Y.; Sandy Hook Proving-Ground, N. J.

Money accounts, Army Regulations 967.—At Augusta, Me. (Kennebec Arsenal); Boston, Mass.; Buffalo, N. Y.; Burlington, Vt.; Dover, N. J.; David's Island, N. Y.; Governor's Island, N. Y.; Newport, R. I.; New York, N. Y.; Oswego, N. Y.; Portland, Me.; Providence, R. I.; Springfield National Armory, Mass.; Willets Point, N. Y.; West Point, N. Y.; West Troy, N. Y.; Watertown, Mass.

TO THE INSPECTOR-GENERAL, DIVISION OF THE MISSOURI:

Colleges.—De Pauw University, Greencastle, Ind.; Purdue University, La Fayette, Ind.; Knox College, Galesburgh, Ill.; University of Illinois, Champaign, Ill.; Ohio State University, Columbus, Ohio; University of Wooster, Wooster, Ohio; Ohio Normal University, Ada, Ohio; Michigan Military Academy, Orchard Lake, Mich.; Michigan Agricultural College, Lansing, Mich.; University of Wisconsin, Madison, Wis.

Depots.—General depot, Quartermaster's Department, at Jeffersonville, Ind.; subsistence depot, at Chicago, Ill.; recruiting depot, at Columbus Barracks, Ohio.

Recruiting rendezvous.—At Chicago, Ill., 2; Cincinnati, Ohio; Louisville, Ky.; Milwaukee, Wis.; and all their branches (temporary and permanent).

National cemeteries.—At Camp Nelson, Ky.; Crown Hill, Ind.; Cave Hill, Ky.; Danville, Ky.; Lebanon, Ky.; Mill Spring, Ky.; and New Albany, Ind.

Arsenal.—The Indianapolis Arsenal, at Indianapolis, Ind.

Money accounts, Army Regulations 967.—At Chicago, Ill.; Cincinnati, Ohio; Columbus Barracks, Ohio; Fort Sheridan, Ill.; Indianapolis, Ind.; Jeffersonville, Ind.; Louisville, Ky.; Milwaukee, Wis.; and Newport, Ky.

TO THE INSPECTOR-GENERAL, DIVISION OF THE PACIFIC:

Colleges.—State University of Nevada, Reno, Nev.; University of California, Berkeley, Cal.

Depots.—Quartermaster's, subsistence, and medical depots at San Francisco, Cal.

Arsenal.—Benicia Arsenal, Benicia, Cal.

Money accounts, Army Regulations 967.—At San Francisco, Cal., and Benicia Arsenal, Cal.

TO THE INSPECTOR-GENERAL, DEPARTMENT OF THE MISSOURI:

The Cavalry and Infantry School at Fort Leavenworth, Kans., and the Cavalry and Artillery School at Fort Riley, Kans.

Colleges.—Alabama Agricultural and Mechanical College, Auburn, Ala.; Arkansas Industrial University, Fayetteville, Ark.; State Agricultural College, Fort Collins, Cal.; Kansas State Agricultural College, Manhattan, Kans.; St. John's School, Salina, Kans.; Louisiana State University, Baton Rouge, La.; University of the South, Sewanee, Tenn.; Agricultural and Mechanical College of Mississippi, Oktibbeha County, Miss.; University of Missouri, Columbia, Mo.

Arsenals and depots.—Columbia Arsenal, Tenn.; Rock Island Arsenal, Ill.; St. Louis powder depot, and Fort Leavenworth ordnance depot.

Depots.—General Depot, Quartermaster's Department, at St. Louis, Mo.; subsistence depots at St. Louis, Mo., and New Orleans, La.; recruiting depot at Jefferson Barracks, Mo.; medical purveyor's depot, St. Louis, Mo.; subsistence depot, Fort Leavenworth, Kans.

Recruiting rendezvous.—St. Louis, Mo.; Evansville, Ind., and Memphis, Tenn.; and all their branches (permanent and temporary).

Penitentiary.—Kansas State Penitentiary, Lansing, Kans.

Hospital.—U. S. Army and Navy General Hospital, Hot Springs, Ark.

National cemeteries.—Alexandria, La.; Baton Rouge, La.; Chakmetta, La.; Corinth, Miss.; Camp Butler, Ill.; Fort Leavenworth, Kans.; Fort Scott, Kans.; Fort Smith, Ark.; Fayetteville, Ark.; Fort Denison, Tenn.; Fort Gibson, Ind. T.; Jefferson Barracks, Mo.; Jefferson City, Mo.; Keokuk, Iowa; Little Rock, Ark.; Memphis, Tenn.; Mound City, Ill.; Mobile, Ala.; Nashville, Tenn.; Natchez, Miss.; Port Hudson, La.; Quincy, Ill.; Rock Island, Ill.; Shiloh, Tenn.; Stone River, Tenn.; Springfield, Mo.; Vicksburg, Miss.

Money accounts, Army Regulations 967.—At Columbia, Tenn.; Denver, Colo.; Fort Leavenworth, Kans.; Jefferson Barracks, Mo.; Little Rock, Ark.; Memphis, Tenn.; Mobile, Ala.; Montgomery, Ala.; Nashville, Tenn.; New Orleans, La.; Quincy, Ill.; Rock Island, Ill.; St. Louis, Mo.; St. Louis Powder Depot, Mo.; Vicksburg, Miss.; Hot Springs, Ark.

TO THE ACTING INSPECTOR-GENERAL, DEPARTMENT OF THE PLATE:

Colleges.—Iowa State University, Iowa City, Iowa; Cornell College, Mount Vernon, Iowa; Iowa Wesleyan University, Mount Pleasant, Iowa; University of Nebraska, Lincoln, Nebr.

Depots.—Ordnance depot at Omaha, Nebr.; subsistence depot at Omaha, Nebr.

National cemetery.—Fort McPherson, Nebr.

Money accounts, Army Regulations 967.—At Cheyenne, Wyo.; Omaha, Nebr., and Salt Lake City, Utah.

TO THE ACTING INSPECTOR-GENERAL, DEPARTMENT OF DAKOTA:

Colleges.—University of North Dakota, Grand Forks, N. Dak.; Agricultural College of South Dakota, Brookings, S. Dak.; University of Minnesota; Minneapolis, Minn.; Bishop Seabury Mission, Faribault, Minn.

Depot.—Ordnance depot at Fort Snelling, Minn.

Recruiting rendezvous.—St. Paul, Minn., and all its branches (permanent and temporary).

Penitentiary.—Stillwater, Minn.

National cemetery.—Custer battle-field, Montana.

Money accounts, Army Regulations, 967.—Duluth, Minn.; Fort Snelling, Minn.; Helena, Mont.; St. Paul, Minn.

TO THE ACTING INSPECTOR-GENERAL, DEPARTMENT OF TEXAS:

Colleges.—Agricultural and Mechanical College of Texas, College Station, Tex.

Arsenal.—San Antonio, Tex.

Subsistence depot.—San Antonio, Tex.

National cemeteries.—At Brownsville and San Antonio, Tex.

Money accounts, Army Regulations, 967.—At El Paso, Galveston, and San Antonio, Tex.

TO THE ACTING INSPECTOR-GENERAL, DEPARTMENT OF THE COLUMBIA:

Depots.—Subsistence, at Portland, Oregon; ordnance, at Vancouver Barracks, Wash.

Money accounts, Army Regulations, 967.—Portland, Oregon; Walla Walla, Wash.; and Vancouver Barracks, Wash.

TO THE ACTING INSPECTOR-GENERAL, DEPARTMENT OF ARIZONA:

Money accounts, Army Regulations, 967.—At Tucson, Ariz.; Prescott, Ariz. Albuquerque, N. Mex.; Santa Fé, N. Mex.

TO THE INSPECTOR-GENERAL, WASHINGTON, D. C.:

Colleges.—Pennsylvania Military Academy, Chester, Pa.; Pennsylvania State College, Center County, Pa.; Delaware College, Newark, Del.; Maryland Agricultural College, Prince George's County, Md.; St. John's College, Annapolis, Md.; West Virginia University, Morgantown, W. Va.; Virginia Agricultural and Mechanical College, Blacksburgh, Va.; Bingham School, Orange County, N. C.; South Carolina Military Academy, Charleston, S. C.; North Georgia Agricultural College, Dahlonega, Ga.; University of Tennessee, Knoxville, Tenn.; Agricultural and Mechanical College of Kentucky, Lexington, Ky.

Arsenals.—Allegheny Arsenal, Pittsburgh, Pa.; Augusta Arsenal, Ga.; Frankford Arsenal, Pa.

Depots.—General depots, Quartermaster's Department Philadelphia, Pa., and Washington, D. C.; subsistence depots, Baltimore, Md., and Washington, D. C.

Recruiting rendezvous.—Augusta, Ga.; Baltimore, Md.; Cleveland, Ohio; Detroit, Mich.; Johnstown, Pa.; Philadelphia, Pa.; Pittsburgh, Pa.; Washington, D. C.; Wheeling, W. Va.; and all their branches (permanent and temporary).

National cemeteries.—Andersonville, Ga.; Antietam, Md.; Arlington, Va.; Alexandria, Va.; Annapolis, Md.; Beaufort, S. C.; Barrancas, Fla.; Battle Ground, D. C.; Beverly, N. J.; Ball's Bluff, Va.; City Point, Va.; Culpeper, Va.; Cold Harbor, Va.; Danville, Va.; Fredericksburgh, Va.; Florence, S. C.; Finn's Point, N. J.; Fort Harrison, Va.; Gettysburgh, Pa.; Glendale, Va.; Grafton, W. Va.; Hampton, Va.; Loudon Park, Md.; Marietta, Ga.; City of Mexico, Mexico; New Berne, N. C.; St. Augustine, Fla.; Salisbury, N. C.; Soldiers' Home, D. C.; Seven Pines, Va.; Staunton, Va.; Wilmington, N. C.; Winchester, Va.; Yorktown, Va.; Knoxville, Tenn.; Chattanooga, Tenn.; Lexington, Ky.; Philadelphia, Pa.; Poplar Grove, Va.; Richmond, Va.; Raleigh, N. C.

Money accounts, Army Regulations, 967.—At Atlanta, Ga., 3; Augusta, Ga., 1; Baltimore, Md., 3; Cleveland, Ohio, 1; Charleston, S. C., 1; Detroit, Mich., 2; Fort Monroe, Va., 3; Frankford Arsenal, Pa., 2; Norfolk, Va., 1; Philadelphia, Pa., 5; Pittsburgh, Pa., 2; St. Augustine, Fla., 1; Savannah, Ga., 1; South Bethlehem, Pa., 1; Washington, D. C., 13; Wilmington, Del., 1; Wilmington, N. C., 1.

INSPECTION REPORTS OF POST COMMANDERS.

The annual inspections and reports made by the one hundred and ten post commanders under paragraph 954, Army Regulations, were probably never more complete than this year. A tabulated statement from them is submitted (Supplement 4). These reports, in addition to those of the regular inspectors, furnish the fullest and most direct information attainable in regard to the widely-scattered posts of our Army; and, being simultaneous and covering every feature of post life, they may afford the basis of important action for the comfort and instruction of the troops and economy of the public service. This year's reports give an instantaneous photograph of the Army as it existed prior to the recent beneficial legislation, and with the regiments all having a full number of companies. And these capable and experienced officers, living in the midst of the troops, ought to best present what is needed, and every attention is due to what they say. Since these reports were rendered, eight of the posts have been abandoned.

The reports of inspections made by the commanding officers at the various garrisoned posts show that there were 417 companies, troops, and batteries inspected (or about an average of four to each post), representing a total force, field, staff, and scouts included, of 1,650 commissioned officers and

Officers and Men at
Garrisoned Posts.

20,521 men. Of the thirteen companies not inspected, one was on duty at the Yellowstone National Park; three at Tongue River Agency; one in the field; four changing stations, and four temporarily absent from their station engaged in artillery practice. There were actually present under arms at the inspections 922 officers and 14,222 enlisted men. The total number of officers and enlisted men reported on special, daily, and extra duty, compared with those present for duty, is as 1 to 9.4 for officers, and as 1 to 3.4 for enlisted men. A little more than $3\frac{1}{2}$ per cent. of the men, or 658, were reported sick, and less than 3 per cent., or 470, were reported as under arrest. The proportion of men to officers present for duty was 14 to 1 for the whole Army, being greatest in the Department of Arizona, which shows seventeen men to each officer, and least in the Division of the Atlantic, where the ratio was slightly in excess of 9 to 1.

Length of Service. More than one-third of the enlisted men accounted for were reported as serving in their second, or later enlistments; and the average length of service of the enlisted men of the whole Army, as based upon the data furnished in the reports, is 6.72 years; the greatest average being shown in the Division of the Atlantic, where it exceeds 8 years, while in the Departments of California and Dakota it is not quite 6 years.

Height. With respect to height, the extremes reported differ by 19 inches, the Department of Arizona claiming the tallest soldier in the Army, he being 6 feet $4\frac{1}{2}$ inches in height, while the Department of Dakota, with a soldier only 4 feet 9 inches in height, furnishes the smallest.

The average height of the enlisted men of the Army has been found to be slightly more than 67 inches; the greatest average being 67.67 inches, in the Division of the Atlantic, and the smallest slightly less than 67 inches, in the Department of the Platte.

Weight. The reports show that the average weight of the soldier, based upon the data given, is 153.44 pounds; the departmental average being greatest in the Division of the Atlantic, where it exceeds the Army average by nearly 2 pounds, and the least in the Department of California, where a corresponding deficiency is shown. Quite a difference is shown in the individual weights, the Department of Arizona reporting the heaviest soldier (280 pounds), and the Department of Dakota the lightest (97 pounds).

Age. The extremes of age in any one department vary but little from those in any other, still there is quite a difference in individual ages noticed; the greatest difference between oldest and youngest, 49.2 years, being in the Department of the Platte, and the least, 40.67 years, in the Department of the Columbia, while for the entire Army it is 50 years. From the Department of the Platte is reported the oldest soldier, 66 years; and the youngest, 16 years, was in the Department of Dakota. The average age for the Army has been found to be 30.3 years; the highest departmental average, 33.57 years, being in the Division of the Atlantic; and the lowest, 28.92 years, in the Department of the Missouri.

Enlisted Men who have Medals and Certificates for Gallantry. The reports name, in the Division of the Atlantic: At Fort Myer, Va., Sergt. William Wilson, Troop B, Fourth Cavalry, has two medals of honor; one for bravery in engagement with cattle-thieves, at Colorado Valley, in 1872; the other for distinguishing himself in engagement with hostile Indians at McLellan's Creek, Texas, September 29, 1872. Private William DuBois, Troop B, Fourth Cavalry, certificate of merit for bravery in action

against hostile Indians at Slim Buttes, Dak., September 9, 1876. At Newport Barracks, Ky., Private James Manning, Company I, Sixth Infantry, silver life-saving medal, for saving the life of a comrade, June 6, 1886, at Grand River, Utah. At Fort Warren, Mass., Sergeant John Connor, Battery B, Second Artillery, medal, for action with Indians at Little Wichita River July 12, 1870.

In the Department of the Missouri: At Fort Lewis, Colo., Sergeant Z. T. Woodall, Troop I, Sixth Cavalry, medal, for engagement at Washita River, Texas, with Kiowa, Comanche, and Cheyenne Indians, Indian Territory expedition, September 12, 1874, courier to Camp Supply, Ind. T. At Fort Logan, Colo., Quartermaster-Sergeant N. H. Wilson, medal, battle of Big Hole Pass, August 9, 1877. At Fort Sheridan, Ill., Commissary-Sergeant Lehman Hineman, medal, for services in General Crook's campaign against the Indians in Arizona in 1872. At Fort Supply, Ind. T., First Sergeant Henry Newman, Troop A, Fifth Cavalry, medal, for action with hostile Indians at Davidson's Cañon August 27, 1872; Sergeant Samuel Klingensmith, certificate of merit, action with hostile Indians at Milk River, Colorado, September 29, 1879, and Sergeant James F. Ayers, medal, action with hostile Indians at Sappa Creek, Kansas, April 23, 1875, both of Troop F, Fifth Cavalry; First Sergeant George K. Kitchen, Troop I, Fifth Cavalry, medal, action with hostile Indians at Washita River, Indian Territory, September 9 to 14, 1874.

In the Department of the Platte: At Fort Bridger, Sergeant James S. Calvert, Company D, Seventeenth Infantry, medal, for services in Indian campaign on Tongue River, Montana, in January, 1877. At Fort Douglas, Private Solon D. Neal, Company G, Sixteenth Infantry, medal, for gallantry displayed with Indians in Baylor County, Tex.; Private John W. Comfort, Light Battery B, First Artillery, medal of honor, distinguished conduct against Indians at Staked Plains, Texas, November 5, 1874.

In the Department of Texas: At Fort Hancock, Sergeant John J. H. Kelley, Company H, Fifth Infantry, medal, for action with Kiowa and Comanche Indians, Wichita River, Kansas, September 9, 10, and 11, 1874. At Camp Pena Colorado, First Sergeant Edward McKiernan, certificate of merit, action with Indians at Slim Buttes, Dakota, September 9, 1876; Sergeant James Quinn, certificate of merit, action with Indians at Slim Buttes, Dakota, September 9, 1876; Sergeant Joseph Patterson, certificate of merit, action with hostile Indians at Milk River, Colorado, September 29, 1879. At San Antonio, Private John Schuitzer, Company H, Twenty-third Infantry, certificate of merit, "for having distinguished himself in the action at Gaudaloupe Cañon, Sonora, Mexico, June 8, 1885."

In the Department of Dakota: At Fort A. Lincoln, Private John Maloney, certificate of merit, for Indian fight near Glendive Creek, Montana, October 14 and 15, 1876. At Fort Assiniboine, Sergeant Samuel W. Hagerman, certificate of merit, battle of Milk River, Colorado, September 29, 1879. At Fort Buford, Sergeant B. Nerwin and Sergeant S. A. Newgent have medals, but for what action is not stated. At Fort Meade, Sergeant E. R. Ashton, Eighth Cavalry band, medal, San Carlos trail, May 30, 1868. Sergeant Albert Kraack, medal, for Indian fights in Arizona in 1868 and 1869.

In the Department of Arizona: At Fort Grant, Privates Thornton Hains, Troop C, Tenth Cavalry, James Wheeler, Troop G, Tenth Cavalry, Benjamin Burge, Company K, Twenty-fourth Infantry, Julius Harrison and Hamilton Lewis, Company B, Twenty-fourth Infantry, all have certificates of merit for action with highway robbers May 11, 1887.

At Fort Lowell Sergeant Fred S. Hazes, Troop H, Second Cavalry, medal, engagement at Washita River, Texas, September 9 to 12, 1874. At San Carlos, Private Squire Williams, certificate of merit, for affair near Cedar Springs, Ariz. T., May 11, 1889. Sergeant David Brown, Company C, Twenty-fourth Infantry, medal, for affair above named. Sergeant Roudy, Company A, Indian Scouts, medal, for gallant conduct in fight with renegade Indians, March 7, 1890. At Fort Thomas, Sergeant William McBryar, Troop K, Tenth Cavalry, medal of honor, engagement with hostile Apache Indians on Salt River, Arizona, March 7, 1890. At Fort Union, Private John C. Hubbard, Company C, Tenth Infantry, certificate of merit, for distinguished conduct in action with Indians at Huachuca Mountains, Arizona, April 28, 1882. At Whipple Barracks, Private Charles Shroeter, Company C, Ninth Infantry, medal of honor, action with Chiricahua Apache Indians, near Fort Bowie, Ariz., 1869.

In the Department of the Columbia: At Fort Sherman, Sergeant Julius Schon, Troop G, Fourth Cavalry, medal, for distinguished conduct against Sioux Indians, campaign of 1876. At Fort Walla Walla, Sergeant Richard Hartery, medal, for bravery in action with Indians at Cibicue, Ariz., August 30, 1881.

Department of California: At the Presidio of San Francisco, Private Thomas Ryan, Battery B, Fifth Artillery certificate of merit, for gallantry in action at Powder River in 1876; Sergeant Edward P. Grimes, medal, for gallantry in action at Milk River, Colorado.

It is a matter of regret that so many post commanders omitted, in making their reports, to give the names of the enlisted men holding medals, certificates of merit, etc., and the action for which awarded. Certainly enlisted men who have attained these honorable distinctions are entitled to such recognition as may make their honors known to the public.

Sharpshooters and
Marksmen. The total number of sharpshooters reported was 1,140, the Department of the Platte being in the lead with 265, followed by the other departments and divisions as follows: Columbia, 226; Missouri, 172; Texas, 163; Atlantic, 109; Arizona, 106; Dakota, 92; California, 7.

The number of marksmen is to that of sharpshooters as 4 to 1, the total being 4,369, distributed among the various divisions and departments as follows: The Platte, 994; Dakota, 692; Arizona, 658; Texas, 551; Missouri, 508; Atlantic, 453; Columbia, 419; California, 94.

The reports show that to every 43 marksmen there is 1 distinguished marksman, the total number of the latter being 102. The proportion of distinguished marksmen to marksmen in the divisions and departments is as follows: Missouri, 1 to 15; Atlantic, 1 to 28; California, 1 to 31; Texas, 1 to 40; Columbia, 1 to 52; Arizona, 1 to 73; Dakota, 1 to 77; The Platte, 1 to 99.

Post commanders report 1,756 desertions during the past year, or 8.5 per cent. of the total number of men stated to be present and absent. The greatest number of desertions, 419, occurred in the Department of Dakota, and the least, 86, in the Department of California. The percentage of desertions by divisions and departments is: Arizona, 5 per cent.; Columbia, 6.5 per cent.; the Platte, 7 per cent.; Atlantic, 8.2 per cent.; California, 8.8 per cent.; Missouri, 9.4 per cent.; Texas, 10.5 per cent.; Dakota, 12.3 per cent. The ratio of desertions to recruits received in the various departments is as 1 to 2.57.

Recruits. During the year 4,513 recruits were received at the various military posts, the greatest number, 971, in the Department of Dakota, followed by other divisions and departments as follows: Missouri, 884; Atlantic, 690; the Platte, 607; Texas, 499; Arizona, 495; Columbia, 287; California, 120. It is stated that 2,614 recruits are required in the divisions and departments as follows: Dakota, 629; Missouri, 565; the Platte, 460; Texas, 278; Arizona, 245; Atlantic, 203; Columbia, 172; California, 62. The number of men always needed to fill the Army, 2,614 in July, gives more scope than is absolutely necessary for the number of military apprentices required for the perfect instruction of our non-commissioned officers.

Deposits with Paymasters. More than 14 per cent. of the total number of men reported present and absent, or 2,900, have availed themselves of the privilege of depositing a portion of their pay with paymasters. The sum placed to the credit of these men reaches a total of \$627,555.09, or an average of \$216.40 per depositor.

Savings. The soldiers discharged during the year were paid upon discharge a savings fund deposited throughout their enlistment amounting to \$912,203.63. Of this sum \$206,543.01 represents the saving in clothing alone.

Funds. The various funds reported, company, "slush," or others, aggregate \$68,079.89, of which about one-fifteenth, or \$4,475.28, is credited to the "slush" funds.

Post Gardens. The number of acres pertaining to both company and hospital gardens reported under cultivation is 999.09, of which 928.76 acres belong to seventy posts and 70.33 acres to forty hospital gardens. A number of posts make no report on this subject. Almost a regiment of men (432) are employed in the cultivation of these gardens, the annual produce of which, so far as stated in the reports, has a money value of \$37,783.94. The inspectors-general report more fully on this subject.

Mess. The preparation and serving of rations requires a force of 1,198 men, or nearly 6 per cent. of the number reported present and absent. At a few posts the mess is improved by the monthly contributions of 50 cents to \$1 per man.

Garrison Schools. At fifty-one post schools more or less instruction was given by commissioned officers, this instruction being generally in the form of lectures. At 33 schools no instruction was given by commissioned officers; at 18 posts there were no schools, and from several of the posts there was no report on this point. As to the progress made by the pupils at these schools, it is stated that at 36 of them it was "good;" at 33, "fair;" at 6, "poor;" and several make no report on the subject. The recommendations for the improvement of the schools are numerous, but the remedies they suggest are already being gradually applied; and another year is needed to show the results. It is worthy of note that at the schools where good progress is reported it is generally the case that instruction was given by commissioned officers.

Battalion and Company Tactical Schools. Concerning the relative efficiency of battalion or company tactical schools, 72 post commanders express a preference for the company schools; 11 favor the battalion school; 5 have had no comparison between the two; 2 think both are efficient; 1 favors a combination of the two; and 19 make no report.

Non-Commissioned Officers. The non-commissioned officers at 97 of the posts are stated to be more or less satisfactory (generally very satisfactory); at 11 posts they are unsatisfactory, from 2 posts there is no report upon the subject.

The reports show that at about 50 posts some or all of the officers have more than the legal allowance of quarters. Sometimes this is occasioned by the posts not being garrisoned to their full capacity. Some officers are reported at a few posts as not having the legal allowance, and at one post two officers are reported as having no quarters at all.

Allowance of Quarters. It is stated that at about 50 posts the allowance of fuel for every grade of officer is insufficient.

Fuel. Fifty-seven post guard-houses are stated as being infested with vermin, while 44 are reported as having none, and several of the posts do not report explicitly.

Vermin in Guard-Houses. A summary of the measurements reported by post commanders gives the following result: Averages for cavalry horses now in the service—age, 10.67 years; height, 15.32 hands; girth, 6.01 feet; weight, 1,010.66 pounds; length from poll to croup, 6.9 feet. For artillery horses—age, 11.15 years; height, 15.51 hands; girth, 6.12 feet; weight, 1,159.98 pounds; length from poll to croup, 7.13 feet. The smallest horse reported is 14 hands high and the largest over 17 hands. Horses in the same troop differ by a couple of hands.

Horses. All the post commanders reporting upon the subject state that for cavalry horses the full ration should be issued after hard service; but when horses are doing only garrison duty the ration almost invariably recommended as the smallest adequate in garrison is less than the present full allowance. With heavier or draft animals the present ration may be more constantly necessary.

Forage. These items relate to the daily life of the soldiers and exclude all that merely relate to the posts, or even to matters such as military discipline, economy, organization and instruction. But these simple facts, though seldom intruded upon the attention of others, are important to the individuals, and some of them may interest those who feel an interest in our soldiers. Every one understands how much in an annual report is left untold.

In considering again the work of the year, whether in connection with the militia, the colleges, the staff, the line, the service schools, the posts, the money accounts or the Old Soldiers' Home, there is everywhere a gratifying assurance of faithful and intelligent industry and zeal which promises continued excellence and no retrogression.

Respectfully submitted.

J. C. BRECKINRIDGE,
Inspector-General.

To the Hon. SECRETARY OF WAR.

SUPPLEMENT 1.

REPORTS OF INSPECTIONS OF THE NATIONAL GUARD.

FORT MCPHERSON, *Atlanta, Ga.*, July 10, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
War Department, Washington, D. C. :

SIR: I have the honor to submit the following report of the inspection of the Second Regiment, Alabama State Troops, made in compliance with telegraphic instructions from Headquarters of the Army, dated June 18, 1890, and instructions from your office, dated June 20, 1890:

I reported by letter to the Hon. Thomas Seay, governor of Alabama, and in person to Col. Thomas G. Jones, commanding Second Regiment, Alabama State Troops, on June 23, 1890, and was present at the camp from the beginning until the end of the encampment.

I. Organization. The Alabama State Troops consist of three regiments of white and two companies of colored troops. The organization of these troops is more particularly shown in the report of the adjutant-general of the State of Alabama, herewith inclosed. The Second Regiment Alabama State Troops consist of ten companies of infantry, two batteries of artillery, and one troop of cavalry. The strength of the command, as shown by the consolidated morning report for June 24, was: Present, commissioned officers, 41; non-commissioned officers and privates, 374. Absent, commissioned officers, 9; non-commissioned officers and privates, 397. Aggregate present and absent, 821.

The camp ground was pleasantly situated on high land and in a grove of trees near the city; it was supplied with city water of excellent quality. The camp was furnished with shower-baths, which were very well patronized; the sinks were well cared for. In fact, the sanitary condition of the camp left nothing to be desired. The troops were under the command of Col. Thomas G. Jones, Second Regiment Alabama State Troops; Capt. J. P. Saffold, adjutant, and Capt. Barry Holt, quartermaster.

The troops were reviewed by Hon. Thomas Seay, governor of Alabama, on June 28, who expressed himself as highly pleased with the appearance and discipline of the troops.

II. Arms and equipment. The infantry companies are all armed with the Springfield rifle, caliber .45, some, however, without the safety-notch, and some with Buffington and others with the old sight. Many of the guns were rusty when inspected. It is not always practicable for each man to care for his own gun while the troops are at their homes, and this work is usually done by an armorer or person hired for the purpose. On account of this system there is liable to be a little carelessness when the guns are exposed to the weather in camp. I was much gratified to see that some of the men had, however, taken good care of their guns and accouterments. One company was supplied with web belts instead of leather belts and cartridge-boxes. They presented a very neat appearance. I would recommend that in future all of the infantry companies should be supplied with this belt only; it requires less care to keep in good condition and is more serviceable than the leather belt. Only one company had blanket-bags. They should all be supplied with blanket-bags, canteens, meat-can, knife, fork, and spoon. The cavalry troop was armed with pistols, carbines, and sabers of standard pattern. The saddles and bridles were also, with the exception of one or two bridles, of the standard pattern. The batteries were armed with Gatling guns, 3-inch rifles, and bronze 6-pounders. They were supplied with mules on one day only during the visit of the governor. I desire to repeat the recommendation of a former inspector, "that a sufficient number of suitable horses—the very life of a light battery—should

be provided, to be retained in camp and cared for by the men during the encampment." The artillerymen were armed with sabers; some of them were also supplied with Colt's revolvers. I think that the revolvers issued should be called in.

The best authorities agree that an artilleryman should depend on his field-piece rather than on his individual arms. A saber is enough for individual use and guard duty, and the practice of making a walking arsenal of an artilleryman should be discouraged.

Under the provisions of the State laws each company is gradually providing itself with a fatigue uniform similar to the fatigue uniform of the U. S. Army. Some of the companies adhere, with some tenacity, to the extra braids and stripes, which, while not affecting the adaptability of the uniform to use in the field, show a certain lack of uniformity hardly in accordance with the best military ideas. As to the dress uniforms, the State laws allow the companies to exercise their own choice in the matter. In accordance with this provision, some of the companies have adopted uniforms which the word "fancy" fails adequately to describe.

1. *Drills.*—The companies showed a reasonable proficiency in company drill. There was no skirmish drill during the encampment, and, owing to the excessive heat, no other drills before 5 p. m. At 5 p. m. there was a battalion drill or review, and at retreat a dress parade. The battalion drill was rather ragged at first, but showed a very marked improvement toward the latter part of the encampment. The dress parades, aside from a little unsteadiness in ranks natural to inexperienced troops, were at the close as good as those of any well-drilled battalion. The artillery was anxious to improve, and made the best of their opportunities and equipment. The cavalry troop was composed of good riders, well mounted and equipped, and well drilled in most parts of the school of the company. A little riding with crossed stirrups would improve them some. As a whole they presented a very fine appearance. Officers' call was sounded daily with good results. Instruction was given in methods of official correspondence and riot duty, and in other matters which the commanding officer noticed during the day. The ceremony of guard mount was well performed, largely owing to the care and patience of Adjutant Saffold and Sergeant-Major Waller. The former performed all of his numerous duties with care and intelligence, and the latter was his able assistant. The ceremony might have been much improved by a little practice in the armories of the companies, before coming to camp.

2. *Guard duty.*—Very few of the officers and men who were on guard had previously served in that capacity, but notwithstanding this, guard duty was well performed. Colonel Jones rightly lays great stress on this duty. Pamphlets giving the duties and orders of a sentinel were distributed among the men, and were of great benefit; although some of the sentinels did not know their orders verbatim, all tried to carry out the spirit of them. At the request of Colonel Jones, I made frequent inspections, and found officers and men alert and faithful in the performance of their duties.

3. *Target practice.*—There was no target practice during the encampment, owing to the thickly settled state of the surrounding country. It is to be hoped that the camp will be so selected that there can be some practice next year. Most of the men composing the regiment are able to shoot with some degree of proficiency, but it is to be hoped that more systematic attention will be given to the matter than in the past. Competitive shooting rather than competitive drilling should be encouraged, not only because the former is more important, but because the improvement which the latter causes in drill is more than offset by the damage which it does to discipline. Competitive drilling makes most importance of the unimportant parts of the soldier's profession; it introduces a pecuniary and criticising spirit into a company which competitive shooting could not do.

The discipline of the regiment was very good. There were few disturbances, and during my entire stay in the camp I saw no one under the influence of intoxicating liquor. Salutes were frequently, but not always, rendered officers. The men themselves belong to a superior grade, mentally and socially, and obeyed orders with that cheerfulness and alacrity which showed that they could be depended on in time of need. Much credit is due to the excellent military schools of the State in fostering a military spirit and furnishing well drilled and disciplined officers and men for the State troops.

Quartermaster's department.—The quartermaster of the regiment, V.—Administration. Captain Barry Holt, was in charge of this department. He is a successful business man, and conducted the affairs of the department in a satisfactory manner. The State appropriates a gross amount for the three regiments, which is to be divided according to the strength in camp, so that the colonel of the regiment has no idea as to whether the accounts will be within his allowance or not. Some change should certainly be made in this respect. Each man should be given a per diem during his attendance, and the necessary expenses of the camp and transportation to and from the camp paid without regard to the exact amount. The regiment owns about 100 tents of various sizes. The State has also 45 A-tents,

United States standard, which were sent from one camp to another. The camp was supplied with a flag-pole and post-flag.

2. *Commissary department.*—This department was also under charge of Captain Holt, but Commissary Sergeant Herron had immediate charge. The food was of good quality, sufficient in quantity, well cooked and served, and of a nature to preserve the health of the men. The mess furniture was the property of the regiment. Officers and men messes together. The companies have in the past felt the need of camp-kettles when called into the field for service. In both departments business methods prevailed. I would respectfully call attention to the simple form of voucher used, being in marked contrast to some of the vouchers used in the regular service, which have certificates so long that an officer with much business to attend to never has time to read them before signing.

3. *Medical department.*—This department was in charge of a competent physician from Montgomery; a man of high standing in his profession and the community. It was well conducted.

1. *Railroads.*—Some of the companies were slow in arriving, and

VI.—*Miscellaneous.* There was some uncertainty as to the exact time of their arrival. Some officer should be charged with the duty of superintending the concentration of the troops, so that they may arrive together and go into camp with the least possible delay. There are no special laws governing the use of the railroads by the State troops; movements by rail are made in the same manner as in the United States service. In case of a sudden call the troops are provided for by contract.

2. *Armories.*—The city of Montgomery furnishes an armory for the city companies, in return for which the companies have to furnish a guard at fires. The other companies have their own armories, the State making an allowance for the purpose which covers about half of the expense.

3. *Bands.*—The regiment had a good band but no company musicians. Each company should have two buglers.

4. *Riot duty.*—I would respectfully call attention to the laws of the State in this particular. They were drawn up by Col. Thomas G. Jones, Second Regiment Alabama State Troops, who is not only an able and experienced soldier but an excellent lawyer as well. They legalize the things which must be done to preserve order and give the troops the immense moral advantage of having the law behind them instead of opposed to them. They are contained in Article III of Chapter I of Title IV of the criminal code of the State of Alabama, and No. 118 of the session laws of 1889. A proper addition to the latter would be to require a copy to be posted in each place of sale of liquor. These laws are inclosed.

VII.—*Recommendations.* I would recommend that the troops should continue in the work of improvement already commenced. I believe that the service would be benefited by requiring each officer, before promotion or commission, to pass an examination in the tactics of his arm of the service, guard duty, and a certain amount of military law.

I desire to record my gratification at the earnest desire to learn shown by officers and men, my appreciation of the courtesy with which all corrections were received, and my thanks to Col. Charles P. Jones, adjutant-general of the State, and the colonel and members of the Second Regiment for their hospitality during my stay with them.

I am, sir, very respectfully, your obedient servant,

L. G. BERRY,
Second Lieutenant, Fourth Artillery.

FORT MCPHERSON, Atlanta, Ga., July 31, 1890.

INSPECTOR-GENERAL U. S. ARMY.
Washington, D. C. :

SIR: In obedience to Special Orders, No. 149, Headquarters of the Army, Washington, June 26, 1890, and letter of instructions from your office of July 5, 1890, I have the honor to report the result of my visit to the encampment of the Third Regiment of Alabama State Troops at Selma, Ala.

I arrived at Selma about 9.45 p. m. July 9, and the following morning reported my presence to Col. W. W. Quarles, commanding the regiment. By 11 a. m. all the companies composing the regiment had arrived in the city, and about 11.45 a. m. the command was formed on Washington street and then marched to the Union Depot, where the cars were taken for Houston's Grove, a place about 2 miles to the east of Selma, on the Atlantic and West Point Railroad. I did not accompany the regiment to the encampment, as Colonel Quarles requested me to join in the afternoon, saying

that everything would be ready for me. In accordance with his request, therefore, I reached the camp about 5 p. m.

Camp. The tents had all been pitched a day or so before the arrival of the troops, so they had nothing to do but deposit their baggage and put it in place. The camp was nicely laid out. An artesian well close by gave a bountiful supply of the finest water. Trees in great number protected the tents from the intense heat of the sun and rendered them more habitable.

* * * * *

The lieutenant-colonel, major, and surgeon were not present during the entire encampment. The assistant surgeon reported about the third day. The absence of the surgeons necessitated the appointment of an acting assistant surgeon, in the person of Capt. John J. Hunter, of Company K, Noble Guards, a practicing physician of Ironton. He took great interest in his duties and performed them zealously.

A band, consisting of thirteen pieces, recently organized as part of the regiment, was present and very attentive to duty.

On the evening of the 10th the first dress parade was held, and I was agreeably surprised at the soldierly manner in which the ceremony was conducted. It was remarkable, considering that the regiment had not been together for a year, and that never at an encampment had so many companies been present. Some of the companies, too, had been on the cars for over thirty hours, and the men were very tired.

The adjutant at parade published an order prescribing the time at which the calls would be sounded. Another order was issued announcing my presence in camp and directing all officers and men to show me proper respect and courtesy. On this score I have no cause of complaint, for, from the colonel down to the youngest private, I was treated with great courtesy.

Guard Duty. Guard duty was performed by an officer of the day, two officers of the guard, two sergeants, three corporals, and twenty-four privates. While the sentinels were very vigilant, they did not perform their duties in a proper manner, due to lack of instruction. I left a copy of Kennon's Manual of Guard Duty at the guard-house, and requested that each officer of the guard read it carefully and instruct accordingly, and turn the book over, from day to day, to the next officer of the guard. I also gave personal instruction in the matter, which I think, however, was of little value, as the command was so large and the time so short that a large number of both officers and men did no guard duty at all.

Average Strength of Command. The average strength of the regiment, from day to day, was as follows: July 10, 563; July 11, 563; July 12, 563; July 13, 584; July 14, 584; July 15, 576; July 16, 566.

Drills. Company drills were held every day and were well conducted, both officers and men taking great interest. Too much attention, however, was to the manual of arms, I think. The companies had no skirmish drills. In conversation with the officers I tried to impress upon them the value of skirmish drill, and I have no doubt that next year the companies will be as well up in this drill as they are now in the "school of the company."

The mounted drills held by Troop C were excellent. The company has only been organized since the last encampment, but nearly all the men own their horses, so as a matter of course they know how to manage them. In another year, if attention is given to dismounted drills and the use of the small-arms with which the men are provided, the troop will be a valuable acquisition to the national guard of the State.

The Battery. Battery C is only a battery in name. The *personnel* is good. Most of the men are mechanics and are well put up, but they want a great deal of instruction. The material consisted of two 3-inch rifles, with limbers, but no caissons. The State should do more for the battery and make it what it ought to be.

Target Practice. No target practice was held, owing to the failure of the authorities to send the ammunition.

Discipline. The discipline of the regiment was good. There were only a few cases of infraction of the rules. Officers and men were attentive to their duties, and orders were cheerfully obeyed. Saluting was not required of any man unless he happened to be a sentinel. Men would pass an officer without the slightest recognition, not out of any disrespect, however, but simply because they had never been taught to salute.

Inspection. Monday, the 14th, I made an inspection of the companies in the company streets, and found that the majority of the pieces (Springfield, caliber .45) were in good condition, and, with the exception of one company, were provided with the improved sight. The belts and cartridge-boxes, except those which had been recently issued, were not in very good condition. I attribute this to two things, viz. want of knowledge on the part of the men as to the care of leather, and to the fact that the enlisted men change so frequently that the accouterments

have changed hands many times. Quite a large number of the bayonet-scarbards needed reburnishing.

Uniform. The uniforms are purchased by both officers and men. Some of the companies had two uniforms, dress and undress. The undress uniform for the officers and men consisted of a forage-cap, blouse, and trousers. All the companies wore blue except one company and that was clothed in green. All undress uniforms were serviceable, but would be more so if the facings and the stripes were removed from the privates' clothing.

Tentage. The tents, both hospital and wall, were purchased by and belong to the regiment. When not in use they are stored in Selma. They were in good condition, although they had been rolled up and stored away for one year.

Commissary Department. The officers and men messes in common under a large shed which had been erected for the purpose. The messing arrangements were under the supervision of Capt. M. J. Meyer, the regimental commissary, and he proved himself to be one of the most capable and efficient officers in this line that I have ever seen. There was not a single hitch in the running of his department during the entire encampment, although he was feeding over 570 men three times daily. The regiment this year bought its own tableware, so that next year the mess expenses will not be so great.

Medical Department. Hospital was established and great attention paid to the matter both by Colonel Quarles and Captain Hunter, the acting assistant surgeon. These officers took such interest in the affairs of this department that they succeeded in raising a subscription of \$10 from each company for the purpose of organizing the hospital corps, which they intend shall be in working order by next year.

Recommendations. I would respectfully make the following recommendations:

1. That the State furnish the uniform for its soldiers and not require them to make an outlay which many can ill afford; that all companies be uniformed alike, and that only one kind of uniform (undress) be furnished.
2. That not only the ceremony of guard mounting but the actual guard duty be practiced at the homes of the several companies, so that when they come together as a regiment at an encampment this duty may be well performed.
3. That each company be provided with its own tentage and mess kit.
4. That the ration, while in camp, be the "service" ration, and that each company cook its own food.
5. That more attention be paid to skirmish drill and target practice, and hereafter these exercises, together with guard duty, form the prominent features of every encampment.
6. That the encampment be at a cooler season of the year, and that its duration be at least two weeks.
7. That competitive drills be done away with, as tending to destroy regimental pride, engendering bitter feelings of envy, which might, under some circumstances, easily lead to unsoldierly and mutinous conduct.
8. That when an officer of the Army is sent to inspect the national guard a certain number of selected non-commissioned officers and privates be sent to give practical instruction in guard duty and to show the national guardsman how to take care of his piece and equipments.
9. That officers and men be paid a certain amount per diem for services while in camp.
10. That all officers who can attend and won't attend the encampments be required to tender their resignations.
11. That knapsacks, haversacks, and canteens be furnished the companies as part of their equipment.
12. That one of our medical officers be detailed for duty at encampments to give instruction in field hospital duty.

The different staff departments of the regiment exist only in name; they are not actually run on any organized basis.

A net-work of railroads affords ample facilities for concentrating and distributing the forces of the State.

I am of the opinion that the Third Regiment, on the whole, is a good one; but the State does not do enough for her soldiers. The consequence is that most of them, the poor ones, are put to an expense which they are little able to stand in providing for themselves that which the State ought to furnish.

Very respectfully, your obedient servant,

S. W. TAYLOR,
First Lieutenant, Adjutant Fourth Artillery.

DELAWARE COLLEGE, *Newark, Del., August 4, 1890.*

The INSPECTOR-GENERAL U. S. ARMY,
Washington, D. C.:

SIR: I have the honor to report that, in compliance with Special Orders, No. 133, current series, Headquarters of the Army, Adjutant-General's Office, dated Washington, June 7, 1890, I visited and took part in the annual encampment of the Delaware National Guard, from its opening, July 26, to its close, August 2, 1890.

Immediately upon receipt of the order above cited, I reported at once to the governor and adjutant-general of this State, and to you, by letter, for instructions, and I now respectfully submit the following report:

* * * * *

The cavalry and artillery were organized as separate battalions for ceremonies and camp management; the former were dismounted, and the battery was only furnished with wheel-horses for limbers, there being no caissons furnished cadet battery. These organizations were small, but for purposes of instruction and drill did better than would have been expected, and made the organization and instruction of the guard as a brigade possible.

It has been customary for the companies to alternate in preparing camp, pitching tents, etc., and also in breaking camp, *i. e.*, packing up State property for shipment. This duty was very well performed by Companies I and D, respectively. Captain Isaac A. Wooten and his company (I) of Laurel, Del., deserve special commendation for the thoroughness and cheerfulness with which they performed their work this year in a driving storm of wind and rain.

General headquarters, the governor's staff, and the hospital department were located together on the left flank and on a line perpendicular to and a little in front of the color-lines of the several battalions. The best possible disposition was made under the circumstances, but the space was altogether inadequate for the comfortable handling of a brigade, and the location had many disadvantages from a military point of view. The great advantages were cheapness of transportation for men and supplies, and an excellent "target-range," an ample supply of good water, plenty of shade near at hand, and excellent drainage. The sanitary conditions were well looked after and duly reported to brigade headquarters each day of camp. The medical staff was an exceptionally good one, each member being imbued with a desire to do his full duty by all concerned. Some instruction was given in way of short "emergency lectures" and practical use of stretchers, etc. The desirability of establishing a "hospital corps" was thoroughly discussed and will, no doubt, fructify before the next annual encampment. The sinks for men and officers were renovated and carefully looked after, at the urgent demand of the medical staff, and irregularities of cooks and scullions were also checked in good time. Men and officers received timely caution as to eating and drinking to excess, and to the skillful efforts of the camp surgeons is due, in a large degree, the success of the week's work of the guard.

This was the first brigade encampment of the National Guard of Delaware, and it required a few days for officers and men to understand the new conditions. All, however, rapidly settled down to work and there was a marked freedom from unsoldierly wrangling. General R. R. Kenney, adjutant-general of the State, was assigned to the command of camp and all troops thereat. A guard was established at headquarters, and while all comers were treated with courtesy and attention, no loitering was allowed and business was transacted with dispatch and, considering the experience and opportunities (or rather lack of same) for acquiring technical knowledge, well in accord with military ethics.

The utilization of the general camp guard as headquarter guard was a good feature, and gave the organizations the advantage of having the greatest possible number of men present for drills and ceremonies.

The general staff was provided with kitchen and dining shed, in rear of headquarters. Separate kitchens and dining sheds were provided for the "field and staff" of the several battalions, for the line officers, for the cavalry, for the cadets, and for each company of infantry. This arrangement worked to the perfect satisfaction of all concerned, and I can readily understand that it is (as many officers and men claimed it was) a very great improvement over the common mess system heretofore adopted at the annual encampment of the guards. These kitchens and dining sheds were visited every day of camp, and, though there was on several occasions complaint of lack of sufficient milk, bread, or meat, as a rule the tables were well supplied with plenty of good, wholesome, and well-cooked food.

As has been stated before, the drainage of the camp ground was good, and the general police of camp was fairly good at all times, and often excellent, depending upon the vim and push of the police officer of the day. The tents were in excellent condition, practically new; arms, equipments, and uniforms, in several cases, notably Companies A, C, and H, of the infantry and the cavalry, were in excellent general condition. In all cases arms, equipments, and uniform were in fairly good condition,

though more care could be well exercised in cleaning rifles after coming off guard duty or after returning from "target practice." The Delaware College Cadets went into camp this year as a volunteer battery (paying their own expenses), and at the request of the adjutant-general of the State. As these cadets have been recently thoroughly inspected by an officer of your department, it is considered sufficient to say that the main advantages to them lay in the line of guard duty, castramentation, and brigade drill and ceremonies; and it is believed that their presence in camp will prove to have been of mutual advantage to the cadets and to the guardsmen.

Target practice began Tuesday and was continued each day until the striking of tents Saturday noon. The officers in charge of this important branch of the instruction of the soldier were enthusiastic, energetic, and efficient. Colonel Hart and Lieutenant Simpson were untiring in their duties, and deserve great credit for the amount of useful work done by the guard during the week in "target practice." One, two, and five hundred yards were the ranges fired over, and, considering the fact that many of the men were only enlisted this spring and had no previous instruction, the scores made were decidedly encouraging. Some of the older men made excellent scores. The cavalry and cadets were given instruction as well as the infantry, using their own arms.

The daily drills, two in the forenoon and two in the afternoon, included much in the school of the company and battalion, and covered a little instruction in evolutions of the brigade. Considering the fact that many of the men and a few of the officers had had no experience in battalion drill prior to this camp, the general execution of movements was good. Skirmish drills (company, battalion, and brigade) were the special feature of this encampment, and considerable proficiency was acquired before its close. Company H, of New Castle, displayed the greatest proficiency in skirmish drill.

Considerable attention was paid to the proper instruction of sentinels, but possibly less hazing of sentinels would have served all necessary purposes had in view. It is often better to devote a maximum amount of time to instruction and minimum time to "trying" sentinels with difficult and perplexing combinations. Guard duty was generally fairly well performed, and in many instances with the care and vigilance of a "Regular." Patrols were sent out a number of times, but no instruction (practical) was given in outpost duty.

Great improvement was made in the conduct of ceremonies (battalion and brigade) before the end of camp, and a number of those held were exceedingly creditable. At first there was little attention paid to military etiquette by officers or men, but, thanks to the persevering efforts of General Kenney, Colonel Marshall, and others, there was a decided and gratifying change for the better from the first day, and by the close of camp it was the exception to see officers or men fail to salute or pay proper respect to each other.

Company I, First Infantry, arrived on the ground Thursday, July 24, 1890, pitched tents, etc. The cavalry arrived Saturday morning, July 26, 1890, and the cadets followed closely. The other organizations arrived early in the afternoon, and the camp was formally opened by raising the flag and the firing of the salute of seventeen guns for the commanding general. Battalion dress parade was held by the different battalion commanders on their respective color-lines at 5.30 p. m., and brigade guard mounting took place at 6.30 p. m.

Sunday morning inspection was without arms, men standing in front of their tents, with the exception of a few of the infantry companies, which were formed and inspected under arms. Everything was found in good condition; the camp was orderly, neat, and soldierly. At 11 o'clock a. m. the men fell in and were marched to the "Grove," where service was held by Chaplain Willis, of the First Infantry. The Catholic soldiers attended low mass at the pavilion, celebrated by Father Birmingham, of Wilmington. Afternoon service was conducted by Bishop Coleman, of Delaware. The day closed with brigade guard mounting and dress parade. Police of camp and conduct of men for day excellent.

Monday was well filled with company and battalion drills and evening ceremonies. Great interest was displayed by all concerned, and skirmish movements were well executed. Company A gave an exhibition drill, evidencing careful training and marked steadiness. Colonel Marshall, commanding the First Infantry, worked hard with his command, and deserves special mention for the zealous and untiring efforts put forth by him to accomplish the greatest possible amount of useful work in the short time allowed by the State for the annual encampment. The results of his efforts were decidedly creditable.

The cavalry gave an exhibition saber-drill that reflected credit on the organization. While this command performed all the duties required of it as dismounted cavalry in a very satisfactory manner, deported themselves well on all occasions during camp, and presented a very good appearance, the fact that the men have not been instructed how to ride and care for horses is not only lamentable, but suggestive of the advisability of said commands being organized, armed, and equipped as artillery

or infantry, unless it be practicable to cure the fault above cited. Cavalry without horses or instruction in horsemanship, may present a somewhat striking appearance on occasion of ceremonies, but would not compare well with properly equipped artillery or infantry for actual service. Rain set in about 6 p. m., and the evening ceremonies were conducted in undress. Though the weather was very trying, sentinels performed their duties well during the night.

Tuesday forenoon was rainy, but, at the request of Colonel Marshall, the First Infantry was maneuvered, under my supervision, to illustrate the general principles of attack and defense; advance guards, flankers, and rear guard and reserve being cut off from main body and properly instructed prior to the movements in advance. During the drill blank cartridges were used freely, and the camp surgeons made use of their stretchers in carrying off supposed wounded soldiers. The usual drills took place in the afternoon and target practice began. The evening ceremonies were in full dress and well executed. Sentinels visited after taps, and found vigilant and well instructed.

Wednesday the usual morning company drill, with other camp duties, filled the time till the brigade was formed to receive the governor of the State. The cadet artillery fired a salute of seventeen guns, and the command was afterwards dismissed, without marching formally in review. Target practice continued during the day, though battalion drill was dispensed with in the afternoon, at the request of the surgeon-general, on account of the heat. Men at firing points were protected by rough board sheds. The brigade ceremonies in the evening were in full dress, and an improvement over any preceding day; sentinels visited during the night, and found fairly well instructed as a rule, though several exceptions were encountered.

Thursday morning, at request, the brigade was formed in the fields opposite camp and dispositions made to receive attack. During the maneuvers which followed Cadet Robert Mearns, U. S. Military Academy, commanded the Delaware College Cadet Battery; Colonel Marshall commanded the infantry and Lieutenant Stevenson the cavalry; and I had the general direction of the disposition of the several organizations. The drill was very satisfactory indeed, officers and men executing orders promptly and correctly. The booming of the field-pieces appeared to have an inspiring effect. Of course the imaginary enemy was repulsed and routed. Target practice continued during the day, and some good scores were made.

After brigade dress-parade the brigade was turned over to me for the regular inspection of arms, equipments, uniforms, etc. Many guns were found in rusty condition, but the general condition of arms, equipments, and uniforms was good. Many rifles are of the old model, and should be exchanged for more modern arms. Though many of the men and several officers lacked the "set up" that should characterize the complete soldier, the general soldierly appearance of officers and men was good.

After inspection Colonel Marshall had a "mob drill," illustrating the manner of clearing streets. The drill was well executed and very interesting and instructive. Sentinels found well instructed and vigilant.

Friday forenoon was very warm, but target practice was continued and the routine duties. Soon after noon the rain fell in torrents and continued till about 4.30 p. m., when it let up, and, at General Kenney's request, I took command of the brigade and passed it in review before the governor. Though the rain fell lightly during the ceremony, the movements were promptly and cheerfully executed, and the brigade presented a creditable appearance as it marched past the governor and his staff. The rain having ceased, the brigade was formed about 7 o'clock in the evening and dispositions made for attack upon imaginary enemy, supposed to be formed in the fields north of the camp, Colonel Marshall commanded the infantry, Major Rice the cavalry, and Cadet Mearns the artillery, and the general direction of the maneuvers were in my hands, assisted by Colonels Whitely, Layfield, and Hart, of the general staff. General Armstrong, the inspector-general of the State, was also on the field and was a close observer of all that took place. The drill was entirely satisfactory as a drill, and it is believed will have a good effect on the organization. Skirmish drill may be justly considered the most important of our present system of drills, and it is believed that too much attention can not be paid to the thorough instruction of soldiers in this drill and in target practice, both of which were made special features of this year's encampment of national guard of Delaware.

It is a matter of regret to me that I feel constrained to say that the order and soldierly conduct in camp on Friday evening was far below the standard of previous nights. No quarreling or disturbance occurred requiring severe criticism, but there was much hilarity that could have been well dispensed with. Sentinels were not as vigilant and faithful as they should have been, though all these matters were corrected about 1.30 a. m. on the 2d.

Saturday morning preparations were made for breaking camp. All property was turned in to the quartermaster, he giving receipts for same. At 1 p. m. the tents all fell at the first note of the bugle call at brigade headquarters, and the commands were marched out of camp and aboard the cars at the Brandywine Springs Station.

In closing, general, I wish to say that I found officers and men extremely anxious to learn, courteous, kind, soldierly, and teachable. While many little breaches of military etiquette were noted, there was on the other hand a ready and cheerful obedience accorded to superior officers that speaks of the existence of a soldierly instinct and acumen that insures success of the Delaware National Guards in the future, if adequate support be accorded them by the State.

I am, general, very respectfully, your obedient servant,

GEO. LE ROY BROWN,
First Lieutenant, Eleventh U. S. Infantry.

U. S. RECRUITING RENDEZVOUS,
Augusta, Ga., July 1, 1890.

INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C. :

SIR: I have the honor to respectfully report that, in obedience to paragraph 17, Special Orders No. 101, current series, Adjutant General's Office, Headquarters of the Army, Washington, April 30, 1890, and in compliance with written instructions from your office, dated June 9, 1890, I visited the encampment of the Georgia militia, and performed the duties assigned to me.

I went into camp on Sunday evening, June 15, 1890, and did not leave until after camp had been broken, at midday, June 21, 1890.

Within the limits of the city of Augusta, and adjoining the exposition building, is a large and handsome grove of pine trees known as Druid Park. The grounds were loaned to the State by the company owning them. The grounds were not desirable, being poorly adapted for the encampment and instruction of a body of troops.

However, the grounds were selected by the military advisory board of the State of Georgia as the best available this year. At the request of Col. Charles A. Olmstead, quartermaster-general, and the advisory board, I undertook the work of preparing the camp, erecting tents, cook-sheds, latrines, etc., so that everything was in readiness upon the arrival of the various battalions, separate or unattached companies. Five groves were used for the encampment. The company streets were of unequal width, owing to the growth of trees, and consequently some companies could not have their proper formation at roll calls. The tents of company officers were too near company streets, and field and staff officers were too near company officers. It was also impossible to have a regimental color-line. When a ceremony was about to take place, companies were formed in the various company streets, and one after another battalions were formed in a public street running through the encampment. After battalions were formed they would move into the exposition grounds and form on the general parade ground, inside the race track. This was large and roomy, and was in a fair condition; it was an excellent place for instruction in all the movements of battalion drill.

By the morning of Sunday, June 15, the tents had all been pitched and floored, wooden kitchens built, mess-sheds and mess-tables provided, latrines had been built and inclosed, mattresses placed in tents, etc., and everything was made ready and very comfortable.

The troops commenced to arrive on Sunday, 15th, and at once went into camp. The First Regiment Georgia Volunteers, under command of Lieut. Col. Peter Reilly, consisting of five companies from Savannah, Ga., was the first complete organization to arrive in camp. The three Augusta companies, constituting a part of the First Battalion Georgia Volunteers, under command of Lieut. Col. J. C. Levy, arrived in camp early Sunday morning. During the day and evening various commands continued to arrive in camp, and at midnight, Sunday, nearly the whole command were present. On Saturday afternoon two troops of cavalry (mounted) arrived in camp, having come a long distance from southeast Georgia.

The militia of Georgia under the present laws consists of fifty companies of infantry, seven companies of cavalry, and three companies of artillery (all white), and the Georgia militia (colored) of twenty companies of infantry, one of cavalry, one of artillery.

The white companies of infantry are in some cases organized into battalions under the command of lieutenant-colonels, but there are a large number of unattached companies. The First Regiment Georgia Volunteers, Col. G. A. Mercer, from Savannah, Ga., consisted of five companies. The First Regiment Georgia Cavalry, Col. W. W. Gordon, consists of seven companies scattered through various parts of the State.

None of the colored troops were present at the encampment.

The governor is commander-in-chief of all the forces in the State.

Under a law passed at the last session of the legislature, there was made available an annual appropriation of \$7,200 for the benefit of the militia.

The companies are from different counties, and, with the exception of Savannah and Augusta troops, are completely isolated. In this encampment the Georgia militia have come together for the first time. It is a wonder that the companies are so good, for there has been absolutely no opportunity for comparison with other commands.

The rank and file is composed of the very best material in the State—young men of good families. Some of the companies are historical and have had an almost continuous existence since the Revolutionary war.

I regret to say that many of the employers of these young men refused them permission to attend the encampment.

The State of Georgia does not pay her troops, and until the present year the militia has been entirely self-supporting. All the companies in the State purchase their own uniforms, and many companies have been obliged to purchase their own equipments.

At this encampment the State allowed the sum of 60 cents per diem per man for mess purposes. Transportation to and from camp was furnished by the State, the railroads giving reduced rates of fare.

The uniforms of the officers and men of the various battalions and of unattached companies are of infinite variety. I do not think any two companies in camp had similar uniforms. Many of the uniforms are very handsome, and are elaborately trimmed with braid, others with gold lace, but very few of them are suitable for service.

Some companies have uniforms closely resembling the full dress of the United States Infantry; others have uniforms very much like the fatigue dress of our Infantry.

It is proposed, however, to adopt the United States uniform, except that the State button will be used in place of the button with the eagle. The State has lately purchased a large quantity of cloth from the Government of the United States, but it will be some time before funds will be available for making the clothing.

Through the munificence of the United States Government nearly all the troops have been supplied with Springfield rifles, caliber .45, but there are a number of companies still armed with the old .50 caliber Springfield breech-loading rifle. The Government has also supplied the troops with belts, cartridge-boxes, bayonet scabbards, etc. Only a few companies have knapsacks, haversacks, canteens, overcoats, etc., and these articles have been purchased from time to time by the companies. As the allowance of the State is only about \$11,000 annually, it has been impossible to furnish the complete equipment of United States troops.

Camp Richmond was commanded by Col. George A. Mercer, First Regiment Georgia Volunteers, of Savannah, Ga. He is the senior field officer of the State, and he was assisted by a very efficient staff.

The Camp.

The State of Georgia has no general officers.

The troops consisted of the First Regiment Georgia Volunteers, of five companies, under command of Lieut. Col. Peter Reilly; First Battalion Georgia Volunteers, of five companies, under Lieut. Col. J. C. Levy; Seventh Battalion Georgia Volunteers, of four companies, under Lieut. Col. Ed. L. Wight; Ninth Battalion Georgia Volunteers, of five companies, under Lieut. Col. William F. Jones; First Regiment Georgia Cavalry, five companies, under the command of Col. W. W. Gordon (all mounted); and seven unattached companies from various parts of the State.

There were present for duty twenty-six companies of infantry and five troops of cavalry—a total of thirty-one companies. No artillery present.

For purposes of drill and instruction, the various infantry battalions were equalized by the assignment of unattached companies, in the following manner, viz:

First Regiment Georgia Volunteers (Savannah) five companies, and the Columbus Guards; total, six companies.

First Battalion Georgia Volunteers, five companies, and the Dalton Guards; total, six companies.

Seventh Battalion Georgia Volunteers, four companies, and the Americus Light Infantry and Dublin Light Infantry; total, six companies.

Ninth Battalion Georgia Volunteers, five companies, the Perry Rifles, Southern Rifles, and La Grange Light Guards; total, eight companies.

Grand total, twenty-six companies of infantry, divided into four battalions.

Five troops of cavalry (mounted).

The hours of service and roll-calls, as announced in General Orders, were generally observed during the encampment.

On account of the intense heat it was found necessary to abandon the afternoon drills; several of the companies, however, were drilled for an hour in the afternoon, in the manual of arms in the company streets.

The discipline of the camp was exceedingly lax.

The colonel commanding seemed to think that the lieutenant-colonels (battalion commanders) were responsible for and should maintain discipline in their respective commands.

It is only just and right to say that an exception should be made in the case of Lieut. Col. Peter Reilly, commanding the First Regiment Georgia Volunteers.

In his camp everything was a model of neatness and of soldierly discipline. It was a pleasure at all times and under all circumstances to visit this command, and the discipline was quite equal to that maintained in a camp of regular troops.

It is also just and right that I should make an exception in the case of the First Regiment Georgia Cavalry, commanded by Col. William W. Gordon.

The men of this command were held under strict military discipline during the entire encampment, and officers and men were attentive and zealous in the performance of duties.

Owing to the abandonment of afternoon drills, the troops not on guard or other special duty were absolutely free from all restraint, going and coming as they pleased.

From 10 o'clock in the morning until 5 or 6 o'clock in the evening the men were absent in large numbers, visiting friends in the city, riding, or driving.

The intense heat, of which so much complaint was made, was not more unendurable than that to which State troops are generally subjected in the summer season.

As it was many hours were absolutely wasted every day. At night there was the same condition of affairs. Immediately after brigade dress-parade, the various camps would be almost deserted (always excepting the camps of the First Regiment Georgia Volunteers, and the First Regiment Georgia Cavalry). The men would visit Augusta and would not return to camp until late at night, or just before reveille. In consequence the loss of sleep rendered them unfit for the duties of the following day.

I can not speak too highly of the discipline maintained in the camps of Colonel Gordon and Lieutenant-Colonel Reilly; it was in such marked contrast to the laxity of discipline in the three other camps of the infantry.

As regards the three Augusta companies of Lieutenant-Colonel Levy's battalion, it is only just to say that many of his officers and men were obliged to go to the city daily to attend to their business, some of the merchants of Augusta, the employers of the young men in the battalion, refusing to allow them to be absent during business hours. To some extent this was also the case with the Richmond Hussars, who were part of Colonel Gordon's command.

Military Instruction. The volunteers, or militia of Georgia, have one company that, in point of drill, discipline, and general military knowledge, is the equal, if not the superior, of any company of the National Guard which I have ever seen. It has been my good fortune to have seen the militia of New York, New Jersey, Maryland, California, and several other States, in camp. I have never seen any company that was the superior of the Savannah Cadets, belonging to the First Regiment Georgia Volunteers, and commanded by Capt. J. F. Brooks. It was always a pleasure to meet this officer, and to come in contact with the officers and men of his command. I can not speak too highly of his company, of the soldierly bearing of each and every individual officer and man composing it; of the absolutely thorough police of his company street and its surroundings; of the neatness and cleanliness of arms, uniforms, and equipments; of the completeness of all matters pertaining to the mess, comfort, and welfare of the men. Whenever any officer entered the company street, every man at once stood at attention, heels together and eyes straight to the front, every man a model of soldierly deportment.

All of the non-commissioned officers were thoroughly well posted in their duties, and, together with every man in the company, were anxious to learn everything pertaining to the duties of a soldier.

I went out to drill with this company several times. In marching their step had the swing and snap of a company of regulars; was fully 30 inches in length, and after timing them again and again, when with them and when they did not know I was near, I found that the cadence was, in almost every instance, exactly 120 steps to the minute. Not only did I find it so, but so did Captain Edward Field, Fourth United States Artillery, who also frequently went out to drill with them. Upon one occasion I took the company out to skirmish drill; the officers and men were clothed in blue flannel shirts and dark gray trousers, wore the regulation prairie belt and brown canvass leggins, and, had they been provided with the brown campaign hat, any one might have mistaken them for a company of regular infantry in the field. The drill was excellent in every particular, and all the movements were executed with great promptness and precision to the sound of the bugle. Only one or two small errors were detected, and were of slight importance.

It is only fair to state that the Savannah Cadets will compare most favorably with any company of regular troops in the U. S. Army. Captain Brooks is a thorough soldier and a strict disciplinarian; his administrative ability is extraordinary, and his company may well feel proud of such an excellent company commander; whilst he may well feel more than proud of commanding such a model company.

In saying this, I feel that I have done Captain Brooks and the Savannah Cadets simple justice; and I trust that it may be my good fortune to see, and again serve, with this company.

There were many other excellent companies, and there were few poor companies in camp.

With the exception of the First Regiment Georgia Volunteers and the three Augusta companies of the First Battalion Georgia Volunteers, all the companies are isolated, and came together in this camp for the first time.

The instruction of the isolated companies is not what it should be, but is not due to lack of zealoussness on the part of officers.

The officers and men have few opportunities for observation and comparison with other commands.

It was surprising to observe the quickness and readiness with which both officers and men acquired knowledge of their duties, in the very few days of the encampment.

The companies, one and all, displayed considerable proficiency in company drills. There was no skirmish drill, except the drills of the Savannah Cadets. The battalion skirmish drills were not attempted by any of the lieutenant-colonels, as very few of the companies had had instruction in the company skirmish drill.

There was no attempt made by any company at bayonet exercise.

Captain Davis, of the Perry Rifles, informed me that he had drilled his company in bayonet exercise, and that a squad of twelve men were reasonably proficient in it. I tried to have them drill the bayonet exercise, but there were so many duties devolving upon Captain Field and myself, it was impossible to find time to be present.

The battalion drills of the First Regiment Georgia Volunteers, under Lieut. Col. Reilly, were very good, this command being altogether in Savannah, Ga. They have frequent battalion drills.

The First Battalion Georgia Volunteers showed reasonable proficiency in battalion drill; but Lieutenant-Colonel Levy (owing to a painful and unfortunate accident on the day before going into camp) was unable to give his excellent command the necessary time and instruction.

It is only just to add that Lieutenant-Colonel Levy had attached to his command three companies from isolated places, and none of their officers or men had ever seen a battalion formation; but considering all things the six companies did remarkably well.

The battalion drills of the Seventh and Ninth Battalions were very crude, but still displayed considerable improvement towards the close of the encampment.

Of the fourteen companies composing these two battalions not an officer or man had ever seen a battalion formation before coming into camp; only the simplest movements were attempted, but the general results was much better than could have been expected.

Lieutenant-Colonels Wight and Jones, of the Seventh and Ninth Battalions, respectively, are to be congratulated upon the success attending their first efforts, and no more zealous, careful, and painstaking officers can be found in the Georgia militia. None of the battalions attempted any firings. No brigade drills were attempted, the colonel commanding deeming it best to devote all the limited time to company and battalion movements, and in this decision Captain Field and myself heartily concurred.

The evening parades (with the exception of one evening) was the brigade formation "in line of masses," owing to the character of the ground, and the fact that there was only one band (the Fourth Artillery) in camp. The five troops of cavalry under Colonel Gordon were posted on the left of the infantry, being formed in column of troops, and presenting a magnificent appearance. The parades were all commanded by Colonel Mercer, attended by his entire staff.

Capt. Edward Field, Fourth Artillery, performed the duties of adjutant-general, and to his care and forethought, added to his wide experience, the success of these parades is due.

At the request of Colonel Mercer and Lieutenant-Colonel Levy, I commanded the First Georgia Battalion at all reviews, parades, and other ceremonies, as Colonel Levy was unable to be mounted because of his painful accident.

It was an imposing spectacle to see the long column of infantry moving on to the parade ground. After arriving opposite their places, the heads of the columns of fours of the four infantry battalions would change direction and then executed "left front into line" simultaneously.

The long column of cavalry would then move on to the parade ground in column of fours and execute similar movements. After the first parade, these movements were executed with a regularity and precision worthy of regular troops. All of the infantry companies march remarkably well.

On the evening of June 20 I requested Colonel Mercer to have a separate parade for each battalion of infantry.

The parade of the First Regiment was excellent, and was in strict accordance with the tactics and regulations.

The parade of the First Battalion was very good; several officers made mistakes,

but it was owing to the fact that three companies of the battalion had never been on dress parade before. The three companies from Augusta were excellent, and their manual of arms, steadiness in ranks, etc., was quite equal to the First Regiment.

The parades of the Seventh and Ninth Battalions in spite of the many mistakes of officers and men, were quite well done, considering the fact that it was not only their first, but their only dress parade.

Owing to the lack of time, it was impossible to have a mounted dress parade of the cavalry battalion. I regretted this greatly, for they were a splendid body of officers and men.

On June 19 Governor John B. Gordon, accompanied by his staff and the state military advisory board, visited "Camp Richmond;" minute and thorough inspection was made of the entire camp, and his excellency expressed himself as highly pleased with all the surroundings, the condition and appearance of the troops, etc., and pronounced the first encampment of the Georgia militia an unqualified success. In the evening there was a review and brigade dress parade, in the midst of which there occurred one of the most violent electrical storms ever known in this part of the country.

All the ceremonies were gone through with, however, and the men of Georgia behaved themselves like veterans. In the midst of this storm the governor, followed by his staff, rode down the line and was loudly cheered by the troops. The enthusiasm of the troops and the wonderful personal magnetism of General Gordon, in the midst of this terrible storm, surpassed anything I have ever seen.

It is almost unnecessary to say that all the uniforms of the troops were nearly ruined, and that upon their return to camp everything was in a state of chaos; but with the readiness of veteran soldiers the men soon repaired damages and made themselves comfortable for the night.

In the storm one cavalry horse was killed and several others were badly shocked by a stroke of lightning.

I think it was a mistake to put so large a body of troops in camp near a city, and I would respectfully recommend that the State of Georgia follow the method adopted in the State of New York, *i. e.*, send regiments of ten companies into camp for a period of ten days each for instruction, and let the encampment be removed as far as possible from any city or village. In this way each colonel or lieutenant-colonel can be held directly responsible for discipline; he can easily keep his men in camp; the officers and men will have no temptation to shirk duty; all kinds of instruction will be more thorough and the general results will be much more satisfactory.

As is the rule in nearly all States, here also company officers are elective. It would be useless for me to write anything of the evils of this system, for many older and more competent officers have already reported upon it. In Georgia all commissioned officers are required to undergo an examination before receiving their commission, but I am informed that the examination is a mere form.

The laws of Georgia require frequent inspections of the companies of militia by the adjutant and inspector-general, but I am informed that the law is almost a dead letter, owing to the failure of the legislature to provide sufficient funds for the payment of necessary expenses. It is to be hoped that the legislature will do more for the militia during the coming session, for taken as a whole, and if they are properly provided for, the State will soon have a force to be proud of, and one that can be depended upon in an emergency.

There were no formal brigade inspections, nor were there any battalion inspections conducted in accordance with tactics and Army Regulations. I made frequent and daily inspections of companies, as did Captain Field, but it was not an easy task to overhaul thirty-one companies, in addition to our other manifold duties.

The arms, accouterments, and clothing were all in good, serviceable condition. I must say, however, that in many of the companies the men were careless about cleaning their guns, and many sets of equipments needed blacking and the application of heelball.

The tentage was excellent (having been furnished by the U. S. Government), but it was altogether insufficient for a camp of this size. The State has only 215 tents all told, *viz.* 175 common tents with walls, 15 wall tents, and 25 Sibley tents with walls. As a consequence, seven companies had to be quartered in the Exposition Building, and although they were more comfortable than the men who were in tents, still they had not the advantage of instruction in camp life.

The men were assigned, four to a common tent, and fifteen to a Sibley tent for infantry; twelve cavalrymen to a Sibley tent, whilst the wall tents were reserved for officers, together with some of the common tents.

The State of Georgia has a fine body of cavalry. The First Regiment Georgia Cavalry is composed of seven companies, from various parts of the State, all under the command of Col. William W. Gordon, of Savannah, Ga.

Of this command, four companies were in camp, viz, Company A, Capt. G. B. Pritchard, Savannah, Ga.; Company B, Capt. J. L. Fleming, Walthourville, Ga.; Company E, Capt. J. M. Darsey, Hinesville, Ga.; Company F, Capt. J. S. Thomas, Brunswick, Ga.

The Richmond Hussars, Capt. J. W. Clark, of Augusta, Ga. (an independent troop over one hundred years old), were attached to Colonel Gordon's command. The command numbered 22 commissioned officers and 145 enlisted men.

I was unable to devote much time or attention to this command, but judging from what I did see, I can safely say that Georgia has one of the finest if not the best body of volunteer cavalry in the United States. The large majority of the men were finely mounted, and many of the officers and men were superbly mounted; and it is interesting to record the fact that all of the officers and a large majority of the men own their own horses.

I have never seen more magnificent riding, and a hundred of these men can in this respect bring the blush of shame to the finest cavalry troop in the U. S. Army. The men of Companies A, B, E, and F, devote a great deal of time to tilting, and with a few exceptions are experts. Many of the men mounted on their fine chargers will ride 100 yards in from eight to eleven seconds, taking off in quarte and tierce two suspended iron rings, besides jumping hurdles and cutting three heads from 5 foot 6 inch posts.

The riding school is not in the form of the figure 8, but is generally in a straight line on a smooth and level plain or on a road.

Too little time is devoted to the manual of the carbine and pistol, mounted or dismounted. However, I think next year's encampment will show a great improvement in all things.

The drills were in the school of the soldier, platoon and company, mounted. No skirmish drill was attempted, the men being armed only with the saber and pistol.

Colonel Gordon is a thorough soldier and a strict disciplinarian and by next year his command will be in a high state of efficiency. As it is now the cavalry command reflects great credit upon its commander, and the State is to be congratulated upon having so large and fine a body of mounted men.

Target Practice. It was impossible to have any target practice, the camp being within the city limits, and no target range being available within a distance of several miles. Under State laws provision is made for a supply of both blank and fixed ammunition for all companies. So far as I could learn, very few companies have ever had any target practice.

Guard Duty. There was a camp or police guard mounted daily. On account of the heat, guard mount took place in the afternoon, before evening parade. As none of the officers were familiar with the ceremony of guard mount, indeed few had ever seen it, it became necessary for me to perform the duties of post adjutant. Every day the ceremony of guard mount was gone over with the new officer of the day, officers of the guard, non-commissioned officers, etc.

The first and second guard mounts were very crude affairs, but after that, the officers and men did very well, everybody being out to witness this new and unusual ceremony, of which they had heard so much. The entire camp was constantly, day and night, surrounded by a complete chain of sentinels.

The daily details for guard consisted of eighty-odd men, besides the non-commissioned officers supernumeraries; but it was impossible to instruct such a number, and not half of the command acquired any knowledge of the important duties of sentinels. An officer of the day and officers of the guard were detailed daily, besides innumerable non-commissioned officers. A field officer of the day was dispensed with.

A countersign was issued daily, but the sentinels failed to understand or appreciate its importance. A great many men who were absent after parade would come into camp at all hours of the night. The sentinels seemed to think that if a man was in uniform it was all right, and that there was no necessity to call for the corporal of the guard, etc.

Attendance. It has been quite impossible for me to arrive at the exact strength of the Georgia militia, but the aggregate will not fall far below 5,000 men. There seems to be no minimum or maximum strength for a company. The orders from the adjutant-general's office this year required that every company should go into camp with a minimum strength of twenty-nine enlisted men and two officers.

Before the encampment and since then a number of companies have been mustered out of the service, and I am also informed that for the present the State will not allow any newly formed companies to enter the State Guard.

The morning reports of the brigade at encampment showed twenty-six companies of infantry, divided into four battalions, and five troops of cavalry. These reports showed 118 battalion officers and 1,070 enlisted men present, an aggregate of 1,188.

I could not obtain any figures showing the number of officers and enlisted men absent from the various commands. When the fact is considered that it was a bad season of the year for an encampment, the attendance was remarkably good.

Owing to the limited appropriations made by the State it was impossible to allow all of the organizations to go into camp and as this camp was entirely experimental, the number of officers and men present was an agreeable surprise to the State authorities.

It is to be hoped that at the coming session of the legislature a military code will be enacted and that the large number of separate or unattached companies will be organized into battalions and regiments.

General Conduct. Whilst it is true that there was a lack of strict military discipline, still I have never seen so large a body of men more perfectly well behaved. I did not see a single case of drunkenness or disorderly conduct during the entire encampment.

It seemed to be generally understood among officers and men that intoxicating liquor would not be allowed in camp; and beyond partaking of ginger ale, soda water, and bottled beer, the men did no drinking in camp.

The regulations as to salutes and military courtesies were strictly complied with, and it is a great pleasure for me to say that I have never seen a body of men more uniformly courteous and considerate of each other.

Police and Sanitary Arrangements. The police of the company streets and of the entire camp was excellent, and the various battalions seemed to vie with each other at all times in their endeavors to keep their camps the most cleanly. The condition of Camp Richmond from opening to close was, in point of police and cleanliness, equal to an encampment of regular troops. Excellent arrangements were made for bathing facilities for the men, and after coming in from drill the men would bathe by the hundreds inside the Exposition building. After the second day the sinks were kept in thorough police, earth, lime, and carbolic acid being freely used.

As a consequence there was little or no sickness in the command; officers and men seemed at once to appreciate the great importance of cleanliness of sinks, etc.

The Encampment. While from a strictly military point of view the encampment can hardly be considered a pronounced success, yet it was almost of inestimable value. The men were able to learn considerable about camp life and how to care for themselves and provide for the encampments of the future.

It must be remembered that this is the first camp of the State of Georgia, and that the rank and file is composed entirely of young men of sterling worth, the great majority of whom have been born since the close of the civil war. It is safe to say that fully 600 of the men in camp had never seen a soldier's tent erected and had absolutely no idea of what a camp looked like. I believe that I can safely assert that next year's encampment will see a wonderful improvement in the Georgia militia.

Officers and men are full of zeal and enthusiasm and all are desirous of learning more of the duties devolving upon them; good and faithful work will be done if the State does her part and makes anything like a liberal provision for the support of the magnificent material within her borders. If the State can not or will not defray the necessary expenses, then the United States should take the matter in hand. With proper care and handling the Georgia militia can be made second to none in this country.

To Adjutant-General Kell, the Military Advisory Board, the members of the governor's staff, to Col. Charles A. Olmstead, quartermaster-general, to Colonel Mercer and his staff, to Colonel Daniels and Captain Clark, and to all the officers of the Georgia militia, I desire to express my sincere thanks for many courtesies and much valuable information.

To Capt. Edward Field, Fourth United States Artillery, much of the success of this encampment is due, and it is to be hoped that he will be present at the next encampment to give his valuable aid to the State authorities.

I am, sir, very respectfully, your obedient servant,

COLVILLE P. TERRETT,

First Lieutenant, Eighth Infantry, Inspector and Instructor.

FORT SHERIDAN, ILL., August 15, 1890.

The INSPECTOR-GENERAL OF THE ARMY,
Washington, D. C. :

SIR: I have the honor to submit the report of my inspection of the Indiana Militia. Pursuant to your letter of instructions of July 30, 1890, I reported by letter to the governor of the State, and on the morning of the 9th instant I reported in person to Brigadier-General Ruckle, adjutant-general of the State of Indiana, who had been assigned to command the camp at South Bend, Ind.

The camp was located about a mile and a half from the town, on ground partly wooded and partly open, which, in an ordinary season, would have proved very suitable. In consequence of prolonged drought it was very hot and dusty. The soil was sandy and the location high and healthy. It was about a mile from the nearest stream (St. Joseph River), which prevented adequate bathing facilities for the men. It was intended that a water-pipe should be laid to the camp in connection with the town water supply, but this was not done; as a consequence there was something of inconvenience and privation, but no real hardship. The water was hauled in tanks, and the supply, though not lavish, was ample.

The whole of the organized militia force of the State was in camp. It consisted of the following organizations:

Artillery: First Regiment, field and staff, 3 officers and 19 men; Company A, 2 guns, 2 officers and 27 men; Company C, 2 guns, 3 officers and 32 men; Company E, 2 guns, 2 officers and 18 men. Total, 6 guns, 10 officers, and 96 men.

Infantry: First regiment, consisting of 12 companies, organized with 3 battalions of 4 companies, 1 colonel, 1 lieutenant-colonel, and 4 majors—total strength, 34 commissioned officers and 413 enlisted men. Second regiment, consisting of 12 companies and 2 "separate" companies attached; organization same as first regiment; total strength, 40 commissioned officers and 499 enlisted men. Third regiment, consisting of 12 companies; organization same as first regiment; total strength, 61 commissioned officers and 405 enlisted men. Making a total in camp of artillery, 10 commissioned officers and 96 enlisted men; and infantry, 135 commissioned officers and 1,318 enlisted men.

The State maintains no cavalry.

The field pieces of the artillery are of the old-pattern 3-inch rifles. The carriages are old and worn and out of repair. The harness is in need of repairs, but is serviceable. The batteries are not horsed. A complement of team horses were hired for use with the guns during the encampment, and, of course, were undrilled and not entirely suitable. In charge of the artillery regiment are also 2 old-pattern Gatling guns, caliber .45, in fairly good order.

The arms of the infantry are as follows: 200 new-model Springfield rifles, 50 model of 1878 Springfield cadet rifles, 450 model of 1878 Springfield rifles, and 1,300 model of 1873 Springfield rifles.

The new model Springfield rifles are in prime order and condition. The other rifles are old and worn and bear evidences of hard service, and, to some extent, lack of knowledge in caring for arms. This is explained by the fact that they have been for a long time in the hands of independent companies—the regimental organizations, with the consequent responsibilities and duties, having been perfected within the last two years.

The camp and garrison equipage was good, in sufficient quantity, and is well cared for.

The rations were of good quality, sufficient in quantity (about one-third more than the Army ration), well cooked and served. The rations were issued daily to the companies by the commissary. The cooking was done by skilled cooks, hired for the purpose by the State, and attached to each company.

The camp was well laid out, in conformity with regulations and tactics.

The duty was carried on constantly and intelligently—the entire time being devoted to practical instruction and drill. Guard mounting was held every morning; company drills for an hour and a half, and officers' school, under the direction of the regimental commanders, for an hour. The afternoons were devoted to battalion drill by the infantry and to mounted drill by the batteries. Dress parade was held every evening. The guard duty was carried on fairly well, absolutely, and, considering the few opportunities for actual practice, it was excellent.

The discipline for the entire command was good. Among officers and men there is great zeal and desire for perfection in all military matters, and there is a notable absence of any desire for mere show, and a distinct leaning towards practical things; any lack of efficiency is clearly traceable to want of opportunity and not to absence of a desire for information and improvement. About one-half of the companies have, at their home stations, good armories and drill rooms. For the remainder the facilities and accommodations are insufficient. Each company is allowed by the State \$120 per annum for rent of armory.

The men are provided with one suit of uniform and two suits of underclothing each. The cloth for the uniform is supplied by the General Government (Quartermasters' Department) out of the pro rata allowance for the support of the militia and is charged to the State. The uniforms are made up from this cloth at a cost to the State of \$1.20 each. It would be of advantage if each man could have two suits (one for fatigue duty) of uniform. This plan will, I think, be adopted in the future by the issue of a new suit of uniform to each man, he retaining his present uniform as a fatigue suit. No full-dress uniform is provided for the troops, and, in my opinion, none is required.

The State has no target range and no rifle practice; firing has been had at ranges

over 300 yards, and up to that range by only a few of the companies. It is the intention to have this year, near the city of Indianapolis, target practice at the longer ranges for all men that may qualify for it at the short ranges.

While in camp, and during the time of travel to and from the place of encampment, officers and men are paid by the State compensation at a uniform rate of \$1 each per diem. Considering the sacrifices that must be made it would seem more equitable that officers and men should receive the pay of their grade as fixed for the Army, except the minimum allowance for any member of the militia should not be less than \$1 per diem while actually on duty.

The supplies of camp and garrison equipage and reserve of ordnance stores are kept at the State capital under the immediate care and control of the quartermaster-general of the State, Brigadier-General Pope. He informs me that his store-houses are ample and fairly well equipped. When troops are called out the stores required for their use are forwarded to the place of destination of the command, and can be there in time to meet the wants of the troops. This system is found to work well in practice. The quality and character of the camp and garrison equipage available is good, and is furnished by the Quartermaster's Department of the Army.

The facilities at the disposal of the State for concentrating or distributing its forces in case of sudden emergencies are those that may be furnished by the railways, and are ample. The State owns no means of transportation, and there are no laws regulating the transportation of its forces over railroad lines within the State.

I can bear cheerful testimony to the zeal and enthusiasm of officers and men, and to their desire to profit by any and all opportunities for improvement and instruction. I mingled freely with the officers and found their professional knowledge and capacity for their duties good. I endeavored to give them the benefit of such knowledge and experience as I have, whenever solicited, as unobtrusively as possible, which in every case met with most cordial and courteous reception.

As it was not desired by the commanding officer, I did not submit any daily written reports, but was in constant communication and conference with him. As an officer of large experience in the war of the rebellion, his information and knowledge is complete and practical. In nothing was this more conspicuously manifest than in the cleanliness, thorough police, and good order throughout the camp.

This is the first appropriation by the State that has been available for the encampment and instruction of the troops in their practical duties.

I suggest and recommend that, to promote the efficiency of the troops, the State should appropriate not less than \$25,000 annually for the expenses of the camp; that the troops should remain in camp for two weeks, if possible; and that the State should have, and control by purchase or lease, a permanent camp ground of not less than one mile square, close to a line of railway and a good stream of water, and at distance of at least 3 miles from any large town. On such a plat of ground a rifle range should be made for use in connection with the camp.

The camp broke up on the 9th instant, and I returned to my proper station.

I am, sir, very respectfully, your obedient servant,

CHAS. G. PENNEY,
Captain, Sixth Infantry.

WILLETS POINT, N. Y., July 14, 1890.

General J. C. BRECKINRIDGE,

Inspector-General, U. S. Army, Washington, D. C.:

SIR: I have the honor to report that I have completed the duty to which I was assigned by paragraph 3, Special Orders, No. 131, Adjutant-General's Office, dated Washington, June 5, 1890.

I arrived at Augusta, Me., during the afternoon of June 28, in company with Brig. Gen. H. L. Mitchell, who commanded the camp. On his arrival at the camp ground a single gun was fired and a flag raised to the top of the staff in front of brigade headquarters, to announce the opening of the camp. Brig. Gen. H. M. Sprague, adjutant-general; Col. G. A. Philbrook, commissary-general; Capt. G. Doughty, brigade quartermaster; and Capt. C. A. Plummer, brigade commissary, were already on the ground, and had been employed for several days in making all needful preparations for receiving and caring for the troops on their arrival. General Sprague was exceedingly active, and no detail was overlooked that would add to the comfort of the command; having been connected with the military establishment of the State for a number of years, he knew what was required and made no delay in supplying it.

The ground selected for the encampment is admirably adapted to the purpose. It is a tract of about sixty acres, and is distant about one mile from the depot of the Maine Central Railroad. Two-thirds of the area is nearly level, and this space affords ample room for permanent buildings, pitching tents, and leaves sufficient room for a very good drill ground. The land, with all improvements on it, belongs to the State.

It is considerably elevated above the surrounding country, and affords an excellent view of the Kennebec Valley for several miles. There are several light frame buildings upon the ground; one is designed for the governor and his military staff, three others accommodate the brigade commander and his staff; there is a kitchen for the mess of the field officers of each regiment, a kitchen for each company, one for each gun detachment, and a small store-house for each regiment, from which issues are made. These are all constructed of smooth lumber, shingled and battened, and with the exception of the regimental store-houses, are painted outside. The floors are of smooth matched boards. There is a large store-house at one corner of the grounds built of lumber and painted; it is used for storing tents and other articles. The sinks are light frame buildings screened by lattice work; both sinks and screens are painted. Besides these there are other buildings used for dining-rooms by the brigade officers and by the several companies, also sheds for the shelter of the horses of the mounted officers. The dining-rooms and sheds are made of rough boards and unpainted; they are shingled but not battened. The kitchens are detached buildings. The dining-rooms consist of one for brigade headquarters, one for each regimental headquarters, and one for each band. These are detached buildings. The company dining rooms are grouped, four on one side of that of the regimental headquarters and five on the other. Each group is under one roof, but the rooms are separated by partitions. These nine rooms accommodate the eight companies of a regiment, and the gun detachment assigned to it.

The general arrangement of the tents and buildings was good. The tents, wall, 10 by 12, were placed in the customary manner so far as those of the companies are concerned. The tents of the band were on the same line as those of the field officers. All the tents except those intended for the guard were pitched before the troops arrived. The dining-rooms of all, except the brigade commander, were on one line in rear of the tents of the regimental field officers. The kitchens, with the same exception, were on one line about 10 feet distant from the dining-rooms. A shutter on the side toward the dining-room, when opened, formed a shelf over which articles were passed from the kitchen. The kitchens are supplied with a good variety of cooking utensils. Iron knives and forks and tin cups and plates are used. The companies were obliged to rent or supply their own cooking stoves. Water barrels were placed just outside the kitchens and were filled daily by a wagon from a spring outside the camp ground. Galvanized iron cans were supplied to receive the refuse from the kitchens. The sinks and also the sheds for field officers' horses were on a line about 60 feet distant from the kitchens. The former were supplied with wooden boxes and covered frequently with fresh earth, and removed when necessary. The buildings occupied by the governor's staff, and the brigade commander with his staff, were in a group on the right flank of the regimental tents and a short distance in front of the color-line. In front of the quarters of the brigade commander there is a flag-staff about 60 feet high. Tents for the accommodation of the men detailed in the hospital department were pitched on the left of the quarters of the brigade commander. The guard-tents, pitched by the guard after the troops were in camp, were placed slightly in advance of the regimental tents and on the exterior flanks of the line; they opened toward the regimental tents; it would have been a slight improvement to have had their fronts in the opposite direction; the sentinel posted over them would have had a clearer view of the ground exterior to the camp. There were also two guard-tents at brigade headquarters. All tents were supplied with floors. Officers were supplied with mattresses, those issued to the State by the General Government. The men were supplied with bed-sacks filled with hay. All articles of camp and garrison equipage are kept in the store-house in Augusta and are well cared for. The only articles in possession of the men or at the various armories are the uniforms, arms, knapsacks, belts, and cartridge-boxes.

The natural drainage of the camp is excellent. The soil is of such a character that it soon becomes dry, even after a heavy rain-fall.

The Maine Volunteer Militia consists of one brigade, composed of two regiments of infantry and two gun detachments; there is also one independent company of infantry; the gun detachments, until recently, were parts of a battery of artillery. Owing to the difficulty of obtaining suitable horses and the time consumed in training them while in camp, it was decided to replace the brass smooth-bored guns with the latest pattern of Gatling gun. This has been done, and during the encampment one gun detachment was assigned to each regiment, and occupied tents on its left. Each regiment contains eight companies and a band. These companies and detachments have been organized and are maintained in seventeen cities and towns. Portland is the only place that has more than one such organization. There are three companies of the First Regiment in that city. Owing to the activity of business in Portland it was found impossible to get out the required number of men in one company. The members of this company who reported were assigned to other companies, and the independent company from Eastport took the place of the absent organization during the camp. Although the law provides penalties for failure to turn out when

ordered, it is found very difficult to compel attendance on military exercises when these requirements conflict with the daily duties of civil life. Employers, as a rule, are found willing to allow their help to be absent for the annual encampment, but too many are still disposed to regard these affairs as a recurrence of the old-time muster-day. They consider these occasions as seasons of frolic and not as days of hard work and valuable instruction, which they really are.

The number of field and staff officers with each regiment and the number of officers with each company is the same as in the regular Army. There are two lieutenants with each gun detachment. The brigade is commanded by Brig. Gen. H. L. Mitchell, of Bangor, who has given much time from his private business to build up an efficient organization. He embraces every opportunity to increase his knowledge of military information, and by untiring energy has aroused and maintained an excellent interest in his command. There are eight members of the brigade staff who are commissioned officers and four non-commissioned. The commissioned officers are an assistant adjutant-general, a brigade inspector, a medical director, and an inspector of rifle practice, with the rank of major; a quartermaster and a commissary, with the rank of captain; two aides-de-camp, one with the rank of captain, the other first lieutenant.

There are sixteen persons on the governor's military staff. But three of these were constantly in camp during the muster; these were General H. M. Sprague, adjutant-general; Col. G. A. Philbrook, commissary-general; and Col. E. J. Cram, inspector of rifle practice. General J. Harper, inspector-general, was present part of the time, but was called away by sickness in his family. Nearly all the other members were present on July 3, the day appointed for a review in the governor's honor.

The hospital corps was made by a detail of eight men from each regiment.

By noon, June 29, the regimental quartermasters and the cooks of the several companies arrived in camp and proceeded to make arrangements for having dinner in readiness for the troops when they would reach camp. At about 1 o'clock Monday afternoon the Second Regiment arrived in camp, and was followed soon after by the First Regiment. Each regiment was preceded by a band, and marched by brigade headquarters on the way to its quarters in camp. General Mitchell, with his staff, reviewed each regiment as it passed. The Second Regiment stacked arms on the color-line and the companies proceeded to their respective parade grounds and were dismissed. After wheeling into line on its parade ground the First Regiment was dismissed by its colonel and the several companies marched to their quarters under arms. Dinner was ready and was promptly served.

The whole command seemed to appreciate that the encampment was for work, for it was not long before the Second Regiment prepared for guard mounting, and the First Regiment went out for company drill. As soon as guard mounting was over in the Second that regiment turned out for battalion drill. Both regiments had dress parade at the time prescribed in brigade orders. The guard mounting of the First Regiment took place after its dress parade. This ended the first day, and when it is remembered that some companies had been traveling a good part of the night the amount and quality of the exercises were very creditable.

July 1 and 2 were exceedingly favorable days and the order of exercises prescribed by the brigade commander was closely followed. The drills were by battalion, the guard mounting by regiment, and the parade by brigade. There were several battalion skirmish drills, also a practice review of the brigade from regimental lines. It is not to be expected that these exercises were perfect in every detail. The companies are brought together but once a year, and between encampments the membership of each company changes considerably. The men are intelligent and well developed; their bearing is very good, but would be improved by a still greater attention to setting up than has yet been given. The officers displayed a good knowledge of their duties, and manifested commendable interest. There was a marked improvement in the drills from one day to the next, and I have no doubt that with more time allotted to the encampment a very good proficiency would have been shown. The manual of arms at parades is worthy of mention; it was executed in a satisfactory manner.

July 3 (Thursday) the weather changed; the rain fell in showers all day, and the programme had to be abandoned. It was intended to have a review in honor of the governor, followed by an inspection that would have enabled me to have made some comparison of the companies with one another. The governor and staff arrived in camp about noon; he was received with an artillery salute, the State flag was run up, and the command was paraded in overcoats on the color-line. The salute and parade were repeated shortly afterward on the arrival of the Hon. Redfield Proctor, Secretary of War. About 3 o'clock both of these gentlemen left the camp for Portland. The governor was accompanied by his staff.

On July 4 the rain continued, but the plan arranged on entering camp was followed. The command left camp at an early hour in the morning, and marched in the rain to the railroad station, where it took the cars for Portland. The train was waiting, and the Second Regiment embarked with no delay until it was found that an

insufficient number of coaches had been provided, and that a portion of the command would be obliged to ride in box-cars provided with rough seats. The neglect in this matter appears to have been on the part of the railroad management, for the military authorities made application early enough for an ample supply of cars. As the troops were to be one attraction to draw people to Portland and increase the receipts of this road, and as their transportation was paid for, it was rather unfair treatment to force them to accept such unsatisfactory and unsuitable accommodations. After considerable remonstrance on the part of officers and men, they were induced to take the cars provided, and reached Portland about 10 o'clock. While the streets were muddy, the clouds had cleared away, and preparations were made to enter the street parade in dress uniform. After the parade, the companies were dismissed to assemble at the armories in time for the trains that were to convey them to their homes. They made a fair showing in the parade, but would have appeared to much better advantage if the weather had been pleasant when they left camp, for then greater attention could have been paid to the details of the uniforms; among other things, rubber boots, which appeared here and there, would have been packed with the baggage.

The uniform of the State troops consists of dress-coat, helmet, trousers, blouse, forage-cap, overcoat, and blanket. The blankets are red. The other articles are of the same pattern and material as those issued to regular troops. They are all in good condition, and most of the uniforms fit satisfactorily. It can not be expected that all will fit perfectly, as the companies change constantly their members, and it would require a larger supply of uniforms at each armory than it is practicable to have in order to give each member an excellent fit in every particular. The uniforms are the property of the State, and are kept at the various armories or in the possession of individuals during enlistment. The facings are white for the infantry and red for the gun detachments. The trousers of all enlisted men have a cord in the outside seam. The only exception is that of the non-commissioned staff officers, who have stripes. Cloth chevrons are worn by non-commissioned officers on blouses and dress coats, the brigade non-commissioned staff excepted. The latter have gold-lace chevrons. There is quite a variety of blouses worn by the line officers. Some of these articles are made plain, while others are braided in front. The material, while uniform in color, differs in texture. The officers' cap ornaments are not uniform. Very few officers have undress belts; quite a number of them have the officers' regulation overcoat.

The infantry regiments are equipped with the Springfield rifle. These guns have been in use for quite a long time. I had no opportunity to examine a great many, but those that I saw, while in good working order, were not so clean as they should be. The belts and cartridge-boxes have been used a good while; they are much worn and lacked blacking and polish. The brass parts of the equipments were not so bright as desirable. The knapsacks are of patent leather, and do not appear to be well adapted to service; many of them are worn, and some have the regimental number nearly obliterated. The command is partly equipped with canteens, but has no haversacks. The tents have been in service over ten years, and are generally in good condition; only a few are slightly torn. The best of care must have been given them to have preserved them so well.

Each regiment supplied its own guard. One regiment had thirteen posts, the other nine. Each had an officer of the day and two officers of the guard. Each, in turn, supplied the brigade with a field officer of the day. Each regiment also sent six privates and a non-commissioned officer daily to brigade headquarters. The sentinels were on the alert, and performed their duty intelligently; they did not repeat their orders with great readiness, but showed a willingness to learn. Owing to the short stay in camp, it was impossible to have every man perform even one tour of guard duty, though the number of posts was large. Good attention was paid to saluting, and at night a countersign was used. I visited the guard during the day and night and assisted in its instruction. There has been a marked improvement in the performance of guard duty in the last five years in this State. There also exists a greater observance of military courtesies at all times. The men about camp seldom failed to salute officers, though I noticed several who neglected to rise when officers approached.

The police of the camp was excellent. A little more attention should have been paid to the cleanliness of the kitchen floors. This might have been done if the supply of water had been greater. There was sufficient water and ice for other purposes.

The camp was quiet and orderly. Men were allowed to visit the town but did so in a gentlemanly manner. Their behavior in Portland was excellent, and I failed to see any intoxication among them while they were in Augusta or Portland.

The food supplied was excellent in quantity, abundant in quantity, and of sufficient variety. Rations were issued by the brigade commissary to the regimental quartermasters, and by them divided among the several companies. The cooks were enlisted for the camp, and besides their pay from the State as soldiers they received additional compensation from the companies.

In its militia the State of Maine possesses a zealous, earnest body of men that with more time would become thoroughly proficient in all that pertains to military duty.

What they have done in the past is very praiseworthy when the difficulties under which they labor are known. There should be more time allotted to these annual encampments; ten days of active camp work would be none too little. The greater efficiency that would thus be obtained would be more than commensurate with the additional expense. If the time would be employed as faithfully as two days of the last encampment were there would be a very satisfactory advancement achieved. It does not seem desirable to have so short an encampment as this last one. The utility of the Portland trip is questionable; the time could have been employed in camp more advantageously.

Target practice is carried on with great difficulty at the various towns where the companies assemble. Not many of these companies can obtain ranges of more than 300 yards, and the conveniences on these are unsatisfactory. Money invested in good ranges for a greater amount of company practice would be well employed. The competitions in marksmanship were conducted at such hours as not to interfere with the other camp duties; they were all under the direction of Col. E. J. Cram and Maj. E. E. Newcomb, inspectors of rifle practice. These gentlemen are excellent shots, and, besides possessing great interest in this branch of military work themselves, have the tact and skill necessary for imparting their knowledge and enthusiasm to others with whom they come in contact. The competitions were at 200 and 300 yards, and the work done was creditable. I noticed three patterns of sights. Blunt's Firing Regulations are generally followed, though I noticed slight modifications. The range at Augusta is a good one, but practice can not be held conveniently beyond 300 yards.

I was cordially received by all officers, and frequently was asked concerning points relating to the military service. The hospitality of the mess at brigade headquarters was extended to me, and every opportunity was given to see the troops under such conditions as the weather permitted. The suggestions that I saw fit to make from time to time were favorably received and promptly acted upon.

To Generals Mitchell and Sprague I am particularly indebted for the information furnished and for the facilities afforded for making my tour of duty at the camp agreeable.

Very respectfully, your obedient servant,

EDGAR W. HOWE,
First Lieutenant, Seventeenth Infantry.

FORT WAYNE, MICH., August 5, 1890.

The INSPECTOR-GENERAL OF THE ARMY,
Washington, D. C.:

SIR: In pursuance of the provisions of paragraph 11, Special Orders, No. 156, Headquarters of the Army, dated July 7, 1890, relating to the inspection of the Michigan National Guard in camp, I have the honor to submit the following report:

I arrived at the encampment, near Battle Creek, Wednesday, July 23, at 2 o'clock p. m., and remained in camp until Tuesday, July 29, the date of breaking up of the encampment. I was present at and observed guard mountings, drills, dress parades, review, and sham battle, and participated in the Sunday inspection.

The camp ground is a rectangle, about 80 rods wide and 172 rods long, and contains about 96 acres. It is high ground, level enough for the purpose but not too level for good drainage, is well covered with grass, and is composed of soil that absorbs rain quickly, but does not become very muddy.

The camp was pitched on the south end of the rectangle, bordering Cognac Lake. It was in complete readiness for the State troops upon their arrival, and upon their departure they left it as they found it.

The camp is prepared and subsequently broken up by hired laborers, under the direction of the State quartermaster-general. Wall tents were in use for the most part, with three or four men in the tent. In a few cases there were five men in a tent—none too many. Each company has a mess-tent large enough to seat a full company at tables. The tents were generally floored, and very comfortable. Cheap wooden buildings are used for kitchens and water-closets; they are so constructed that they can be conveniently taken apart for storage or shipment, and readily be put together again when required for use. There are about eighty of these buildings; they are of two sizes, suitable for kitchens and water-closets. Officers were well supplied with tentage, with more, in many cases, than was necessary for military purposes. The camp was abundantly supplied with good water; there was a hydrant at every kitchen and wherever water was needed. Excellent fuel was supplied. The camp was kept generally clean and in good order.

The camp was named "Camp Black," in honor of Col. H. M. Black, U. S. Army, who has been associated with the Michigan State troops at their annual encampments for several years, and for whom they entertain the highest regard.

The camp was commanded by Brig. Gen. Charles S. Brown, who was supported by a competent staff. General Brown and his staff were constant, energetic, and efficient early and late.

Reference is made to copies of daily consolidated morning reports, also to copy of General Orders, No. 7, Military Department of Michigan, dated July 5, 1890, all of which are hereto appended as part of this report. The State authorizes thirty-six companies, which are grouped into four regiments, the First and Fourth containing eight companies each, and the Second and Third ten companies each. The men are nearly all young men; only a few are more than thirty years old, while the greater number are under twenty-five years of age. It was estimated that about one-third of the whole number had never been in camp before.

The Fourth Regiment has an excellent band, composed of enlisted men of the regiment. Three independent bands were hired for the encampment and brought from different parts of the State. They were assigned to the First, Second, and Third Regiments; thus each regiment had a band. With the Nineteenth Infantry band, which was also present, there were five good bands in camp.

Headquarters band, four companies of the Nineteenth Infantry, Nineteenth Infantry. a medical officer and detachment of the hospital corps, all from Fort Wayne, constituted a part of the encampment. The battalion was supplied with an ambulance complete and every medical appurtenance for field service. It also had a competent signal party properly equipped for duty. Its camp was a model in appearance and neatness; not a man was in arrest or confinement nor in any trouble whatever while absent from post. The battalion participated in all military duties, having the right of the line, except brigade drills. It did not join in those drills on account of being so much smaller than the battalions of the State troops.

The troops are armed with breech-loading Springfield rifles, in Arms, etc., of State Troops. fair condition and serviceable. They have belts and cartridge-boxes, many of which are much worn but serviceable. They have knapsacks which were properly packed, and blankets neatly rolled. They are also supplied with haversacks and canteens.

The clothing was complete and uniform throughout, embracing Clothing. full-dress uniforms, undress uniforms, and overcoats. The uniforms were worn by officers and enlisted men constantly during the encampment.

Particular attention was given to this branch of instruction. Guard Duty. In many cases guards were mounted twice a day, in order to give instructions to a greater number of men. Guards were detailed and mounted by regiments. Each regiment detailed an officer of the day and two officers of the guard. The number of enlisted men for guard varied in the different regiments, but the following is the total, to wit: 7 sergeants, 21 corporals, and 179 privates. A brigade officer of the day was also detailed. The daily improvement in the performance of guard duty was commendable.

All the State troops arrived in camp Wednesday, the 23d, and Drills, etc. all the regiments had guard mounting that evening; and one regiment, the Second, had a short drill and a dress parade that evening also. From Thursday to Saturday, inclusive, there were two drills a day, each drill of two hours' duration. Thursday there were two battalion drills, Friday battalion drill and brigade drill. The same on Saturday. Sunday forenoon was devoted to inspection; the brigade was formed, and two officers of high rank were designated by the inspector-general (eight officers in all) to inspect each regiment, and also designate the best company in each regiment. The four companies thus designated were subsequently inspected by three officers of the Nineteenth Infantry, to determine which one of them was best. The camp was inspected throughout. Monday forenoon there was a review by the governor of the State. The brigade was formed in line in single rank, each regiment having a band. The left of the line extended into one of the streets of the camp. Monday afternoon there was a sham battle on a very good site about a half mile from camp. From Thursday to Monday, inclusive, there was a brigade dress parade, daily, at retreat. The troops were formed for dress parades in line of masses, and the bands were consolidated.

Attention is invited to Circular No. 1, series 1890, attached. Target Practice. The provisions of that circular were carried out. A good range up to 600 yards was prepared less than a mile from camp. Four revolving Texas targets were provided. By request of Inspector-General Newberry,

some of the officers and enlisted men of the Nineteenth Infantry participated in target practice. General Newberry and his assistants, having in view the shortness of time devoted themselves to their work early and late, and obtained excellent results.

The officers consisted of a brigade surgeon with rank of lieutenant colonel, a surgeon and assistant surgeon with each regiment, and one surgeon U. S. Army, ten medical officers in all. The State medical department was supplied with a modern ambulance, with good horses and harness complete; also with stretchers and other appliances, ready for battle. Two medical officers of the day, a surgeon and assistant surgeon from different regiments, were detailed daily. The ambulance, with one medical officer and a suitable number of attendants, was on the field whenever the troops were paraded for any purpose, and often had occasion to render service. It is understood that the medical officers organized for professional discussion and mutual improvement while in camp.

The Governor and Staff. The military staff of the governor were all established in camp as early as Wednesday, the 23d. Some of the members had been there longer superintending the preparation of the camp. Governor Luce himself arrived Thursday at noon. He mounted a horse at the railroad station, and, accompanied by his military staff and Brigadier-General Brown and his staff, rode to camp. A signal party signaled his approach when nearly two miles away. There were two field-pieces in camp and the appropriate salute was fired. The governor and all his staff remained in camp day and night throughout the encampment. Whenever the troops were paraded for any purpose the governor attended on horseback to witness their movements.

Finances. There is a State law which provides annually for military purposes a sum equal to 3½ cents per capita of the population of the State. At present the amount is about \$60,000 a year. An increase is expected with the new census of the State. The money is expended under the direction of a State military board. During the encampment the enlisted men are paid \$2 a day for seven days, five days in camp and two days' travel, and are furnished transportation both ways. They subsist themselves. The officers are paid for the same time as the men a per diem equal to the pay of officers of the same grade in the regular Army. They also get transportation. The total cost of the encampment was about \$40,000.

Mess. Although the troops subsist themselves, they habitually mess by companies. Each company owns a mess outfit and generally brings cooks and waiters with it. Their Sunday dinners would do credit to a first-class restaurant, not only in the variety and quality of the food but in style and service. They are strangers to the Army ration, and would not know how to use it at first. That experience would be quickly acquired, however.

Discipline. As a rule, the discipline in camp was good. Most of the men appreciated discipline themselves, and there was generally a spirit and manner of subordination and respect. Occasionally there would be an outburst of applause or derision at some event. A few irregularities were reported as having occurred outside the camp or in the city of Battle Creek. Sometimes company officers appeared too reluctant to exercise their authority to enforce discipline, and in such cases colonels had to attend to matters of discipline too much in detail; but when it is remembered that in very many instances at home the officers and enlisted men are equals socially and peers in business, that the company officers are elected annually by the men, and that the command is in camp only five days in a year, the habitual respect, subordination, and discipline observed may be considered as excellent. In some commands discipline appeared to be constant and complete.

Weather. The weather was fair, with only one shower, which was too brief. Thursday and Friday were excellent days for drilling, cloudy and a good breeze. Saturday, Sunday, and Monday were very hot and the camp became quite dusty. A few men fell out of ranks, but a surgeon and the ambulance were always at hand, and there were no serious results from those events.

Health. One hospital tent contained all the sick in hospital. A large number were sick in quarters with bowel complaint for the most part. The companies from the northern part of the State were more generally affected in that respect.

Proficiency in Drill. The drills were comprehensive, and embraced the more important battalion and brigade movements. Of course there were irregularities, mistakes, and other blemishes, but there were no failures. The troops always got there without material delay, while the improvement in accuracy from day to day was very marked. Only a few troops at any time during the war were as well drilled in tactics as these troops are to-day. Many movements by companies and by regiments were nearly faultless. Many such were noted and might be cited here.

The State of Michigan may well be proud of her military resources. The excellent appearance of her troops to-day compares most favorably with her glorious military record in the war.

Very respectfully, your obedient servant,

C. H. SMITH,
Colonel Nineteenth Infantry, Bvt. Maj. Gen., U. S. Army.

FORT LEAVENWORTH, KANS., August 25, 1890.

INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C. :

SIR: Having been directed by paragraph 3, Special Orders, No. 163, dated Headquarters of the Army, Adjutant-General's Office, Washington, July 15, 1890, to inspect the State troops of Missouri taking part in the encampment at Excelsior Springs, Mo., from the 21st to the 28th of July, 1890, I have the honor to submit the following report as the results of my inspection:

The camp was established at Excelsior Springs, Mo., and was under the command of Brig. Gen. J. A. Wickam, adjutant-general of the State, and the troops consisted of the Third Regiment Missouri National Guard, of Kansas City, Col. Milton Moore commanding, and five unattached companies from different portions of the State, forming a second battalion, under command of the senior captain, Capt. W. K. Caffee, of the Carthage Light Guards.

The Third Regiment National Guard of Missouri consists of eight companies of infantry, one light battery of artillery attached, and one troop of cavalry attached; the laws and regulations for the National Guard of the State permitting such organization. Of these, all were represented in camp except the troop of cavalry, which was not present.

All of the officers were present more or less of the time the regiment was in camp with exception of the lieutenant-colonel, senior major, and judge-advocate, who were not present at any time during the encampment.

The companies comprising the regiment are all from Kansas City, Mo., or its immediate vicinity, and while none of the companies had out in camp their full strength, yet a sufficient number were present to make a good sized battalion; the consolidated morning report showing an aggregate of 331 present, including field, staff, and non-commissioned staff.

The band of the regiment, consisting of twenty-nine musicians, were all present, and under their competent drum-major not only discoursed fine music, but were well instructed in their military duties at ceremonies, etc.

Company A: A detachment of this company (fourteen) was present in camp with its second lieutenant, Samuel Troutman. The captain, H. J. Taylor, and the first lieutenant were absent. Aggregate strength of company, present and absent, 84.

Company B: Capt. C. A. Wager, First Lieut. G. E. Kurfiss, and Second Lieut. H. C. Pickering were present with 32 men. Aggregate of company present and absent, 74.

Company C: Present, Capt. F. W. Fleming, First Lieut. J. E. Kendrick, and Second Lieut. J. J. Erkstine, with 37 men. Aggregate of company, present and absent, 71.

Company D: Present, Capt. S. E. Kelsey and 22 men. First lieutenant absent. This company has no second lieutenant, having failed to elect one. Aggregate present and absent, 49.

Company E: Present, Capt. C. G. Butterfield, First Lieut. Paul McGeahan, and Second Lieut. F. E. Hughson, with 32 men. Aggregate present and absent, 46.

Company F: Present, First Lieut. H. G. Henley and Second Lieut. S. C. Ragland with 33 men. Absent, Capt. C. E. Knox. Aggregate of company, present and absent, 63.

Company G: Present, Capt. J. G. Piazza and Second Lieut. C. M. Leslie with 28 men. Absent, the first lieutenant. Aggregate of company, present and absent, 57.

Company H: Present, Capt. G. A. Collins, First Lieut. R. S. Blossom, and Second Lieut. A. T. Trimble with 33 men. Aggregate of company, present and absent, 56.

Battery B (K. C. L. B.), attached to Third Regiment:—Present, Capt. W. M. Abernathy, First Lieuts. R. I. Pearson and C. Klingman, Second Lieut. C. B. Overton, and First Lieut. and Assistant Surg. W. C. Adams and 34 men. Aggregate present and absent, 56.

The regiment (infantry) is armed with the Springfield rifle, caliber .45, issue of 1873 (no safety notch). It has the McKeever cartridge box and belt, 1 box per man; 35 blanket-bags and 25 canteens to each company. It is supplied with full dress and fatigue United States uniform, also with overcoats and blankets.

The First Battalion of the Third Regiment, composed of Companies A, B, and C, was organized in November 1885, Kansas City; merged into Third Regiment April, 1886, with Companies D and E added. Company F was added in June, 1886; Com-

pany G in November, 1883; Company H in 1890; and Company I in 1889; Troop B (K. C. L. C.), attached in 1887, and Battery B (K. C. L. B.), in 1887. Regiment encamped in 1886, 1888, 1889, and 1890.

A detachment of the regiment was stationed at Bevier in 1878 for about three weeks during the strike of coal miners. Has lost no one in line of duty.

The attached battery has two 3-inch guns and two Gatlings, one of the latter of old pattern and one of new pattern.

The troop of cavalry attached was not present in camp.

The unattached companies in camp consisted of "Brookfield Rifles," Brookfield, Mo., Capt. J. A. Arbuthnot; present, 2; commissioned officers and 20 men. "Carthage Light Guard," Carthage, Mo.; present, Capt. W. K. Caffee, 2 lieutenants, and 40 men. "Mound City Guards," Mound City, Mo.; Capt. C. H. Graves; present, 2 commissioned officers and 24 men. "Savannah Guards," Savannah, Mo.; Capt. R. N. Skuse; present, 3 commissioned officers and 14 men; "Sedalia Rifles," Sedalia, Mo., Capt. H. C. De Muth; present, 3 commissioned officers and 23 men. As before mentioned, these companies were organized into a battalion, under command of Capt. W. K. Caffee, Carthage Light Guard. The companies were equipped similarly to the Third Regiment.

The hospital department was in charge of Maj. and Surg. A. Bond, assisted by Capt. and Assistant Surg. J. T. Eggars, J. and was most carefully looked after, every attention being given the sick and injured.

The encampment was made on high ground overlooking the town of Excelsior Springs, Mo.; the ground well adapted for the purpose, the greatest objection being the lack of water, which had to be hauled from the town. Water barrels were furnished and the troops kept abundantly supplied by water-wagons, mineral water being furnished for drinking purposes if desired.

There were encamped near the State troops some United States troops that had marched over from the Infantry and Cavalry School at Fort Leavenworth, Kans. These troops consisted of infantry, viz, Company F, Tenth Infantry, Captain Stretch, and Company K, Thirteenth Infantry, Captain Fornance, and Light Battery F, Second Artillery, Brevet Lieutenant-Colonel Woodruff.

During the encampment the United States infantry troops were drilled and taken through the ceremonies in the presence of the State troops, and were generally utilized with a view to the instruction of the State troops. It was found that example was worth more than any amount of verbal instruction to these troops.

Light Battery F, Second Artillery, was drilled frequently during the encampment, which drills were no doubt very beneficial to Battery B, attached to Third Regiment State troops. Of course, the drilling of Colonel Woodruff's battery was excellent.

The drills consisted of company, company skirmish, and battalion drill; the ceremonies of guard mounting, grand guard mounting, and dress parades. There were also advanced guard and rear guard formations, with duties pertaining thereto.

The lecture on advanced and rear guard formations and duties was delivered by Second Lieut. W. C. Wren, Tenth Infantry (one of the officers with the United States troops), before the officers of the State troops previous to the field formations of advanced guard, etc., which excited great interest among the officers; and the formations referred to were repeated, the officers of the United States infantry troops directing and superintending the formations, accompanied by the officers of the State troops, the State troops being used for the purpose.

It was a great pleasure to notice the eagerness of the State troops to learn and to perfect themselves in the different military duties, and the drills and maneuvers generally, which were rather crude at first, grew better daily. The last dress parades of both battalions (they paraded separately) were most creditable, and evidenced the improvement that always follows attentive practice.

The drilling of Battery B (K. C. L. B.), attached to Third Regiment, was very good, and when the disadvantages under which the battery labored, such as having to hire horses for the occasion, etc., are taken into consideration, it is surprising that it did so well.

On the 25th of July, his excellency the governor of the State, David R. Francis, arrived at the camp, and on the 26th, accompanied by his staff, reviewed the troops—all the troops in camp, including the United States troops, being in line.

On the 27th of July, Inspector-General William Bull, of the governor's staff, inspected the Third Regiment, his inspection being a very thorough one.

Target practice was held daily at 200 yards range, there not being facilities for increasing the distance. The shooting was fair. Captain Swegler, ordnance officer on the colonel's staff, had charge of the practice, and was very enthusiastic on the subject and attentive to his duties.

There should be, by all means, opportunity offered the State troops for practice at all ranges, and, if possible, ground should be procured near their encampments, and a large butt or embankment thrown up so to permit, with safety, practice at all ranges up to 1,000 yards. They should be permitted and required to have plenty of known distance shooting, as well as skirmishing (individual and company) and volley firing. To do this properly they should have the more recent rear-sights on their rifles.

The police of camp was generally good; the company streets in fair condition, always. Some companies had their streets very well policed, showing a degree of neatness that could well be imitated by others.

Cots of various descriptions were used in camp, while many of the troops, both officers and men, spread their blankets upon straw only for beds; the latter style of cots, it was noticed, predominated at regimental headquarters.

The tents provided by the State were insufficient in number, necessitating the renting of some tents by the Third Regiment, which were different in size and shape from the Government issue. The State owns one hundred and nine tents, and about forty more were rented for use in camp.

The messing of the troops while in camp was looked after by Captain and Commissary John Monihan, of the Third Regiment staff. The supplies were purchased by the troops themselves.

Rough tables and benches were made, and the eatables placed before the men in very good shape. Fresh beef, corned beef, canned fruit, and fresh vegetables, such as potatoes, cabbage, and onions, were issued in sufficient quantities to the different companies. No complaints of the messing were made, to my knowledge. The cooks were employed for the occasion, and did not, as a rule, belong to the State troops.

During the encampment, and by request, criticisms were made daily. Of the drills the criticisms were made on the parade ground, and mistakes immediately corrected. Of the ceremonies and other military duties, the commanding officer was informed of the mistakes, etc., immediately after the ceremony was over, and in every instance I was glad to see that immediate action was taken to remedy the errors.

A competitive individual drill for regimental prize (gold medal) took place on the evening of the 26th of July. The prize is offered by the Third Regiment for the best drilled man in the "manual of arms" and the "firings;" has to be won twice by the same man to entitle him to permanent possession. The prize was won this year by First Sergeant Johnson, of Company B. The judges were United States Army officers belonging to the battalion United States infantry in camp.

The majority of those in the ranks of the State troops are very young men, many under twenty-one years of age. The setting up of the men was fair; much can not be expected of men who have only one week in camp each year, and it appears hard for some of them to get away from their business for that short length of time without risk of losing their positions. The uniforms fit the men pretty well; can be very much improved upon, however, in some cases.

The discipline, respect shown officers, drill, and general efficiency good. The discipline would be better, I think, if company officers would not care so much about being popular with their men, and act during the time they are in camp only for the general efficiency of the command, and not endeavor to throw the responsibility for the punishment of each and every offense committed by their own men upon the commanding officer.

The condition of the arms when camp was broken was bad; proper care had not been taken to keep them from rusting, a neglect which was probably due to the lack of oil and cleaning material in camp. Plenty of oil and cleaning material should be furnished the men to use during the encampment, and they should be required to use them; otherwise the rifles will be almost ruined from the great exposure to dampness. Company commanders should frequently inspect the rifles in their companies.

Transportation to and from camp secured and paid for by the troops themselves. State does nothing for them in the way of furnishing transportation. The State is not at all liberal in its legislation for the National Guard of the State, and if the troops are to be made efficient the General Government will have to increase its allowance to the State. It can scarcely be expected of this reserve army that it will leave its business and continue to pay its own expenses to and from and while in camp every year for the purpose of preparing itself, in a military way, for a possible call from its Government or State. It should be encouraged in every possible way by both the General and State Governments.

I desire to commend the great interest taken and energy displayed by the colonel of the Third Regiment, Colonel Milton Moore, in his efforts to instruct his regiment in all matters pertaining to its military duties, and in which he has been ably assisted by his junior major, J. S. Perkins.

The camping together of United States troops and State troops I believe to be bene-

ficial to both in many ways. While one week is not a sufficient length of time to expect anything like perfection on the part of the State troops in military matters, if United States troops are present to illustrate by example the various drills and ceremonies, much time will be saved, better progress made, and better ideas formed by the National Guard of the different military movements.

If called upon, I believe that twenty-four hours would be sufficient to bring together 400 men of the third Regiment National Guard of Missouri.

It is hoped that the unattached companies which were in camp will soon be organized into a regiment, as the companies are good ones and with the addition of a few more companies would make a fine regiment.

I am indebted to the governor and staff and to officers of the State troops for various courtesies extended while in camp.

Respectfully submitted.

J. F. STRETCH,
Captain Tenth Infantry.

HEADQUARTERS FIRST ARTILLERY.
Fort Hamilton, New York Harbor, June 23, 1890.

Brig. Gen. J. C. BRECKINRIDGE,
Inspector-General, U. S. Army, Washington City, D. C. :

GENERAL: Pursuant to Paragraph 11, Special Orders, No. 111, dated Headquarters of the Army, May 12, 1890, I visited the camp of the First Brigade, New Hampshire National Guard, at Concord, N. H., from the 14th to the 20th of June inclusive, and inspected the troops taking part in the encampment, and I have the honor, in compliance with the orders of the honorable Secretary of War, to submit direct for your information the following report of my inspection.

This brigade was inspected by me in September, 1884, and I have not seen it since that time. It gives me much pleasure to say, during the six years that have passed away since my last visit the brigade has made most satisfactory progress in its efficiency. The discipline of the troops, the bearing of the officers and men, the fit of the uniforms, and the general appearance of the camp and personnel have all improved. Musketry practice is more frequently had than it was six years ago; guard duty is very much better performed, and there is more attention paid now than there was then to the little courtesies that promote harmony in a military command, and which always characterize a respected and self-respecting soldiery. The proportion of young men to the old among the officers and in the rank and file is greater now than formerly, and there is, consequently, an increase of individual snap and elasticity so marked as to attract the attention of any officer who has been acquainted with the brigade but who has not seen it for several years. Formerly, strange as it may seem, little or nothing was done in the way of "setting up." Now a portion of each drill, or at least the first quarter of every morning drill in camp, is set apart for practice in the "four exercises" of our infantry tactics adapted from the field exercises of the English army, and judging from the effects in this instance, these four "extension motions," properly and persistently practiced, are all-sufficient to give a soldier a perfectly military carriage.

The sanitary arrangements of the camp have been greatly improved of late years by the State authorities. It may be said of the policing of the camp by these troops that never since I first saw this brigade has there been anything left to be desired in this respect, and it is sufficient commendation to say of this year's encampment that its policing was up to its usual standard.

One of the most interesting features of the encampment was the noticeable earnestness with which all, officers and men alike, performed their work. From the hour they entered camp till the moment the tents were struck and the brigade marched out, they were always seen actively engaged in their military duties; and this not in a half-hearted, listless, or perfunctory manner, but as if they meant business—business that interested every man in the brigade. Their main object was quite evident, namely, to learn all that could be learned in the one short week allowed for their concentration and instruction. That this week was profitably employed was evidenced by the marked contrast between the appearance of the organizations when they filed into camp on the morning of June 14 and the appearance of the same men in the well-drilled brigade as it marched down the principal street of Concord to the railway station on the afternoon of the 20th of June. The faces of the men had become bronzed by a week's exposure to the sun in out-of-door life, their heads were erect, the shoulders thrown back, the step light and springy, and the alignments of the ranks carefully and easily maintained. The individual had been vastly improved, and the whole mass had become molded into a compact, homogeneous, and mobile brigade.

Organization. The brigade consists of one brigadier-general and brigade staff; the First, Second, and Third Regiments of Infantry; Troop A, Cavalry, and the First Light Battery. There are eight companies in the First Regiment of Infantry, eight in the Second, and but six in the Third Regiment.

Attendance.

AVERAGE DAILY ATTENDANCE.

Troops.	Companies.	Present.		Absent.		Total present and absent.		
		Officers.	Men.	Officers.	Men.	Officers.	Men.	Total.
Brigadier general and staff		10	5			10	5	15
First Regiment of infantry	8	29	298	1	54	30	352	382
Second Regiment of infantry	8	30	200	3	102	33	302	335
Third Regiment of Infantry	6	25	182	2	55	27	237	264
Troop A, cavalry	1	3	55			3	55	58
First Light Battery	1	3	67	1	2	4	69	73
Total		100	807	7	213	107	1,020	1,127

Percentage: First Regiment, 85.52; Second, 68.33; Third, 74.62; Troop A, 100; Light Battery, 97.22; brigade average, 80.47.

The average daily sickness in the brigade was 2 men, or a percentage of .0022.

Uniform. The uniform throughout the brigade is the same as that worn by the Regular Army of the United States. There is one exception to this; in the summer helmets worn by the non-commissioned officers and privates. Neither the United States Army Regulations nor the War Department General Order No. 38, of 1890, amending the regulations, prescribes what shall be the color of the summer helmets worn by the enlisted men. Nevertheless it is the "custom of service" to have the color of the men's helmets white, the same as that of the summer helmets worn by the officers. The officers' helmets are covered with white facing cloth; while those of the men are covered with unbleached linen, which the men whiten with pipe clay or some kindred material. In the New Hampshire brigade the men's summer helmets are drab in color, and the contrast they make with the officers' white summer helmets is unpleasant to the eye.

The uniforms are clean and well preserved, and generally the equipments are in good order and all serviceable.

Arms. The infantry is armed with the Springfield rifle, caliber .45; the cavalry with the saber, and the artillery with the obsolete 12-pounder Napoleon gun. Good care is taken of the arms and they are all in condition for immediate service. The question is often asked, "Why does not the State procure for the light battery guns of the latest pattern?" The fact is, the State has no suitable artillery range, and until such a range is purchased the latest pattern guns, with their extraordinary range, can not be safely fired with projectiles; and for firing salutes and for drill purposes the light 12-pounders now in possession of the battery are preferable to any late-pattern breech-loader. When an artillery range is bought and artillery practice can be had, new guns will be asked for, and when received the battery will be promptly instructed how to use them.

The Brigade Commander and his Staff. The following is the roster of the brigade commander and his staff.

Commander. Brigadier-General Joab N. Patterson.

Commissioned Staff. Lieut. Col. Albert N. Dow, assistant adjutant-general; Maj. Charles E. Faxon, assistant inspector-general; Maj. Harry B. Cibley, inspector of rifle practice; Lieut. Col. Irving A. Watson, medical director; Maj. Frank W. Rollins, judge-advocate; Capt. George R. Leavitt, quartermaster; Capt. Arthur H. Chase, commissary; Capt. Daniel H. Gienty, aide-de-camp; Capt. Frank L. Kimball, aide-de-camp.

General Patterson, like his predecessor in command, General White, is a veteran of the war of the great rebellion. His experience in actual warfare has made him strongly averse to anything in the faintest degree resembling "fuss and feathers" in the instruction of his brigade, and it has impressed him, too, at the same time with the paramount necessity for alacrity in the movements of troops. These ideas he has infused into the minds of his people, and the results are plainly apparent in the quick

and spirited movements of his officers and men, individually and collectively, and in their prompt and unquestioning execution of orders.

In the work of raising the brigade to the highest degree of efficiency General Patterson is greatly assisted by his intelligent and industrious staff, the members of which bring to their aid in the administration of military affairs the habits of concentration and application that have made them successful in business pursuits. They are loyal to him and faithful in the discharge of their several duties. There is among them no dawdling, contention, or discussion about trifles, but each attends closely to his own work, and this, with a strict adherence to the regulations, is productive of the greatest harmony throughout the brigade.

The different organizations of the brigade are commanded as follows: First Infantry, Col. G. M. L. Lane; Second Infantry, Col. Albert W. Metcalf; Third Infantry, Col. True Sanborn, jr.; First Light Battery, Capt. S. S. Piper; Troop A, Cavalry, Capt. Ervin H. Smith.

All of these officers are deeply interested in their commands, and they give their personal attention to the instruction of their officers and men. Of course there are degrees of efficiency among these commanders, but every one of them is in love with his work, and certainly was while in camp under my observation most enthusiastic in the performance of duty.

Gen. A. D. Ayling is the adjutant-general of State. In addition to the duties that pertain exclusively to his position as adjutant-general he performs those of the quartermaster-general, chief of ordnance, commissary-general, and paymaster-general. Except during the one week of the annual encampment General Ayling has charge of all the camp equipage of the brigade stored for the rest of the year on the camp-ground. He is also personally responsible for all of the ordnance stores and property and the uniform and blankets not actually in the hands of the troops. Just now he is fully occupied, with insufficient clerical assistance, in completing and arranging, so as to be easily accessible for reference, the records of the volunteers who fought in the great rebellion. It seems too much to expect of him in addition to this work to take charge of the accounts required by the quartermaster, commissary, ordnance, and paymaster's departments. He should be relieved of some of the duties foreign to his office, or else be paid a salary sufficient to enable him to employ a number of clerks adequate to his multifarious labors. It may be considered this is a matter to be settled by the State Government. It is my duty, however, to express my opinion of this system of administration, and that opinion is, that the aggregating of labors of the different bureaus in one office is not advisable. All this diversified work is wonderfully well done now, and it is not exaggerating to say it would be difficult to find an officer as capable of doing that work well as is General Ayling. Nevertheless, if the brigade were suddenly called into service the present system would hardly work. A better one should be perfected now in time of peace, when it can be done deliberately, officers trained to the work of the staff departments, and provision made for expanding the present brigade into ten or more brigades, and for clothing, feeding and arming thousands of men, and transporting them, with all necessary stores, from their homes to the distant theater of war.

General Elbert Wheeler is the inspector-general of the State. This officer is a graduate of West Point. After receiving his commission he served with credit in the First U. S. Artillery and then resigned to go into business in New Hampshire. His education at the Military Academy, the habit of discipline he acquired in the Regular Army, and his business training combine to fit him peculiarly for the responsible position he holds. He is fearless in his criticisms of essentials and in his recommendations, and yet performs his delicate duties with a tact and kindness that leaves no room for any feeling except a desire for improvement.

General Patterson, the commander of the brigade, was in camp during the whole week. The same must be said of General Ayling and General Wheeler. These three officers were constantly and efficiently employed in the duties appropriate to their positions. To those officers is more largely due the credit for the improvement, heretofore noticed, of the brigade and for its present condition, than to any other cause.

The troops are fed by caterers at a fixed rate per head, and the meals are served in large and comfortable tents readily protected from inclement weather. While this mode of providing food for the men would hardly be practical in real campaigning, it is certainly the best for troops serving, as do these, but a few days in the field. It is very satisfactory to the captains and their men.

The acting governor, D. Arthur Taggart, visited the camp accompanied by an escort, and was received by the assembled field and staff and paid the usual honor of a salute with cannon. On the 18th of June he reviewed the brigade and spoke in complimentary terms of the bearing and marching of the troops. These encomiums were well deserved. I have never seen a review better conducted by any troops.

Criticisms.

Several of the captains were not sufficiently particular in requiring their men to appear in the proper uniform at drill. At some of the company drills a few of the men wore forage caps when the whole command was supposed to be in helmets. It should not be necessary to tell the commanding officer of a company that he is responsible for the appearance of his men. He should give his orders, and then remember if they are not executed it is his fault as well as the fault of those who disobey the orders he has been too weak to enforce.

As regards steadiness in ranks there has been a great improvement over former years, but there is room still for improvement, and this can be affected only by the captains and file-closers. The latter are not placed in the rear of a company as ornaments, but are supposed to correct faults by speaking to delinquents in a tone to be effective without being so loud as to distract attention from the commands or instruction being given by the officer in charge of the company at the time.

There is too much *crowding* in ranks, too much pressure towards the guide, and this is noticeable even when the men are at a halt; in a great many cases the elbows overlap. With regard to alignments, it is true the tactics enjoin touching (not crowding) with the elbows (toward the guide) without opening the arms. But the tactics also enjoins that the touch shall be a *light one towards* the guide, while resisting all pressure from the opposite side. Nothing so soon tires the men as this crowding, which can be easily remedied by the captains and file closers. This defect was observable only at company drills; marching in column of companies when taking step from the guide in front, the men had a long, free step, and no crowding was noticed.

It is to be regretted that several of the men indulged in "horse-play" during the last two days of the encampment. This was allowed to proceed until it took the form of "bouncing" two or three favorite officers. This is the first time for years any such conduct has marred the otherwise fair record of the New Hampshire Brigade. It was particularly unfortunate that it occurred this year, at a time when the improvement of the brigade in other respects has been so marked. Of course it will be said, and with truth, that this was only play and was not done with any feeling against the officers. That makes little difference as a matter of discipline. An officer who has been tossed in a blanket by his men is hardly in a position to exercise any authority over them for their good or the good of the service.

During the visit of the governor a flag, said to be the flag of the State of New Hampshire, was kept flying from the same flag-staff on which was hoisted the flag of the United States. The Army Regulations, from paragraph 442 to 484, prescribe, among other things, the salute to be given a governor of a State, how official visits and courtesies are paid, and the rules governing the hoisting, displaying, and lowering of the national colors. No authority can be found therein for hoisting a State flag on the same staff from which the United States flag is flying within a military command. In this instance, of course, the State flag was below the other. Should it become an established custom to hoist the Federal and State flags together, if history repeats itself, legislation may sometime become necessary in the future to prevent some State other than New Hampshire from placing its flag above the national colors on the same staff.

The foot troops are not thoroughly instructed in the school of the company. It was explained to me by several captains that the cause of this is that there are many companies which have no armories, or, indeed, any suitable place in which to drill. An armory or other drill room is an absolute necessity for a National Guardsman whose only time for instruction, during most of the year, is in the evening after he has finished his work for the day.

Recommendations. In several cities of New Hampshire the United States Government has erected large and solidly constructed public buildings for the use of the United States courts, the Post-Office, and Treasury

Departments. In each of these cities is one or more of the companies of the New Hampshire Brigade. In case of a riot or any general disturbance that may threaten to disturb the peace or destroy the property of the community, these buildings will not only be the first that should be securely guarded, but they will naturally serve as rallying points for the concentration of the civil and military forces. It would appear a wise measure on the part of the Federal Government to allow such of the basement and attic rooms as can be spared in these public buildings, to be used, under clearly expressed conditions, by the local organizations of the National Guard from year to year until they can get armories built by the State. This brigade needs encouragement until the languid interest of the people of the State can be stimulated into some favorable action in the way of providing suitable places for the companies in which to drill and store their property. If the General Government will give this encouragement now it will put new life into these troops who are all voters, and who, in a few years, will be able so to influence the public opinion of their State as to get

through its legislature the appropriations required to build the much-needed armories.

My visit was made very agreeable to me by the warm welcome The Brigade and the General Government. and numerous courtesies I received from the warm-hearted officers of the brigade, many of whom I had met six years ago during the two inspections I then made of the command. There is among the officers and men of the brigade a strongly rooted feeling of loyalty to the Federal Government, and which is too much a part of their daily lives to be talked much about as anything at all extraordinary. They have at the same time a strong attachment to their comrades of the Regular Army. Therefore each man of the brigade seems to believe himself called upon to do something kind for the Army officer who has the good fortune to represent in their camp the Government of the United States.

I wish to thank them all in this public manner for making my stay among them so pleasant, and I desire specially to thank General Patterson, General Ayling, General Wheeler, and Colonel Dow, assistant adjutant-general, for many polite attentions, and for giving me facilities for doing readily and smoothly the work committed to my charge. I am also indebted to Maj. Harry B. Cilley, inspector of rifle practice, and to Capt. Arthur H. Chase, commissary, for many kindnesses.

I desire also to acknowledge the courtesies extended to me by the Rev. C. E. Coit, rector of St. Paul's School, and Dr. George Cook, both prominent citizens of Concord, and who, though not connected with the brigade, contributed very much to the pleasure of my visit.

I am, general, very respectfully, your obedient servant,

LOOMIS L. LANGDON,
Colonel, First Artillery, U. S. A.

ST. FRANCIS BARRACKS,
St. Augustine, Fla., September 13, 1890.

The INSPECTOR-GENERAL U. S. ARMY,
Washington, D. C.:

GENERAL: In obedience to paragraph 6, Special Order No. 108, current series, from Headquarters of the Army, and letter of instructions from your office dated June 20, 1890, I have the honor to forward the following report of my inspection and observation of the several organizations of the National Guard State of New York, on duty at the camp of instruction at Peekskill, N. Y., during the period extending from July 5 to August 23, 1890:

"The camp was opened on the 5th of July, in accordance with General Orders, Nos. 13 and 17, current series, from General Headquarters State of New York, and constituted a military post, with Maj. Gen. Josiah Porter, the adjutant-general of the State, in command.

The troops.

Date.	Organization, etc.	Strength present and absent.		Average present during the week.		Average percentage of attendance.
		Officers.	Men.	Officers.	Men.	
July 5 to 12	Ninth Regiment, from New York City, Col. William Seward, jr., commanding.	32	634	30	430	69+
	Troop A, Cavalry, from New York City, Capt. Charles F. Roe, commanding.	4	96	3	61	64
July 12 to 19	Fourteenth Regiment, from Brooklyn, Col. H. W. Mitchell, commanding.	37	601	35	449	76—
	First Provisional Battalion, Lieut. Col. Alexis C. Smith, Twenty-third Regiment, Commanding:					
	Fourth Separate Company	3	79	3	71	90+
	Eighteenth Separate Company	4	61	3	49	80
	Twenty-sixth Separate Company	3	80	3	52	66+
	Thirty-sixth Separate Company	3	84	2	80	94+
	Thirty-ninth Separate Company	4	76	4	64	85
July 19 to 26	Thirteenth Regiment, from Brooklyn, Col. David E. Austen, commanding.	32	632	27	448	72—
	First Brigade Signal Corps, Capt. Albert Gallup, commanding.	1	16	1	15	94+
	Second Brigade Signal Corps, Capt. Fred. T. Leigh, commanding.	1	19	1	11	60

The troops—Continued.

Date.	Organization, etc.	Strength present and absent.		Average present during the week.		Average percentage of attendance.
		Officers.	Men.	Officers.	Men.	
July 26 to Aug. 2.....	Sixty-fifth Regiment, from Buffalo, Col. Samuel M. Welch, jr., commanding. Second Provisional Battalion, Maj. Wallace A. Downs, Seventy-first Regiment, commanding: Seventh Separate Company Eighth Separate Company Twenty-eighth Separate Company Twenty-ninth Separate Company Thirty-third Separate Company	30	458	29	392	86+
Aug. 2 to 9.....	Third, Fourth, and Fifth Provisional Battalions—Provisional, Col. A. S. Bacon, commanding: Third Provisional Battalion, Capt. William Haubemestel, Nineteenth Separate Company, commanding: Tenth Separate Company Fifteenth Separate Company Nineteenth Separate Company Thirty-first Separate Company Fourth Provisional Battalion, Capt. A. M. Murphy, Sixteenth Separate Company, commanding: Fourteenth Separate Company Sixteenth Separate Company Twenty-third Separate Company Twenty-fourth Separate Company Fifth Provisional Battalion, Capt. C. W. Eddy, Thirty-second Separate Company, commanding: Thirty-second Separate Company Thirty-seventh Separate Company Forty-fourth Separate Company Forty-sixth Separate Company	3	62	3	46	75+
Aug. 9 to 16.....	Sixth, Seventh, and Eighth Provisional Battalions—Provisional, Col. A. S. Bacon, commanding: Sixth Provisional Battalion, Capt. W. M. Kirby, Second Separate Company, commanding: Second Separate Company Thirty-fourth Separate Company Forty-first Separate Company Forty-fifth Separate Company Seventh Provisional Battalion, Capt. H. C. Rogers, Twentieth Separate Company, commanding: Third Separate Company Twentieth Separate Company Twenty-first Separate Company Thirtieth Separate Company Eighth Provisional Battalion, Capt. C. B. Gaskill, Forty-second Separate Company, commanding: Eleventh Separate Company Twenty-seventh Separate Company Forty-second Separate Company Forty-third Separate Company	4	81	3	72	88+
Aug. 16 to 23.....	Sixty-ninth Regiment, from New York City, Col. James Cavanagh, commanding.	38	885	36	665	76—

Detachments of artillery, consisting of about sixteen men from Wilson's, Rasquin's, and Wendel's light batteries, were in camp from week to week. These detachments were commanded by non-commissioned officers. They were neat, soldierly bodies of men. They drilled and practiced with two light 12-pounders; fired the morning and evening guns, and such salutes as were ordered by the post commander. Their camp was a model of neatness.

Everything in camp had been prepared for the reception of the troops, and when the Ninth Regiment and Company A, Cavalry, arrived the routine of duties as prescribed by Orders, No. 1, Headquarters Camp of Instruction, was immediately en-

tered upon. The tents had been pitched; there was an ample supply of camp equipage on hand; and a new mess-hall and kitchen, which had been built since last year's encampment, was in excellent working order. This new mess-hall is capable of seating one thousand men comfortably, and the kitchen, in which the cooking is done by steam, is a model of neatness and dispatch.

The clothing was of the State pattern; black and white helmets; double-breasted dark-blue uniform coats; light-blue, white duck, and white flannel trousers; forage caps; gray overcoats, and dark-blue blouses. The clothing is well adapted for field and garrison service, and was always kept in good order by the men.

The arms are Remington rifles, caliber .50, with ordinary bay-arms and equipments. The Frazier patent cartridge-box, with a capacity for 20 rounds of ammunition, is used. It is carried on a black leather waist-belt. The company of cavalry was armed with sabers and breech-loading carbines. The arms were always kept by the troops in a clean, serviceable condition.

The troops were supplied with knapsacks, canteens, and haversacks, all of the old pattern. The old glazed knapsack is not of much service, but it looks better than a "clothing-bag."

There was ample tentage of good quality (nearly new) for about 1,200 men. The tents were supplied with portable cots, mattresses, camp-stools, wash-basins, pails, tin cups, and candlesticks. Good, serviceable red blankets, of uniform size, were issued to the troops while in camp. These articles were always kept in thoroughly clean condition.

Col. Joseph G. Story, assistant chief of ordnance of the State, was post quartermaster, post commissary, and post ordnance officer. The camp was laid out, the tents pitched, and everything put in order before the arrival of the troops on July 5. This was done by hired laborers, working under Colonel Story's direction. Upon the arrival of the troops the camp equipage and utensils were transferred by Colonel Story to the regimental and battalion quartermasters, who receipted for the property. Upon the departure of these troops from camp on the following Saturday the property was duly accounted for and returned to the post quartermaster, and so on from week to week during the camping season. I did not hear that any articles were lost, and I consider the system a very good one.

The troops were rationed by contract. Returns of the troops were made by company and detachment commanders; these were forwarded through regimental and battalion commanders to post headquarters for approval and orders. The returns were made for meals, so that if a man were to be absent from breakfast, dinner, or supper, the State would not have to pay for the meals not eaten. The post adjutant examined these returns carefully, approved them when correctly made out, and directed the post commissary of subsistence to have the number of meals called for ready at the appointed time. The meals were substantial and well prepared; the troops were marched to the mess-hall at the times appointed, and the greatest decorum prevailed during the meal hour. Colonel Story, the post commissary, was invariably present at the mess-hall at meal hours. The system worked remarkably well.

The troops were transported to and from camp under contracts made by the chief of ordnance (acting quartermaster-general) with steam-boat and railroad companies. They arrived and departed at the hours named in the schedule. There was some little trouble caused one week by the strike on the New York Central and Hudson River Railroad, but it was quickly overcome, the troops being only delayed a few hours in arriving and departing. The quartermaster's department was well arranged throughout, and the whole machinery of transportation worked smoothly and pleasantly.

The National Guard of the State can be mobilized and placed in condition for active service in a very short time.

The ordnance department provided and issued blank cartridges to the infantry for battalion and skirmish drills, blank cartridges for light 12-pounders to the artillery detachments for salutes and the morning and evening gun. Colonel Story was kept very actively employed in attending to all the duties connected with these departments; but in transporting, subsisting, and taking excellent care of troops in camp I can safely say that he has few equals and no superiors.

Brig. Gen. J. M. Varian, chief of ordnance of the State and acting quartermaster-general and commissary-general of subsistence, had charge of all these departments. He made frequent visits to the camp and overlooked and inspected everything appertaining to them. I do not think he had any cause for complaint of the manner in which the duties of the departments were conducted.

Brig. Gen. Joseph D. Bryant, surgeon-general of the State, had charge of the medical department. He made weekly visits to the camp. The department was well organized and thoroughly efficient. The regimental and other surgeons and assistant surgeons were careful and

prompt in the discharge of their duties; they were relieved weekly. There was very little sickness in the camp. The surgeons and assistant surgeons were required to inspect the camp and the ground in its vicinity daily, and report its condition in writing to the post adjutant. The kitchen, mess-hall, bath-houses, drains, and latrines had to be critically inspected and their condition reported.

Maj. Nelson H. Henry, surgeon Twelfth Regiment, had charge, during the camping season, of the instruction of the hospital corps and litter-bearers; he instructed by lecture and by litter-drill on the camp-ground. He is a very efficient officer.

Pay Department. The troops in camp were paid each week by Col. Frederick Phisterer, acting assistant adjutant-general of the State, who was also post adjutant. The pay-rolls were made out and submitted to the post adjutant for verification. The officers and men were paid by check, and the payments were carefully and rapidly conducted.

Inspector General's Department. Brig. Gen. Thomas H. Barber, inspector-general of the State, formerly an officer of the First United States Artillery, had charge of this department at the camp this year. He made weekly visits of two or three days to the camp, when he inspected it thoroughly. There was no regular inspection of the troops in camp. Col. Thomas H. McGrath, assistant inspector-general of the State, inspected the camp and its surroundings daily. He inspected the streets, tents, clothing, cots, blankets, pails, etc.; nothing, in fact, escaped his notice. Colonel McGrath is an exceedingly painstaking and thoroughly competent inspector. The police of the camp was simply perfect during the whole camping season.

Target Practice. There was no target practice in camp. This practice is conducted at the home ranges, and is, I am informed, carefully attended to. Nothing is permitted to interfere with the week's practical instruction in drills and recitations at the camp. The New York City and Brooklyn troops have their target practice at the Creedmoor range, and the other regiments and companies have target ranges of their own. Brig. Gen. Charles F. Robbins is general inspector of rifle practice of the State.

Instruction. Orders No. 1, Headquarters Camp of Instruction, directed that the troops in camp should have two drills a day, Sundays excepted. The company drills were before guard mounting, and the battalion drills from 9.30 a. m. to 11.30 a. m.

The company drills were nearly all devoted to skirmishing; and the battalion drills were, as a rule, only in such movements as could not be executed in the armories and in skirmishing. Great improvement was made from day to day by all the troops in camp, and the drills were generally very well conducted.

Colonel Phisterer, the post adjutant, and Capt. F. L. Holmes, Twenty-third Regiment, were detailed as inspectors of drills. They were always on the ground during drill hours, and made daily reports in writing to the post commander setting forth any mistakes and inaccuracies observed at the drills. These reports were sent by the post adjutant to the commanding officers of regiments and battalions, in order that the mistakes might be corrected and the inaccuracies rectified. A great deal of good was done by these reports, and a decided improvement in drill was shown from day to day.

Schools of instruction were held by commanding officers of regiments and battalions every afternoon (Sundays and Fridays excepted) for the officers and non-commissioned officers of their commands, and much useful information was imparted in this manner. Colonel Phisterer, in addition to his other duties, always assembled the 1st sergeants and the non-commissioned staff officers, as soon after their arrival in camp as possible, and instructed them in the routine of their duties, and in the manner in which their office work should be conducted. Everything connected with reports, returns, etc., was thoroughly explained to them, and they were permitted to ask questions upon any subject connected with their duties. These lectures were exceedingly interesting and instructive.

One afternoon during the week the Sixty-ninth Regiment was in camp a very instructive drill took place. All the non-commissioned officers of the regiment were assembled and drilled as skirmishers and guides by Colonel Phisterer and Captain Holmes, the inspectors of drills. The drill was as nearly perfect as possible, and the result was plainly apparent at the battalion drills of the regiment next day. I think it was the most instructive drill of the season.

Guard duty was generally very well performed, but, as a good many of the men were in the first year of their enlistment, they could not learn enough in a single tour to properly fit them for its performance. These men consequently made mistakes, but they were always willing and anxious to learn. Capt. N. B. Thurston, Twenty-second Regiment, instructor in guard duty, who is a thoroughly competent and energetic officer, instructed the guard at the guard-tents, and was on hand day and night, visiting and instructing the sentinels, non-commissioned officers, and officers of the guards. Captain Thurston has a thorough knowledge of Kennon's

Manual of Guard Duty, and he has also a wonderful aptitude for imparting the information contained in it to the officers, non-commissioned officers, musicians, and privates of the guards. A great deal of attention was paid to guard duty in the camp this year.

Discipline. The conduct of the troops, while in camp, was excellent. The men were quiet, obedient, and respectful, and responded with alacrity to the orders of their officers. The quiet that prevailed in camp at all times, but particularly between tattoo and reveille, was remarkable. There was no drunkenness, noise, or tom-foolery of any kind. Military courtesy was strictly observed. The officers and men were required to wear their uniform in camp, and when they appeared upon the parade ground, outside the company streets, their blouses had to be buttoned.

In illustration of the good discipline of the New York State troops in camp this year, I shall relate the following circumstance: A man named Dunphy, a saloon-keeper in Peekskill, N. Y., built and opened a shanty for the sale of whisky, rum, beer, etc., upon the margin of the State camp ground. As the sale of all spirituous liquors, wine ale, or beer, in camp had been forbidden by the governor of the State, a question arose as to how this villainous whisky-shop of Dunphy's just outside the camp and in full view of the whole command should be dealt with. It did not take Major General Porter, the post commander, long to decide the question. He issued, caused to be read to each company, and posted on the bulletin-board at the head of each company street, Orders No. 3, from Headquarters Camp of Instruction, forbidding all officers and men from entering the place referred to. The strict obedience paid to this order by the troops was remarkable; in only a very few instances, so far as I was able to observe, was the order disregarded; and the few men (five or six) who disobeyed and were found in the whisky-shop were promptly tried by court-martial and punished pretty severely. After the publication of the order referred to, and until the close of the camp, I never saw an officer or soldier in Dunphy's saloon, although I frequently (some days six or eight times) passed close to the building, the "bar" of which was fully exposed to view. When it is considered that nearly eight hundred officers and men, from all parts of the State, were in camp each week, and that only five or six men were found to have violated this order during the seven weeks of the camping season, I think this obedience and good conduct speaks volumes in praise of the discipline of the New York National Guard.

General Remarks. The dress parades and guard mountings of the various commands were had at the hours prescribed in orders, and were, during the whole season, very creditably executed. Some regiments and provisional battalions were a little better than others, but at the close of each week very little difference could be noted.

The governor of the State made one visit to the camp this season and reviewed the troops present. The ceremonies incident to his visit were well performed, and the detachment of artillery fired the salute in honor of his visit. I noticed that the time for the review on this occasion was so arranged as not to interfere with any of the drills or exercises of the day.

Troop A, Cavalry, organized April 2, 1889, in New York City, made its first appearance in camp this year. It is a well selected, soldierly body of men, and its captain, Charles F. Roe, formerly an officer of the Second U. S. Cavalry, is well fitted by education and experience to command it. The men sit their horses in cavalry style and ride well; they have apparently a natural fondness for the service, and endeavor to excel in it. They were well equipped, and their horses, which I was informed were hired for the week, were well groomed, fed, and watered by the men. On the first, second, and third days of the week the horses were easily alarmed and frightened by the music, etc., but on the last days they did not seem to mind it much, not even when the troops were firing blank cartridges at drill. This troop did a good week's work in camp.

The military appearance of all the troops was very good. The Thirty-second Separate Company, from Hoosick Falls, was, I think, the best organization in camp this year. It is a superb body of men, well set up, well drilled and disciplined. The Twenty-first Separate Company, from Troy, was the largest one in camp, having three officers and one hundred men present. The Forty-sixth Separate Company, from Amsterdam, had four officers and ninety-three men present. This company, organized September 6, 1888, presents a fine military appearance, and is a well-drilled organization. Indeed, all of the separate companies in camp this year were fine, soldierly bodies of men, well drilled and disciplined. The Sixty-fifth Regiment, from Buffalo, made great progress during its week in camp. This regiment skirmishes beautifully, and its officers seemed to have perfect control of it. The Ninth Regiment, from New York City, is a fine body of men. The Sixty-ninth Regiment, from New York City, made great improvement during its week in camp, although nearly 40 per cent. of the men, as I was informed, were in the first year of their enlistment. It presents a fine military appearance, and the men were soldierly and teachable. The Fourteenth

Regiment, from Brooklyn, did good work during its tour of duty. The Thirteenth Regiment, from Brooklyn, paid a great deal of attention to grand guard duty, advanced and rear guards, and patrols. The officers are enterprising and indefatigable, and the men yield a willing obedience to their orders.

I may here remark that some of the regimental and separate company officers (captains and subalterns) were not well posted in their duties. They knew very little about the management of the men upon the drill ground, and were not well set up or instructed. It would be well if these officers could be sent before the examining boards for re-examination as to their qualifications for command.

During the seven weeks of the camping season the weather was exceedingly fine; it rained a little during the last week, but the drills and exercises were not suspended.

Maj. Gen. Josiah Porter, adjutant-general of the State, was, as I have already stated, the commanding officer of the camp. I have, in former reports, set forth that it was mainly to General Porter's high executive ability and distinguished qualifications for command that this camp has been the means of bringing about a uniform system of instruction for the National Guard of the State. During the strike on the New York Central Railroad, while General Porter was absent for a few days attending to his military duties at Albany, it was plainly noticeable that matters did not work quite smoothly in camp; but upon his return to his command he at once rectified the mistakes that had been made and placed everything in good working order.

Colonel Phisterer, the post adjutant, is peculiarly fitted to the duty. He is an Army officer of long service and experience. He was ably assisted throughout by Capt. J. S. Shepherd, of the Twenty-third Regiment, an officer of few words but of extensive knowledge and ability. The adjutant's office was a model one.

In concluding this report I desire to offer my sincere thanks to General Porter and staff for their courtesy and kindness to me during my visit to the State camp.

I am, general, very respectfully, your obedient servant,

R. H. JACKSON,

Lieutenant-Colonel, Fourth Artillery, Bvt. Brig. Gen., U. S. Army.

HEADQUARTERS DIVISION OF THE MISSOURI,
ASSISTANT ADJUTANT-GENERAL'S OFFICE,
Chicago, Ill., August 5, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C. :

SIR: We respectfully submit the following report of our inspection and observation as contemplated in Special Orders, No. 144, current series, Adjutant-General's Office, as well as by your written instructions under date of July 3, 1890:

Mount Gretna is on the Cornwall and Lebanon Railroad, a feeder of the Pennsylvania system, so that it is easily accessible from all parts of the State. The camp grounds contain some 5,000 acres, mostly wooded; for so large an encampment it would have been better should there have been more clear ground. Nature has made the gradings well nigh perfect. Lake Conewago furnishes good water, sufficient for all purposes (save at the highest point); it is piped to all parts of the camp.

We arrived in camp on the date contemplated in the order, as per our instructions. The day after reporting, Lieutenant Warren, of the Corps of Engineers, received information of the death of his child, and was relieved from further duty at the camp. In his stead, Capt. C. B. Sears, Corps of Engineers, was detailed, who reported the fourth day, and who will submit a separate report.

The command consisted of a division of three brigades, commanded by Brig. Gen. George R. Snowden (who was promoted on the last day of the encampment to be major-general, vice General Hartranft, deceased). In addition, there was a squadron of cavalry, under the command of Major Carpenter; two batteries of light artillery, under the command of Major St. Clair, and a battalion of the Eleventh Infantry, under command of Lieut. Col. E. G. Bush, organized as a brigade, and commanded by Col. Horatio G. Gibson, of the Third Artillery. These regular troops, by their fine soldierly conduct, as well as by their splendid drill, made for the National Guard an object-lesson of great value.

Supplies of all kind were of good quality. The subsistence is substantially the ration issued to the regular soldier, the food being prepared by regularly enlisted cooks, and in every instance very well done.

The clothing is of the pattern and of the quality issued in our service; it never becomes the property of the men, but is issued for use during their stay in the service; inspected and condemned when worn out. The men, as a rule, get second-hand uniforms, the new uniforms being given to the old and trusted men.

No better evidence of wise and economical administration could be given than the fact that this splendid division of more than eight thousand men is paid, fed, clothed, tented, and transported to and from camp, from all parts of the great State, in some instances 300 miles distant, with the comparatively small appropriation of \$300,000.

The work of making camp is done by advanced details, and broken up by small detachments left for that purpose. The camp equipage and its belongings are carefully packed and stored in the State arsenal at Harrisburg.

In the important matter of target practice we had no means of determining efficiency, there being no practice during the encampment. We were informed, however, by the officers that great attention is paid to this part of the soldiers' instruction at their respective home drills, where they had more time and better ranges than even Camp Gretna afforded, and where much time and attention was given to this work. In several of the regiments over 50 per cent. of the men were reported to us as qualified marksmen; in one regiment every soldier was reported as so qualified.

In this connection we would recommend that an experienced officer of the Army (one especially qualified for this very important duty) be detailed for duty in the State as instructor of small-arms practice, and that steps be taken to have the National Guard of all the States so instructed; the same system being used in every instance as prescribed by the regulations now and that may hereafter be put in force to the use of the regular Army. This done, and well done, we will have a solid foundation for as many soldiers as there are names upon the rolls of the respective States. The importance of this work can not very well be overestimated.

In the matter of guard duty, much attention was given to its strict performance, in accordance with the rules and regulations governing the same in the Army. The instruction in this duty was given by Lieut. William H. Bean, Second Cavalry, who manifested a lively interest in all that pertained to the welfare of the camp, and took great interest in imparting instructions to the sentinels and to the guards in general.

During the fourth and fifth nights of the encampment Brigadier-General Goben, commanding the Second Brigade, superintended the placing of guards in advance pickets covering Mount Governor Dick, and roads leading thereto, covering several miles to the eastward of the camp. This duty awakened great interest in both officers and men, and was as well performed as by our best instructed soldiers in active service during the war.

The sanitary features of the camp were excellent in every particular. Surgeon Greenleaf, of the Army, who was present during the encampment, and who gave particular attention and study to all that pertained to the sanitary features of the camp, stated to us that the percentage of sickness among the officers and men was less than he had ever known in his entire experience in field service, which is well known covers many years.

The records, returns, and reports are much the same as are kept in the Army, and inspection of the same showed that they were carefully made and posted to date. Several of our obsolete forms and books yet in use is explained by the State having the old ones on hand, and refuses to get new ones until the supply on hand is exhausted. In many instances, however, they have purchased new ones from private funds.

General Orders No. 2 give detailed instructions for the encampment, which were carried into effect, the only exception being paragraph 15 prescribing a review at 4.30 p. m., July 23, by Major-General Schofield, commanding Army. Substitute the President of the United States, accompanied by the Secretary of War, Postmaster-General, the Attorney-General, and the Major-General Commanding the Army, and his personal staff.

In addition to the drills, etc., prescribed in General Orders No. 2, the adjutant-general of the State, accompanied by ourselves, during the first, second, and third days of the encampment inspected and mustered every individual officer and man of the command.

We also beg to submit with this report herewith act of the general assembly of the State, approved April 13, 1887, to provide for the organization, discipline, and regulations of the National Guard of Pennsylvania, and in this connection we would submit that it would be wise if the National Guard of the several States should have uniform regulations. The code of Pennsylvania appears to us to have so much merit that we unhesitatingly submit it as one in every way worthy of consideration by the other States. There are many things in this code deserving of special mention; one particularly, namely, the part the civil courts and civil officers play in the arrest and trial of offenders in the military service. It seems to us in this connection that it would be in the line of good administration and economy that when our deserters are arrested, instead of being transported in many instances long distances, that the sheriff of the county, or perhaps better, the United States marshal, should be required to make the arrest and the prisoner tried by the nearest United States court.

On an average there were present over 96 per cent. of the entire guard.

* * * * *

Also, herewith we submit a letter from the Quartermaster-General inclosing schedule of return movement of troops, which shows with what care and consideration this matter is treated. It is submitted as a whole as a matter worthy of special consideration.

The manifest determination on the part of Gen. D. H. Hastings, the adjutant-general of the State, to obtain the best possible results in every instance, seemed to be fully appreciated by the entire command; in short, a more conscientious discharge of duty on the part of all officers of every grade has rarely been our privilege to witness, and on the part of the men they seemed quite as willing to receive instruction as the officers were to impart it. In every instance there was abundant evidence that the efforts toward perfection were entered into as heartily by the enlisted men as by the officers themselves.

We feel that we would be alike unmindful of our own sense of obligation, as well as of duty, if we did not make of record the uniform courtesy and respect shown us as officers of the Army, and the unstinted hospitality and many evidences of consideration extended us individually.

We have the honor to be, very respectfully, your obedient servants,

HENRY C. CORBIN,
Assistant Adjutant-General.

NOTE.—This report was prepared for the signature of Capt. J. Gales Ramsay, but before it had reached his post he had already prepared and forwarded an individual report; therefore, he did not sign this one, deeming his signature superfluous under the circumstances.

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FORT SCHUYLER, NEW YORK HARBOR,
August 7, 1890.

The INSPECTOR-GENERAL, U. S. ARMY:

SIR: In obedience to paragraph 9 of Special Orders, No. 144, Headquarters of the Army, Washington, D. C., June 20, 1890, and letter of instructions from your office of July 26, 1890, I have the honor to render the following observations on the National Guard of Pennsylvania encamped at Mount Gretna, Pa., from July 18 to 26, 1890.

Camp J. F. Hartranft (named after the late distinguished governor of Pennsylvania and subsequently major-general commanding the National Guard of Pennsylvania) was located at Mount Gretna Station, on the Cornwall and Lebanon Railroad, between Conewago Junction and Lebanon, Pa., on the property of Mr. Robert Coleman; the site of the camp, as I was informed, being furnished gratuitously by the owner, who had also laid pipelines to all parts of the camp for water supply and furnished many other facilities and conveniences at his personal expense. The character of the terrain is high and rolling, a clearing running approximately parallel with the railroad from the Mount Gretna Station, some 2 miles west, and from one-fourth to one-half mile in width, rising at times abruptly and furnishing occasional quite extensive plateau, upon which latter drills, the brigade exercises, reviews, etc., were held. For many reasons the selection of this location for a large camp are admirable, the hygienic conditions being excellent, the railroad most convenient, the soil porous, the drainage good, and that essential, good water, furnished plentifully. But the distances are a drawback to the prompt assemblage of troops, as from right to left of the division nearly 2 miles are involved, as at no point was the camp line deeper than regimental. This latter fault of concentration was caused by the reservations for drills, reviews, etc. I think unnecessary dispersion of the command existed, and that the division could readily have been encamped on a little more ground than that occupied by the Second and Third Brigades, both of which were rather more convenient to the railroad and on somewhat better ground than the First Brigade. Much tedious marching and hauling could thus be avoided and prompt assembling accomplished. The Second and Third Brigades, Brigadier-Generals Wiley and Gobin, respectively, commanding, were encamped close to the railroad; in fact one flank of each of their regiments reaching quite to the line. This was most convenient for arrivals and departures, as each regiment reached and left its camp with ease. The First Brigade, Colonel Dechert commanding, was not so conveniently located to the railroad nor was its ground generally as good.

The usual method of "pitching camp" is by sending detachments in advance of their organizations, who erect the tents and other canvas, the regiments finding their camps ready for occupation on arrival. The plan of making whole organizations participate in this work has been tried in some of the commands, but is not at all general from what I learned, nor do I recall their impression of its success. The tents were admirably pitched, the alignments fine, and the effect showed attention and care.

Upon the breaking up the camps of the National Guard of Pennsylvania the canvas belonging to the State, if dry at the time, is struck, rolled, or bundled by the late

occupants and left on the ground, to be cared for and shipped to the State arsenal at Harrisburg, under the superintendence of the keeper of the State arsenal, Captain Maloney, — Regiment, and his assistants. At other times, as at this camp, it is left standing and cared for as above. The general condition of the camp equipage is excellent, showing care in its preservation. It is all examined, aired, mended, etc., at the State arsenal by the officials referred to. The loan of it to the Grand Army of the Republic and other organizations (for which I do not know the authority) has, I am informed, caused considerable damage if not loss. In addition to the "uniform" canvas there is much not in vogue in the United States service, very useful and adaptable for the purposes involved, but increasing materially the item of transportation. Immense mess tents and large paulins for company messes make meals more of a reality than the individual session with tin cup and other army outfit, but excusable probably in a short permanent camp; the more so when purchased by the commands to which they pertain.

The canvases for horse shelter, an ingenious combination of jointed gas-pipe and paulins, seems to answer the purpose well. The police of the camps, after the first day of settling down, was good, and the latrines received due attention of disinfection, etc.

Personnel.

The rank and file of the National Guard of Pennsylvania are a general representation of the yeomanry of the land, and, of course, includes an infinite variety of professions, trades and occupations, and, as a rule, is excellent. Very many young men, apparently minors, are in ranks, such accessions seeming greatest just before camp, and it is to be observed that they add nothing to the bearing of their commands, as they are deficient in soldierly appearance and "set up," which latter comment may, however, with reservation, be more generally applied.

Arms.

The final equipment of the Guard with the .45 caliber occurred during this camp, and I believe now that all .50 calibers have been withdrawn.

The condition of most of the arms, as a rule, was fair, though some inspected that had been but three years in the hands of the men were in sad plight; which if not immediately and radically remedied promised no greater continuance of life and usefulness than three years more. In such cases, however (but little escaping, the vigilance of the adjutant-general and his equally vigilant inspector-general), reprimands were given for negligence and orders for improvement.

Equipments.

The old .50 caliber cartridge-boxes should at once be replaced by those suitable for the present arms, the depth of the .50 caliber not being sufficient for the .45 cartridge.

The knapsacks are not all uniform, and would not, generally, stand field service. I would suggest a uniform outfit of the most modern used in the Army. A patent knapsack (one entire regiment was equipped with them) having wooden shoulder and hip-supports impressed me as having much merit. Belts were in poor condition, needing oiling and blacking. The army tin cup, etc., is carried by each soldier. White cotton gloves, procured by the individual, are worn.

Clothing.

Similar in color and general character to that used in the United States service, though not uniformly of as good quality. Much of the clothing made to measure fits well and presents a natty appearance, but more of it in the Guard recalls the "bagginess" of the recruit. The blouses should fit more neatly about the neck especially.

Quite a feature in City Troop of Philadelphia was the wearing of the Army working suits and russet top boots as a fatigue uniform; and with the brown campaign hat they, when mounted, presented a most unique appearance strangely reminiscent of "butternut" dyes. A good uniform.

All clothing in use in the National Guard of Pennsylvania is undress, and adapted to field service; but it must be borne in mind that they have but *one* suit of it, and that of outside clothing. Shoes are not included in the issue, though I saw one company (in Colonel Hawkins' regiment) that were shod uniformly with a better marching shoe than we have in the Army.

The blankets are generally of pattern varying from fair to good, but not up to the army standard. Overcoats good. Gaiters are recommended.

Target Practice.

That this is attended to with great interest is shown by the great number of marksmen of successive years' qualification in ranks. The State supplies a neat and suitable insignia, with bars for successive years. Many of the officers, from the general commanding the division to the junior of the line, have received such emblems, while the church militant has followed in the straight line with "qualified" chaplains. Marksmanship is, I hear, a prerequisite to enlistment in some regiments. The standard of qualification includes 200 and 500 yards.

In this connection I found that arms were sometimes allowed to be kept in the hands of the individual soldier. Unquestionably they should invariably be kept in the

armories or other depositories, and should, as long as the man is in service, always be used by the same soldier, thus fixing responsibility. The money allowance from the State to detached companies may not in some instances justify the hire of armories, but it should be enough to secure safe deposit for arms and other State property.

Most cheerful and usually intelligent performance of duty per-
Performance of Duty. vades all grades. Zeal and subordination the rule, and desire to excel apparent, though lack of instruction (proper instruction) in preliminary duties has been the rule. Neglect of the proper custom and regulation of privates saluting officers is most noticeable, and to be deprecated. On the other hand, the practice of officers saluting each other and superiors is most punctiliously carried out. The former should be taught the recruit with his setting-up exercise and in squad drill, and should be insisted upon by his company officers at all times. No spirit of disrespect causes this omission, for on a given example they follow suit invariably.

I had but little knowledge of its performance save near our
Guard Duty. quarters, where it was fairly well done. There were numerous instructors in this important duty in camp, and special reports were to be made on the subject, I understood, and thus gave the matter no attention. The ceremonies attending guard mounting that I observed were creditably gone through with.

Were frequent and of all kinds, from the company to the bri-
Drills. gade, and in most instances were carefully conducted and well rendered.

Many battalion movements were admirably executed, possibly not with even precision, but with comprehensive knowledge and effectiveness. The skirmish drills that I witnessed, both company and battalion, were quite good, and a skirmish line at night, firing, displayed that work to much advantage. The two division reviews, one for the governor, the other for the President and others, were really fine spectacles, well rendered; the marching, alignments, distances, etc., and appearance of the men generally deserving and eliciting high encomium. At these formations, however, too many men were absent from ranks as spectators. Guard duty or other special service could hardly account for so large a number.

The remarks of General D. H. Hastings, adjutant-general of
The Mounted Batter- Pennsylvania, in his report to the governor of Pennsylvania in
ies. 1888 may very properly be quoted in this connection: "The Gat-
 ling guns are in good condition, but the remaining armament of the batteries is of little account. They have outlived their usefulness, and their limbers and carriages are rotten and practically worthless. The new 3-inch rifle lately adopted by the Federal Government should, in my judgment, be substituted as soon as possible." Notwithstanding the discouragement of an obsolete and inefficient armament, these batteries are well drilled in the manual of the piece and battery movements. Pieces, carriages, harness, and equipments, are well cared for. Horses are hired as occasion requires; those with the batteries this year were in excellent working condition, and were as docile as if used to the work. I regard it as an open question whether or not Gatling guns should form part of the equipment of a field battery.

There were present three troops of cavalry, all well armed and
Cavalry. equipped. Two of them, I believe, own their own horses. All were well mounted and good horsemen, their appearance most creditable, their movements evincing a good state of proficiency.

The Army ration is substantially the basis, somewhat amplified
Messes—Rations. with potatoes and tinned vegetables. I am not informed of the cost this year, but judge it varying from 17 to 20 cents from year to year. Proper contracts are entered into by the appropriate staff officers for these supplies, which are of excellent quality and satisfactory. Messes are by companies; cooks both detailed and hired. Great variety in methods and means of cooking, which should be reduced to uniformity. No serious complaints were heard; the entertainment of visitors probably accounting for any scarcity of supplies.

The books of regiments and companies are nearly models, and
Records. correct returns are made of State property. The judge advocate-general was the inspecting officer of these records, each captain and adjutant presenting in person those for which he was responsible. I was much pleased with their conciseness and the evident care with which they were kept. The muster-rolls are certified by the company commanders, under oath, before being handed to the adjutant-general for payment.

The division of the National Guard of Pennsylvania is fortunate in its distinguished general officers. All of them have had war service, and bring into their military families assistants of high character and excellence. It was my good fortune to meet constantly and familiarly the general and division staffs. Quite a number of them were in service during the rebellion. It would almost seem affectation to make mention of them, were it not to record impressions of their capabilities, untiring energy,

and most modest performance of their arduous and responsible duties. The success of the National Guard of Pennsylvania system in a great measure rests on their shoulders, and, though the burden be far from light, they cordially accept the situation and manfully maintain their prestige.

The non-commissioned staff at various headquarters (this is a peculiar feature of the Guard) are, in many instances, ex-regular soldiers of several terms of service, and from what I witnessed of their work and was told, they are an efficient and worthy adjunct.

The present admirable system of the National Guard of Pennsylvania is the logical sequence of a top-heavy organization that the unhappy disturbances of 1877 showed to be ineffective and faulty, and at no time probably since its formation has it shown the prescience of guiding thought and hand than to-day; and it presents, on a fairly extensive scale, an example of citizen soldiery that the Republic may well afford to admire and congratulate itself upon. The continuance in State service of so many of its most distinguished and efficient officers, year after year, when their fealty to the forces of the commonwealth legally has long since ceased, the accession of much high character and intelligence in the line and staff, and the forcible elimination of the luke-warm and unworthy must meet great approbation.

The magnificent spectacle of the work done recently by a contingent of this guard under control of General D. H. Hastings, adjutant-general of the State, in guarding, caring for, and feeding the living, burying the dead, and performing all the offices of tenderness and sympathy that the death through a most awful visitation of Providence caused some thousands of their fellow-citizens, may properly enough be cited as an example of their thoroughness and character.

In conclusion, I beg to express my high appreciation of courtesies from his excellency Governor Beaver, Generals Snowden and Hastings, and the brigade commander, the general, division, and brigade staffs; and my thanks are due to all officers of the National Guard of Pennsylvania whom I approached for information.

* * * * *

I beg to call attention to the report of General Hastings, adjutant-general of Pennsylvania, for 1888 (none yet printed for 1889), and with special reference to the reports contained in that volume of the chiefs of the various staff departments, which give detailed information and show much broadness of view.

Very respectfully,

J. GALES RAMSAY,
Captain Second Artillery.

POST OF WILLETS POINT, N. Y., July 31, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.

(Through military channels.)

GENERAL: I have the honor to submit the following report on my recent official visit to the camp of the National Guard of the State of Pennsylvania at Mount Gretna, Pa.:

In compliance with a telegram of July 21, from the Adjutant-General U. S. Army, anticipant of paragraph 4, Special Orders, No. 168, Headquarters of the Army, Adjutant-General's Office, July 21, 1890, I proceeded to Mount Gretna to assist in the inspection of the troops of the State of Pennsylvania encamped at that place.

I received the telegram on the 22d at 11 a. m., it having been delayed en route; left this post at 1.30 p. m. and reached Mount Gretna at 8 a. m. on the 23d. I had no instructions of any kind beyond the telegram in question, nor did I see a copy of the printed order in the matter until the last day of the encampment. I assumed, however, that I was to give whatever professional assistance I could to the adjutant-general of the State in inspecting the troops and to make notes for a subsequent report of my observations to the proper authority.

Reaching the camp some days after its inception I missed seeing many interesting and essential operations, the detailed inspections having been completed and most of the inspection drills, from a prescribed programme, having been finished. I confined my attention, therefore, to general observation only, and my report must necessarily be equally general in its scope.

Wednesday morning, the 23d, I accompanied the adjutant-general of the State to an inspection, review, and muster of the cavalry and artillery battalions of the State Guard. In the afternoon I inspected, on foot, the camp of the First Brigade, and later in the day I accompanied the governor and his staff to an inspection and review of the whole command.

Thursday morning, on foot, in a steady rain, I inspected the camp of the Second and Third Brigades, and in the afternoon, with the division commander and his staff, I attended a review of the whole command by the President of the United States.

On Friday it rained all morning so as to prevent military exercises, but in the afternoon I witnessed the battalion drills of some six different regiments. On the evening of Friday, the 25th, the dispersion of the guard began, and was practically completed when I left on the morning of the 26th, at 10.30 o'clock. I give this detailed account of my personal movements to show my opportunities for observation in order that such commendations and criticisms as I shall make may be weighed in connection with the extent of the personal observation I was enabled to give.

An account of the organization and administrative operation of the guard, the military code in vogue, and the description of the camp-ground at Mount Gretna have been given in previous reports to the Adjutant-General, U. S. Army, by Colonel Otis, Major Pennington, and others.

Upon first view the Mount Gretna position does not appear a very suitable one for the camping of a division, being very irregular in contour and too heavily wooded, but as it fulfills as to its topography the general average service conditions it may be considered as fairly well adapted for the purpose of a camp-ground merely. Several more acres of timber should be cleared and grubbed to permit of greater intervals between regiments and brigades. As a maneuvering ground for a division of infantry, however, it is very defective, there not being sufficient cleared and fairly level ground to permit the proper and necessary movements of a brigade, or the simultaneous drills of more than a few battalions. The elevation is quite great, the location healthy, the drainage is good, and the supply of potable water is ample. Its accessibility by rail is fair, but is not as central as might be desired.

The camps, considering the eccentricity of the ground, were well and properly laid out and, as far as practicable, in conformity with Army Regulations. The enlisted men were quartered, as a rule, in the standard A-tent, though each company had a few of the new low wall-tents. The officers were quartered in the full-sized wall-tents, though those of the company officers were frequently crowded together too closely. The men were subsisted on rations furnished by the State through its regular supply officers, each company receiving and preparing its own food. As this gives both the supply officers and the men a valuable experience under service conditions, it is to be preferred to the New York system, under which, I understand, the troops are fed by boarding-masters.

All the tents were supplied with rough board floors, purchased, however, by the companies. While floors add materially to the comfort of the men, and to some extent prevent sickness, they are never used in the field in the face of the enemy, and their use should be discouraged.

The camp was fully established on July 20, and continued unbroken till the evening of July 25. The legal term is five days; *i. e.*, the troops are paid for that number of days only. The consolidated morning reports of the division for July 21, 22, 23, 24, and 25 are transmitted in a separate package directly. I am indebted for them to Lieutenant-Colonel North, adjutant-general of the division. They show an average total strength present and absent during these five days of 8,399, rank and file. Of this total strength there were present in camp an average of 8,018, or 95½ per cent. This was a remarkably good attendance and, I think, quite unequaled by previous records of Pennsylvania or any other State, and shows the great interest taken in the State Guard, not only by its members, but by the citizens at large, who, as a rule, encouraged the attendance of their employes by continuing their wages or salaries during absence. It also speaks well for the discipline sought to be enforced by the State authorities, no one being excused from attendance except for urgent and valid reasons. Of those absent the average without leave was 237. I understood from the adjutant-general that each case would be inquired into and properly punished where not excusable.

Of those present there was an average daily sick report of only 35½, or less than one-half of 1 per cent. This shows the fine physical character and condition of the men and the good sanitary condition of the camp, also the entire absence of malingering.

The reports do not show the number in arrest or confinement, but I understood that the percentage was extremely small. I saw no cases whatever of inebriety, insubordination, and boisterous and unruly conduct. The men generally appeared quiet and respectful and attentive to their work. Both officers and men showed an earnest, zealous spirit and a desire to improve the occasion for learning their duties. As a rule, where they fell short it was due to ignorance and want of experience.

The logistic administration is to be specially commended. The troops were assembled and dispersed promptly, systematically, and with due regard to their comfort; they were well quartered and fed, were fairly well outfitted with uniforms and arms, and their health and bodily comfort were properly regarded.

The infantry small-arms were uniform in style and caliber, 45 Springfield rifle, but as a rule were badly taken care of, and the equipments were in bad condition. For the former there can be no excuse, and for the latter but little, assuming that

they were issued in good condition and had not been too long in use. The fault probably lies with the company officers, who should give much greater personal attention to the care of the arms and equipment.

It struck me that the enlisted men as a body were much superior to their company officers, a large majority of whom appeared to be careless in their dress, slouching in their carriage, slow and indecisive in giving their orders, and often grossly ignorant of their duties, though generally zealous and willing. A thorough mastery of tactics requires only a very moderate intellect, and an earnest study of this little book would have remedied many of the deficiencies.

Setting-up drill had been neglected, apparently, by both officers and men. As this drill can be enforced in every squad without the facilities requisite for company or battalion drills, there seems to be no valid reason why it should be neglected. That it is tiresome for the men and monotonous for the officers should not cause it to be slighted. I would especially call the attention of the authorities to this point and recommend a much more rigid compliance with the tactics in this matter. They will be surprised, after a fair trial, to see how much more military will be the appearance of both officers and men. The poorness of the company officer *personnel* is largely due to the elective system under which officers receive their appointments. It would not be proper to criticise the policy of the State in adopting this system, as it probably has good reason for following it, although generally recognized as a vicious one. Its bad features are somewhat mitigated under the code of 1887, section 32, by requiring an examination by military boards before being commissioned. It lies in the power, therefore, of the military boards greatly to improve the *personnel* of the company officers, though, unfortunately, an examination can not fully determine a man's fitness for command; it can pass upon his personal bearing, his general character, and his theoretical knowledge of his duties, but his capacity to inspire the respect of his men, to enforce discipline, to obtain prompt and unquestioned obedience, to engender and maintain the proper *esprit* can only be determined by trial. In addition, therefore, to a more extended and rigorous examination I would recommend a probationary service before officers are finally commissioned.

In walking about the camps I noticed the usual citizen "fraternity and equality" between officers and men and a general slackness of military bearing when off duty, and not infrequently when under arms; unbuttoned blouses, slovenly personal bearing and carriage, and unkempt appearance; privates and non-commissioned officers lounging in and about the company officers' tents; failure to salute in passing or addressing officers; omitting the proper titles in speaking to those of different grade; and many other little things betraying a want of the true military spirit and a correct understanding of the relative duties and dignities of the several grades, and an ignorance of the great value of all the little formalities embraced in the term military etiquette. As an ex-volunteer enlisted man, I fully recognize the great difficulty of fully developing these characteristics in the right direction, but with more detailed instruction by and stricter requirements on the part of the brigade and regimental staff these faults can be materially corrected, providing the company officers be more carefully selected. In this matter of military etiquette there was a notable difference between the enlisted men and company officers on the one hand, and the field, brigade, and division commissioned and non-commissioned officers on the other hand. The latter were, almost without exception, in their various grades, neat in their dress, alert and military in their bearing, and punctilious and ceremonious in their manner. These externals evinced the true military spirit, and could their possessors be present with the troops in camp for longer and more frequent periods their example alone would be very beneficial. If, in addition, they sought to develop the same characteristics in the subordinates, the effect would be still greater.

I notice that the military bearing, the observance of forms of military etiquette, and the general *esprit du corps* was the best among the commands composed of men of good education and high social standing. They evidently recognized the importance of these points, and their example was undoubtedly beneficial.

As a rule, except at division and brigade headquarters, the guard duty was improperly and inefficiently performed. There was a general want of alertness on the part of the sentinels and of knowledge of details on the part of officers and non-commissioned officers of the guard. The men on post seldom walked their posts in a soldierly manner or with a military bearing, though many seemed to give special attention to the utterly needless and unprescribed custom of coming to a full halt at the end of the beat, then to a carry, then to about face, then to a support or right shoulder, and then a resumption of the slouching, dragging walk. I quite often crossed sentinels' posts without being seen, though when seen I was generally properly saluted, except that sentinels invariably failed to stand attention after saluting, when I was passing parallel and near to their posts, until I had got by. The calls, challenges, the posting, and marching of reliefs, the turning out the guard, the inspection of sentinels, etc., were generally incorrect in method and slack in performance. I one night got across five different posts after taps without using the countersign.

The sixth sentinel I tried knew his business and brought me up standing in good shape. I would recommend a stricter attention to guard duty in the regimental camps. I understand there has been a great improvement in the performance of this important duty of late years, and that further improvement may be expected. I would recommend each company commander to occasionally hold a guard mounting of his whole company, put one-third of them on post, and go through all the movements of relieving sentinels, challenging, grand rounds, officer-of-the-day inspections, etc., as laid down in the tactics and regulations. This will familiarize the men with the general code, and when they go into regimental camp they will not have so many things to learn all at once. I think entirely too much time is devoted to inspections, reviews, and manœuvres purely ceremonious and not nearly enough to battalion drills, especially skirmish movements. The heavy skirmish line is undoubtedly that of the next war, and too much attention can not be paid to battalion skirmishing. The battalion drills I saw were far from being even fair. Not one of the six colonels whom I overheard knew his tactics thoroughly, and none were properly supported by their field officers. I saw several colonels wasting time in aligning markers and guides and giving detailed individual instruction, while their field officers sat on their horses and did nothing. Many of the orders given by the colonels were deficient or redundant in the wordings. The captains were often, apparently, ignorant of what commands to give, and failed to grasp the significance of the movement as ordered, while others were dilatory in repeating commands, and gave their preparatory orders in so low a tone as to be ineffectual. Many would wait and look about to see what others were doing before giving their commands. Of course there were some notable and commendable exceptions by captains who had evidently studied their tactics to good purpose, for their companies moved promptly and correctly. There seemed to be prevalent in some regiments an unnecessary waving and flourishing of swords when handling the companies, and many captains, while giving commands and executing movements, carried their swords in the second position of present arms instead of keeping them at a carry. In all the regiments I saw drilling the captains designated their companies by letter instead of by the numbers as determined from right to left and from front to rear. There appeared also to be no equalization of companies or assignment of officers and guides for battalion drills. The guides and markers generally were ignorant of their duties. This can only be obviated by non-commissioned officers' schools and frequent practice.

All of the field music was, I think, in error as to the proper cadence for quick time; it was more nearly that of common time. This gave a dragging appearance to the step and delayed the movements. Barring this defect, the Pennsylvania Guard marches exceptionally well, as was shown in the various reviews I witnessed.

The faults I have noted above, however, are mostly in minor parts, are common to all State organizations, and are incidental with any body of troops having infrequent opportunities for battalion manœuvres.

Taking the division as a whole, I have seen no State organization equal to it in the essential features of a military body. The general organization and administration are excellent. The State can, with forty-eight hours' notice, put into the field at almost any point within its limits a division of 8,000 men, well armed, fairly equipped, and properly organized, which, on taking the field, will be much superior to any volunteer brigade or division that took the field in 1861, after two months' service, and after a month's hard work in camp engaged in drilling and guard duty the division can be relied on to make its mark, *pro bono publico*, in a sharp, decisive campaign and on the field of battle. I know of no other State unless it be New York, that can put into the field on as short notice so large, so well equipped, and so efficient a body of men, and I doubt if any other State has as good an organization as far as relates to the division staff and the logistic organization.

The effect of the presence of the regular troops was, I think, very beneficial. It is to be greatly regretted that a regiment or at least a six-company battalion, of infantry and a regimental band could not have been sent instead of only two companies and the field music. The large bulk of the guard is composed of infantry, and the camping of a full regiment of infantry, with its band, regimental camp and guards, battalion drills, guard mounting, dress parades, etc., alongside the State Guard would set a good example of military customs, discipline, bearing, and etiquette, which the guard would be quick to appreciate and emulate; and it would react beneficially on the regular troops themselves.

The artillery, composed of three batteries of four guns each, and the cavalry, consisting of three independent troops, are in a fair condition as to their personnel, and tolerably efficient as to drill, considering the scant opportunities they have had for concerted action and the great difficulty of doing good work in these arms with horses picked up at random. The companies owning and using their own horses showed a marked superiority over the others in promptness and steadiness of movement.

The artillery armament and equipment is old and worn out or otherwise inefficient, and should be retired, as should also several of the officers. The guns, harness, and

equipments should be of the latest and best style and design; that is, if the policy of the State continues in the direction of the maintenance of regular field batteries. Considering the great expense of keeping up full batteries of field artillery, the great inefficiency of batteries not horsed by animals owned by the State, and that it will seldom within its limits have occasion to use a rifled field-piece, I think its wisest policy would be to maintain Gatling, mountain, boat howitzer, or Hotchkiss batteries, on a foot basis, using horses only for transportation to the scene of operations. This will be the most efficient and economical arrangement for the service it is likely to be called on to perform.

Of three troops of cavalry two used their own horses. This gave them a great advantage over the other in mounted drill. I would recommend the adoption of the regular cavalry uniform and a uniformity of armament; also, that the State hold out some inducement to the third troop to own and use its own horses.

There troops are quite sufficient for the present needs of the State for patrol, vidette, scouting, and orderly duty, but these three should be more nearly equal in quality and uniform and dress, equipment, mount, and armament, and the quality should not be less than that of the First Troop (Philadelphia). It would then, with a good battalion commander, have a body of cavalry of which it might well be proud.

No systematical instruction appears to have been given to field signaling by flag and torch. This is an important factor in field manœuvres, and should not be neglected. In case of internal troubles, where telegraph lines are liable to be cut, a knowledge of the signal code and the possession of the appliances for using it might be of great and vital importance.

In conclusion, I desire to express my thanks to General Hastings and to General Snowden, the adjutant-general of the State, and the division commander, respectively, and to the members of their staffs, for the courteous and cordial hospitality and ample facilities for observation extended to me as one of the representatives of the Regular Army officially accredited by the War Department.

I remain, General, very respectfully, your obedient servant,

CLINTON B. SEARS,
Captain, Engineers, U. S. Army.

FORT RINGGOLD, TEX., July 21, 1890.

The INSPECTOR-GENERAL U. S. ARMY,
Washington, D. C.

GENERAL: In compliance with paragraph 4, Special Orders, No. 152, current series, from headquarters of the Army, I was present at the encampment of the Texas Volunteer Guard which occurred at Camp Stoddard, near San Antonio, Tex., between July 7 and 12 of this year. Your letter of instructions dated July 2, with inclosures, was not received by me until July 9.

The following report of my inspection, obtained from personal observation and information furnished me, in great part, by Brig. Gen. W. H. King, the adjutant-general Texas Volunteer Guard, is respectfully submitted:

The legislature of Texas, in making its annual appropriation for militia purposes this year, authorized the unusual permission to expend such part of it as might be deemed best in payment of expenses incurred in concentrating the Volunteer Guard in an encampment for the benefit of instruction. Eight thousand dollars of the total amount appropriated (\$10,000) were devoted to this use, and on June 10, 1890, General Orders, No. 65, current series, from the adjutant-general's office, State of Texas (copy inclosed, marked A), was issued, and Governor L. S. Ross directed that the Texas Volunteer Guard assemble at a camp of instruction to begin and end on the dates already mentioned, assigning to the command of said camp Maj. Gen. A. S. Roberts, first division, Texas Volunteer Guard.

By the laws of Texas neither officer nor soldier receive any pay or allowance, except when in actual service in time of war or insurrection; but in attendance upon encampments it is provided they shall be furnished with subsistence and quarters. To provide rations for the troops expected at this encampment \$3,000 were set aside to pay for subsistence of officers and men en route to and from the camp. The method of expending this money is explained in General Orders, No. 66, adjutant-general's office, State of Texas (a copy of which is inclosed, marked B). The remainder (\$5,000) was turned over to a citizen committee, which guaranteed payment of all expenses of subsistence of troops while in camp.

The question of providing quarters seems to have been easily solved. Upon application to the General Government about 400 large tents, 12 by 14 feet principally, were sent to San Antonio, and an officer of the Third United States Cavalry, Second Lieut. M. M. McNamee, was detailed by General D. S. Stanley, commanding Department of Texas, to take charge of this tentage, stake out a camp, and pitch the tents. This

was done by Lieutenant McNamee, and when companies reported they had only to march into their company streets and take possession.

The camp itself was nearly tactical in its formation, and consisted of headquarters for the governor and division commander, two brigade headquarters, and tents for two brigades of troops of three battalions each. When I reached the camp, on July 7, the United States troops ordered had also been established by their commander, and formed a part of the entire encampment. I inclose a rough sketch (marked C) which may give you some idea of the position in which all the troops were placed in camp.

Railroads in the State of Texas are not obligated by law to transport troops free of expense. In this instance they voluntarily did so, carrying free all men in uniform to and from the encampment.

With this explanation as to means and methods by which the State of Texas concentrates its National Guard for instruction in military duties, I respectfully state that on the morning of July 7, 1890, I met Governor Ross in the city of San Antonio and reported to him as the officer assigned by the Secretary of War for duty as inspector of the troops to be present at the encampment. The governor referred me to General Roberts, then at and in command of the camp. I at once repaired to Camp Stoddard and reported to General Roberts, and requested from him instructions as to what matters he desired me to give special attention. The general said that as yet affairs were in an unsettled condition; that he desired me to observe how the men were going into camp, and if I saw anything unmilitary, either among the men in tents or these doing guard duty, to correct, by his authority, the same. He also requested me to make on the following morning, in company with his assistant inspector-general, a thorough inspection of the camp and its appurtenances, reporting as to the police, discipline, and general condition found in company streets, the tents, etc. Service of this character, attendance at battalion drills, at lectures given to the officers at guard-mounts, visits made to guard-tents and sentries on post, with inspection of arms and accouterments, made up my daily routine during the six days passed at Camp Stoddard, and, from what I observed and heard, formed the following opinion as to present efficiency of the Texas Volunteer Guard:

Organization. Fifty-three organized companies appear on the roster, as shown by General Orders, No. 64, of 1890, from the Adjutant-General's Office, State of Texas (copy inclosed herewith marked D). Of these 49 are white and 4 colored. Notwithstanding the stringent order of the commander-in-chief, only 37 reported for duty at the encampment. Actually they were separate companies, each having a local or distinguishing name. "By order," with eight exceptions, each had been assigned to a regiment with a letter designation; this encampment being the first occasion where such a formation had been attempted.

There are 6 regiments with a full complement of field and staff officers, and from 6 to 10 companies each.

Two brigades, each under the command of a brigadier-general, constitute a division of troops commanded by a major-general.

By law the volunteer guard of Texas is limited to 3,000 officers and men.

The division consolidated morning report, which I inclose (marked E), shows a total of 1,681 officers and men, of which 128 officers and 917 men were present at this encampment. Not being able during the earlier part of the encampment to obtain a morning report, in my camp inspections I made a count of the troops, exclusive of general and general staff officers, which resulted in a total of 118 officers and 978 men. I inclose this data, marked F.

Arms and Equipment. Infantry armed with Springfield rifles, caliber .45, and equipped generally with the regulation waist-belt and McKeever cartridge-box. Two or three companies had crossed belts and cartridge-boxes of some fancy style. I saw no blanket-bags, haversacks, or canteens. The Brenham Light Artillery have two Gatling guns, with limber, no caissons.

The Dallas Artillery have two 3-inch rifled guns with caissons and limbers complete; one gun is unserviceable.

The Capital City Cavalry Troop, of 2 officers and 22 men, had the regulation saber and Springfield carbine, caliber .45; purchased their own saddles and mounts.

Uniforms. The fatigue dress worn by United States troops with State button is prescribed, but as the men pay for their own uniforms the order is not strictly complied with. Gray, red, and zouave were mixed with the blue in ranks, and detracted much from the military appearance. Many of the companies had also a full uniform; no two being of the same pattern.

Messing. Officers and men were provided for by a citizen committee. The camp was in the San Antonio fair grounds, and one of its buildings roofed, but not sided, furnished ample room and excellent accommodations for feeding and seating. At first there seemed to be a great lack of system in the preparation of meals; breakfast especially was very late, and interfered much with drills and guard-mount. A quantity of barbequed beef spoiled,

and was ordered by the division inspector to be hauled away. Complaints from all sides were numerous. By the fourth day matters had been pretty well straightened. I took my meals at the mess-hall, and consider the food furnished as wholesome and nutritious. The men were marched to the mess-hall by a non-commissioned officer and a semblance of order attempted, but at many meals too much noise and an occasional dispute demonstrated that if this method of messing is to continue some action should be taken at headquarters to insure order at the tables. I think that company or regimental messes would be preferred by a majority of the Texas officers and men, and would, it is likely, prove more economical to the State in the end.

General Orders, No. 2, Headquarters Camp Stoddard, directed
Guard Duty. brigade guard-mount at 7.40 o'clock a. m., and some time between that hour and 9 o'clock a. m. (dependent upon breakfast) it was attempted. I regret to report that in a knowledge of this important duty the Texas Volunteer Guard came to the encampment distinctly uninformed. Neither officers or non-commissioned officers had the slightest conception of what was required from them, and the four officers of guard and the sixty odd non-commissioned officers and men detailed for guard daily were at first so many units. Capt. Edgar Z. Steever, Third United States Cavalry, on duty at camp headquarters, took charge of this matter, himself mounted the guard, instructed its members as to their positions and duties, and following up the matter to the guard-tents, taught them how to prepare lists of reliefs and posts for non-commissioned officers and privates of the guard. All that a zealous and efficient officer could do was done by Captain Steever, and a decided improvement was noticed before the camp broke up. In my inspections it was shown that officers of the guard absented themselves without authority, and when a relief was mounted more or less of the men could not be found. The sentries on post were vigilant, and showed an evident desire to carry out instructions, but they had not been instructed, and with few exceptions did their duty in an unmilitary and careless style. Some improvement was made; there is room for more.

Drills. Battalion drills were ordered as a part of the daily routine, but of the six in camp I never saw but three of the battalions on the drill ground. Of these, two, the Second Regiment, Col. R. P. Smythe, and Fourth Regiment, Col. A. J. Houston, were persevering in their effort to obtain knowledge of battalion movements and did a great deal of useful work. A lieutenant of the Twenty-third U. S. Infantry accompanied each colonel during these drills, correcting errors, and instructing in tactics; all that could be expected in such a short time was attained. The Brenham Light Artillery gave an exhibition drill with Gatling guns, and showed a good knowledge of the manual of the piece. I noticed the Dallas Artillery doing some nice drilling in manual of the piece. The troop of cavalry did not drill, and I only saw its members mounted while doing duty as orderlies. Some of the organizations also drilled in company movements, but I gave them but little attention, as such practice was not ordered by the camp commander. As a rule the company drill is very good; in several of the companies it was excellent. A brigade dress parade followed by a review took place daily at 6.40 p. m., participated in by all the regular and volunteer troops.

Inspections. The Second, Fourth, Fifth, and Sixth Regiments were presented to me for inspection as to condition of arms, accouterments, clothing, etc. It being a first attempt at battalion inspection, a great many errors occurred in the performance of this duty. The colonels showed they had consulted the tactics, but company commanders did not exhibit any such attention to their duties. I corrected errors and gave such instruction as the time allowed would permit of. In glancing along the lines of troops a splendid body of young and intelligent men was seen. The Texas volunteer, when in ranks, is fairly well "set up," and the general appearance of companies is good. The arms and accouterments were not clean. This is a weak point with Texas State troops, but I have before inspected a number of these companies at competitive drill and know there was no excuse for guns being in a state that, if required for use, their being serviceable is doubtful; while belts, plates, and cartridge-boxes gave no evidence of even having received any attention. This was the general state; there were a few exceptions.

Discipline. During the whole time I did not see an instance of drunkenness or disorderly conduct, but laxity in discipline is quite apparent. Though officers and men may be social equals, it seems to me that if the officer would exact, and the private render, more of courtesy and obedience while on military service, better results and more satisfaction all around would be obtained. Salutes were given, but the men should be drilled in paragraph 18 of the tactics.

Police and Sanitary Arrangements. The police of camp during the earlier days of the encampment was simply wretched and in striking contrast with that of the United States troops, their model. The matter being reported to General Roberts, he did all he could to remedy the evil, and an improvement did take place; but, unprovided with shovels, brooms, or wheelbarrows,

it was really difficult for anything like a proper police of camp to be made. Acting Assistant Surgeon J. R. Harmer, U. S. Army, who was with the United States troops at encampment, had charge of sanitary arrangements. The four surgeons who were present at camp reported to him for duty. Dr. Harmer did all that was possible with material on hand, and during the last three days great improvement was visible.

Target Practice. There was none.

Instruction. While at Galveston as judge of competitive drill held near that city last year, I made the acquaintance of a large number of officers holding commissions in the State National Guard, and during this encampment met and conversed with many others. I found them intelligent, courteous, educated gentlemen and with a most extraordinary interest in military matters. Given a fair opportunity and I believe most of them would fit themselves to be valuable officers to the General Government in case their service should be needed. Except, however, some few of the older men, none have had any experience in military matters beyond what is acquired drilling in the manual of arms and company movements. During this encampment a systematic effort was made to impart information by daily lectures to the officers on some practical subject pertaining to military duty. United States officers met with and talked to them on guard duties, tactics for battalion and brigade movements, military discipline, and the art of war. This school of instruction was well attended, much interest manifested, and many questions asked which showed an appreciation of the subject under discussion. My opinion is that much benefit was derived. Instruction was also given by United States officers on guard-mounts, inspections, battalion drills, as noted under their respective headings.

Remarks. There can be no question as to the benefit that may be derived by the National Guard from the presence of regular troops at their encampments, and the Texas Volunteer Guard are indebted to the brigadier-general, U. S. Army, commanding this Department for much of the success attending its first experiment.

At Camp Stoddard six companies of infantry, four troops of cavalry, and a light battery of artillery represented the three arms of service, and were right there as models for such as desired to see how professional soldiers live and care for themselves while in the field. My observation led me to conclude that, either from diffidence or some other cause, the National Guard did not take advantage of the opportunity, and I think encouragement should be given them to do so. I am sure officers of the Army would be happy to see their comrades of the guard and talk "shop" with them, and the old soldier proud to give points which might be of benefit to the militiaman in the care of his gun, accouterments, and such like.

This concentration of troops at a camp of instruction resulted in considerable benefit derived by both officers and men. There was a decided improvement on Friday in battalion drills, guard mount, and camp police from what I noticed in my inspection on Tuesday. If, with what has been gained, some theoretical instruction during the interim and a little more elimination of social element during a tour of camp service no doubt a far greater advance in the knowledge of the soldier's duties can be made next year. A division and two brigade headquarters, with general officers, each with a complete though not thoroughly instructed staff, would seem to be a rather complex administration for a camp of only about one thousand men.

Recommendations. That an order be issued urging colonels, field officers, adjutants, and company commanders to acquaint themselves, as well as they can, theoretically with the tactics for battalion drill.

That captains be directed to inform themselves as to what is expected from an officer of the day, and to see that their subalterns post themselves in the duties required from an officer of the guard. Some one of the revised and corrected manuals on guard duty should be furnished by the State for use of its officers, and guard mount, making of guard report, and sentry duty practiced at the armories.

That company skirmish drill and bayonet exercise be made important features in the home drilling.

That special attention be given to the subject of "messing," and, if possible, some better plan be substituted for the present contract system.

That tools be provided at next encampment for performing police duty.

That at least one month prior to another concentration an effort be made to learn what companies may be expected to be present, and unless meanwhile the National Guard has been recruited to a maximum, it be consolidated for the purpose of instruction into a brigade of four regiments.

That a programme detailing the instruction, drills, etc., for each day of the next encampment be prepared by a competent officer and published in orders in good time to give opportunity to officers and men to acquaint themselves with what will be required from them during their tour of duty in camp.

In concluding this report I desire to express my thanks to his excellency Governor

Ross, Major-General Roberts, Brigadier-Generals King, Stoddard, and Oppenheimer, and the staff officers at headquarters.

I am, general, very respectfully, your obedient servant,

E. C. WOODRUFF,
Major, Fifth Infantry.

FORT MONROE, VA.. September —, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C. :

SIR: In accordance with Special Orders, No. 131, Adjutant-General's Office, 1890, and instructions from the Inspector-General's Office, dated June 12, 1890, to inspect, instruct, and report upon the Vermont National Guard, I have the honor to make the following report:

Though nominally five days in camp are provided for by orders, it was afternoon of the first day before the troops were in camp, and they left in the morning of the fifth day, making a total of three and one-half days in camp. This valuable time was fully occupied in the performance of military duties.

The Vermont National Guard is organized into a brigade, consisting of one 12-company regiment and one 4-gun light battery.

Organization.

* * * * *

Equipment.

The regiment is armed with the Springfield rifle, caliber .45. The battery is armed with the new 3.2-inch steel breech-loading rifle; has the new harness for the piece teams; old caissons and old harness for the caisson teams. The battery horses are team horses, and the men who drive them in their daily work are enlisted in the battery to serve as drivers of the same teams.

Uniform.

The troops all have dress and undress uniforms, most of them having the regulation U. S. Army uniform, the rest having a gray uniform. All have the Army overcoat. The gray is being changed as rapidly as may be to the regulation blue. It is expected that the change will be completed by another year.

The Camp.

The ground for the camp was well selected and the camp was well laid out, although not strictly according to tactics. The camp was pitched under direction of the quartermaster-general of the State by details from the various organizations sent three or four days ahead. The camp contained ample room for guard mounting and parade, while adjoining was a field of sufficient size for brigade review, battalion drills, etc.

The camp equipage was in excellent condition. The tents were all wall-tents, 9 by 9 feet. Officers' tents consisted of two of these tents, with a fly in front, making them 9 by 27 feet. All the company officers lived in one of these tents opposite the entrance to the company street. The company streets of the regiment were covered with canvas and furnished at the end toward the parade with a sign-board, giving in large, plain letters the name and letter of the company. Most of the tents had tent-floors. The troops all slept on mattresses. Each company had its own mess-tent, kitchen, etc. The cooking and waiting on table was done by women brought along for the purpose.

The camp was supplied with water by a pipe laid for the purpose to a spring in a neighboring hill-side.

Every morning while the troops were at drill the brigade surgeon made a thorough inspection of the entire camp, tents, kitchens, sinks, etc.; pointed out faults to be corrected, and saw that they were corrected. He made a daily report, showing to a scale of 100 the relative merit of the various organizations as to cleanliness and appearance, with the result of creating emulation and securing by the third day an almost perfect sanitary condition for the whole camp.

At the close of the encampment the tents were left in charge of details and the local company, to be taken down as soon as they were dried, as they were thoroughly wet from the rain that was still falling when the troops left.

The Encampment.

The troops began to arrive by rail about 12 o'clock of the 19th. As they left the train they were formed on the platform and marched to the rear to await the arrival of the entire battalion, when they were marched about a half a mile to the camp. The battery was brought on four flat cars, three horse cars, one passenger car, and one baggage car. The carriages were unloaded on the freight platform of the station.

After dinner, the 19th, guard mounting was held. At afternoon drill call the battalion was formed and company commanders directed to drill their companies at skirmish drill.

On the 20th the regiment was divided into its three battalions, each under com-

mand of its major, and the drill superintended by the colonel and lieutenant-colonel. This was found an excellent idea, as the movements could be executed more quickly than in a large battalion, and so gain time for other movements or for repetition. Two or three drills, however, were conducted with the whole regiment as a battalion. The battery drilled twice each day, starting out with section drill, then platoon drill, then battery drill.

The honorable Secretary of War was in camp during the afternoon of the 21st and morning of the 22d, and witnessed the various exercises performed by the troops during that time.

His excellency W. P. Dillingham, governor of Vermont and commander-in-chief of the State troops, with his staff, was in camp from the 20th to the 23d.

On the 22d—called "Governor's Day"—the governor reviewed the brigade. Company F, Eleventh U. S. Infantry, occupied the right of the line as a separate battalion; next came the First Regiment Vermont National Guard; then the First Light Battery Vermont National Guard. The entire brigade made an excellent appearance during this review. Hon. Justin S. Morrill, Senator from Vermont, was present during part of the encampment and accompanied the governor in his review of the troops.

After the return of the brigade to quarters the company of regulars gave an exhibition skirmish drill, which was watched with the greatest interest by all the troops.

The following morning the troops marched out about 9 o'clock in a drenching rain, leaving the camp standing.

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Problems. Only the afternoon of "Governor's Day" was given up to ceremonies, the morning being occupied in solving problems, involving battalion maneuvers, given by the brigadier-general commanding the camp.

Target Practice. The battery fired thirty unfilled shell at a canvas target, 8 by 12 feet, on a hill-side, at a range of about 1 mile. No glass was on the field powerful enough to detect a shot-hole, and no one was near the target to signal the strike of the shot, so it was necessary to judge from the dirt thrown up where the shot struck the target or whether it struck it at all. Only 2½ pounds charge was used. The cartridges had not been weighed, but measured, and not very carefully at that, as they were intended, when made, for blank cartridges. The non-commissioned officers did the sighting in every case, after being instructed as to the setting of the sights. The only range-table at hand was the one constructed at the U. S. Artillery School for the full charge. From this table the approximate elevation was obtained. All the shots apparently struck close. An examination of the target after firing showed that about a third of the shots had gone through. This was the first time the battery had ever fired projectiles from the new pieces, and it is thought that under the circumstances the results were excellent. But another year, with more careful preparation, much better results may be expected.

The only small-arm target practice during the camp was the competition under General Orders Nos. 7 and 8. The scores made by teams of five, twenty-five shots, at 200 yards, were: E, Barre, 99; M, Richford, 98; I, Brattleboro, 94; H, Montpelier, 87; K, Bennington, 81; F, Northfield, 77; L, Newport, 76; D, St. Johnsbury, 65; B, St. Albans, 61; G, Bradford, 60; A, Rutland, 56; C, Brandon, 40.

The highest individual scores were two 21's and seven 20's. Whitman, of the Richford company, took the first Webb medal; Sampson, of Barre, the second; and Robin, of Barre, the third. Immediately after the review on "governor's day," Company E, of Barre, winner of the centennial trophy, was marched to the front, where it was halted, addressed by the governor, and presented with the trophy amid the cheers of the regiment and the people. Then the winners of the medals marched separately to the front and received the prizes from the hands of the governor.

Small-arm target practice by the National Guard of Vermont is in its infancy, but it has received a recognition and impetus this year that will fire the ambition of every company in the State. The facilities for target practice at the various armories are very poor at present, but with aid, encouragement, and supervision from the proper authorities it is believed that by another year great improvement will be noticed. It is suggested that a larger number of shots per man be fired; part of them at a longer range than 200 yards.

Inspection. The inspector submitted to the brigade commander the following plan of inspection, which was approved by him and carried out by the inspector: The inspection to be by company; to be in undress uniform; after the inspection of clothing and equipments, each captain to be required to drill his company in such maneuvers as may be indicated by the inspector, the captain then to fall out and the company to be similarly drilled by the first lieutenant, then by the second lieutenant; a half hour to be given to each company; each company to be warned a half hour beforehand of the hour set for

its inspection; all officers to be informed a day or two beforehand of the plan of inspection. This plan was found to afford the inspector the maximum amount of time with each company, at a minimum loss of time to the entire body of troops; to afford him an opportunity to test each officer's ability to handle his company; and to afford him an opportunity to correct mistakes as they occur, and to require movements to be repeated until performed correctly.

The quarters, tents, mess-tents, kitchens, sinks, and company streets were inspected in company with the brigade surgeon while the troops were out at drill.

The battery and each company was inspected and marked with special reference to the following points: Clothing and equipments, general appearance and set-up, manual of arms and facings, company maneuvers, efficiency of officers and non-commissioned officers, condition of quarters.

Taking into consideration all of the foregoing points, I mark the various organizations as follows: Battery, good; A, Rutland, good; K, Bennington, good; C, Brandon, good; B, St. Albans, good; E, Barre, good; I, Brattleboro, good; H, Montpelier, fair; L, Newport, fair; F, Northfield, fair; D, St. Johnsbury, fair; M, Richford, fair; G, Bradford, poor.

In general I found the clothing and equipments in fair condition, the general appearance and set-up fair, the manual of arms and facings good, company maneuvers fair, efficiency of officers and non-commissioned officers fair, condition of quarters excellent.

Guard Duty. A guard of 60 privates, 6 non-commissioned officers, and 2 officers of the guard were mounted daily. The guard was made up of details from all the companies. Guard mounting passed off

well, considering the few opportunities the troops have of taking part in or even of seeing the ceremony.

Guard duty itself was badly performed, and improved but little during the encampment. The inspector, in going the whole chain of twenty sentinels, in company with the officer of the day, after taps, found not one sentinel to advance correctly "Friends, with the countersign." Men were seen to cross and recross the lines without being stopped and without being reported. The corporal at the guard-tent did not know how to receive, and did not know how No. 1 should challenge. No wonder the men did not know their duties.

Guard duty calls for preparation by study beforehand, and for constant effort while on the duty. I would recommend that another year there be mounted two or three non-commissioned officers for duty with each relief; one, at least, to be constantly on the line of sentinels instructing them and examining them in their duties. The most important orders could be printed on a single sheet of paper, and each member of the guard given one to study the night before and to carry with him and study during his tour of duty. I would also recommend that the officers and non-commissioned officers detailed for guard be examined the night before in all the duties they may be called upon to perform during their tour, and any one who does not know them to be thrown out and his place filled by the detail of another. I would also recommend that Kennon's Manual of Guard Duty (the present standard in the Regular service) be adopted and strictly followed.

Officers' schools. Every evening at 8 o'clock the officers of the regiment met in the colonel's tent and the officers of the battery in the captain's tent to listen to criticisms of the day's work and to discuss the work of the following day. Three evenings the inspector attended the regimental school and one evening the battery school, being treated in every case with marked courtesy, his criticism invited, and suggestions asked for. On the evening of the 19th he called attention to slowness in forming the right wing for parade, explained the manual of the sword, called attention to the tendency to keep troops at a carry, and suggested that they be kept at the right shoulder or order as much as possible.

On the evening of the 20th attention was called to the method of giving commands, and it was suggested that movements would be better executed if commands were given in a firmer, more confident voice. The method of inspection to be followed was explained.

On the evening of the 21st the inspector attended the battery school, where points of tactics and artillery target practice were discussed. The battery uses the old tactics for mounted maneuvers and the new drill regulations for the manual of the piece. The battery commander stated that at schools for officers, non-commissioned officers, and drivers he used miniature carriages, which were maneuvered at command.

On the evening of the 22d, at the regimental school, attention was called to the carelessness of officers in not following strictly the tactics in giving commands and executing maneuvers, and it was pointed out that if officers did not know the tactics themselves sufficiently well to give the proper commands their companies could not be expected to make a good showing. It was suggested that the drill-book be studied more faithfully by officers and non-commissioned officers. Attention was invited to

the importance of target practice and of guard duty, and substantially the same recommendations were made as are made above in this report. The suggestions were always well received and were put into practice as far as possible.

It was the desire of the inspector to explain, and propose for execution, some maneuvers in minor tactics, but the time was so short and so much needed for ordinary drills that there was no opportunity.

Officers' schools are held for two days at a time, once or more during the winter, when as many officers as possible get together to study and discuss tactics and other matters of interest to the National Guard.

The Regulars. Company F, Eleventh U. S. Infantry, took part in the encampment. They marched across the State from Burlington and back.

They attended parade every evening, forming on the right of the line as part of the regiment. It is certain that the presence of this company in the State and in camp has served to increase the respect of the people and of the National Guard for the rank and file of the Regular Army, while its drill and discipline has served the purpose of an excellent object-lesson to the troops in camp.

The Band. The cornet band of Montpelier was employed to serve as the regimental band. Although not a part of the enlisted strength of the Vermont National Guard, it deserves mention here as keeping as good time, marching as well, and making as good an appearance as a band in the Regular service.

The Hospital. The hospital was well equipped with a set of surgical instruments, bandages, medicine-chest, etc. Owing to the excellent sanitary condition of the camp there was little or no sickness. The ingenious medicine-chest of the hospital steward was fully described in the report of the inspector last year.

Military Schools. The University of Vermont, at Burlington, and the Norwich University, at Northfield, each have a military department in charge of a Regular officer. At Rock Point and at Sexton's River are academies where a uniform is worn and some military instruction given.

Company Books. The commanding officer of each company is furnished with a blank book in which to keep the roster of the company. This book has ruled columns with printed headings, so that the books can all be kept in a uniform manner and referred to at any time to obtain the military history of the company or of any member of the company. The accounts of the company are kept by an acting quartermaster and commissary sergeant.

Attitude of the Press. As showing the interest felt by the people of the State in the National Guard, it may be noted that the daily papers had representatives on the ground and gave extended reports of the encampment. The Rutland Daily Herald offered a sword and belt to the most popular line officer of the Volunteer National Guard. About a quarter of a million of votes were cast.

Vocations. It is well known that many a volunteer regiment during the war could furnish from its ranks craftsmen of all kinds, so that whatever there was to be done in a campaign men could be found in the regiment to do it. To see whether the volunteer militia maintains this reputation, and thinking it might be interesting and valuable to know who the men are who make up the Volunteer National Guard, and what might be expected of a Vermont regiment in the emergencies of a campaign, I asked the captain of each company to furnish me a list of the occupations of the officers and men of his company.

* * * * *

Expenses. The State has expended about \$5,000 during the past year for new regulation uniforms. The current expense (for rent and insurance of armories, wood, lights, and general care of arms in armories, services of armorer at arsenal, gallery and field target practice, small repairs, etc.), about \$10,000.

Transportation. The governor is directed by statute law to furnish transportation for troops when ordered out, and directs the quartermaster-general to furnish and pay for the same, but he is not invested with authority over the transportation lines of the State with reference to transportation of troops. To mobilize all the troops of the State in case of extreme emergency at Essex Junction, would take about three hours; at St. Johnsbury, four hours; at Bellows Falls, four hours; provided, of course, that they were at their respective stations ready to move at the word.

Recommendations. The length of the encampment is too short. I would recommend that it be extended at least one day. The expense would be increased about one-eighth, while the working time of the encampment would be increased over one-fourth.

About one-third of the men in camp this year were raw recruits. I would recom-

mend that original enlistments be prohibited during the three months preceding the annual encampment.

Guard duty is not well performed. I would recommend that officers and non-commissioned officers of the guard be examined before marching on, and that some of them be required to be constantly on the chain of sentinels, instructing and examining them. I would recommend the adoption of "Kennon's Manual of Guard Duty."

Officers and non-commissioned officers need instruction. I would recommend that the State authorities secure, if possible, the detail of a Regular Army officer for two or three months preceding the annual encampment, to spend three or four consecutive days at each armory, personally drilling and instructing the officers, non-commissioned officers, and men. I would recommend that every man elected a line officer be required to pass an examination before being commissioned.

For reasons of economy, if for no other, I would recommend that ground suitable for encampments be secured in some convenient locality for a permanent camp ground.

I would also recommend that the National Government be urged to make larger appropriations for the National Guard. It is easy for the National Government to obtain money—hard for the State government. If the Guard is, as it purports to be, a national guard, the nation ought to support it.

General Orders, No. 10, from brigade headquarters, was well described by the command. The officers and men of the Vermont National Guard, are of a character well suited to take care of themselves in the field, to endure the hardships of a campaign, to perform any unusual or trying service requiring patience, ingenuity, and skill of hand. They are not very well drilled, not very well set up, not conversant with minor tactics, but they are ready to learn and have made a good beginning toward making excellent soldiers.

I wish to extend my thanks for official and personal courtesies to all the officers of the brigade, and especially to General W. L. Greenleaf, commander of the brigade and camp; to General T. S. Peck, adjutant and inspector general of the State; and to General W. H. Gillmore, quartermaster and paymaster general of the State.

Very respectfully, your obedient servant,

S. M. FOOTE,

First Lieutenant, Fourth Artillery.

FORT SNELLING, MINN., *September 8, 1890.*

The INSPECTOR GENERAL, U. S. ARMY,
Washington, D. C. :

SIR: I have the honor to report that in compliance with Special Orders, No. 145, extract 9, Adjutant-General's Office, June 21, 1890, and letters of instruction from your office, I inspected the Wisconsin National Guard, as follows: The Third Regiment of Infantry, the Fourth Battalion of Infantry, and the First Regiment of Infantry, at Camp Douglas, Juneau County, Wis., between the 7th and 26th of July.

Each of the above-mentioned regiments remained in camp one week; the Third from the 7th to the 12th, the Fourth Battalion from the 14th to the 19th, and the First Regiment from the 21st to the 26th of July. The Second Regiment and the First Light Battery encamped at Oconto, Wis., from the 11th to the 16th of August, and the Light Horse Squadron at Oconomowoc during the same period.

The laws of the State of Wisconsin relating to the National Organization. Guard authorize 40 companies of infantry, 1 light battery, and 1 troop of cavalry. The companies of infantry are organized into regiments and battalions as the governor may direct. The organization at present is as follows: First Regiment, 10 companies; Second Regiment, 12 companies; Third Regiment, 11 companies; Fourth Battalion, 7 companies; 1 light battery, and 1 troop of cavalry. There are, in addition to the above, four provisional companies. These companies are subject to orders and may be called into service, and when so employed are entitled to receive the same pay and allowances granted the established force, otherwise they receive no money from the State.

The provisions for the payment of the troops are as follows:
Pay and Allowances. When the troops are called into service for a period less than thirty days, each man receives for pay \$1 per day, subsistence, and the necessary transportation. For over thirty days' service, the troops receive the pay and rations of the U. S. Army. The regimental officers on duty receive the pay of officers of like grade in the Regular service. For rent of armory and other necessary expenses there is paid, per annum, by the State to each company of infantry \$300; to the light battery and troops of cavalry, \$500. While in camp each infantryman

receives for subsistence \$1.50 per day; each trooper and artilleryman \$2 per day. There is also paid to the light battery and troops of cavalry the further sum of \$300 each for the extra expenses incident to the mounted service.

Clothing. The State furnishes to fifty men in each company a suitable fatigue uniform, after the pattern in use in the U. S. Army. This uniform consists of one overcoat, one blouse, one pair of trousers, and suitable head-covering—cap, white canvass helmet, or campaign hat, as the authorities may elect.

Equipment. The infantry troops are furnished with Springfield breech-loading rifles, caliber .45, woven field-belts, and canteens. The State has in store a limited supply of obsolete pattern haversacks and knapsacks. In some cases companies have supplied themselves with knapsacks, haversacks, and leggings at their own expense. The Light Horse Squadron consists of one troop of cavalry, mounted on private horses, and equipped with carbines, sabers, and pistols. The horse equipments, saddles, bridles, blankets, etc., are issued by the Ordnance Department of the Army.

Camp and Garrison Equipage. Camp and garrison equipage issued by the State consists entirely of tents, of which there are 9 hospital, with fly; 150 wall, with fly; 10 mess, for companies, 12 by 40 feet; and 1 mess for officers, 14 by 45 feet.

Messing. While in camp the messing is done by companies. The company officers, as a rule, mess with their men. The cooking is done by men or women hired for that purpose. In some cases the cook's police came by detail from the companies; in others, the assistant cooks and waiters were men, women, or boys hired for the occasion. The troops subsist themselves, paying for this purpose into a common fund such proportion of their per diem as may be necessary. This fund is disbursed by the commandant of the company for the purchase of the food. The men seemed to be well satisfied with the quantity and quality of the subsistence served.

Police of Camps. While in none of the regimental or detachment camps was the police entirely satisfactory, it was much the best in that of the Second Regiment. In that regiment a little rubbish in rear of some tents, and in and about the mess-tents and kitchens, marred the otherwise good effect. The police of the Third, Fourth, and First Regiments was not satisfactory; a litter of papers, rags, bottles, and bits of food could, at any time, be found in or about the tents or the grounds in the immediate vicinity of the camps. Neither company nor general police seemed to be systematically carried on. In the First Regiment a field officer was detailed to supervise the police of kitchens. Having first cleaned away much kitchen refuse left by the outgoing regiment, this officer was diligent in his duties and succeeded in maintaining a fair state of police. Credit is due him for his conscientious efforts to discharge this important camp duty.

Military duty. Military duty was fairly well done. The roster of calls in the several regiments or detachments required the ordinary camp routine to be observed. The duty calls were, as a rule, sounded at the hours fixed, but were not generally as promptly observed as good military discipline requires. This was particularly the case in the formations for roll-calls, drills, and parades—too much time elapsed after the calls were sounded before the formations were made, showing that the troops were not properly disciplined in the matter of promptness. Guard mounting and parades improved in all the companies from the first day. The same may be said of guard duty; but as the personnel of the guard changed each day, neither officers nor men serving more than one tour of duty during the encampment, the improvement was more in the character and mode of instruction on the part of those charged with this duty than in the components of the guard.

Drills. In the infantry regiments the drill was confined to the school of the battalion. The artillery detachment and cavalry troops were exercised in the school of the battery and school of the troop. With the exception of the Fourth Battalion the companies of infantry are widely separated, and it is only for one week in the year that battalion drill is possible. With this in view it is not surprising that the maneuvers should be slow and inaccurate in details. The Fourth Battalion is stationed in the city of Milwaukee, and it may be possible for its commander to assemble it, from time to time, for battalion drill. The officers and men being earnest, willing, and diligent in their work, from the first day the several organizations improved. This improvement was chiefly in the direction of uniformity of cadence, and steadiness in ranks, ease, and rapidity of formation. There was not time during the few drills obtainable in an encampment of six days to correct all the errors committed by officers and non-commissioned officers whose knowledge of the tactics was imperfect. Unless company and regimental officers are thoroughly grounded in the tactics before coming to camp, the instructions will never progress beyond a certain point.

Target Practice. Target practice was observed by all the regiments and the troop of cavalry. The rifle range at Camp Douglas offers unexcelled advantages for the instruction of troops in the use of the rifle.

General Orders, No. 6, adjutant-general's office, State of Wisconsin, May 19, 1890, orders the troops into camp, and says: "A considerable portion of each day will be set aside and scrupulously devoted, weather permitting, to 'rifle practice;' and this not by a selected few, but in such manner as that the entire command may have opportunity for practice." A large portion of the time of the men during the encampment of the Third and Fourth Regiments was devoted to rifle practice. Some of this time was wasted and the ammunition thrown away owing to lack of previous instruction in the company armories of the men in sighting drill and gallery practice. In the First and Second Regiments, under subsequent instruction from the adjutant-general, the system of practice was so regulated as to give time for the necessary instruction of the troops in other equally important matters. The practice of the Second Regiment was over a temporary range on the camp-grounds at Oconto.

Gallery practice.—Gallery practice is observed in some degree throughout the guard. I do not understand that it is practiced by all the companies, nor that the instruction is thorough in all cases. Some of the companies have ranges of their own, and take much interest in practicing on them throughout the year. This is an excellent plan, and should be encouraged and fostered by the State.

Inspections.

The governor of the State visited the troops at Camp Douglas as follows: The Third Regiment, Thursday, the 10th of July; the Fourth Regiment, the 17th; the First, the 24th. The lieutenant governor visited the Second Regiment and light battery at Oconto on the 14th of August, and the Light Horse Squadron at Oconomowoc on the 15th instant. On each of these occasions a formal review was held by his excellency, after which I made an inspection of the arms, accouterments and military bearing of the several regiments and detachments. The returns showed the enlisted strength of the several organizations to be as follows: First Regiment, 473; Second Regiment, 693; Third Regiment, 584; Fourth Battalion, 442; Light Horse Squadron, 58; light battery, 51. The infantry regiments average 70 per cent. of their total strength in camp, the cavalry 55 per cent. The light battery had 3 officers and 25 men, with two 3-inch rifle field-guns and one caisson.

The review was in each case very creditable, the "march past" steady, with lines well dressed, giving a soldierly air to the column; distances were well preserved, and the details of the ceremony very carefully followed. The inspection of the military appearance of the troops under arms showed a lack of proper setting up. This important matter is much neglected in the National Guard; it is not a common thing to find a well set up soldier in the ranks. Unless the men have been carefully instructed in the first part of the school of the soldier, including the setting up exercises, they will be unable to assume the bearing of a soldier when called from their civil avocations to duty under arms. When the attention to this matter its importance deserves is given by the company commanders, the military appearance of the troops in and out of ranks will be much improved.

The condition of the arms may be classed as fair, that is, they are serviceable, but are not as clean nor as well cared for as they should be. Almost without exception the bayonet-scarbards were hung too far to the front, so that in coming to "support arms" the stock of the rifle would strike the shank of the bayonet, scratching or bruising the wood, and thus seriously injuring the piece.

The military dress, as a rule, was not neatly worn; in some cases the men had not brushed their clothing nor properly prepared themselves otherwise for inspection. The men, as a rule, seemed to be indifferent to the condition of their dress, arms, and accouterments. This is wrong, and vigorous measures should be taken to instill into the men a proper pride in their military appearance, and in the care of their pieces, clothing, and equipments.

Military courtesy was very well observed, quite as well, as far as the men are concerned, as could be expected; for the changes in his habits of life are so great when the guardsman puts on his uniform and marches into camp once every year that it is unreasonable to expect from him compliance with military usages in every particular. The officers generally were punctilious in giving and returning salutes. While in some cases it was done, it was not the rule for the men to have their blouses buttoned up when out of tents and to salute their officers. One regiment excelled in these particulars.

General Remarks and Recommendations. The grounds where the First, Third, and Fourth Regiments encamped are owned by the State of Wisconsin. This tract of about 640 acres is located within a mile of the village of Camp Douglas, Juneau County. Two lines of railroad (the Chicago, Milwaukee and St. Paul, and the St. Paul, Minneapolis and Omaha Railroads) pass through the village and within half a mile of the grounds. These grounds are known as the Wisconsin Rifle Range. The facilities for rifle practice are unsurpassed. Rocky bluffs form natural stop-

butts. The grounds are almost level (not entirely so)—there being enough undulations to give the necessary variety to skirmish practice. The soil is sandy, insuring good drainage and dry footing, even after the heaviest showers. Water is procured by drilling into the sand rock; it is cool and of excellent quality, almost, if not entirely, free from any deleterious matter. Six well-equipped ranges, with twelve targets on most of them, afford ample opportunity for the practice of a large number of men at one time. The number of ranges can be increased to an almost unlimited extent. Targets, butts, range-houses, and, in short, everything necessary has been provided by the State. The grounds are also well adapted for encampment purposes, and further improvements in the way of clearing the grounds of underbrush are projected with the view of increasing its adaptability for the camping of troops. The fact, too, that these grounds are in a sparsely settled country and away from the vicinity of a large town or city is an advantage in its use by troops assembled for rifle practice or drill.

I have alluded to the lack of thorough police on the part of the troops at Camp Douglas. Camp police is a very important matter, and should be carefully observed; better facilities for disposing of the refuse from the kitchen should be provided. Owing to the fact that the soil is sandy and quickly absorbs the moisture, there is a disposition to throw slops from the kitchens and soapy water from the hand basins on the ground. If this is continued for a few years typhoid-fever germs will inevitably be produced, and the location will have to be abandoned.

More instruction in guard duty at home by the companies would render the discharge of this important duty much more satisfactory than it is ever likely to be under the present system.

I think the present system of messing the troops a good one, unless a general mess for the entire command under one commissary officer should be tried. The system of camp messing in the regular service is not practicable with the National Guard, called into camp for a week.

Too much can not be said on the importance of officers preparing themselves for the annual encampment by a close and careful study of the tactics and such other military works as are available. To aid in this it might be well to formulate some months previous to the annual encampment a course of instructions, so that the work should be systematical and progressive day by day.

The military appearance of the camp and economy in transportation would be promoted by fixing within certain limits the articles of tent furniture and bedding permitted to be brought into camp. The present "do as you please" is not in the interest of good discipline. As the outgoing regiment is expected to leave its camp in perfect condition in the matter of police of tents, streets, guard-house, parade, company mess-tents, kitchens, and latrines, it would be well to have an officer of the State staff make a careful inspection before a regiment marches out. In the absence of this there is no check, and the incoming regiment may perforce be obliged to clean the camp of refuse and litter not of its own making. This condition of affairs is likely at any time to produce ill-will between organizations. So important do I consider this matter of police that I think it should be enforced by order from superior authority.

The character and extent of military instruction is limited to camp guard duty, the ceremonies of guard mounting, review, parade, drill in the school of the battalion, and target practice; skirmishing was only practiced in two of the regiments, and then upon a very limited scale; none of the important matters, classed as the minor operations of war were attempted. It is highly important that the troops should know how to cover themselves by hasty intrenchments, to establish and defend a grand guard, or picket-line, as it is commonly called. It is necessary for the officers to be instructed in patrol duty, in the manner of conducting a reconnaissance, and some other simple field exercises, for they would be called upon to practice them if called into active service. The scope of instruction is certainly too narrow; the best interest of the National Guard requires it to be from time to time enlarged. This is being done in some of the States with a marked increase in interest in military matters, not only on the part of the officers but of the men.

The personnel of the Wisconsin National Guard is excellent. The field officers, as a rule, are men of long experience, some of them having acquired it in the late war, and all who came under my observation were active and zealous in the discharge of their duties. The company officers are generally young men who have entered the service of the State from interest in military affairs, and while many of them have but limited experience, they are, as a body, intelligent, zealous, and well disposed to discharge their duties. The rank and file are healthy, vigorous young men.

The efficiency of the troops in certain directions, and also that of the general staff of the governor, has been tested on more than one occasion with most satisfactory results. The State is divided into regimental districts, the companies of each regiment so grouped along the lines of railroad as that in a few hours a force can be assembled at any point in the State; this has been repeatedly done.

The opinion is general that a longer term than six days is required to give the

troops the benefit of the expense incurred by the State in calling the regiments into camp. I was impressed with the general willingness on the part of the officers and men to acquire a knowledge of military duty, and am confident that the addition of two, or, better still, four days to the time would be of marked benefit to the troops. With six days they about get into good working order when the time to "march out" arrives.

I also suggest that the experiments be tried in Wisconsin of bringing at least two regiments into camp at one time. If this is done there should be a camp commander superior in rank to the regimental commanders. I am satisfied the emulation excited between the organizations would be healthy and result in much good to all concerned.

Under the orders of the Secretary of War the headquarters band, and companies of the Third Infantry went into camp on the Camp Douglass rifle-range July 5 and remained until the 28th, covering the entire period of the encampment of the First, Third, and Fourth Regiments of the State troops at that place. The object of this encampment, was so far as I was informed, to afford the National Guard an opportunity to observe the methods of the United States Army in the matters of camp duty. The battalion was under my command, and while in camp, in addition to the ordinary routine of guard mounting, parade, inspection, roll-calls, and drills, was occupied part of each day in field exercises. The troops, national and State, were located near each other, so that the military duty performed in camp by the Third U. S. Infantry could be observed by the State troops if they were so inclined. The field exercises, in grand guard duty, patrols, first aid to the wounded, hasty intrenchments, etc., were carried on outside the limits of the camp, but in its immediate vicinity. The most cordial and harmonious relations existed at all times between the national and State troops, and on the part of many of the officers and men there was evidently a desire to profit by the opportunity to observe the methods of the Regular Army in matters of drills, discipline, police, care of arms, etc.

In case Regular troops camp with the National Guard in the future, I think there should be some well-digested plan of co-operation, or at least such an understanding between the State authorities, the regimental or camp commander, and the commandant of the Regular force, as would result in giving the State troops the full benefit of the professional knowledge and experience of the United States officers, for, unless there is time and opportunity given to instruct, and willingness on the part of the officers and men of the National Guard to receive instruction, it is questionable whether the benefit derived by the mere presence of the United States troops in camp is sufficient to warrant the continuance of the experiment. I think that co-operation is possible, for I believe the relation between the national and State officers is generally most friendly and cordial; it certainly is so in the State of Wisconsin. So, while the rights of both the national and State troops are respected in matters of control and command, there can be, by common agreement, such instruction given and practical field-work done as would be greatly to the benefit of all concerned.

I beg leave, in closing, to express my appreciation of the many acts of courtesy received at the hands of the governor, the adjutant-general, and other officers of the general staff, and the kindly manner in which my suggestions were received by the officers of the several regiments and detachments.

I take pleasure in noting the fact that General Burchard, the adjutant-general of the State, remained in camp during the entire period covered by the encampment; his presence as the representative of the executive was a pleasure to all, as a further mark of the good will of the State authorities toward the Regular troops. General Griffin, the quartermaster-general of the State, accompanied the battalion on the train, when it returned to its station at Fort Snelling, to a point beyond the State line.

Very respectfully, your obedient servant,

EDWIN C. MASON,
Colonel, Third Infantry, Special Inspector.

SAN ANTONIO, TEX., *July 15, 1890.*

ASSISTANT ADJUTANT-GENERAL DEPARTMENT OF TEXAS,
San Antonio, Tex.:

SIR: I have the honor to make the following report of my connection with the first encampment of the Texas Volunteer Guard, just closed, at Camp Stoddard, near this place:

In compliance with paragraph 3, Special Orders, No. 54, current series, headquarters Department of Texas, I reported for duty to the commanding general of the department on the 7th instant, and the same morning, in company with him and Governor L. S. Ross, of the State of Texas, joined Camp Stoddard, at which I remained until after the close of the encampment, July 13.

In accordance with the verbal instructions of the department commander, I acted as his representative during his absence from the camp, and also as a special staff officer to Governor L. S. Ross and Maj. Gen. A. S. Roberts, Texas Volunteer Guard, commanding the camp. In the latter capacity I devoted much of my time to the adjutant-general's office, engaged in the preparation of the many necessary orders that so large a command necessitated, and also acted in the capacity of adjutant-general at dress parade and brigade guard mounting, as well as taking charge and supervision of the school established for the instruction of the commissioned officers of the Texas Volunteer Guard. Acting in these several capacities kept me very busy throughout the encampment, but afforded many opportunities for observing the interior workings of a body so large as a division of militia.

To be sure there were errors of omission as well as commission on the part of the Texas Volunteer Guard, but as a whole the encampment was a decided success, and the improvement made in all directions was marked and praiseworthy. Both officers and men exhibited a desire to learn their duties, and as a rule availed themselves of the opportunities afforded by the Regular officers to bring about a better understanding of the many requirements demanded of one who desires to be well posted in the profession of arms.

There are several features that need special attention, and among these one of the most important is the

The camp being located at the fair-grounds, the large hall Messing Arrangement, known as machinery hall was utilized as a dining-room, at which all the officers and men of the Volunteer Guard and the officers of the Regular Army were fed. The messing was under the charge of a civilian and a joint measure on the part of the citizens' committee and the militia authorities. The result was that during the first part of the week the meals were not ready on time, and in one instance the breakfast was not served until at least two hours after the specified hour, the men being compelled to wait outside in the sun until the doors were opened. This delay in serving breakfast seemed to have been principally due to lack of the necessary number of waiters; the food having been cooked in season and in sufficient quantity, was therefore cold and unpalatable when served. The delay in getting breakfast disarranged the entire list of calls and put back into the heat of the day battalion drills and guard mounting, which were ordered for the early part of the morning.

The practical difficulty in the way of feeding fifteen hundred or two thousand men is such that a general mess for all is not desirable. Had each company done its own cooking there would have been no trouble in serving breakfast for the men at 6.30 a. m., as prescribed in the list of calls. From all that I could gather on the spot, company messing was preferred by all the company officers that I have heard express an opinion upon the subject, and if the amount expended by the messing committee had been pro rated among the different organizations they could easily have managed the purchase and preparation of their own food.

The long waiting for breakfast that the men who were marched to the dining-hall on time experienced was exasperating to them as well as a waste of time. The practical result was that battalion drills either had to be undertaken on an empty stomach before the delayed breakfast, or on a full stomach later in the day when the sun's power had materially increased.

Guard Mounting and the Performance of Guard Duty. Guard mounting was from one to two or more hours late every morning. This was partly due to the delayed breakfast and partly to the lack of promptness on the part of some regiments in reporting their details at the place of assembly. On one occasion as long an interval as an hour and a half elapsed between the arrival of the first detail that reported and the last. Nothing is much more subversive of military discipline than this lack of promptness. Although a medal had been offered to the adjutant who should cause his guard detail to be the most promptly reported at the place of assembly, it did not seem to arouse a spirit of emulation among them all or the long interval noted above would not have occurred. There should have been a punishment meted out to the responsible party for being so dilatory.

Brigade guard mounting was the ceremony adopted. This was well enough in itself, but the guard was kept assembled at one place, a central location in the camp but not central with reference to the position of the different posts, and in consequence each relief had to march 1 or 2 miles while the new sentinels were being posted and the old ones relieved. A better arrangement would have been to have divided the guard into two or three parties, each under a commissioned officer, each party having its station near the few posts it was to supply. In this way a great deal of unnecessary fatigue would have been spared the members of the guard, for the entire circuit of the chain of posts must have been nearly 2 miles.

During the first two or three days of the encampment the guard duty was poorly performed. This coming to my attention, I devoted as much of my time as my other duties would permit to the practical instruction of the officer of the day, the officers

of the guard, the sergeants, corporals, and even privates of the guard in their duties as such. I found a willingness, and, in fact, a zeal, on the part of all to more thoroughly learn their duties, and, I am happy to say, a marked improvement was visible toward the latter part of the week, the lapses at first being due more to lack of knowledge than to any desire to shirk the responsible duties of members of the guard. Thorough instruction in the proper performance of guard duty is much needed by the Texas Volunteer Guard, in all grades, from that of sentinel to field officer of the day.

For another encampment of like character I would recommend that an officer of the Regular Army be detailed to take exclusive control of the subject of guard duty, and to give theoretical and practical instruction in that department. He should have no other duty to perform, for, if he conscientiously fulfills the office for which detailed, he would have no time to devote to other purposes. He should be an officer who is known to be well posted on the subject, of sufficient age and experience for his efforts to be appreciated, and be of a zealous, untiring disposition. Probably an officer of the grade of captain would be most suitable.

Battalion Drills. quest, Major L. T. Morris, Third Cavalry, commanding the United States troops in camp, detailed First Lieut. E. B. Bolton and Second Lieutenants B. C. Morse and D. B. Devore, all of the Twenty-third U. S. Infantry, to act as instructors and critics at battalion drill. These gentlemen, with Captains F. J. Badger and F. A. Reichardt, Texas Volunteer Guard, were assigned as follows: Lieutenant Bolton to the Second Regiment, Colonel Wythe, commanding; Lieutenant Morse to the Fifth Regiment, Colonel Hoase (later Colonel Pettis), commanding; Lieutenant Devore to the Fourth Regiment, Colonel Houston, commanding; Captain Badger to the Fifth Regiment, Colonel Cocke, commanding; and Captain Reichardt to the Sixth Regiment, Lieutenant-Colonel Swain, commanding. Lieutenants Bolton, Morse, and Devore were assiduous in their performance of this duty, and afforded valuable instruction to the regiments to which assigned. This was very apparent in the marked improvement exhibited toward the latter part of the encampment, and, from the expressions heard, I am satisfied their services were highly appreciated by the commands with which they worked.

On Tuesday, the second day of the encampment, I was requested by General Roberts to take charge of a school for the commissioned officers of the Texas Volunteer Guard. This I did, and accordingly made arrangements for lectures and instruction by means of questions and answers for the remainder of the week, the school commencing at 10.45 each morning. It was opened on Wednesday by an address by myself and a lecture by Capt. R. I. Eskridge, Twenty-third Infantry, on the subject of "Ceremonies" and "Common errors in tactics." The next day a lecture was delivered by Capt. G. A. Goodale, Twenty-third U. S. Infantry, on the subject of "Guard duty," and the next one by First Lieut. C. A. Foster, Third Artillery, on the subject of the "Art of war." These lectures were well attended. The gentlemen of the Texas Guard manifested much interest in them, and expressed themselves as highly pleased with the information received and the instruction imparted. It is a valuable feature of such a camp and should be continued.

There were present at the encampment, under the command of Maj. L. T. Morris, Third Cavalry, (1) a battalion of the Third U. S. Cavalry, consisting of Troops D, H, I, and K, Capt. H. W. Wesells, jr., commanding; (2) Light Battery F, Third U. S. Artillery, Capt. J. B. Burbank, commanding; (3) a battalion of the Twenty-third U. S. Infantry, consisting of Companies A, E, F, H, I, and K, Capt. R. I. Eskridge, commanding. The presence of this fine body of troops, who participated with the volunteers in brigade dress parades, contributed materially, in many ways, to the success of the encampment. Not only did the officers give the instruction indicated heretofore, but in season and out of season were aiding the volunteers in the acquisition of military knowledge and in affording assistance in numerous directions.

The rank and file of the Texas Volunteer Guard are composed of excellent material, and all that is needed is the necessary amount and the proper kind of instruction. Although it contains such crack companies as the Houston Light Guard, the Belknap Rifles, the San Antonio Rifles, the Seeley Rifles, etc., which in the manual of arms and company manoeuvres are almost perfect, still there are many companies in which the knowledge of drill is very rudimentary and the performance of guard duty is very poor; but all that is needed to bring the latter up to a first-class standard is enough of the proper kind of instruction.

It seems to me that if a regular army officer were detailed for duty with the Texas Guard, such as has been done in the States of New York, Pennsylvania, Ohio, and others, in one year, even, a vast improvement would be seen.

I would also recommend regimental camps of instruction of two weeks' duration to precede any brigade or division encampment. These regimental encampments being

smaller, the units can be more readily handled and taught. They need not be held at the same time, thus permitting one instructor to visit them all in rotation, and, by conformity to a uniform system of instruction, bring up to the level of the best companies those that are now behind.

As already stated, the personnel is excellent, and all that is requisite is sufficient instruction by a competent officer.

Very respectfully, your obedient servant,

E. Z. STEEVER,
Captain, Third Cavalry.

ANGEL ISLAND, CAL., September 22, 1890.

General JOSEPH C. BRECKINRIDGE,
Inspector-General U. S. Army, Washington, D. C.:

GENERAL: I have the honor to report that in compliance with Special Orders, No. 131, C. S., from Headquarters of the Army, I proceeded to Sacramento, June 11, and reported to the governor of California, for the performance of the duty with which I was charged. I was received with much cordiality by Governor Waterman and his adjutant-general, Richard H. Orton, and I am happy to be able to bear testimony to the uniform courtesy and hospitality extended to me as the representative of the regular Army, by all the officers of the guard with whom I was brought into contact during my three visits to their encampments at Santa Cruz.

The National Guard of California, as at present constituted, musters about 4,000 men, consisting of two light batteries, one troop of cavalry, fifty-seven companies of infantry, one cadet company, and three signal corps organized, eight regiments, two battalions, and one unattached company, six brigades, and one battalion.

Having reported for orders to the adjutant-general of the State, I was informed by him that the First Artillery, Sixth Infantry, and Second Brigade would separately encamp for eight days, and at different intervals at Santa Cruz, that he would notify me of the several dates of encampments, and he wished me to be present at said camps, both as instructor and inspector.

I was notified that the Sixth Infantry would begin their encampment on the 5th of July.

I left Monterey on the 8th, and reported to Col. Eugene Lehe, commander of the Sixth Infantry, at Santa Cruz, on the same day. * * *

Colonel Lehe impressed me as an energetic officer. The material of which this regiment is composed is excellent, its officers and privates being the very best citizens of Stockton, Fresno, and Visalia. Adjutant Murray appeared to take great interest in the profession of arms, and pride in his position.

The companies being necessarily very much scattered, and consequently having had very little, if any, battalion drill previous to this encampment, it was astonishing to observe the readiness with which officers and men executed commands as the result of a week's drilling. Much hard work was done, and the men were at all times cheerful, obedient, and respectful. The camp was well planned, and the tents properly pitched, serviceable, and roomy.

The discipline was excellent, not a man in the guard-house, nor did I see a man under the influence of liquor.

The clothing was good, and the men looked well in their uniforms. The arms were not in good condition, old and worn, and in many instances almost worthless.

The police of the camp was good, the company streets clean, notwithstanding loose straw in the bunks of the men.

The food was well cooked, and there appeared to be plenty of it. The sinks were judiciously located, and kept in good order.

The Sixth broke camp on the 13th.

Having been notified by the adjutant-general that the First Artillery of the State would go into camp at Santa Cruz on the 4th of August, I reported on that date to its commanding officer, Col. John W. Guthrie.

I was present at several battalion drills commanded by Colonel Guthrie. He drills his regiment with snap and vigor, knows his drill himself and therefore, his instructions are given clearly, concisely and convincingly. He appeared to impress his men with the necessity of doing well whatever they attempted. Many movements were repeated until he was thoroughly satisfied of the accuracy with which they were executed.

The companies located in Sacramento were fairly well drilled, those stationed outside were not so proficient; in many instances the alignments of companies were poor and the manual of arms decidedly ragged. One company of this regiment stationed in Sacramento deserves much praise on account of its marked excellence in company drill, the manual and bayonet exercise.

The zeal of its young commander excited my admiration; were all captains as earnest as he, what a perfectly trained body of men the guard would be!

The arms of the First Artillery, being equipped as an infantry organization, are in no better condition than those of the Sixth Infantry. * * * The commissary and quartermaster departments appeared to be carefully and intelligently administered. The food was well cooked and the men seemed satisfied with the quality and quantity of it. The general police of the camp was only fair; many tents were very untidy on account of the loose straw heaped up in them. Guard duty, at first, was very indifferently performed, but every day showed improvement and at the close Kennon's manual was fairly well followed.

A feature of this camp was the presence of many of the officers' families, living in camp. This innovation may have its advantages, but I doubt their military character. I do not think it advisable that the families of officers should live with them while in tents.

The discipline of this regiment, in camp and town of Santa Cruz, was decidedly good. I observed no men in the guard-house, no drunkenness nor quarreling. Generally the men possessed sufficient self-respect to maintain discipline without being coerced by the fear of punishment.

The First broke camp on the 12th.

The Second Brigade N. G. C. went into camp on the 13th of August. The logistic arrangements of this brigade were excellent. No time was lost in getting to or from camp, and the comfort of the men was carefully considered. The camp was named "Camp Waterman" in honor of his excellency the governor of the State, who has always shown himself a true friend of the militia. The brigade consists of the First, Third, and Fifth regiments of infantry, the Second Artillery and the San Francisco Hussars.

The order herewith inclosed (General Order No. 15, rules, regulations, calls and drills) was faithfully adhered to and energetically executed. General Cutting handled his brigade with ability and was ably assisted by a very efficient adjutant-general, Colonel Edwards.

I was present at the different battalion drills on Monday, the 14th, having previously reported to the general commanding, who received me very cordially and treated me with the utmost hospitality during my stay in his camp.

The brigade is recruited in San Francisco, with the exception of the Fifth Infantry, which comes from the neighboring towns. It is the main reliance of the State in case of emergency, and is an exceedingly creditable exhibition of the citizen soldiery of the Commonwealth of California.

The First Regiment was drilled by Major Sullivan, in the firings by Lieutenant-Colonel Taylor, in company and battalion skirmishing, in movements from line into column and *vice versa*; and by Colonel Dickinson, in battalion movements generally. These officers appeared to be well instructed in their tactics, and the drill in the main was commendable. The cadet company attached to the First are splendid young soldiers.

Colonel Dickinson has a very good regiment. The line officers are zealous and take pride in the profession of arms. Many have held their present commissions for years. Captain Bush has held his for nearly twenty years, and is as much of an enthusiast in military matters now as when first commissioned.

The regiment having been at "rest," I desired to know how quickly it could "commence firing," in case of a sudden attack. Colonel Dickinson informed the men of what was required to be done, that when he gave the command "attention" they were to lie down and begin firing as quickly as possible without waiting for further command.

The greater part of the regiment had assumed the prone position and began firing in five (5) seconds after the command had been given. This speaks for itself without further comment.

The military bearing of the men of this regiment is very good, clothing and equipments also good, arms bad, food good and well cooked; camp was well policed and latrines were in good order. At the guard-mount of this regiment, the band marched in common time and countermarched in quick time, which practice is obsolete.

The Third Regiment, Colonel Barry commanding, was engaged in company skirmish drill. The men were rather awkward in executing the different movements; it was probably the first exercise of this kind they had had in the field. The drill of this regiment showed marked improvement toward the end of the week. Colonel Barry has good material in his regiment, but it needs to be shaped and molded. The men can stand a great deal of setting-up and careful drilling. More energy in this matter on the part of the officers would have a very beneficial and gratifying effect, for the men are only too willing to learn. A little less familiarity between officers and men would likewise produce a very salutary effect. The Third is a good regiment, but the colonel requires the active co-operation of his officers to make it a bet-

ter one. There are many promising young officers in this regiment, and among them I may name Captain Delany and Lieutenants Dillion and Dwyer. I am confident the Third would be ready in a very few hours to respond cheerfully and gallantly to any demand, or to make any sacrifice required of it by the State or nation. I found everything in as good shape as circumstances would permit. Rations good, plentiful, and well cooked; camp clean, tents in fair order; kitchens well policed; sinks properly attended to; arms no better than those supplied to the rest of the guard, which I qualify as old, worn, and almost worthless.

I was present at the drill of the Fifth Regiment. It was commanded on this occasion by Colonel Fairbanks. Upon investigation I found this regiment was composed of companies scattered in various localities, and that more than two companies could seldom be brought together for instruction. It was not surprising, therefore, that a lack of cohesion and concert of action was apparent in the drills of the first and second days. It was surprising, however, to note the effect of hard labor, close attention, and intelligent action on the part of both officers and men at the close of the week. Another such week would make the Fifth a well-drilled body of men.

Generally the time of the militia encampments is too short for the work required. The men have but settled down to a good working basis when tents are struck. A regiment ought to stay in camp at least ten days. The internal economy, arms, and equipments of the Fifth differed little from those of the First and Third regiments.

The drill of the Second Regiment of Artillery, which is equipped as infantry, was good, with the exception of talking in ranks. The regiment was commanded on this occasion by Lieutenant-Colonel Koster, who showed himself to be a clever tactician, a zealous and competent officer. His commands were given clearly and distinctly, and his explanations were concise, complete, and to the purpose. The military appearance of the Second was very creditable, notwithstanding the white helmets, while the rest of the brigade wore the black (regulation). The police arrangements of this regiment, especially noticed in the cleanly condition of its streets and the neatness of the men's tents, might have been adopted with good results by the other regiments of the brigade. The tents were models of tidiness, no loose straw to be seen lying about, but each had a comfortable mattress. No reason why all should not have them.

Captain Sime, commanding the light battery, deserves much credit for the masterly way in which he handled it, showing the effect of constant devotion to his duties, in the face of much discouragement and almost overwhelming obstacles, to which a less determined man would have succumbed. There is no reason why this battery should not be as well equipped as the light batteries in the regular service, in fact there are many reasons why it ought to be. The two guns in this battery are simply worthless old 10-pounder Parrotts of '63; it would be dangerous to fire them with a service charge of powder; besides it is questionable if cartridges could be obtained for such obsolete guns.

The ambulance corps, attached to the Second Regiment and under the superintendence of Surgeon McCarthy, rendered good service during the encampment. It was remarkably complete and efficient and a move in the right direction. Surgeon McCarthy deserves high commendation. One of the most deserving and painstaking officers of this camp is Captain Keene of the Hussars. It was gratifying to note at the end of the week, a week of patient, steady hard work, what an efficient troop of cavalry he succeeded in forming out of a lot of green horses and men.

On the 21st the brigade was inspected and reviewed, after a very creditable parade, in line of masses, by Adjutant-General Orton, who requested me to join his staff. General Orton makes an excellent adjutant-general, and the efficiency of the brigade is largely due to his able administration of the duties to his office. The inspection was thorough and rigid, the wheelings and alignments of the companies were in many instances faultless, while in a few cases the proper distance between companies was not preserved.

General Dimond, accompanied by a brilliant staff, inspected and reviewed the troops on the 23d. A dress parade in line of masses preceded the inspection. The line of masses executed the manual of arms in perfect unison as one battalion.

The improvement in the military bearing of the men, the promptitude and accuracy in the formation of line of masses, the manual of arms, and marching, as the result of the week's work, was distinctly noticeable. The review was followed by a sham battle, in which the principles of modern attack were illustrated. Every man was furnished with twenty rounds of blank ammunition. The line of battle was formed with Colonel Dickinson on the right, Colonel McDonald on the left, Colonel Barry right center, Colonel Fairbanks left center, and the Hussars on the extreme left. A piece of artillery was placed between the regiments.

The supposed enemy in front was felt and his position developed by the Hussars, who advanced in line of skirmishers, covering the front of the line of battle. The enemy having been encountered in force, the cavalry retired in good order, and the Third Regiment was deployed forward as skirmishers, to attack the enemy and retard his advance. The Third having carried out its order successfully, was withdrawn and

reformed in rear of the line. The employment of the cavalry and infantry as skirmishers, preparatory to the main attack, was executed with promptitude and spirit; the intervals were well maintained, and the alignment left little to be desired. The Third having re-occupied its place in line, the right wing advanced about 100 yards toward the enemy at a run, was halted and commenced firing by battalion, during which the left wing advanced in a similar manner, and having reached the line of the right wing, was halted and commenced firing by battalion, when the right wing ceased firing and rushed forward 100 yards while the left wing was firing and then halted. Having in this manner, by alternate rushes, gained the position desired, from which a destructive fire could be poured into the enemy, the line was halted, the wing in rear having come up to the one in front, and file firing, lying down, was begun and continued until the remainder of the cartridges was exhausted, when the enemy's position was supposed captured.

The attack was spirited and the file firing very realistic. The volley firing of the Fifth was excellent, the entire regiment firing at the word of command as one man. The rushes of the First and Second Regiments were exceedingly well executed.

Before closing this report I must make mention of the signal corps attached to this brigade and under the able management of Lieutenant Brown. Messages were readily sent and received with the heliograph. The arrival of his excellency Governor Waterman at the railroad depot, a distance of about 1½ miles from camp, was in less than four minutes announced to General Cutting in camp. This vouches for the marked proficiency of the corps.

As a rule guard duty was very poorly done. I visited the sentinels at night and examined them also during the day; many were on guard for the first time and very ignorant of their duties, yet they appeared anxious to do their duty to the best of their ability. On the night of the 22d of August I made the "grand rounds" in company with Major Wilson, field officer of the day. A few sentinels challenged correctly and turned over their orders intelligently, but the greater number appeared to be at a loss what to say or do. This is not to be wondered at, for my experience has been that it is only by careful and persistent instruction that sentinels become familiar with their duty, and it requires incessant vigilance to make them properly perform it.

A visit to this camp would convince any one that in the amount of practical, wholesome, and interesting military work accomplished, the instruction imparted and the lessons of discipline, obedience, and self-reliance taught, Camp Waterman stands high among the best encampments of the National Guard in 1890.

Two things made a deep impression on me during my visits to the camps at Santa Cruz:

First. The readiness and willingness of both officers and men to learn their duty and to do it.

Second. The cheerfulness with which this large body of men sacrifice their personal and business interests to attend this summer encampment, where a man accepted the rudest condition of a soldier's life, with its attendant onerous duties. This devotion merits the greatest praise and deserves from the State and National Government much more than the paltry aid he receives.

The following suggestions, if carried out, would, I think, promote the efficiency of the militia of this Commonwealth:

First. The old and unserviceable arms and equipments ought to be at once replaced with serviceable ones. The Government appropriates at present \$400,000 for the National Guard, which gives about \$7,500 to this State. This is not enough. Congress ought to appropriate at least \$1,000,000, which would give this State \$18,750. This would be economy in the right direction and the Guard would be properly equipped in a short time. An Army inspector should be detailed to inspect semi-annually all arms, equipments, etc., and such as are found unserviceable should be condemned and replaced by serviceable ones.

Second. The regulars and militia, when practicable, should be camped together, and a regular Army officer detailed as instructor in the State camps.

Third. There ought to be a sea-coast battery, furnished by the Government, for heavy artillery practice in this State. The States on the Atlantic sea-board have them.

Fourth. The State ought to own a permanent camping ground situated a reasonable distance from populous towns. It should build suitable armories for the regiments in San Francisco, which now rent houses totally unfit for the duty required.

Fifth. Each man ought to be paid a per diem of \$2 and officers the pay of their grade, as obtains in the regular service, during the week of duty in the field, and the State ought to furnish transportation and rations to the men.

California can place in the field an army corps of 30,000 well-trained soldiers in thirty days should the Government require it.

* * * * *

I am sir, very respectfully, your obedient servant,

JOHN J. O'CONNELL,
Captain, First Infantry.

General Orders, } HEADQUARTERS SECOND BRIGADE, NATIONAL GUARD CAMP,
 No. 15. } *San Francisco, Cal., August 13, 1890.*

The following rules and regulations are hereby announced for the information and guidance of the troops at Camp Waterman, Santa Cruz, Cal. :

I. Hours of service and roll-calls are established as follows, to take effect on the 18th instant, until further orders :

Reveille	5.45 a. m.
Setting up drill by company (15 minutes) immediately after roll-call.	
Surgeon's call	6.30 a. m.
Breakfast	6.45 a. m.
Police call	7.15 a. m.
Drill (battalion drill for regiments, unless otherwise ordered) ..	8.00 a. m.
Recall from drill	9.30 a. m.
Inspection of quarters	9.45 a. m.
Orderly hour—Regimental	10.00 a. m.
Brigade	11.00 a. m.
Lunch	12.00 m.
Dress parade—Brigade	4.45 p. m.
Guard mounting immediately after dress parade.	
Dinner	6.00 p. m.
Retreat	7.00 p. m.
Tattoo	10.30 p. m.
Taps	11.00 p. m.

All calls will be sounded at brigade headquarters and repeated successively from right to left down the line.

In addition to roll-calls at reveille and tattoo, rolls of companies will be called at close of the drill commencing at 8 a. m., each day, under the supervision of a commissioned officer.

II. Stable calls for the cavalry and light battery will be sounded by the trumpeters of these organizations immediately after reveille and retreat.

III. Musicians' call will be sounded at brigade headquarters fifteen minutes previous to calls for reveille, drill, dress parade, guard mounting, retreat and tattoo.

IV. Whenever the brigade is to be formed, at the sounding of the assembly all bands and drum corps will report to the drum major in charge of the consolidated band in front of brigade headquarters.

V. Companies of infantry will be equalized in company streets previous to reviews, brigade drills, and brigade dress parades.

VI. The commanding officer of the Second Artillery Regiment will cause Light Battery A to fire one gun at reveille and retreat, daily, during the encampment.

VII. Enlisted men who desire to leave camp during the day, when not on duty, must receive verbal permission from their company commanders. Those who desire to leave camp after retreat must obtain passes signed by their company commanders, approved by their regimental commanders.

VIII. All lights must be extinguished at taps, except those in the quarters of regimental and unattached company commanders, adjutants, and paymasters, and in guard quarters and hospitals.

IX. Civilian employes must conform strictly to the discipline of the camp. During their absence from camp they will be provided with special passes issued from the regimental headquarters responsible for their employment.

X. No signs or symbols, other than those designating the tents of field and staff officers, will be permitted. Street decorations are prohibited.

XI. Civilians will be permitted by the guards to pass in and out of camp between reveille and tattoo, but will not be allowed to remain inside the lines after taps, except by permission of commanding officers.

XII. Entrance and exit will be made only at the main entrance of the camp grounds.

XIII. The firing of blank cartridges, except when on drill or in obedience to orders, is strictly prohibited.

XIV. Regimental commanders and the commander of the troop of cavalry will maintain proper guards for their respective organizations, and details will be made daily from brigade headquarters for the brigade and provost guards.

XV. Skirmishing is an essential in modern military education. Its importance must be recognized, irrespective of the practical methods of its exercise, and its object to deploy open lines of men under perfect control by the simplest means should never cease to engage the attention of the officers charged with the instruction of infantry and cavalry soldiers. Commanding officers will therefore devote at least one-half hour each day to skirmish drill and firings.

XVI. The brigade will be reviewed by Maj. Gen. W. H. Dimond, division commander, on Thursday, the 21st instant, at 4 p. m., and by his excellency the governor and commander-in-chief on Saturday, the 23d instant, at 4 p. m.

By command of Brig. Gen. John T. Cutting:

WILLIAM EDWARDS,
Lieutenant-Colonel and Assistant Adjutant-General.

NATIONAL ARMORY, *Springfield, Mass., September 13, 1890.*

ADJUTANT GENERAL OF THE ARMY,
Washington, D. C. :

SIR: I have the honor to submit the following report of the duties devolved upon me in connection with the rifle practice of the National Guard of the State of North Carolina.

As appears from the last report of their adjutant-general, James D. Glenn, the guard, with the exception of one or two companies, had never received any instruction in the use of their arms, nor any practice in military target firing, no ranges had been established for any of the companies, nor was any of the requisite material on hand; it was therefore essential to first commence with the rudiments of the subject and not to advance to the higher forms of instruction until the facilities were improved and such a step warranted by the interest the soldier manifested.

The guard consists of four regiments of infantry and one separate troop of cavalry (the latter generally appearing in the annual camp dismounted) or thirty companies in all. These thirty organizations are located at twenty-nine different cities or towns throughout the State, and as a rule, are all brought together but once a year or are assembled as battalions, as was the case this present season when two regiments, the First and Third camped together from July 22 to 29, and then after an interval of a week, the Second and Fourth regiments took their place for a similar period. Concentrated but so seldom, brigade or regimental movements become of much greater importance during the period of annual encampment than individual instruction in rifle firing, which therefore more appropriately should form a feature of the home work of the companies, leaving for the general camp only the skirmish or volley firing of companies or larger bodies.

Requiring, however, as many ranges (nearly) as the guard contained companies, the establishment of the facilities for practice becomes a heavy tax upon the resources of the State, diminishing by that extent the funds available for ammunition and necessitating a very moderate amount of firing for a few years to come.

Upon the issue of Special Orders, No. 136, of June 11, 1890, from the headquarters of the Army, directing me to attend the annual encampment of the North Carolina Guard at Wrightsville, between July 22 and August 12, finding the conditions as above stated and having previously had considerable correspondence on the subject with General Glenn, I prepared for his consideration a system of rifle instruction which I deemed would meet all requirements and advance the instruction of their troops as far as could be expected for several years.

This being accepted was published in general orders, as follows:

General Orders, } STATE OF NORTH CAROLINA,
No. 10. } GENERAL HEADQUARTERS, ADJUTANT-GENERAL'S OFFICE,
Raleigh, June 28, 1890.

(1) Small-arms practice will hereafter form a part of the military instruction of the North Carolina State Guard, and will be conducted, except as herein provided, according to the methods of "Blunt's Small-arms Firing Regulations," as used in the regular Army.

(2) Practice will be supervised and inspected by an inspector-general of small-arms practice with the rank of colonel, and in each regiment by a regimental inspector of small-arms practice with the rank of captain, but the details of instruction will be given by the company officers and non-commissioned officers.

(3) It being essential that these instructors should themselves be proficient both in the theoretical and practical portions of the subject, they are enjoined to make themselves thoroughly familiar with the system of instruction prescribed in the firing regulations, and are required to participate in all preliminary instruction and in the target practice of their commands.

(4) Success in rifle firing being, in so large a degree, dependent upon the interest taken in the subject, all officers will endeavor to awaken the enthusiasm and emulation of their men, and while encouraging the successful shots will be careful not to dishearten the least proficient, reminding them that attention to instruction and persistent effort will, ultimately, be amply rewarded. Officers will also bear in mind

that a command in which all the men have been brought to attain a fair degree of accuracy in rifle firing is of much greater general efficiency than if only the ability of some few expert shots had been developed, and the instruction of the majority comparatively neglected.

(5) Before the opening of the "practice season" for range firing in each year, instruction will be given, according to the methods of the firing regulations, in sighting drills, in position and aiming drills, and, when practicable, in gallery practice, with reduced charges. These exercises will be had in the company armories or squad-rooms, and conducted with every possible care and thoroughness, as they afford the surest means of ultimately attaining accuracy on the range.

(6) The "practice season" during each year will include the period of the general encampment and a period before and after it, and, unless otherwise ordered, will commence annually on June 1 and end on the 31st of August. Only such scores as are made within this time, and in accordance with the Firing Regulations and this order, will be considered in making up the aggregate required to determine the class in which any soldier will be included.

(7) The limited allowance of ammunition attainable not permitting the prosecution of the recruit, second season and subsequent courses of preliminary and regular practice as specified in the Firing Regulations, the following single course is substituted, and will be pursued by each officer and man.

(8) The preliminary practice at known distances will include not more than five shots at 100 yards, five shots at 300 yards, and five shots at 500 yards, and for each soldier may be entirely or partially omitted in the discretion of the company commander.

(9) The record, or regular practice, at known distances, will comprise one score of five shots at each of the ranges 200 and 300 yards, and two scores at 500 yards.

If in this practice any soldier attains a total score of 80, his regular practice will be extended to 600 yards, where one score of five shots will be fired.

In regular practice the positions assumed and targets employed will be as prescribed in the Firing Regulations, and under the rules there given. Particular attention is directed to paragraphs 183 to 186 and 221 to 251, inclusive.

(10) In individual skirmish firing the preliminary practice will include as much of that specified in paragraph 329, Firing Regulations, as the ammunition available will permit. In any case the men will be exercised in advancing and retreating, estimating distances and adjusting sights, taking positions and going through the motions of loading, without cartridges, aiming and pulling trigger, using the group target as an objective until they become familiar with the principles of skirmishing.

(11) The regular or record practice in individual skirmishing will consist of one advance and retreat, conducted as prescribed in paragraphs 326 and 327, Firing Regulations, except that only one shot will be fired at each halt, or a total of but ten shots in all. In this practice the group target employed, the system of scoring, and the general methods governing the firing will be as specified in paragraphs 321 to 335 inclusive, to which particular attention is directed.

(12) All practice, whether on-local ranges or on that of the general encampment, will be under the charge of the company officers, though, if convenient, the command may be divided into squads and the immediate instruction given by competent non-commissioned officers; but *all* shots fired for *record* during the practice season must be fired in the presence and under the general supervision of a commissioned officer of the company, or some officer of the general staff, or of the field and staff of the regiment to which the company belongs.

(13) The soldier's classification will be determined according to the general system given in Chapter IV, part 4, Firing Regulations, but as the amount of regular practice is but one-eighth of the individual firing, as there specified, for a "second season's course," the aggregates required will be proportionally reduced, and hence will be as follows:

(a) For qualification as a sharpshooter, an aggregate in regular practice at known distances, 200, 300, 500, and 600 yards, and in regular skirmish practice of 125.

(b) For the marksman's class, an aggregate of 90 in regular practice at 200, 300, and 500 yards, and as a skirmisher.

(c) For the first-class an aggregate of 75.

(d) For the second-class an aggregate of 57.

(e) The third-class will be composed of those who have practiced and failed to make the aggregates qualifying them for the second class.

(f) The fourth-class will be composed of all the remaining members of the company who may be borne on its rolls at the close of the practice season.

(14) To those qualifying as sharpshooters, certificates and badges will be issued as prescribed by the Firing Regulations. To marksmen when first qualifying, the marksman's button; for a second year a pin of bronze with bars for the current and the prior year, to which an additional bar will be added for each subsequent year of qualification.

Sharpshooter's and marksmen's insignia will not both be issued to the same man for the same year's firing.

(15) The individual figure of merit of each organization (company, regiment, and entire guard) will be determined by multiplying the number of sharpshooters by 200, the number of marksmen by 100, the number of the first-class men by 60, the number of the second-class men by 30, the number of the third-class men by 10, the number of the fourth-class by 0, and dividing the sum of the products thus obtained by the total number in the above six classes.

(16) Where practicable the known-distance firing, or at least a portion of it, both preliminary and for record, will be held on local ranges, when they may be obtainable, leaving only the completion of the known-distance firing and the skirmish practice for the time of the general encampment. When this can not be done the entire record practice will be held on the range at the general camp.

(17) All scores made during the practice season must be noted and kept in ink or indelible pencil, by or under the supervision of the company commander. Scores for record practice will be kept separate and distinct from shots in preliminary firing.

(18) Scores made on the range at the general encampment will, if constituting part of the required record practice, be taken up by the proper company commanders when duly reported and certified to them by the officer in charge of the firing. The entire record practice will then be certified to by the company officers, said certificates being substantially in the form laid down in the Firing Regulations.

(19) On or before September 5 of each year company commanders will make out and forward a report in duplicate on the blanks furnished from this office, corresponding to Form 30-b, Firing Regulations, showing the *totals* of all record scores made by the members of their respective commands during the preceding practice season, the classification of the company, and the resulting figure of merit.

These reports will be examined by the regimental inspector of small-arms practice, returned for correction, if necessary, and finally forwarded as promptly as possible, one copy to the general inspector of small-arms practice and the other to regimental headquarters.

(20) This order shall be in full force from and after this date, except that all shots fired for record for the year 1890 will be fired on ranges at the annual encampments of the respective regiments.

(21) Capt. Stanhope E. Blunt, Ordnance Department U. S. Army, having been detailed by the Secretary of War to attend the annual encampments of the North Carolina State Guards for this year for the purpose of giving instruction in rifle practice, he will have entire supervision of this branch of the service during the encampments, and regimental commanders will issue such orders and instructions in relation thereto as he may direct. All officers and men are urged to render him a hearty cooperation in the performance of the duties imposed upon him, and as an officer of the United States he will be obeyed and respected accordingly.

By order of the commander-in-chief.

JAS. D. GLENN,
Adjutant-General.

By this order it is endeavored to bring the State practice into as close harmony with the Army system as their restricted amount of ammunition and time available for practice will permit; it places the individual instruction where it properly belongs, under the control of the company officers and provides for its being conducted at the home ranges, but as these ranges will undoubtedly, for some years to come, be but indifferently equipped, the skirmish practice is relegated to the general camp where the facilities can be made greater. Company, skirmish, and volley firing are not provided for at present, both on account of the additional cost that would thereby be incurred and because it was deemed best to thoroughly ground the men in the more preliminary stages of rifle-firing before advancing them to the collective practice.

On June 12, immediately after the issue of the order requiring my attendance at their camp, and in compliance with the request of Col. F. A. Olds, the quartermaster-general and chief of ordnance of the State, I provided him with photograph views of several army target ranges, with directions for the construction of a range and with a complete list of the targets, target frames, cotton cloth, pasters, streamers, and all other material necessary for its equipment with four Laidley targets, and for conducting practice thereon.

The place selected by Colonel Olds for a range is about one mile from the camp occupied this year, but in the immediate vicinity of the permanent sight where the guard will be located, probably next, but undoubtedly in succeeding years, the ground falls slightly from the firing points to the targets, back of which there is an extensive wood, free from habitation, for a couple of miles.

On reaching Wrightsville, July 21, I found the target-pit with continuous markers shelter nearly completed, the stop butt in rear of targets finished, and the range prepared for practice. None of the material, however, for which requisition had been

forwarded by Colonel Olds on June 16 (which requisition, as I there learned, had received the approval of the Secretary of War, on June 24) had yet arrived, though notification was at hand of its issue, on July 10, from Rock Island Arsenal.

By Special Orders, No. 167, Headquarters of the Army, my duty with the North Carolina Guard was terminated on July 30, instead of August 12, as first provided, thus limiting my instruction to the earlier encampment, it being represented by me, the Secretary of War approving, that I could so exemplify the methods of conducting practice that the officers of the guard who ultimately would have charge of the subject would be fully competent to carry on the instruction during the week when the second half of the force should be in camp, and that the experience they would thus gain would probably be of more value than any advantage which possibly might accrue from my prolonged presence.

The targets and other material not having arrived (they did not reach Wrightsville until August 8, more than a week after my departure) it was impossible to give practically any instruction on the subject, a circumstance which appeared to be as much regretted by the members of the guard as it certainly was by myself. Through the courtesy of General Glenn I was, however, afforded the opportunity of addressing all the officers, both the regimental and staff, receiving from them marked attention and every manifestation of interest while I explained the system of preliminary drills followed in the Regular Army; the method of conducting practice on the range, both in known distance and skirmish firing; the construction and operation of ranges; the forms of targets; the various material employed, and the rewards given the successful marksman. The application of the Army system to their own practice, as prescribed by the general order elsewhere quoted in this report, was also discussed. My address awakening the dormant interest, I subsequently had conversations with many of the company officers as to minor points not previously touched upon, and copies of the Army Small Arms Firing Regulations having been issued to each company, I was enabled to direct their attention to the more elaborate treatment there given to the different features they mentioned.

During my stay at camp Governor Fowle appointed Col. B. Cameron to the position of inspector-general of small-arms practice, as provided in paragraph 2 of the order previously quoted, and we were therefore able to examine and discuss together the system of practice established for the State troops and that which governs in the Army. As Colonel Cameron has had much experience in the National Guard, is energetic, and interested in this new subject, a marked advance in rifle firing under his supervision can undoubtedly be anticipated.

As previously mentioned, the targets and other material reached Wrightsville on Friday, August 8, after my departure, but during the encampment of the Second and Fourth Regiments; the range was at once completed and some firing held on the following Saturday and Monday under direction of Colonel Cameron.

I can not conclude my report without expressing my appreciation of the cordial reception and uniform courtesy shown me, as the representative of the regular Army, by the governor of the State, by the adjutant-general and by all other members of the National Guard—nor without testifying, though it did not fall officially under my observation, to the excellent manner in which the different duties incident to their camp life were performed, the thoroughness of their drill, the smoothness attending the execution of the usual military ceremonies, the soldierly bearing of many of the men, the very general interest manifested by the officers and their intelligent appreciation of the peculiar difficulties of their position and of the appropriate measures requisite for attaining a good standard of efficiency with their commands.

Very respectfully your obedient servant,

STANHOPE E. BLUNT,
Captain of Ordnance.

WISCONSIN RIFLE RANGE.

CAMP DOUGLAS, WIS., September 13, 1890.

General J. C. BRECKINRIDGE,
Inspector-General, U. S. A., Washington, D. C. :

SIR: I have the honor to report that an interstate rifle competition has been conducted at this place—8th to 13th instant—upon a basis which admits of comparison and classification with similar contests in the U. S. Army. By reason of this assimilation the results are valuable and interesting.

The competitors were all members of the National Guard of one of the following named States: Minnesota, Wisconsin, Illinois, and Iowa. One team was composed of members of the State troops of Michigan.

The orders under which these five rifle teams, alternates, team captains, organization officers, markers, scorers, etc., and camp officers and detail attended the interstate competition were issued from the office of the adjutant-general of the several States named. All wore the fatigue uniform.

Among the spectators or participants constantly present were the adjutant-generals of Illinois, of Wisconsin, of Minnesota, of Iowa, the inspector-general of Michigan, and the general inspectors of small arms or rifle practice of the four States first named.

During a portion of the time the following officials were also present: The governor of Wisconsin, the commanding general Department of Dakota, and the senior inspector-general, U. S. Army.

At all times during both the preliminary practice and the competition proper, there was present a considerable representation from the National Guard of each of the States participating. All were in fatigue uniform.

The officer in charge of the practice and competition was an officer of the U. S. Army. With this exception, all of the organization force, officers and men, team captains, etc., were members of the National Guard. Each State named furnished some portion of the organization force. The interstate rifle competition was so timed as to be nearly simultaneous with the fifth biennial competition of the Army carbine team, both of which contests, also the tenth annual rifle competition of the Division of the Missouri, took place here this and last month. In previous reports to the Adjutant-General of the Army I have explained the formation of and objects of the association named, and especially the encouragement given it by the late Major-General George Crook, U. S. Army.

Circular No. 2, M. R. Association of the National Guard of the Northwest, dated July 1, 1890, is inclosed; also models of the score-cards used. The latter conform to those used in the U. S. Army. I also inclose for file in connection with this report, copy of General Orders, No. 11, State of Wisconsin, adjutant-general's office, Madison, September 2, 1890.

Pursuant to resolutions adopted January 14, 1890, at a meeting in Chicago of the adjutant-generals of the States of Wisconsin, Illinois, Minnesota, Michigan, Iowa, and, by proxy, Indiana and Ohio, at which time the association was formed—see my previous reports—the interstate rifle competition, which concluded yesterday, was a contest between teams of ten men each, and was upon a basis of a competition of the several teams as units and not an individual contest, although individual scores were kept and will be reported to those interested.

At the meeting above referred to, it was decided that only the Springfield service rifle and original service cartridge, Frankford make, should be used. Further, that each competitor should, during the two days of the competition proper, fire 10 shots off hand, target A at 200 yards, 10 shots kneeling or sitting, target A at 300 yards, 10 shots, prone position, target B any position void of artificial rest, at 600 yards.

During the two days of preliminary practice, also during the two days of competition, each competitor was allowed forty cartridges, same to be expended in two equal skirmish runs, 600 to 200 yards and back; 10 halts, 5 advancing and 5 retreating, each halt of 30 seconds duration; quick and double time in advancing, using as objectives the group targets D, E, and F. The only deviations from the Firing Regulations, Chap. III, Part V, "Blunt," concerning individual competitive firings, were that at fixed distance 5 instead of 10 shots per man were fired per man per range, and only 20 instead of 40 cartridges per run for skirmish firing were permitted. Two shots were required to be expended by each skirmisher at each halt. It will thus be seen that the ammunition allowance was just one-half of the amount issued for use in the individual department competitions of the U. S. Army.

Save as above noted, the general rules regulating the firings of the interstate preliminary practice and competition were those prescribed by the small arms firing regulations prepared for the use of the Army and the National Guard of the different States, approved by the Secretary War December 19, 1888. These regulations have been

officially adopted by the Military Rifle Association of the National Guard of the Northwest.

The interstate competition was a gratifying success in every respect. It was begun with enthusiasm, and appended scores will show not only good marksmanship, but also how closely the entire match was contested by the majority of the teams. No casualty of any kind occurred. Assurance is given that there will be further State and interstate small arms competitions. The scores for the first day of the competition, showing the total of teams at the several ranges, were as follows:

Teams.	200 yards.	300 yards.	500 yards.	600 yards.	Skirmish.	Total.
Minnesota	207	209	200	195	422	1,233
Iowa	185	201	203	188	330	1,207
Illinois	201	194	207	180	411	1,193
Wisconsin	197	203	202	165	417	1,184
Michigan	191	198	183	164	382	1,118

The result of the second day's shooting was as follows:

Teams.	200 yards.	300 yards.	500 yards.	600 yards.	Skirmish.	Totals.
Wisconsin	192	206	192	196	408	1,194
Illinois	194	196	206	186	391	1,173
Minnesota	198	205	200	170	378	1,151
Michigan	195	195	192	159	366	1,107
Iowa	173	191	199	167	359	1,089

The result of the two days' shooting was as follows:

Teams.	200 yards.	300 yards.	500 yards.	600 yards.	Skirmish.	Total.
Minnesota	405	414	400	365	800	2,384
Wisconsin	389	409	394	361	825	2,378
Illinois	395	390	413	366	802	2,366
Iowa	358	392	402	355	789	2,296
Michigan	386	393	375	323	748	2,225

The near equality of the teams is sufficiently indicated by the totals.

By reference to the report of the inspector-general of rifle practice of the State of New Jersey for the year ending October 31, 1889, it will be noted that General Bird U. Spencer states concerning the interstate match at the State camp ground, Sea Girt, September 1 to 4, 1889, as follows: "The contest between the New York team and the New Jersey team was extremely close, the New York team winning by a score of 958 points against 955 for New Jersey and 829 for Delaware."

Many of the comments of General Spencer and of Col. G. E. P. Howard, captain of the New Jersey team, as expressed in report alluded to, are applicable to the interstate team match just concluded here.

Very respectfully, your obedient servant,

PHILIP READE,

Capt. Third Infantry, office in Chicago of the Inter-State Rifle Competition.

SUPPLEMENT 2.

REPORTS OF INSPECTIONS OF MILITARY DEPARTMENTS OF COLLEGES, ETC.

ALABAMA AGRICULTURAL AND MECHANICAL COLLEGE.

HEADQUARTERS DIVISION OF THE MISSOURI,
INSPECTOR-GENERAL'S OFFICE,
Chicago, Ill., January 25, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.

SIR: I have the honor to submit the following report of my inspection of the military department at the Agricultural and Mechanical College of Alabama, Auburn, Ala., made January 20, in accordance with instructions from your office dated September 27, 1886.

Lieut. J. B. McDonald, Tenth Cavalry, is still on duty at this college as professor of military sciences and tactics, in pursuance to Special Orders No. 190, Adjutant-General's Office, 1888; he is acting commandant of cadets and has charge of the demerit record of students, drills and instructs the companies and battalion. He received \$300 per year from the college funds, but is employed only on work in the military department. Being a member of the faculty, he attends all its meetings.

This college has the capacity to teach 300 or more students annually. During the present year 234 have matriculated up to date, all males. Of these 203 are organized into a battalion of four companies, embracing the following classes: Seniors, 20; juniors, 29; sophomores, 56; freshmen, 64; and subfreshmen, 34. Their age is from 13 to 23 years—18 years being about the average, only even being under 15 years of age. They are drilled in squad, company, battalion, and skirmish drills, light artillery drill, and target firing with cadet rifles. The battalion is armed with two 3-inch rifles with carriages and limbers; the pole of one of the limbers is still broken (reported last year), it was received in unserviceable condition. One hundred and fifty Springfield cadet rifles and 150 sets infantry equipments are in good condition and stored in brick store-house near college building. Received last year from Rock Island Arsenal 100 blank cartridges and 300 friction primers for 3-inch rifles; 6,000 ball and 5,000 blank cartridges for cadet rifles, caliber .45, all in good condition.

Military drill is obligatory upon all classes except those physically disqualified, and privates of the senior class may be excused from drill by the faculty when they have attained a proper proficiency therein. During the first three months of the college year the cadets are drilled twice a week in company drill and once a week in battalion drill. The next six months they have two battalions and one company drill per week; in May the corps drills daily, except Sunday. Dress parades generally takes place after drills; reviews, inspections, and guard mounts often enough to instruct them tolerably well in these exercises; light artillery drills about twenty to forty during the year. The students also march to church, recitations, etc. The theoretical instruction given is by a course of lectures, in the spring of the year, on martial and military law, grand tactics and strategy, illustrated by different campaigns, field of operation, etc., and weekly recitations in tactics by the senior and junior classes. This, Lieutenant McDonald states, usually makes the cadets quite proficient in the ordinary routine of military duties and prepares a well-drilled battalion by June, the month of the commencement.

The facilities for indoor drill is a long hall in basement of new academic building; have also a drill-ground large enough to maneuver the battalion upon.

All regular studies, including the military course, are rated alike for graduation.

The interest in the military course and discipline of students is good and growing better, but as none of the students live at the college it is not possible to enforce strict military discipline. The students as a rule come to the college for a collegiate and scientific education, and being usually very deficient in these departments can

not afford to devote more time than is allowed to the military education. But with the time allowed and the constant changes in the personnel of the classes this department is doing about as well as could be desired or expected under the circumstances. This institution seems to fulfill the requirements of the law (Rev. Stats. 1225) to the best of its opportunities. The library of this college since it was burned two years ago has not been replaced.

The battalion and company drills were very satisfactory; a great improvement since last inspection. The arms and accouterments were in good condition and well cared for.

Respectfully submitted.

Your obedient servant,

E. M. HEYL,
Colonel, Inspector-General.

STATE UNIVERSITY OF CALIFORNIA.

HEADQUARTERS DEPARTMENT OF CALIFORNIA,
INSPECTOR-GENERAL'S OFFICE,
San Francisco, Cal., June 9, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.

SIR: I have the honor to report the following result of an inspection of the University of the State of California, located at Berkeley, and inspected by me on the 4th instant.

First Lieut. George F. E. Harrison, Second U. S. Artillery, is professor of military science and tactics, and is a member of the faculty. The average number of students during the present year was 400, including both sexes, three-fourths of whom are males. Of these, 201 are uniformed and organized into a battalion of four companies, with an adjutant, quartermaster, commissary, and three officers to each company. The captains and lieutenants are selected from the senior class, sergeants from the junior class, and corporals from the sophomores. In addition to the organized battalion there are 25 members of the senior class who receive theoretical instruction in the art of war, one hour per week. The uniform is worn during military exercises. Military duty is compulsory for all but the senior class. Military instruction is theoretical and practical; two hours per week are devoted to the latter and one hour to the former. Theoretical instruction consists in prepared lectures on the art of war, organization of the army, company and regimental administration, field fortification, sieges, camping, marching, messing, etc. The practical consists of company, battalion, and skirmish drill, supplemented by target practice. The result of the latter Lieutenant Harrison reports as interesting and very satisfactory. The battalion of four companies was reviewed and inspected. Both ceremonies were executed in accordance with tactics and with gratifying precision. The boys march well; their step is elastic, firm, and of the proper cadence. Their arms, of which there are 248 stand together with a like number of equipments, were in serviceable order, but not clean. They are properly cared for, in racks, in an excellent armory.

Lieutenant Harrison passed the battalion through many maneuvers and then turned it over, by request of the inspector, to the cadet captains in turn, each of whom drilled it without error and in excellent form in all the most intricate movements at the inspector's dictation. I consider it a very well instructed battalion.

Lieutenant Harrison devotes his entire time to the military department. The president informed me that the military branch is an esteemed part of their curriculum. He expressed unbounded satisfaction with the growth of the department under the able management of Lieutenant Harrison, and professed unfeigned regrets over the anticipated loss of his services.

In my recent report of the inspection of the University of Nevada, I gave the result of my observations in regard to the kind of representatives of the Army that developed growths that are useful and lasting in the college work. The individual characteristics there described, which in my judgment produce results commensurate with the best expectations of the War Department, apply with singular definiteness to Lieutenant Harrison. He is a man of fine abilities; his efforts have been earnest, interested, and energetic. Through good judgment, tact, and a manly direction of his office, he has expanded and elevated the military department to a higher plane than it has ever occupied before. It is now recognized by the president, professors, and regents as a conservator of order, discipline, and gentlemanly spirit, the loss of which they would regret as one of the most valued parts of their institution.

It was a happy thought in the War Department to direct an inspector to visit the colleges each year. They themselves appreciate the value of such supervision as adding

dignity and character to the Department as well as for its diffusion of a sympathetic interest in the profession of arms, which links them as kindred in feeling, and almost a part in fact of the Government in its Department of War. The cadets feel a pride in the paternal care exercised over them by the Secretary of War, as exhibited through these inspections, and evince an intense desire to acquit themselves with credit before the Secretary's representative.

Lieutenant Harrison, who, by the way, seems to have given more intelligent thought to this college work than any one whom I have inspected, informed me that the origination of inspections was the best step that had been taken in college affairs by the War Department. He thinks that it has given the professor of military science and tactics a footing he had not heretofore, and his Department a standing which in no other way could have been better obtained.

Respectfully submitted,

G. H. BURTON,
Lieutenant-Colonel, Inspector-General.

STATE AGRICULTURAL COLLEGE OF COLORADO.

President, C. L. Ingersoll. Military professor, First Lieut. W. H. Cowles, Sixteenth Infantry.

1. General description and location of college and date of its establishment?—Situ-ated at Fort Collins, Colo. Incorporated 1870, and established 1879. (See report of December 17, 1889.)

2. Religious denomination, if any?—None.

3. Date of military professorship?—March 11, 1889. First officer reported April 3, 1889.

4. Government of the college, what, and in whom invested?—State Board of Agri-culture and the faculty *ad interim*. (See report of December 17, 1889.)

5. Is the military professor a member of the faculty, and was the detail made at the request of the college authorities?—Yes.

6. Has the college the capacity for educating 150 male students?—Yes.

7. Is military instruction obligatory?—Yes.

8. Facilities for military instruction?—Good; will be better when the new college building is finished.

9. Number of male and female students?—Fifty-three.

10. Number of male students under military instruction over fifteen years of age?—Forty-two.

11. Average daily attendance at drill?—Forty.

Present at inspection: Company A, 2 officers, 2 non-commissioned officers, 13 pri-vates. Present at inspection: Company B, 2 officers, 2 non-commissioned officers, 13 privates.

12. How are the unauthorized absences dealt with?—Same as absences from other college exercises.

13. Military organization of students?—In two companies; both companies are being drilled in artillery drill.

14. Uniform, if any, and when worn?—Dark blue flannel required at drills.

15. How many students wear the uniform?—All are required; but temporary stu-dents sometimes do not.

16. How many wear a mixture of uniform and civil dress?—About 5 per cent.

17. What penalty, if any, for being out of uniform?—Usual college penalties for infringements of the rules, *i. e.*, demerits, etc.

18. Are all military rules and orders and all appointments and promotions of officers and non-commissioned officers made upon the recommendation of the military pro-fessor?—Yes.

19. System of demerit and punishment for misconduct during military exercises, such as trifling, inattention, talking, being late?—As the officer and faculty think right.

20. Number and character of military ceremonies during the past college year?—None.

21. Number and character of drills during the past college year?—Whenever the weather would permit either artillery or infantry drills have been had, but no record has been kept of the number.

22. Any other practical instruction?—No.

23. Any small-arms or artillery target practice, gallery or field?—Yes; small arms target practice at 100 yards; each cadet fired ten rounds; interrupted by inclement weather.

24. Where do drills take place in winter or during inclement weather?—None

during past winter; drill hall just completed, and hereafter during inclement weather the drills will take place therein.

25. Number and character of lectures and recitations?—Logistics and field fortifications, twelve lectures.

26. Text-books used?—None.

27. Military books in college library?—Rebellion Record, Hamley's Operations, Wilhelm's Military Dictionary, and Strategos.

28. Number of arms and accouterments?—Seventy cadet rifles, caliber .45, and accouterments.

29. Condition as to repair and cleanliness?—Guns of Company A, dirty; those of Company B in good order.

30. Number of guns, carriages, and equipments?—Two 3-inch rifled guns (no caissons) and equipments.

31. What ammunition on hand during the year?—Allowance authorized in orders. On hand 460 blank and 500 ball cartridges, small arms; 50 blank cartridges for 3-inch rifled guns.

32. Any unserviceable property?—None.

33. What duties, if any, are performed by officer apart from the military professorship?—None.

34. Do such duties interfere with military duties?—None performed.

35. What compensation received from the college?—None.

36. What is the attitude of the college authorities towards the military department?—Cordial.

37. What that of the students?—Willing and interested.

38. Suggestions of president of college?—In the opinion of the president the work is going on well, and full interest has been maintained.

39. Suggestions of military professor?—None.

40. Does the military professor reside at or near the institution?—Yes.

41. Is he provided with quarters on the same terms as other professors?—Yes.

42. Does he, when performing military duties, appear in proper uniform?—Yes.

43. Have the reports required by G. O. 15, A. G. O. of 1890, been regularly made?—Yes.

44. Copies of all reports and correspondence affecting the military department on file?—Yes.

45. Is the military professor a suitable person for the position?—Yes, in the opinion of President Ingersoll. I shall be better able to express an opinion another year.

Remarks. So little time has elapsed since my last inspection of this college, viz, December 17, 1889, and so little opportunity has been afforded for practical instruction that no change in affairs is perceptible. Military instruction, as before reported, is considered an acquisition to the college course both by the students and college authorities.

Last Friday the drill-hall was completed, and hereafter on stormy days practical instruction can be given without interruption on that account.

The cadets were inspected and drilled by company in infantry drill. The guns of Company A were very rusty; there were three absentees (cadets) and four out of uniform. In Company B there was one absentee (sick) and one out of uniform. There is no battalion formation, and the companies have not been instructed in the ceremony of inspection. This year there have been but four artillery drills per company, and, as Lieutenant Cowles reported the companies uninstructed as companies, I did not turn them out. There are in the two companies combined, however, two well instructed gun detachments.

In reply to my inquiry the president expressed himself as very much in favor of the tabulated information respecting agricultural colleges given in the report of the Inspector General of the Army for 1889.

Respectfully submitted.

J. P. SANGER,
Major and Inspector-General.

SHEFFIELD SCIENTIFIC SCHOOL OF YALE UNIVERSITY.

NEW HAVEN, CONN., June 4, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.:

GENERAL: I respectfully submit the following report of an inspection which I have just made of the military department of Sheffield Scientific School of Yale University.

The school received all the endowment of lands granted Connecticut under the act of Congress of July 2, 1862. The fund amounts to \$135,000 and is held by the State,

and the institution receives an annual income of \$6,750, or 5 per cent. interest on the investment. This school has been in existence since 1847, and of course was in full operation before the grant, and the military condition coupled therewith came to it. The military requirements as laid down in General Orders No. 15, current series, of the Headquarters of the Army, have never been complied with here. The military department has been conducted as other branches are usually conducted at universities, viz, by lectures.

The only officer of the Army that they have ever had at the school, prior to the present detail, was Lieut. Col. Benjamin S. Roberts. The experience gained from that detail induced the authorities of the university to look for some other way whereby they might honestly accomplish this part of the contract entered into with the Government in accepting the endowment. Arrangements were entered into, and at the expense of the institution, to secure a course of lectures each year from the officers stationed at Willets Point, N. Y. This state of things continued until last year when it became apparent that the Government proposed to insist upon something more being done than had been done previously, and an officer was asked for and First Lieut. C. A. L. Totten, Fourth Artillery, was detailed.

Lieutenant Totten has laid out his course, which consists of twenty-four lectures annually. Attendance on these lectures is made compulsory on the senior class. The students are required to keep notes of the lectures, and to write graduating theses on military subjects.

There are sixty-nine members in the present senior class and 80 per cent. have been present at the lectures delivered.

Lieutenant Totten has been both studious and energetic in the work confided to him. He had the note books and voluntary essays, together with the theses submitted by the members of the class, in his office for my inspection. The note-books indicate that fair attention was given to these lectures, and that the students gained some knowledge of military matters in a general sense, but these theses also demonstrate the fact that a working, practical knowledge of military matters was not imparted to the students.

The Sheffield Scientific School has never had any military organization in her student body. No steps have been taken towards organizing, arming, equipping, and drilling the student body or any portion of it.

The position taken by the university seems to be that the military department should be placed upon the same status as the other departments of learning. An examination of the subject, I think, will make it evident to the faculty that this is a mistake. In some of the other branches the experimental work is part and parcel of the lectures, as in philosophy and chemistry. In other branches practical work is made a part of the course, as in engineering, surveying, etc. In all these departments where nothing but text-books and lectures are employed as means of instruction it will be seen that the student is given an opportunity to grow by absorption or experience before great responsibilities are thrust upon him. This process is not possible in the military profession of our day. The late wars have opened by calling almost entire male populations that were of an age and physical condition to endure the hardships, from a state of profound peace to face the enemy on the battle field. Armies are organized and battles fought in a few days after the resort to arms has been definitely determined upon. Let me accentuate this by asking how much opportunity was given for instruction of troops after the powers had determined to resort to the arbitrament of arms in the last three great wars? The few days between the declaration of hostilities and the meeting of the armies were wholly occupied in mobilizing and concentrating the troops, and during such operations very little instruction of any kind can be imparted. The idea at Sheffield is that they are to fit their students for accepting responsibilities of commission officers in organizations that may be suddenly called into existence. The idea is certainly correct, but the method of carrying it into execution will not meet modern requirements. The lieutenant of to-day, to be efficient, must have sufficient education in military matters to enable him to form prompt and good judgments, and correct valuations of both strategical and tactical situations and positions; he should be familiar with applied tactics; quick at reading both country and maps; with a quick and fairly good judgment of distances and altitudes. Any officer, even the youngest lieutenant in commission, is liable to be sent out in charge of a reconnoitering patrol on occasions when the fortunes of the whole army and the key of the entire campaign, may be suddenly thrown into his hands. A few lectures are not going to qualify him to meet such an emergency.

I think the faculty of the university would agree with me that it would be unpardonable to omit giving these students some practical instruction if they knew that they would be called upon to meet an enemy face to face soon after graduation. Each one of them who receives a captain's commission by virtue of the certificate he carries away with him from the university assumes, in his ignorance, a responsibility that a few theoretical lectures can not possibly qualify him to meet. The graduates

from this department of the university, when called upon to apply their knowledge, make use of men and animals as their arguments. The law student, after being graduated from the university, still needs "practice and some back-falls" to make a lawyer out of him, but when men's lives are at stake "back-falls" must be avoided, and to do so practice must go hand in hand with theory.

Something might be done by "applied" lessons given from East Rock, West Rock, and similar commanding positions, and by mapping or sketching expeditions in the country; but even these will not teach the student the proper and best application of weapons of war. Every officer who has command of troops operating against an enemy, who is going to perform his duty efficiently, must know all about the practical use of the weapon put into the hands of the men confided to him. It is about as reasonable to expect to make a capable builder by teaching a student to work out mathematically the strains and stresses on specified timbers of a structure, as to expect to make a competent commissioned officer of the Army out of a student by lecturing to him.

The habit of yielding prompt obedience to legitimate commands and practice in exercising command are both primary matters, but of the very first importance. Lectures may make these young men severe critics of officers appointed over them, but they, of themselves, will never qualify the hearers for commanding troops.

If it is the intention of the General Government to adhere to the requirements set forth in General Orders No. 15, current series, Headquarters of the Army, the attention of the authorities of this university should be so informed. The authorities of the school and Lieutenant Totten both tell me that the War Department has been kept fully informed of the exact situation, and that no exceptions have been taken to it, and this silence is accepted as an assent to the existing status.

There was some suggestion made to me of an elective organization. I do not consider such an organization of any real value. I have seen some of them, and they go to pieces on the first stress. In all the other institutions coming under my inspection that received the endowment accruing from the act of July 2, 1862, the military course includes both theoretical and practical work, and the practical is made compulsory upon the lower classes. The taking of this course is necessary if the student receives his degree. I can not see any good and sufficient reason for not carrying out the same requirements at this school.

Lieutenant Totten is engaged in organizing and drilling a company of boys at the high-school in Bridgeport, and also in drilling the Governor's Guard of Hartford once a week.

There is no doubt of Lieutenant Totten's willingness to work.

Very respectfully,

R. P. HUGHES,
Colonel, Inspector-General.

DELAWARE COLLEGE.

WASHINGTON, D. C., June 10, 1890.

The INSPECTOR-GENERAL U. S. ARMY,
War Department, Washington, D. C. :

SIR: I respectfully submit the following report:

Location?—Newark, Del.

Date of establishment?—1828.

Endowments?—The interest on the proceeds of the sale of 90,000 acres of land-scrip received from the General Government yields an income of a little less than \$5,000. Fifteen thousand dollars a year are also received from the United States under the act for the establishment of the Agricultural Experiment Station. The college receives no support from the State.

Buildings?—The buildings are two in number. The main college building, of brick, contains the recitation rooms, the society rooms, the college library, dormitories, the oratory, dining rooms, kitchens, etc. This building also contains the chemical and electrical departments. The Experiment Station is a brick building two stories in height.

Equipment?—The college is especially well equipped in chemistry, but not as well as it should be in electrical science and engineering.

Government, in whom vested?—In a board of trustees, of which the governor of the State and the president of the college are ex officio members.

Religious denomination?—Non-sectarian.

Requirements of law (sections 1225 or 1260, Revised Statutes) met?—Yes.

Departments of instruction?—English language and literature, mental, moral, and political science, chemistry, mineralogy, and sanitary science, biology and geology,

mathematics and physics, Latin and Greek, French and German, agriculture, military tactics.

Collegiate courses?—Classical, Latin-scientific, modern language and science, engineering and science, agriculture.

President?—Albert H. Raub, A. M., Ph. D., professor of mental, moral, and political science.

Students and classes?—The regular college classes.

Discipline?—The discipline is in the hands of the president and the faculty of the college.

Expenses?—The expenses for students rooming in the college are \$93 per annum. Table board may be obtained in the college building for \$3 per week.

Date military department established?—February 24, 1889.

Has the detail been continuous since?—Yes.

Professor military science and tactics?—First Lieut. George Le Roy Brown, Eleventh U. S. Infantry.

Date assumed duty?—February 21, 1889.

Suitable for the position?—Yes. The president of the college reports that Lieutenant Brown is an energetic, capable officer, whose work has done much for the improvement of the college.

Number of hours per week to military duties?—Twelve.

Receive proper support from the authorities?—Yes.

What encouragement is given to the military department?—Every encouragement. The instructor reports that he has received every possible assistance from the faculty, board of trustees, and the friends of the college.

Interest manifested by the faculty?—A very satisfactory degree of interest is manifested by the faculty.

Is the department popular with the students?—Yes.

Satisfactory to the faculty?—Yes.

Efficient as it should be?—No. The instructor controls the students only at drills and recitations. It is perhaps as efficient as it can be under the present rules.

Requirements of General Orders, No. 15, of February 12, 1890, from the Headquarters of the Army, strictly enforced?—As far as practicable.

Does the professor of military science and tactics reside at or near the institution?—Yes.

When in the performance of his military duties does he appear in proper uniform?—Yes.

In his relations to the institution does he observe the general usages and regulations therein established affecting the duties and obligations of other members of the faculty?—Yes.

Does he perform other than military duties at the institution, and what compensation, if any, does he receive therefor?—He is professor of civil engineering, and receives a compensation of \$200 per annum.

To what extent do these duties interfere with his military duties?—Not at all.

Are all rules, and orders, appointments, promotions, etc., as indicated, made and promulgated by the professor?—So far as relates to his department. All orders are issued subject to the approval of the president of the college.

Does he enforce proper military discipline at all times, as required?—Yes.

Upon occasions of military ceremony and in the performance of military duties does he require the students to appear in the prescribed uniform?—Yes.

Is the course of instruction both practical and theoretical?—Yes.

Does theoretical instruction occupy at least one hour, and practical at least two hours, per week?—Yes.

Does the practical instruction embrace everything required under the head "Course of instruction" on page 2 of the general order, and both for infantry and artillery?—As far as practicable.

Specify any omissions.—The instruction in artillery does not embrace saber exercise and target practice.

Does instruction include the duty of sentinels, and castrametation?—Only theoretically.

Is instruction given by the professor personally, or under his immediate supervision?—By the professor, personally.

Is theoretical instruction given by the professor, and by recitations and lectures, and does it include a systematic and progressive course in the subjects mentioned in the general order?—As far as practicable.

Specify any omissions, or recitations or lectures upon other subjects.—No recitations or lectures upon other subjects.

Are the quarterly reports duly rendered, and in the required form?—Yes.

Are copies of all reports and correspondence retained?—Yes.

Is copy of the graduation report duly furnished the adjutant-general of the State?—It will be.

Is the professor of military science, etc., a member of the faculty, with all the rights, privileges, and authority of other heads of departments or professors?—Yes. And does he habitually exercise them?—Yes.

Is he provided with quarters on the same terms as other professors?—Yes.

The number of students since military professorship was established?—One hundred and six in college, seventy-six in academy.

Total number of graduates?—Four.

Largest number of graduates in one year?—Four. When?—1889.

Number of students in institution last year?—Twenty-four.

Number of graduates?—Four.

Other information which will indicate the present condition of the institution?—The enrollment since September, 1889, has been eighty-two, of whom seventeen held over from last year, making a gain of sixty-five.

How many students is the institution prepared to teach annually?—Two hundred.

Number of students in attendance, 82; males, 82.

Number of students in military department, 158; seniors, 4; juniors, 6; sophomores, 19; freshmen, 52; sub-freshmen, 76, (academy); special, 1.

Age of the youngest student in military class, 14; age of eldest, 24; average age, 18.

Age of youngest student in battalion, 14; age of eldest, 24; Average age, 18.

How many of the students live at the institution?—Twenty-five.

Of those in the military department?—Twenty-five.

How many live elsewhere?—Fifty-two college and thirty-six academy students.

Is the military course of instruction compulsory upon all under-graduate students?—Yes.

Who are excused?—Only those that are physically disqualified.

Are all under-graduate students, capable of performing military duty, required to attend the prescribed military exercises?—Yes.

What classes are required to attend?—All.

Who are excused?—Those physically disqualified.

What causes excuse students?—Physical disability.

Methods of military instruction?—The method of practical instruction laid down in Upton's Infantry and Artillery Tactics, the authorized manual of signals and the small arms firing regulations, and all cadets are carried through the school of the soldier, etc. under the personal command of the commandant, afterwards organized into a company and later into a battalion of two companies. The theoretical instruction has been in the form of lectures and recitations on the fundamental principles of organization, law, regulations, usages of war, uses of the different arms of the service, outposts, marches, camps, offensive and defensive campaigns, obstacles, etc., treated in an elementary and progressive manner.

Does this work occupy the whole time of the military professor?—Yes.

Facilities for military instruction?—Satisfactory and improving.

What are the text-books for each class?—For all classes: Upton's Tactics, Regulations and Instructions for the use of the Delaware National Guard.

How many students are studying each?—All.

What campaigns have the students studied?—The campaigns of the Army of the Potomac, Greene's campaigns in the Revolutionary war.

How many military essays by students?—One.

On what subjects?—Delaware's place in the Revolution. Prize Essay.

What other original work have the students done?—None.

Number of military recitations since last annual inspection?—Eight.

Number of military lectures since last annual inspection?—Forty-seven.

Number of drills?—Infantry, 306; artillery, 24; since last annual inspection.

Do the powers, methods, and distinction between military and martial law form a part of the military course?—Yes.

Instruction in Army regulations? How many?—Frequent lectures; students are required to take notes, and are afterwards questioned.

In use of Army forms and blanks; including rolls and returns?—Lectures and explanations.

In methods of requisition and supply?—Yes.

In probable fields of war, and military operations?—Yes.

Logistics?—No.

Strategy?—No.

Lines of supply?—Yes.

Instruction in outpost or reconnaissance duty?—Yes.

Any night exercises?—No.

Any instruction relative to fire-arms?—Yes.

Practical gunnery?—No.

Projectiles?—Yes.

Gunpowder?—Yes.

Other explosives?—Yes.

To what extent have the details of these several subjects been taught?—Only in an elementary way, owing to the very recent establishment of the military department. The aim of the professor has been to lay a foundation for better and progressive work.

Estimating distances?—No.

Time allotted different studies at the institution?—The number of hours allotted to each course varies, with the class, from fourteen to twenty-one hours per week, and for studies from one to five hours per week. The number of hours allotted to the military department averages about twelve per week, *i. e.*, allowing two drills each day of one-half hour each, two weekly drills of one hour each, two recitations of three-quarters of an hour each, one lecture each week of three-quarters of an hour, and extra artillery and signal drills, ceremonies, etc.

Value given different studies?—No grades; marks being the same for all studies.

What value has the military course in determining class standing or relative standing on graduation?—The same as any other.

Is the zeal and acquisition of knowledge in the military department satisfactory?—Considering the length of time, it is.

Messing?—College commons for students living in the college.

Number and character of military buildings?—None. Money has been used for the erection of a drill-hall and gymnasium. This building will include a gun-shed.

What facilities for in-door drill?—The college oratory, a spacious room, is used as a drill-hall in inclement weather.

For gallery practice?—None as yet.

For small-arms target practice?—A 500-yard range.

For signaling?—Flags only.

For artillery practice?—None. There is no target range, and no fixed ammunition is furnished by the artillery department.

Gymnasium?—A room in the college building has been fitted up temporarily as a gymnasium. The professor acts as instructor in gymnastics. Fencing is not taught.

Armory?—A room in the college building, adjoining the oratory, has been fitted up as an armory.

Number of muskets?—Seventy-five cadet rifles, caliber .45, the property of the United States.

Number of accouterments—sets?—Seventy-five.

Field guns?—Two 3-inch rifled guns, with limbers.

Are field guns properly housed?—No.

Are they covered with paulins?—Yes.

Artillery implements?—Yes.

Artillery harness?—None.

Ammunition?—For field guns, blank ammunition only. For rifles, 1850 ball and 800 blank.

When were the ordnance and ordnance stores received?—All received during the past year.

How stored and cared for?—Properly.

Condition of the ordnance as to repair and cleanliness?—Good.

Any unserviceable United States property?—None.

Has any United States property been lost or destroyed?—No.

Military organization?—The military organization consists of a battalion of two companies. Each company has one captain, one first lieutenant, one second lieutenant, one first sergeant, four sergeants, and four corporals. The staff consists of one adjutant, one quartermaster, a sergeant-major, and a quartermaster-sergeant.

What field officers are there?—None.

Uniform?—Cadet gray blouse and trousers, with black stripe, cap, gray cloth, with black band; cap ornament, a gold wreath uniting letters D. C. C., in silver, on black ground. Chevrons for non-commissioned officers of white cloth.

Method of appointment and promotion of officers and non-commissioned officers?—By the commandant, for proficiency and character.

From what class are commissioned officers appointed?—All. In future it is intended to appoint the officers from the senior classes.

Non-commissioned officers?—All.

How is the band organized and maintained?—No band. There is a drum and fife corps, composed of five drummers and five fifers.

From what class is the field music?—From the preparatory department.

Flags, national?—Yes. College?—Yes.

Is the professor of military science commandant of cadets?—Yes.

In fact as well as in name?—Yes.

Is there a separate artillery company?—Yes, a detachment of twenty-four. All students are, however, instructed.

Select company for special drill?—No.

What practice of instruction in cavalry tactics?—None.

What roll-calls are there?—None, except at drill.

What camp equipage?—None. Application for camp equipage was made, but the professor was informed that the law did not contemplate its issue.

What military camping?—None as yet.

What marches for instruction?—None.

Is any guard duty performed?—No.

Has each student walked post?—No.

Drill ground adequate?—The campus is used as a drill ground at present, and is not suitable for the purpose. A new drill ground has recently been purchased which will meet all requirements.

Average daily attendance at drill?—Seventy.

Do the students march to any duty other than drill?—No.

Do they assemble at other times?—No.

What are the punishments for misconduct etc.?—Reprimands, suspension, and expulsion.

What is the aptitude of students for military instruction?—Very good.

What is their interest therein?—Very great.

How long are new students exercised without arms?—About one month.

How long are recruits practiced in the "setting-up" exercises?—About one month.

How often are these exercises recurred to?—Occasionally.

Are all students frequently practiced therein?—No.

What practice or instruction in grand or minor tactics?—None.

What month is the battalion most frequently formed?—In the spring and fall months.

What least frequently?—In the winter months.

How often each?—About eighteen times a month in spring and fall.

Cause of difference?—The want of a proper drill-hall.

What practice or instruction in each of the prescribed ceremonies and inspections?—Limited only.

How often is there dress parade?—Every fair day.

Reviews, how often?—Occasionally. About six practice reviews have been held.

Is there a monthly inspection of the battalion?—No.

Are there weekly inspections of companies, under arms, on every Saturday?—No.

Is there a Sunday morning inspection of the dress and general appearance of the students?—No.

What other inspections are there?—None.

Is the number of inspections, reported as made, enough for thorough efficiency?—No.

Is there guard mounting?—Only for instruction and practice.

How often?—About six times during past year.

Hospital?—None.

What medical attendance have the students?—Private physician.

Is there any opposition on the part of the faculty or students to the military course; or does discontent exist?—None at all.

What improvements are needed in the military department?—A drill-hall and gymnasium, and better equipment in the way of rifles and accouterments.

What are immediately feasible?—Steps have been taken to secure the additional arms, etc., required. As before stated, the necessary funds for the erection of a drill-hall and gymnasium have been secured.

Condition, of office, records, etc.?—Good.

Review and critical inspection of battalion and remarks thereon?—I received a review of the battalion, which was commanded by Lieutenant Brown. The review was held on the college "campus," and the unfavorable nature of the ground interfered very materially with a proper rendition of the ceremony. The form for review prescribed in the drill regulations was closely followed. An inspection of the battalion followed the review. The arms were seemingly clean and serviceable, and the accouterments in good order. The inspection was followed by a short drill of the battalion. The drill was in the manual of arms and the school of the battalion. While there is much room for improvement, the drill was, on the whole, quite creditable; considering the fact that the military department of Delaware College is still in its infancy. After the battalion drill each company was drilled for a short time by its captain. These drills were followed by an artillery drill, which was quite satisfactory. The students at this institution appear to take great interest in the military department, and the work done by the military professor is deserving of praise.

Number and grade of present and absent?—Present, 1 adjutant, 1 quartermaster, 1 sergeant-major, 1 quartermaster-sergeant, 2 captains, 2 first lieutenants, 2 second lieutenants, 10 sergeants, 8 corporals, 35 privates, 5 musicians; total, 68. Absent, 13 privates.

Suggestion of president?—The president expressed himself as satisfied with the military department and had no suggestion to make. He is of the opinion that the

tabulated statement of college work published in the last annual report of the Inspector-General of the Army is of value and should be continued.

Suggestions of military professor?—The military professor suggests that the military department be furnished with camp equipage and a limited supply of ammunition for the field pieces.

I am, general, very respectfully, your obedient servant,

P. D. VROOM,
Major, Inspector-General.

THE NORTH GEORGIA AGRICULTURAL COLLEGE.

INSPECTOR-GENERAL'S OFFICE, WAR DEPARTMENT,
Washington, D. C., May 1, 1890.

To the INSPECTOR-GENERAL, U. S. ARMY:

SIR: I respectfully submit the following report:

Location?—The college stands on the summit of a slight eminence adjoining the village of Dahlonega, Lumpkin County, Ga., which place is beautifully situated among lofty hills in the immediate vicinity of the Blue Ridge, 2,240 feet above tide-water. The building is erected upon the site of the old United States mint. Dahlonega is the county seat, and is 25 miles from Gainesville, the nearest station on the Atlanta division of the Richmond and Danville (Piedmont Air-Line) Railroad. Gainesville is 53 miles northeast from Atlanta. Between Gainesville and Dahlonega there is daily communication by means of mail-bags.

Date of establishment?—This college owes its origin to the act of Congress approved July 2, 1862. The general assembly of the State, March 10, 1866, accepted the donation under this act, and the fund, having been received, the interest of it was placed under the control of the trustees of the University of Georgia. The college was incorporated in 1871.

Endowments?—By an act of Congress, approved April 20, 1871, the Secretary of the Treasury is "authorized and directed to convey to the trustees of the North Georgia Agricultural College, * * * the building known as the United States branch mint at Dahlonega, and 10 acres of land connected therewith, * * * so soon as he is assured that said trustees have been properly incorporated by the laws of Georgia, and on the express condition that said building shall be used exclusively for educational purposes, and in conformity with the provision of the act entitled 'An act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts.'"

Upon incorporation the college entered into a contract with the trustees of the university by the terms of which the North Georgia Agricultural College became a branch and part of the university, the title to the mint property being conveyed to the university on the conditions specified in the act of conveyance, and the trustees of the university appointing the President of the college, making a certain allowance for its support, and exercising over it a general supervision.

The school is maintained by the "allowance" annually made from the interest on the land-scrip fund, and a small annual appropriation by the State. From the Charles McDonald Brown Scholarship Fund the Institution receives annually \$1,000. This is to aid worthy young men unable to pay their way through college. The beneficiary promises on honor in writing he will repay the money as soon after he completes his collegiate course as he is able.

Buildings and grounds?—A few years since, the original college building (the mint) was destroyed by fire, and the present brick structure was erected upon the old foundation, the State by act of October 13, 1889, appropriating the sum of \$5,000 for completing and furnishing the building and inclosing so much of the grounds as might be deemed necessary. Besides the 10 acres granted by the General Government, the college has 17 acres adjoining under a lease for ninety-nine years. A good wood-cut of this commodious and comfortable college building will be found upon the cover of the catalogue.

Equipment?—The equipment of this institution is very meager. When the original college building was destroyed by fire the entire library was lost, but a new library is being gradually collected.

Government, in whom vested?—In local board of trustees. The interior administration rests with the president and faculty.

Religious denomination?—Non-sectarian.

Collegiate course?—The length of the course is four scholastic years of nearly ten months each, each year being divided into two terms, the first beginning the first Monday in September and continuing until the first Monday in February, when the second term begins, which continues until commencement, the latter part of June.

There is no interruption of either term, except for an intermission of a week or ten days at Christmas.

There are six classes, viz: Senior, junior, sophomore, freshman, sub-freshman A, and sub-freshman B. Practically, however, the students are entering and leaving the institution throughout most of the year, being unable to maintain themselves at school but for short periods. There is great irregularity in attendance.

Students, admission of, tuition?—An admission fee of \$5 on entering and at the beginning of each term is required. This is set apart for a library fund and for incidental expenses in the scientific department. No tuition is exacted. Each Senator and Representative is authorized to appoint and send one pupil to this college, who shall be received without the payment of entrance fee.

Discipline?—The system of discipline, under established well-known rules, has for its object to secure, with as much mildness as possible, prompt and cheerful obedience, and quiet, respectful demeanor to the college authorities, and orderly conduct everywhere. The discipline of the cadets is reported fair. The grades of punishment are: (1) Reprimand, demerits, deprivation of recreation, walking post as sentinel. (2) Confinement to room, arrest, reduction to ranks of officers and non-commissioned officers. (3) Suspension, dismissal. (4) Expulsion.

With the exception of demerits in certain cases, punishments of the first and second grades are imposed by the president; those of the third and fourth grades only by the entire faculty.

Requirements of law met?—Under section 1225, Revised Statutes, yes. The college has capacity to educate at the same time not less than one hundred and fifty male students.

Female department?—Rooms in the college building are assigned for the exclusive use of young ladies attending college, upon which no intrusion is allowed; and while at the college and not attending recitation, they remain in these rooms in the presence and under the direction of Miss Mary E. Smith, the principal in the female department. They may pursue any of the studies included in the curriculum for male students, and under the instruction of the same professors. There are now thirty female matriculates distributed among the sophomore, freshman, and sub-freshman A classes.

President?—Col. William S. Basinger, A. M., is president of the college, but the Rev. Dr William E. Boggs, chancellor of the University of Georgia, is the senior member of the faculty.

Date military department established?—The military department was established in 1876. The first army officer detailed was First Lieut. Joseph Garrard, Fourth Artillery (now captain Ninth Cavalry), in October, 1876; relieved in July, 1880. First Lieut. George S. Hoyle, First Cavalry, was detailed in July, 1880; relieved in July, 1883. Second Lieut. William C. Rafferty, First Artillery, was detailed in September, 1884; relieved in July, 1887. First Lieut. Frederick G. Hodgson, Sixth Cavalry, the present incumbent, was then, July 1, 1887, detailed, and reported in September, 1887.

Professor of military science and tactics?—First Lieut. Frederick G. Hodgson, Sixth Cavalry, a graduate of the United States Military Academy in the class of 1881, born in Georgia.

Date assumed duties?—September 2, 1887.

Suitable for position?—Lieutenant Hodgson labors under great disadvantages at this institution from its want of means and the indigence of the students. He is an energetic, painstaking, conscientious gentleman, undoubtedly well qualified for the position. I was favorably impressed by his manner and conversation.

Member of the faculty?—He is a member in all respects of the faculty and faithfully performs the duties and regularly attends the meetings of this body.

Receive proper support from authorities?—Yes; the military department is popular with the authorities and receives such encouragement as results from this friendly feeling, but owing to lack of funds it can receive no substantial encouragement. The military department is popular with the students.

Efficient as it should be?—"It is not as efficient as it should be," Lieutenant Hodgson states, "but as efficient as possible; the school is very poorly maintained; the class of students attending it are very poor country boys, who are not always able to keep themselves supplied with proper uniforms, which detracts from the military appearance. Not being in barracks, the discipline is not as strict as it otherwise would be."

Number of hours per week for military duties?—Five hours per week given to drilling, weather permitting; theoretical instruction three and three-fourth hours. Lieutenant Hodgson is the instructor in French, for which service he receives no compensation.

Number of students capacity for?—The college is prepared to teach annually two hundred students.

Number of students in attendance?—One hundred and twenty-nine. Males, 99; females, 30.

Number of students in military department?—Seventy-five males. By classes: Seniors, 3; juniors, 12; sophomores, 13; freshmen, 28; sub-freshmen, 19. There are fourteen under fifteen years of age. This leaves ten coming under the class "physically disqualified"—a large percentage.

Military course compulsory?—Military duty is obligatory on all male students over fifteen years of age, not physically disabled. In the latter case, the fact must be certified by a physician in good standing, in a prescribed form. But every student is liable to such military studies and modified military duty as he may be found capable of.

Uniform?—Cadet gray blouse, with single row of State buttons. Trousers of same material, with black stripe. Dark blue forage cap. Full-dress uniform is the same, except a gray helmet is worn, and white webbing shoulder and waist belts. A simple and cheap uniform only is practicable. Any uniform at all expensive is not possible at this institution, nor is it necessary.

Military organization?—Battalion as prescribed in Upton's Infantry Tactics, of two companies. There are six company officers, two captains, and four lieutenants; there is one staff officer, the adjutant, a first lieutenant; and one non-commissioned staff officer, the sergeant-major.

Method of appointment and promotion of officers and non-commissioned officers?—Appointed by the President upon the recommendation of the officer; the commissioned officers from the senior and junior classes, the non-commissioned officers from the junior and sophomore classes.

There is no band.

There is no practical instruction in cavalry tactics; there are no facilities.

Number of drills per week?—Five, when weather is favorable, during the school year. Infantry, through the school of the Battalion Artillery, the manual of the piece, and, during their continuance, the cadets attending—juniors, sophomores, and some freshmen—have two drills per day for five days in the week. The average length of drills is one hour.

Methods of military instruction?—The theoretical instruction consists in recitations by the junior class and non-commissioned officers of the sophomore class in infantry tactics through the School of the Battalion. The senior class has recitations in "Califf's Notes on Military Science and the Art of War," and also on lectures given by the military professor, on the organization and composition of modern armies, the minor operations of war, particularly those of which a young officer would require knowledge, camping, marching, guard duty, outpost, reconnoissances; on certain battles to illustrate particular subjects; and on parts of the campaigns of Frederick and Napoleon. The class does not make a study of any entire campaign.

The practical instruction consists in drills in infantry in the schools of the soldier, company, and battalion; company and battalion inspections; reviews; company skirmish drills; guard mounting; posting and relief of sentinels; and target practice. In artillery, the manual of the piece, and such movements as can be executed by dismounted attachment. Cadet officers and non-commissioned officers are permitted to exercise command, under the personal superintendence of the officer.

Military essays by students?—None; and they have done no original work.

Text-books used?—Upton's Infantry Tactics, for junior class and non-commissioned officers of the sophomore class; Califf's Notes on Military Science, etc., for senior class.

How many students are studying each?—Tactics, sixteen. The seniors had not yet, at date of inspection, begun their recitations; there were but three of them.

No recitations in army regulations.

No instruction in use of army forms and blanks, including rolls and returns.

Methods of requisition and supply explained to cadets?—The power, methods, and distinction between military and martial law very slightly touched upon.

No instructions given as to probable fields of war and military operations; logistics, strategy, and lines of supply are more or less fully explained.

Military signaling with flags will be taught the present scholastic year.

Small-arm target practice is taught to the extent of ammunition furnished. Lieutenant Hodgson calls attention to the fact that targets, pasters, etc., are not furnished to colleges.

Artillery target practice?—None; no ammunition.

Number of muskets?—One hundred and forty-eight; caliber, 45; a few are un-serviceable; the others while serviceable are very much worn; used only by students. There are thirty sabres.

Number of accouterments, sets?—One hundred and forty cartridge-boxes, 126 waist belts, 138 bayonet scabbards (all very much worn), 28 saber belts.

The following discrepancies between the return and the property on hand are reported, viz: Bayonets, 14; bayonet scabbards, 12; cartridge-boxes, 10; waist belts, 24, and saber belts, 2. Deficient—there must be two muskets deficient also. Lieu-

tenant Hodgson reports that no property has been destroyed, and none lost since his incumbency, and that none is absolutely worn out, though the arms are old and show signs of long use; and that the United States property is well cared for.

Memorandum: The Ordnance Department has made the following issues:

	Dec. 7, 1876.	June 21, 1880.	Total.
Springfield cadet rifles, caliber 45	87	63	150
Bayonet scabbards, steel.....	87	63	150
Carriage-boxes, caliber 45.....	87	*63	150
Waist belts and plates	87	63	150
Light cavalry sabers		24	.....
Light cavalry sabers (June 14, 1878)		30	54
Saber belts and plates (July 8, 1878)		30	30

* McKeever.

Field guns?—Two 3-inch wrought-iron guns and two 3-inch carriages and limbers were issued to this college June 14, 1878. The carriages and limbers were returned to the Augusta Arsenal April 17, 1889, and were replaced May 10, 1889. These guns mounted on the new carriages, with implements, are stored in the basement of the college building, and are in good condition. They are the only field guns I found properly housed at the several colleges inspected.

Armory?—There is a room set apart in the college building for an armory suitable and ample for the purpose. The arms are kept under lock and key; the key in possession of the officer.

Ammunition?—One hundred blank cartridges for 3-inch rifles; 1,000 blank rifle and carbine cartridges; 2,500 carbine ball-cartridges; 300 friction primers. Condition serviceable. The ammunition is stored in a private magazine.

Number of military buildings?—None.

Number of other buildings?—One.

Drill ground adequate?—Yes; but quite rough.

No military camping, no equipage. No marches for instruction.

Time allotted different studies?—Recitations in mathematics, the languages, physics, and chemistry are given more time than those for military instruction, and elocution less; but Lieutenant Hodgson states "that so far as the allotment of time to the different branches is concerned, there is as much available for the theoretical military instruction as for any other branch. The same amount is not used because it was considered that it would be too much of a strain on the students."

Value given different studies?—All have equal value in graduating-class standing.

The age of the youngest student in the military class is 17 years; the age of the eldest is 28 years; average age, 20 years and 6 months. The age of the youngest student in the battalion is 15 years; the age of the eldest is 28 years; average age, between 19 and 20 years. None of the students live at the college; all live at boarding-houses in and about the town.

Lieutenant Hodgson reports the zeal and acquisition of knowledge of the school satisfactory. "I can not say it is least satisfactory in any particular branch. No opposition or discontent exists that I am aware of." The college authorities do not desire any changes in the law establishing the military professorship, so far as I am informed.

Total number of students and graduates?—The aggregate attendance since the military professorship was established is 2,640. This aggregate is simply the sum of the year's attendance during the period of fourteen years, *i. e.*, a student is counted in the above number not only once, but as many times as he attended school in different scholastic years. Owing to the loss of records it is impossible to state the number of students. The total graduates for the period is 58. The largest number, 10, graduated in 1877. There was an attendance of 143 last year, and 3 graduates.

Lieutenant Hodgson states: "The school is now in better condition than it has ever been, except with regard to the library, which has never been restored. * * * The diminution in attendance from that of several years ago is due to an elevation of the college course, the striking off of primary classes. The attendance now is slowly increasing year by year, and it will probably be more this year than it was last.

The battalion is most frequently formed in the months of March and April, and then every favorable drill day; but not at all in September and October, because during these months, the beginning of the school year, there are not sufficient old cadets to form even a small battalion. In March and April all the cadets are in companies and battalion drills are had. During the greater part of the year there are weekly inspections; not on Sunday. Inspections and reviews are held an average of

once per month. There is guard-mounting. Lieutenant Hodgson thinks these exercises are ceremonies enough for thorough efficiency.

There are probably thirty artillery drills annually.

There is practical instruction on the drill-grounds in guard-mounting, company and battalion inspections, and reviews.

No practical instruction in outpost duty, nor any night exercises.

There is not a separate artillery company.

Cadets are exercised, without arms, from one month to six weeks.

There is no practical instruction in grand tactics nor in minor tactics, as distinguished from drill; there is theoretical instruction by text and lecture.

Each cadet has not walked post. The cadets have been taught some of the duties of a sentinel during the time of an ordinary drill, so far as can be without the actual performance of guard duty.

They are required to march to church, and do not assemble at other times except for drill.

There have been no practice marches.

No facilities for in-door drill are reported; but I think I recall a room, used I believe as chapel and in which the commencement exercises are held, which it seems to me might be utilized for this purpose if the floor space is not too contracted.

There are no sufficient facilities for military gymnastics. There are a few out-door apparatus for physical training.

I did not review and inspect the battalion, owing to the inclemency of the weather.

The arms in the hands of cadets are clean and well cared for. The uniforms as a rule are neat, but in some instances are considerably worn, due to the fact the cadets have no dress uniform; indeed have only one suit, which they use on all occasions, being too poor to buy others. At all drills and other military exercises uniforms must be worn, but at other times they may be dispensed with or not, at the option of the cadet; but, as a matter of fact, I judge they are worn at all times, for reasons above stated. The cadets are in good state of drill. The great drawback to reaching perfection is that there really has to be an entire reorganization each year, there not being a sufficient number of old cadets to form a battalion; therefore, they can only be exercised in the elementary drills until the new cadets (recruits) are sufficiently advanced to be put into companies. Hence it almost amounts to teaching each year an entire new lot of boys. Another obstacle is the great irregularity as to time of attendance.

The military professor is the "commandant of cadets," and the military department is under his immediatedirection. He commands at all ceremonies and battalion and artillery drills, and is present and superintends all other drills. He also inflicts punishments upon cadets for all military neglects and breaches of discipline.

During the fourth quarter of 1889, to date of inspection, while the inclement weather had interfered to some extent with drills, there had been 30 infantry drills, of one hour each, with 69 cadets present, 6 absentees; 6 inspections of three-fourths of an hour each, with 66 cadets present, 9 absentees; and 5 recitations in tactics of three-fourths of an hour each, attended by 4 lieutenants, 10 sergeants, and 2 corporals.

The general aptitude of the cadets for military instruction, etc., and their interest in it is good.

Recommendations: Unless they can be supplied under existing law, I recommend a small appropriation for these land-grant colleges, for the purchase of miscellaneous articles, such as target material, spare parts for small-arms, and text-books on military subjects. The supply is suggested of a few prismatic compasses, and other simple instruments, to be used in teaching practically topography and topographical reconnaissance. I recommend the detail of an enlisted man of ordnance or a competent artillery soldier, to be charged with the care and repair of arms, etc., or some arrangement might be made with a retired soldier.

It is proper to state I called upon the president, Colonel Basingar, at his office, with Professor Hodgson, and had a pleasant interview. I was the guest during my stay of Lieutenant Hodgson.

This report is accompanied by the following four papers, viz: Quarterly return of the officer to November 23, 1889, A; roll of cadet officers and non-commissioned officers, B; catalogue of the college for 1887-'88, C; and catalogue (in duplicate) for the year 1888-'89, D.

I am, general, very respectfully,

H. CLAY WOOD,
Assistant Adjutant-General, Inspector.

KNOX COLLEGE, ILLINOIS.

HEADQUARTERS DIVISION OF THE MISSOURI,
INSPECTOR-GENERAL'S OFFICE,
418 Pullman Building, Chicago, Ill., June 4, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.:

SIR: I have the honor to submit the following report of my inspection on the 23d of May of the military department at Knox College, at Galesburg, Ill., in accordance with instructions from the War Department, dated Adjutant-General's Office, May 7, 1890.

At present 51 students are enrolled in the military department, viz, seniors, 3; juniors, 10; sophomores, 3; freshmen, 12; sub-freshmen, 23. The battalion is composed of two companies; uniform, cadet gray trousers, blouse, and cap. They are armed with 90 rifles and equipments, which are in fair condition. Have no field artillery at this university, and therefore no artillery attachment. Ammunition, 2,000 rounds for rifle in good condition, stored in vault of county jail.

Military drill at this college is voluntary and does not count as a study. At the beginning of a school term in September three drills were ordered for each, each of one hour's duration. These drills consisted at first in setting-up exercises, later drill in manual of arms and company and battalion drills. During the winter, as there is no place for general drill, the companies are divided up into squads, each squad having no less than two hours' drill per week. These drills are in the manual of arms, bayonet exercise, saber exercise, and pointing, aiming, and sighting drills, with a little gallery practice. Since the weather has been favorable company drills have been resumed, with dress parades every evening during pleasant weather, and inspection about once a month. The facilities for drill are a small gymnasium and a large campus. Theoretical instruction given in lectures on army organization, duties of soldiers, customs among military men, history of small arms. Have no recitations in tactics nor regulations.

Lieut. G. O. Cress, Seventh Cavalry, has been on duty here since June, 1889. He resides near the college. Although having been informed that he is a member of the faculty, and his name appears as such on the annual catalogue, he has never been invited to attend any of their meetings. No other subjects are taught by him, nor does he receive any extra compensation on account of his detail here. Lieutenant Cress reports the discipline of the students as being fair—none of them living at the college—and their interest in the military department seems to be quite popular with those who enroll themselves in it. The members of the faculty, the president in particular, appreciate the benefit that might be derived and give his department such encouragement as they can.

It is the opinion of Lieutenant Cress that from now on the Cadet Corps may be made more popular with the students, and that greater efficiency may be attained, owing to the fact that a new society hall is to be erected during the coming summer, the basement of which is to be prepared for an armory and drill hall. An effort will also be made to get more members of the freshmen and sophomore classes to join, so the theoretical instruction may be, each year, given to these two classes. Military drill should be made compulsory upon all able-bodied male students.

A gold medal, presented to the college by Lieut. S. C. Mills, U. S. Army, the former commandant of cadets, known as the "Mills medal," to be worn by that cadet, non-commissioned officer or private, declared to excel in drill and discipline, is competed for in December of each year. This medal is worn by the cadet declared entitled to it until the end of the school year, if he remains in college during that time. A competitive company drill is also held annually during the spring term for a handsome Cadet Corps flag, presented to the college by Lieut. E. A. Edwards, U. S. Army, former commandant of cadets, the flag to be awarded to and borne by the company declared to excel in drill and discipline, until again competed for.

Lieutenant Cress submitted the following names of students having shown special aptitude for the military service: Cadet Capt. J. M. Turner, Cadet Lieut. and Adjutant H. H. Cleveland, Cadet Lieut. O. M. Lanstrum.

The continuing of the tabulated statement of college work, as published in the last annual report of the Inspector-General, it is thought would be desirable.

Two small companies were paraded for inspection and drill. They were neat in appearance, well set up, and drill in the manual of arms and company manœuvres very satisfactory.

The president informed me that owing to the former conditions the number of cadets for drill would necessarily be small, but next term cadets of certain classes would be required to attend drill, which will make a battalion of at least 100 men or more.

The president stated that he is well pleased with Lieutenant Cress and his work, and that the faculty support him in all his efforts to make the military feature a success.

The new hall which is to be built will enable Lieutenant Cress to continue his drills through the winter months, both squad and company. There seems to be a growing popularity for the military feature at most institutions of learning, and with excellent results.

The thorough training, the almost military discipline, both of teachers and pupils, with the attendant results of a high average of moral and intellectual culture in the German educational system affords an instructive and profitable study. Whether this system in all its details is one that we should seek to imitate is a question on which there may be wide difference of opinion. A system which so unifies a nationality as that which has made Germany the leading nation of the European continent is surely worthy of admiration.

Respectfully submitted.

Your obedient servant,

E. M. HEYL,
Colonel, Inspector-General.

THE UNIVERSITY OF ILLINOIS.

HEADQUARTERS DIVISION OF THE MISSOURI,
INSPECTOR-GENERAL'S OFFICE,
418 Pullman Building, Chicago, Ill., June 3, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C. :

SIR: I have the honor to submit the following report of my inspection of the military department of the University of Illinois, located at Champaign, Ill., made on the 22d day of May, in accordance with instructions from the War Department, dated Adjutant-General's Office, May 7, 1890.

At this university all male students are required to drill until their senior year. The battalion of cadets is composed of over 300 students, organized into seven companies of infantry, a band, and a battery attachment. The uniform, blouse, trousers, and cap is of cadet gray. They are armed with 299 rifles, 300 sets of equipments, in good condition, and two 6-pounder field-pieces, which should be replaced by guns of modern breech-loading pattern. The arms are kept in drill hall and guns in gun-sheds.

Students of more than one year's experience at the university, except seniors, are drilled twice a week. Infantry and artillery students, during their first year, drill three times a week in the schools of the soldier, company, and battalion. The freshmen class enters in September; they are drilled in the school of the soldier, without arms, until November 15, then with rifles and a few simple platoon and company movements to end of winter term. At the beginning of the spring term the military class is organized and battalion drills take place. The freshman military class recite tactics twice a week. In the fall term of sophomore year the corporals of the preceding term are appointed sergeants and used as instructors of new students. During this term the sophomore class reviews the school of the soldier and finishes the school of the company and also the company skirmish drill. During the winter term they have the school of the battalion. During the spring term the sophomores are instructed in gallery practice, giving of commands, reloading ammunition and target practice on the range, to 450 yards, which is the limit of the range. They also have five chapters in field fortifications—wheelers; artillery drill for three weeks. At the beginning of the next fall term, being their junior year, they are appointed captains and lieutenants; they revise the school of the company, field fortifications, street-riot duty, and of course drill their companies. They are also instructed in the ceremonies of guard-mounting, dress parades, inspections, and such others as time can be obtained for them. During winter term drills in ceremonies, art and science of war, and verbal instructions in the making out of returns, caring and providing for companies in camp and on the march, the general organization of armies, the constitution and organization of courts-martial, a general lecture as to military and martial law and the circumstances governing the use of each, and many other subjects are discussed. At the end of the senior year they are given a general examination, with a view of finding out the extent of their military knowledge, and all who pass this final examination are commissioned as brevet captains in the National Guard by the governor of Illinois. The standings obtained in military science are not counted in the number required for graduation or class standing; the above named being deemed sufficient reward for proficiency in this department.

A new drill hall has just been completed, 100 by 150 feet, at a cost of \$15,000. There is also a good campus for outside drills. The library of this institution contains about 150 volumes on military subjects, including histories.

Lieut. C. B. Hoppin, Second Cavalry, reported for duty at this university September 1, 1887. He resides about 1½ miles from the college. He is a member of the faculty. No non-military subjects are taught by him, nor does he receive any extra compensation on account of his detail here. He stated that his department is given all needed support and \$100 is allowed annually, in addition to the necessary repairs.

The military discipline of the students is good and is improving. Their general interest manifested in drills, etc., is good; the number taking part is increasing.

Lieutenant Hoppin recommends that the officer on duty at colleges should not be relieved until the one sent to relieve him has arrived and been present with the battalion for at least two weeks, so as to carry on the work as smoothly as possible, and to relieve the new officer of the embarrassment, and the institution of the uncertainty, consequent upon his entry upon routine work for which no rules are laid down as an index of how and why it is carried on as it is. A set of maps should be furnished illustrating campaigns as follows: "Vicksburg," "Atlanta," "Gettysburgh," siege operations before Fort Wagner and Petersburg. Sample sets of uniform and equipments for the several arms, or illustrated pamphlets showing same in detail. Muster rolls and other blank forms in use in the company should also be furnished.

No copy of the last annual report of the Inspector General U. S. Army containing tabulated statement of college work, was received at this institution. They would be glad to see it. It is recommended that if it is intended to continue the tabulated statement a copy of the same be sent to the commandant of cadets at each college. The following names of students were submitted by Lieutenant Hoppin, as having shown special aptitude for the military service: Seniors: C. L. Crabbs, J. M. White, F. E. Storer, F. W. Waterman, S. D. Bawden, H. Hazleton, juniors; A. E. Harvey, F. H. Eno.

The following sophomores are reported as very promising students and will make excellent instructors: A. L. Pillsbury, G. L. Pasfield, P. D. Burrows, James Steele, G. W. Seaman and W. G. Miller.

Seven companies, band, and detachment of artillery were paraded for inspection and review. The marching, drill and manual of arms, were all very satisfactory. I was very much pleased with the promptness and soldierly appearance of the battalion.

Lieutenant Hoppin is a very careful instructor, and has given perfect satisfaction during his tour of duty here. He is held in very high esteem by the president and faculty of the university, so much so, that I am informed an effort was made to continue his detail another year.

The president of the university is a gentleman of broad views and liberal ideas. He is fully in accord with the military features and gives it all the support possible. The drill hall constructed under the direction and management of the president, is certainly a credit to not only the university, but the State.

I was particularly well pleased with the band.

Respectfully submitted,

Your obedient servant,

E. M. HEYL,
Colonel Inspector-General.

DE PAUW UNIVERSITY.

HEADQUARTERS DIVISION OF THE MISSOURI,
INSPECTOR-GENERAL'S OFFICE,
418 Pullman Building, Chicago, Ill., May 31, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.

SIR: I have the honor to submit the following report of my inspection of the military department at De Pauw University, at Greencastle, Ind., made May 20, in accordance with instructions from the War Department dated Adjutant-General's Office, May 7, 1890.

Lieut. R. C. Williams, Fifteenth Infantry, reported for duty at this institution on January 16 last. He resides but a short distance from the college, and is a member of the faculty. He teaches civil engineering and plane surveying, but states that this does not interfere with his duties as professor of military science and tactics. One hundred dollars is allowed him, by the college authorities, for hearing the former (one term and a half), and for the latter he is paid \$50.

This university has at present 1,000 students, 750 males and 250 females. Of these about 125 live at the college and the others board at club houses. The discipline of

the students is reported good. The organization of the De Pauw University includes the following schools: (1) Asbury College of Liberal Arts. (2) School of Theology. (3) School of Law. (4) School of Military Science and Art. (5) School of Music. (6) School of Art. (7) Normal School. (8) Preparatory School.

It teaches all the sciences, has good laboratories and a complete observatory. This university has received no land grant from the United States, but its productive endowment is now \$400,000. This will be increased to \$2,000,000 when the De Pauw estate is sold.

The De Pauw Corps of Cadets is organized into a battalion of four companies, commanded by a major. It has also two separate artillery detachments, and a band of fourteen pieces. Their uniform is of blue cloth, resembling the fatigue uniform of the Army. They are armed with 150 cadet rifles (two are disabled) and equipments, and two pieces of field artillery, all in fair condition. Have on hand 20 blank cartridges for field guns and 1,000 metallic ball cartridges. The blank cartridges are too large for the field pieces and jam in the piece. The other ammunition is in good condition. All stored in magazine and cared for by cadet quartermaster. The following supplies are lost or worn out: 1 hand spike, 2 sponge staffs, 2 primer pouches, 2 cartridge pouches, 2 tar buckets, 2 vent covers, 2 prolonges, 3 thumb stalls, and 2 lanyards.

The military school being considered here as a separate school, drill is obligatory only upon the senior preparatory, freshmen, and sophomore classes. The only excuse from drill is physical disability, but some poor students who are working their way through college have also been excused. The 136 members of the battalion belong to the following classes: Seniors 5, juniors 6, sophomores 31, freshmen 38, sub-freshmen 56. Their ages are between sixteen and twenty-six years; average about nineteen years. The officers of the battalion belong to the following classes: Major and captains to senior, first lieutenants to junior, second lieutenants and sergeants to sophomore, corporals to freshman and preparatory. Band comes from all classes—many are from the normal school. They are drilled twice a week in squad, company, and battalion drill, dress parades, and guard-mounting. The artillery detachments have been drilled in the manual of the piece and mechanical manœuvres; had also five inspections by companies. Indoor drills are held in the armory hall, and for outside drills the east campus is used. The officers and non-commissioned officers recite once a week in tactics and once a month in regulations. Lectures were given on tactics, target practice, and use of the service rifle. No attempt has as yet been made to give thorough instruction on the preparing of army blanks, all the time having been devoted to practical instruction in tactics.

Lieutenant Williams stated that all courses receive equal weight in graduating; that the military course is very popular with the students and satisfactory with the faculty, that many of the professors encourage their students to volunteer for drill, and often come to witness drill. The new president of the university, Dr. John, is also giving him all the aid in his power to make the military department efficient. Lieutenant Williams recommends that all those students who try to avoid drill be required to drill, and that the drill ground be put in better condition. On the former need the faculty recently appointed Dr. Curtis (who is a member of the faculty) to act as surgeon for the military school. The number of students excused from drill for trivial complaints are very few. The effect of the tabulated statement of college work, as published in the last annual report of the Inspector-General, is not known, but the officer thinks it should be continued.

Lieutenant Williams submitted the following names of students having shown special aptitude for the military service: G. M. Walker, E. G. Rognon, C. A. Houts, J. E. Neff, E. C. Smith, M. H. Turk, C. H. Poucher, F. L. Littleton, J. A. Higdon, C. W. McMullen, H. L. Burr, R. E. Locke, F. M. Downey, L. S. Durham, and A. M. Cole.

The commencement of the School of Military Science and Tactics was held on May 16 last, the programme consisting of competitive infantry drills, artillery contest, battalion drill, music, report of judges, presentation of diplomas by President Dr. John, and dress parade.

The battalion, although not as large as it should be, is in excellent condition. The drill, marching, and manual of arms were all well executed. The arms and equipments are in good order; they are kept in a room well adapted for the purpose. The artillery detachment did particularly well in the manual and mechanical manœuvres of the piece. I was very much pleased with the artillery detachment at Columbus, but I must say that I am more than gratified with the detachment here. I would suggest a competitive drill between the Columbus and De Pauw artillery detachments. I am sure it would be very interesting and worth witnessing.

Lieutenant Williams has only been here a short time, but he seems to have done good work. The president speaks very well of him, and is anxious to give all the aid and support possible to make the military feature a success.

The university has a very fair band organized from the students; they play well and

add greatly to the military feature in making the ceremonies much more attractive. The blue uniforms and white gloves give a very neat appearance to the battalion.

The university has an excellent hall for squad and company drill during the winter.

Dr. John, the new president of the university, impressed me as being a man of strong character and ability, and I have no doubt that under his direction and management the university will become one of the most popular in the country.

Respectfully submitted.

Your obedient servant,

E. M. HEYL,
Colonel, Inspector-General.

PURDUE UNIVERSITY.

HEADQUARTERS DIVISION OF THE MISSOURI,
INSPECTOR-GENERAL'S OFFICE,
418 Pullman Building, Chicago, Ill., June 1, 1890.

The INSPECTOR-GENERAL U. S. ARMY,
Washington, D. C.:

SIR: I have the honor to submit the following report of my inspection of the military department at the Purdue University, located at La Fayette, Ind., made May 21, in accordance with instructions from the War Department, dated Adjutant-General's Office, May 7, 1890.

The result of sales of land grant this college received from the Government amounts to \$340,000. It has also an endowment, made by John Purdue, consisting of 180 acres, on which the university buildings are located. Annual appropriation by the State amounts to \$30,000. No part of the income is set aside for the benefit of the military feature of the college. This college has at present 321 males and 108 females, a total of 429 students. About 50 scholars live at the college; the remainder live in village near. Their discipline is good.

Military drill is voluntary at this university, but next year it will be made compulsory for the preparatory and freshmen.

The present corps of cadets is composed of the following: Seniors, 3, juniors, 12, sophomores, 17, freshmen, 29, subfreshmen, 14; total, 75 members. Their ages are between 14 and 25 years. They are organized into two companies of infantry, an artillery detachment, and drum corps. Their uniform is dark blue blouse with State buttons, and light blue trousers with black stripe. Rank is indicated by chevrons of West Point pattern. Drills are had twice a week for each organization. In infantry the drill has been most of the school of the company (in single rank) and company skirmish drill. In artillery they have been instructed in the firings, manual of the piece, etc. But one full gun detachment, with supernumeraries, could be organized out of the sixteen enlistments in that branch. The drum corps of ten members practices also twice a week under a salaried instructor. The instruction in signaling was not carried out this year as contemplated, and as it was done last year, because of the small organization. Guard-mountings, for drill only, have been held about six times. Have had no inspections. There is a drill-hall about 100 by 40 feet, and an excellent campus. The battalion is armed with two field guns, 100 new cadet rifles and equipments, in good condition.

The theoretical instruction consists of recitations in tactics by the officers and non-commissioned officers during the winter term as often as practicable. Instructions are also given officers on drill-ground during drill season. Officers are supplied with Reed's Tactics. Have had no recitations in regulations. Two lectures were given by commandant on history and organization of the U. S. Army and the composition and administration of an army corps.

Grading in the military department is the same as in other departments, on a scale of 100. Final grade is determined relative to (1) interest manifested by prompt and regular attendance, (2) knowledge of duties, (3) deportment, (4) bearing. Students upon graduation are not rated according to merit. Those attaining a standard of proficiency are given a diploma; those falling below are not.

The number of volumes of military subjects in the library of this university are comprised in those recently furnished by the War Department, viz: Volume of Strategies, Kriegsspiel, Wilhelm's Gazetteer, and the Regulations.

Lieut. A. Pickering, Second Infantry, took charge of the military department at this university in October, 1888, and is the first officer detailed here under Revised Statutes 1225. He resides in the city of La Fayette; is a member of the faculty, and during the season has taught United States history, arithmetic, algebra, geometry, and surveying. The compensation received for this depends upon work done, and varies from \$20 to \$50 per month. He stated that this work does not interfere with

his military duties, as the time allotted for drills, etc., is but two hours a week. A fair degree of interest in the military department is taken by the faculty, who give four days out of school a year for camping, the battalion being in camp from May 21 to 24, this year.

Lieutenant Pickering recommends that more time be given for drill; that a non-commissioned officer be allowed each college having an officer detailed thereat, who will have the care of arms, etc., and assist the officer in the instruction of cadets, especially in the paper work of making out returns, etc.; that the Government should make an allowance of \$5 to each student for uniform, bringing cost down to within reach of all. This, he believes, would do more towards removing objections to compulsory attendance than anything that could be done.

Military drill should be made compulsory on three or more classes. The enlistments have been and still are voluntary, but by personally going before the board of trustees he has succeeded in gaining their consent that persons hereafter entering this institution in the preparatory and freshman classes will be expected to join the military organization, unless excused by the president for good and sufficient reasons. Under this rule he hopes that another year will see an organization of at least 150, with a firmer hold on them for discipline. He submitted the following names of students having shown special aptitude for the military service: George T. Ashley (junior), R. A. Smart (junior), A. C. Wright (sophomore), and C. M. Bivins (sophomore).

With reference to the tabulated statement of college work in the last annual report of the inspector-general, Lieutenant Pickering thinks that its continued publication will be beneficial.

There are but two companies organized at this university. At inspection I found them well set up—arms and equipments in very good order. Skirmish drill very satisfactory, and manual of arms well executed.

A drum corps of ten students constitutes the field music; they play very well. I regret to state that the president was absent, and that during my visit I did not have an opportunity to see him. I am informed, however, that he assists and encourages the military feature of the college as much as possible.

The college is located about 1 mile from town; the grounds are large, with good facilities for drills of all kinds. The drill-hall for squad and company drill in cold weather is a great help to the cadets.

Lieutenant Pickering seems to take an interest in his work; the cadets are respectful and show good training and discipline. I am informed that two more companies are to be organized next term, so as to have a full battalion organization and drills.

The two companies go into camp four days each year for target practice.

The three-inch field pieces are kept under cover when not in use for instruction.

Respectfully submitted,

Your obedient servant

E. M. HEYL,
Colonel, Inspector-General.

IOWA STATE UNIVERSITY.

[Inspected May 22 and 23, 1890, by Maj. J. P. Sanger.]

President, Charles A. Schaeffer, A. M., Ph. D. Military professor, Second Lieut G. W. Read, Fifth Cavalry.

1. General description and location of college and date of its establishment?—The university comprises the following departments: Collegiate, law, medical, homeopathic medical, dental, and pharmaceutical. It is located at Iowa City, Johnson County, Iowa, and was first opened for the reception of pupils in 1855.

2. Religious denomination, if any?—Non-sectarian.

3. Date of military professorship?—1874.

4. Government of the college—what, and in whom invested?—A board of regents consisting of the governor of the State and the superintendent of public instruction, *ex officio*, and one member from each Congressional district, elected by the general assembly, and the faculty.

5. Is the military professor a member of the faculty, and was the detail made at the request of the college authorities?—Yes.

6. Has the college the capacity for educating 150 male students?—Yes.

7. Is military instruction obligatory?—Yes. Students are sometimes excused by the faculty, but only when there is good reason. Poor boys unable to purchase a uniform are included among those who are excused.

8. Facilities for military instruction?—Good during fall and spring terms. During the winter (about five months) the facilities are only fair. A larger drill room is needed.

9. Number of male and female students?—One hundred and seventy-two males and ninety-one females enrolled in collegiate department.

10. Number of male students under military instruction over fifteen years of age?—One hundred and twenty-nine at present.

11. Average daily attendance at drill?—One hundred and twenty-nine; strength of battalion (which includes eight who are not in collegiate department) one hundred and thirty-seven.

12. How are unauthorized absences dealt with?—A record is kept, and, together with other delinquencies, they are taken into account in making appointments and promotions. They are also reported to the president. Five unauthorized absences are punished by suspension.

13. Military organization of students?—A battalion of four companies, a battery, and a band.

14. Uniform, if any, and when worn?—A uniform of dark blue cloth is worn on all military duty.

15. How many students wear the uniform?—All who are required to drill.

16. How many wear a mixture of uniform and civil dress?—None at drill.

17. What penalty, if any, for being out of uniform?—Demerit.

18. Are all military rules and orders and all appointments and promotions of officers and non-commissioned officers made upon the recommendation of the military professor?—All are made by him, subject to the approval of the president. The officers receive commissions from governor of State.

19. System of demerit and punishment for misconduct during military exercises, such as trifling, inattention, talking, being late?—Each offense is recorded and is considered in making up the conduct record of the student in the military department.

20. Number and characters of military ceremonies during the past college year?—Seven dress parades, five reviews, one battalion inspection, and two guard mountings.

21. Number and character of the drills during the past college year?—One hundred and sixteen infantry drills, forty-nine artillery drills, and thirty-three band practices. During the winter months the battery and each company drilled once a week on different days. Each of these company drills is counted as one drill.

22. Any other practical instruction?—No.

23. Any small-arms or artillery target practice, gallery or field?—Small-arms target practice at 100 and 200 yards was held twice; each student fired ten rounds. Target practice not yet completed. No suitable range could be obtained this year.

24. Where do drills take place in winter, or during inclement weather?—In the armory, which can accommodate only one company conveniently.

25. Number and character of lectures and recitations?—Forty-nine recitations in tactics (infantry and light artillery) and eighteen lectures on military science.

26. Text books used?—Infantry and Light Artillery Tactics.

27. Military books in college library?—Hamley's Operations of War, Wilhelm's Military Dictionary, Jomini's Art of War, Livermore's Kriegspiel, Trotten's Strategies, Mayne's Fire Tactics, Graham's Studies in New Infantry Tactics, Hutchison and McGregor's Military Sketching and Reconnaissance, Shaw's Attack and Defense, Wolseley's Pocket-book, a number of war histories, etc.

28. Number of arms and accouterments?—One hundred and seventy-three Springfield cadet rifles, one hundred and seventy-three sets infantry accouterments, fifty-two non-commissioned officers' and musicians' swords and belts.

29. Condition as to repair and cleanliness?—In good repair and, except the rifles used during recent target practice, fairly clean.

30. Number of guns, carriages and equipments?—Two 6-pounder bronze guns and implements; two gun-carriages.

31. What ammunition on hand during year?—One hundred blank cartridges for field guns; 5,500 metallic ball cartridges; 1,000 metallic blank cartridges.

32. Any unserviceable property?—None.

33. What duties, if any, are performed by officer apart from the military professorship?—None.

34. Do such duties interfere with military duties?—None performed.

35. What compensation received from the college?—None.

36. What is the attitude of the college authorities towards the military department?—Satisfactory. The only respect in which a change is desirable, is in regard to the time allowed for military instruction. A request for more time would be opposed by some members of the faculty.

37. What that of the students?—As a rule the students are interested in their military work. Very few fail to pay attention at all times,

38. Suggestions of president of college?—"That the result of the annual inspections of the military departments of colleges be published, showing their comparative efficiency, and that a suitable enlisted man, either on the active or retired list of the Army, be detailed to take charge of the Government property issued for use of colleges. It is believed that such a detail would be an economy for the Government."

39. Suggestions of military professor?—"Theoretical instruction, in this section of the country at least, should be confined to the winter months in cases where only three hours per week are allowed for military instruction. There are five months of the year here when out-door drills, without overcoats, are impracticable. The students can not afford to provide themselves with uniform overcoats. If the college authorities would allow it, there would be a great advantage in having two hours theoretical and one hour practical instruction during these winter months, and devote the other months of the school year to practical work."

40. Does the military professor reside at, or near the institution?—Yes, within a half mile.

41. Is he provided with quarters on the same terms as other professors?—All professors provide their own quarters.

42. Does he, when performing military duties, appear in proper uniform?—Yes.

43. Have the reports required by G. O. 15, A. G. O. of 1890, been regularly made?—Yes.

44. Copies of all reports and correspondence affecting the military department on file?—Yes.

45. Is the military professor a suitable person for the position?—Lieutenant Read was spoken of by President Schaeffer in very high terms. In my opinion he is thoroughly qualified for his position.

The military department of this college is in excellent condition, meeting in most, if not all respects, the object of the laws and the expectations of the Government. This may be attributed not only to the competent officers who have succeeded each other as military professors, but to the wisdom and experience of President Schaeffer, and the co-operation of the college authorities. In fine, it may be said that the condition of the military department furnishes an excellent illustration of what can be done where good faith on the part of the governing authorities of the college is combined with proficiency on the part of the military professor. On the one hand we have a correct appreciation of, and an honest compliance with, the laws; on the other, a commendable degree of proficiency in military exercises, and a fair return to the Government.

The battalion of cadets was reviewed, inspected, and drilled; and afterwards the several companies, and the platoon of artillery, which was exercised at the pieces and with the saber, in the use of which it has been well instructed. The entire performance of the battalion from first to last was very satisfactory, the cadets showing much improvement in steadiness and appearance; this, I think, may be correctly attributed to Lieutenant Read, whose military bearing and firm control have produced their natural effect. There were but three absentees.

Attention is invited to the suggestions of President Schaeffer and Lieutenant Read. The latter interprets the last War Department college order to mean that practical and theoretical instruction must be given together at all times, and that he has no discretion as to the seasons during which they may be in operation. The order in question certainly admits of such interpretation, but I have supposed that it was the intention to divide the instruction so as to make the most use of spring, summer, and fall days for drill and other practical exercises. A decision on this point will be of advantage to all military professors.

Attention is invited to the accompanying roster of the battalion of cadets, and to the course of instruction.

It will be observed that President Schaeffer approves the publication of the tabulated information respecting colleges contained in last annual report of the Inspector-General of the Army.

Respectfully submitted.

J. P. SANGER,
Major and Inspector-General.

CORNELL COLLEGE, IOWA.

[Inspected May 21, 1890, by Maj. J. P. Sanger, Inspector-General.]

President, William F. King; military professor, Lieut. Walter Howe, Fourth Artillery.

1. General description and location of college and date of its establishment?—Cornell College was chartered in 1857, and is most beautifully and healthfully located in Mount Vernon, Iowa. The faculty consists of 23 professors and teachers. There are

four regular college courses, each four years in length, besides several shorter and special courses. The annual attendance of students in all departments is 643. The college occupies five well-equipped buildings.

2. Religious denomination, if any?—Methodist Episcopal Church.
3. Date of military professorship?—1872.
4. Government of the college; what, and in whom invested?—The business management of the college and its more general government are in the hands of the board of trustees, and the literary and disciplinary work is lodged in the faculty. The aim is to give as wide range to self-government as possible.
5. Is the military professor a member of the faculty, and was the detail made at the request of the college authorities?—Yes.
6. Has the college the capacity for educating one hundred and fifty male students?—The college has capacity for three hundred male students.
7. Is military instruction obligatory?—It is. Excuses are granted in the last term of the college year to members of the senior class who are privates. All other cases come before the faculty on their merits. Poverty, conscientious scruples, and physical disability are the principal causes of exemption.
8. Facilities for military instruction?—Excellent for infantry drill in good weather. No facilities for artillery drill at present, and no suitable drill room for bad weather. Target range to 200 yards only.
9. Number of male and female students?—Four hundred and sixty.
10. Number of male students under military instruction over fifteen years of age?—Average in fall term, 245; average spring term, 200.
11. Average daily attendance at drill?—One hundred and ninety-two this term, 226 in fall term.
12. How are unauthorized absences dealt with?—When a cadet has three unexcused absences he is reported to the vice-president who, after seeing the student, lays the case before the committee on discipline, who report unexcused cases to the faculty for one demerit. A student's name is read in chapel on three demerits; he is suspended on four.
13. Military organization of students?—Battalion of six companies and band.
14. Uniform, if any, and when worn?—Four companies in uniform and two not. Uniform companies wear it at all drills. By a resolution of the faculty, students entering hereafter in the spring term must all have uniforms by the fall term, and students entering in the fall term must have uniforms by the spring term.
15. How many students wear the uniform?—One hundred and forty-eight.
16. How many wear a mixture of uniform and civil dress?—None at all.
17. What penalty, if any, for being out of uniform?—Transferred to an un-uniform company if repeated. These companies are not permitted to take part in the competitive drills for which prizes are given.
18. Are all military rules and orders and all appointments and promotions of officers and non-commissioned officers made upon the recommendation of the military professor?—By the military professor, on approval by the faculty, officers and non-commissioned officers are reduced by military professor.
19. System of demerit and punishment for misconduct during military exercise, such as trifling, inattention, talking, being late?—Three lates constitute one absence; three absences one demerit; four demerits a suspension. Reprimands and reductions to the ranks are also used. Lieutenant Howe reports that he never has had a case of insubordination which needed more than a reproof. Serious cases are subject to faculty action.
20. Number and character of military ceremonies during the past college year?—One review, one dress parade, and four guard-mountings.
21. Number and character of drills during the past college year?—Three battalion drills; seventy-seven company and squad drills, including bayonet exercise, skirmish drills, and manual of arms.
22. Any other practical instruction?—Laying out camp ground for a six-company battalion.
23. Any small-arms or artillery target practice, gallery or field?—Small arms target practice at distances not exceeding 200 yards. Up to date each student has fired about ten rounds. No target range—practice was held in a stone quarry.
24. Where do drills take place in winter or during inclement weather?—Do not have drills except in fencing and bayonet exercise, which are voluntary. Gymnasium has been used, as well as a basement room of the college, but neither of them answers the purpose.
25. Number and character of lectures and recitations?—One lecture a week in winter term to seniors and two recitations in tactics each week to juniors and sophomores; these are compulsory.
26. Text-books used?—Upton's and Reed's Infantry Tactics.
27. Military books in college library?—Records of Rebellion, Encyclopedia Britannica, American Encyclopedia, Messages and Documents of War Department, four

histories of the United States, The United Service Magazine, and Army and Navy Journal.

28. Number of arms and accoutrements?—One hundred and fifty, and twenty non-commissioned officers' swords. One hundred more guns and equipments expected this term.

29. Condition as to repair and cleanliness?—Some of the belts are about worn out, but can be made to last another year. The arms are in good repair; except the cartridge-boxes; they were only in fair condition.

30. Number of guns, carriages and equipments?—None.

31. What ammunition on hand during year?—Two thousand ball cartridges and six hundred blank.

32. Any unserviceable property?—Three musket locks and one bayonet out of order.

33. What duties, if any, are performed by officer apart from the military professorship?—Taught during winter term, one class all term, two classes part of the term. Did not teach in fall term, and does not teach this term.

34. Do such duties interfere with military duties?—They do not.

35. What compensation received from the college?—At the rate of \$100 per year for each study taught.

36. What is the attitude of the college authorities towards the military department?—They desire to keep it up and make it efficient as far as their means will permit. Lieutenant Howe reports that more interest has been manifested in the military department this term than was manifested in the fall term. Such members of the faculty as I met seemed to regard the military exercises as important.

37. What, that of the students?—Lieutenant Howe reports that the students, as a class, are favorable to military, and he considers them the best disposed students "it has been his lot to have anything to do with."

38. Suggestions of president of college?—"We are well pleased with the influence of military discipline upon the bearing and habits of our students, and we believe that the results to the people at large, and to the General Government are quite as beneficial as to the college. It is the aim of our trustees and faculty to extend to the military department all the facilities and co-operation that is possible consistent with the general literary work of the college."

39. Suggestions of military professor?—"It is suggested that Circular B of 1890, be so modified that members of the senior class who are privates in the last term of their college course may be excused from drill; also that poor boys who have to work over three hours a day, who are working their way through college, may be excused by special action of the faculty. That all colleges having military professors be required to have a battalion. That all colleges having military professors, be required to have suitable armories, and to keep at least one piece of artillery."

40. Does the military professor reside at, or near the institution?—He resides very near, on the college grounds.

41. Is he provided with quarters on the same terms as other professors?—None of the professors are provided with quarters.

42. Does he, when performing military duties, appear in proper uniform?—He does.

43. Have the reports required by G. O. 15, A. G. O., of 1890, been regularly made?—Not yet due.

44. Copies of all reports and correspondence affecting the military department on file?—Yes.

45. Is the military professor a suitable person for the position?—The president of the college answered this question, unhesitatingly, yes. He said, "The success of this department depends so much upon the military professor in charge, it is very gratifying to have an officer who is at once a model in character and bearing, and is competent, prudent, and efficient." I believe that Lieutenant Howe has the respect and good will of the students, as well as of the college authorities, and that he is well qualified for his present duties.

The battalion of cadets was reviewed, inspected, and drilled; and, barring the two un-uniformed companies, presented a very creditable appearance. The latter organizations will soon be provided with uniforms, when in point of appearance this battalion will compare favorably with any I have seen. There were present in ranks, 185 cadets; absent, excused, 13; absent, sick, 2; absent, without proper excuse, 2; total, 200.

A very good band is one of the recent additions to the cadet organizations, and will, no doubt, be of some assistance in improving the marching and military bearing of the cadets.

Lieutenant Howe appears to have the confidence of the college authorities between whom and himself the proper understanding seems to exist. This has resulted in great benefit to the military department, in which I observed a marked improvement. The trifling, inattention, and lack of military propriety, so noticeable among the cadets a year ago, has given place to a more serious and military department;

Remarks.

and while I observed a few exceptions the cadets were generally steady in ranks and evidently desirous of doing well. This change is very gratifying, and gives promise of still greater improvement in the future.

Attention is invited to the importance of providing this college with field artillery in which the cadets will no doubt take much interest, and from which they will derive much benefit. It is suggested that if practicable only the brass 6-pounder or 3-inch rifled gun be furnished as the 12-pounder is too heavy for boys to use.

President King approves the publication of the tabulated information respecting colleges published in the report of the Inspector-General of the Army for 1883.

Respectfully submitted,

J. P. SANGER,
Major and Inspector-General.

KANSAS AGRICULTURAL COLLEGE.

[Inspected May 26 and 27, 1890, by Maj. J. P. Sanger, Inspector General.]

President, G. T. Fairchild; military professor, Lieut. J. F. Morrison, Twentieth Infantry.

1. General description and location of college and date of its establishment?—A State institution organized and located by act of legislature in 1883 at Manhattan, Kans. Equipped with building apparatus, etc., worth nearly \$250,000.

2. Religious denomination, if any?—Non-sectarian.

3. Date of military professorship?—1881.

4. Government of the college—what, and in whom invested?—In board of seven regents, six appointed by governor of the State, the president of the college being *ex officio* member of the board.

5. Is the military professor a member of the faculty, and was the detail made at the request of the college authorities?—Yes.

6. Has the college the capacity for educating 150 male students?—Yes.

7. Is military instruction obligatory?—A course of thirty-two lectures is obligatory; the drill is voluntary by terms.

8. Facilities for military instruction?—Drill room, dressing and store rooms; 2 three-inch rifles and carriages; 150 cadet rifles; 10 swords; 4 practice kits, and 160 uniforms (blouses and caps).

9. Number of male and female students?—Two hundred and thirty-five males and 116 females.

10. Number of male students under military instruction over 15 years of age?—One hundred and thirty-one.

11. Average daily attendance at drill?—Fall term 151; winter term 124; spring term 107.

12. How are unauthorized absences dealt with?—As from recitations, four being considered cause for faculty action.

13. Military organization of students?—Four companies of infantry; one platoon of artillery, and a signal detachment.

14. Uniform, if any, and when worn?—Regulation blouse and forage cap with letters "K. S. A. C.," and wreath. Worn only at drill.

15. How many students wear the uniform?—All at drill; none at other times.

16. How many wear a mixture of uniform and civil dress?—At drill all, as no trousers are furnished.

17. What penalty, if any, for being out of uniform?—None.

18. Are all military rules and orders and all appointments and promotions of officers and non-commissioned officers made upon the recommendation of the military professor?—Yes.

19. System of demerit and punishment for misconduct during military exercises, such as trifling, inattention, talking, being late?—Same as for other college work, a late counting half an absence.

20. Number and character of military ceremonies during the past college year?—Six guard mountings. No systematic instruction in other ceremonies.

21. Number and character of drills during the past college year?—Two regular drills per week, and during spring term guard mounting or extra drill on Friday p. m.

22. Any other practical instruction?—Out-post once and advanced guard once. From this time to the end of the term these will be the practical exercises.

23. Any small-arms or artillery target practice, gallery or field?—Small-arms target practice with the 1,000 cartridges furnished. Ranges 100 and 200 yards.

24. Where do drills take place in winter or during inclement weather?—In armory.

25. Number and character of lectures and recitations?—Thirty-two lectures on

military subjects to young men of second year, and regular recitations once a week in tactics for those who volunteer for the course.

26. Text-books used?—Upton's tactics—infantry and artillery.
27. Military books in college library?—Between one and two thousand volumes.
28. Number of arms and accoutrements?—One hundred and fifty stands of arms, cadet rifles, caliber .45; two 3-inch rifles with carriages and ten swords.
29. Condition as to repair and cleanliness?—Six rifles—locks out of order.
30. Number of guns, carriages and equipments?—Two 3-inch rifled guns and carriages (no caissons), implements, and equipments.
31. What ammunition on hand during year?—One thousand ball cartridges caliber 45, and 100 blank cartridges for 3-inch rifle.
32. Any unserviceable property?—None.
33. What duties, if any, are performed by officer apart from the military professorship?—Instructor in physics and algebra, two hours and a half daily.
34. Do such duties interfere with military duties?—No.
35. What compensation received from the college?—Four hundred and fifty dollars per year.
36. What is the attitude of the college authorities towards the military department?—The president of the college and board of regents very favorable; the faculty not antagonistic.
37. What, that of the students?—A majority of the students are strongly in favor of the military department.
38. Suggestions of president of college?—None.
39. Suggestions of military professor?—None.
40. Does the military professor reside at, or near the institution?—Near by.
41. Is he provided with quarters on the same terms as other professors?—The professors are not provided with quarters by the college.
42. Does he, when performing military duties, appear in proper uniform?—Yes.
43. Have the reports required by G. O. 15, A. G. O. of 1890, been regularly made?—Yes.
44. Copies of all reports and correspondence affecting the military department on file?—But one report has been rendered by Lieutenant Morrison since date of General Order 15, Adjutant-General's Office, 1890, and the retained copy could not be found.
45. Is the military professor a suitable person for that position?—Lieutenant Morrison has the confidence of the college authorities, the respect of the students, and is well adapted to the position.

Considering the many changes among the students during the past year, in the course of which the number has varied between three and five hundred, the state of the military department may be considered satisfactory, and an improvement over its condition a year ago.

President Fairchild fully appreciates the influence of military instruction on the cadets, and is desirous of placing the military department on the most efficient basis.

Many drawbacks, not common to some of the other colleges, prevail at this school, which is largely attended by boys who are entirely dependent on their own labor to meet current expenses, and who are frequently obliged to sever their connection with the college in order to find employment. The effect of this on the military organizations is embarrassing, and seriously interferes with their instruction, the selection of suitable officers and non-commissioned officers, and the preservation and enforcement of the rules governing them.

Notwithstanding these obstacles, Lieutenant Morrison has organized and instructed an infantry battalion of six companies, a platoon or company of artillery, and a signal detachment. These were reviewed, inspected, and drilled, and presented a very creditable appearance. The presence of long grass and the absence of every kind of martial music detracted seriously from the performances of the cadets, who would no doubt have done much better had their spirits been stirred by a good band, and had they been able to march without tripping in the long grass. All were in uniform, there were no unauthorized absentees, and the arms were in better condition than any I have inspected this year. Accoutrements need blacking.

If Lieutenant Morrison's successor will carry the military department forward from the point it has now reached, the results, while perhaps not as gratifying as they would be under more favorable conditions, will fully repay his efforts.

President Fairchild approves the publication of the tabulated information respecting the colleges contained in the annual report of the inspector-general for 1889. He adds that "If the annual attendance could be given, as well as that at date of inspection, with corresponding report of numbers in military drill, the comparison would be more interesting to me."

Respectfully submitted.

J. P. SANGER,
Major and Inspector-General.

AGRICULTURAL AND MECHANICAL COLLEGE OF KENTUCKY.

HEADQUARTERS DIVISION OF THE MISSOURI,
INSPECTOR-GENERAL'S OFFICE,
418 Pullman Building, Chicago, Ill., May 28, 1890.

The INSPECTOR-GENERAL U. S. ARMY,
Washington, D. C.:

SIR: I have the honor to submit the following report of my inspection of the military department at the Agricultural and Mechanical College of Kentucky, Lexington, Ky., made on May 19, in accordance with instructions from the War Department dated Adjutant-General's Office, May 7, 1890.

There are 180 males and 80 females, a total of 260 students at this college this year. Military drill is obligatory upon all students physically qualified, except seniors who are excused; 120 students live at the college, there being accommodations for about 150. Their discipline is reported fairly good. The battalion is organized into four companies and band of 17 members, and one artillery company, in all about 160 students. Their uniform is of gray cloth with State buttons.

One hour each day is given to military work. The practical instruction given is drill in the schools of the soldier, company and battalion, and artillery drill; reviews and inspections once a week, and guard mountings. Besides these the students march to meals and class rooms. Target practice was discontinued on account of the insecurity of the range. Three recitations a week, only in tactics, are held for officers and non-commissioned officers. During the winter months the military exercises were suspended three days in the week and the time taken up by a series of lectures on agriculture, stock raising, etc., by the professors in that department. Lectures were given on Army organization, duties of the Army in time of peace, etc. There are no text-books in use. The only facilities for indoor drills are the halls of the academic building, where manual drill only can be had. Have also a drill ground of about eight acres, covered with grass. No weight is given the military in graduating.

The battalion is armed with two pieces of field artillery, one hundred and fifty muskets and equipments, in fair condition.

Lieut. D. H. Clark, Fifteenth Infantry, is a member of the faculty and resides on the college grounds. No other non military subjects are taught by him, nor does he receive any extra compensation on account of his detail here. He stated that no portion from the income of the land-grant is set aside for the benefit of the military department. He recommends that, as the ball cartridges can not be used on account of the insecurity of the target range, blank cartridges be furnished in future. A drill hall is much needed for winter exercise and drill. Some text-books on military science should be introduced and studied as a complement to graduation. The battalion should have a national and State color. He states the discipline of the students is fairly good, and their interest in the military exercises good. He is in charge of the two dormitories and the discipline of all the students. This institution has no library.

Lieutenant Clark states he believes the tabular statement of college work, as published in the last annual report of the inspector-general, may be a source of stimulant to the boys, but he is not able to note any visible sign of improvement resulting therefrom; that if it was read in the chapel by the president, and some stress laid on it it might become better known, and good results would follow. He recommended the names of the following students as having shown special aptitude for the military service: R. G. Anderson, W. R. Wallis, John Gunn, Henry Barry, and G. F. Clark.

Owing to a severe rain storm, which lasted two days, I was unable to inspect the battalion on the regular drill ground.

I noticed much improvement in the discipline and organization of the cadets, yet there is room for much more. The Springfield rifles were not in good condition, many of them were very rusty. A system of weekly inspections should be inaugurated and require each cadet to keep his piece clean and free from rust.

Lieutenant Clark stated that he has received more support in his department during the last year.

Whatever system of punishment is adopted should be strictly carried out, and any violation of orders or breach of discipline should be corrected at once, even if it results in the dismissal of the cadet; it will prove better for the school in the end, and promote a feeling of respect for those in authority. Subordination is the first thing to be taught the average American youth. He naturally dislikes restraint.

I was not able to have the battalion drill owing to continued rain. I inspected each company separately; they seemed fairly well instructed, but not as soldierly in ap-

pearance as I would like to see—that is there was not that neatness that I observed at other colleges.

A new dormitory has been built which now affords ample room for the accommodations of students, and enables the commandant to preserve a better state of discipline by having the cadets under his immediate supervision and control, during day and night.

The two field pieces of artillery are kept under cover when not in use for mechanical instruction to artillery detachment.

I inclose herewith twenty excuses—written by cadets who absented themselves from inspection. A close study of these papers will reveal the fact that a better system of punishments for the purpose of compelling attendance at drills and ceremonies should be rigidly enforced, otherwise the military feature becomes a mere farce.

Lieutenant Clark will be relieved this year by Lieutenant Clay, Fifteenth Infantry, a native of Kentucky. Lieutenant Clark appears to have given all his time and efforts to his department, and whatever unfavorable comments have been made on the military feature of the college it was not due to any lack of interest on his part, but rather to a condition of affairs beyond his control.

The president seems very favorable to the military department and apparently aids it as much as possible, but to my mind he is too lenient to those who wish to avoid drill.

Respectfully submitted.

Your obedient servant,

E. M. HEYL,
Colonel, Inspector-General.

LOUISIANA STATE UNIVERSITY.

HEADQUARTERS DIVISION OF THE MISSOURI,
INSPECTOR-GENERAL'S OFFICE,
Chicago, Ill., January 24, 1890.

INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.:

SIR: I have the honor to report that I inspected the military department at the Louisiana State University, Baton Rouge, La., on the 15th instant, in accordance with letters from your office dated September 27, 1886, and May 10, 1889.

Lieut. H. P. McCain, Third Infantry, the officer detailed here, assumed the duties of commandant of cadets upon re-opening of the university in October last. He also gives instruction in civil engineering three times a week, for which he is allowed from the college authorities \$200 annually and quarters. This extra employment he reports does not interfere with his duties in the military department.

This university has the capacity to teach at least one hundred and fifty (150) students annually; at present there are one hundred and twenty-one (121) students, all males, of which one hundred and thirteen (113) are enrolled in the corps of cadets and belonging to the following classes: Seniors, 9; juniors, 9; sophomores, 15; freshmen, 24; and sub-freshmen, 56. Their age runs from 14 to 23 years, 17 years being about the average. All the students live at the college, but those from the city of Baton Rouge take their meals at home. Their discipline is reported good at present, and their interest in drill more encouraging than last year. Military drill is obligatory upon all students, except those excused for physical disability.

The corps of cadets is organized into a battalion of four companies. Their uniform is cadet gray, with straps and chevrons like those of the regular army. There is no band. Commissioned officers are taken from the seniors and the juniors; and the non-commissioned officers belong to the sophomore and freshmen classes. They are supplied with two pieces of field artillery, both disabled; 150 Springfield rifles, only one-half of which are fit for use; 150 cartridge-boxes and 150 bayonets and scabbards. All belong to the State and are stored in a brick building. Have no ammunition on hand.

The battalion is drilled five times a week in company infantry drills, schools of the soldier and company; but have had no artillery drill, no field pieces having as yet been received, although the necessary requisition for arms, etc., has been made and forwarded to Washington. There has been no battalion drill because it was believed better results would follow thorough training in the school of the company before beginning battalion drill. Lectures are given at odd times on art and science of war, regulations, customs of service, etc. Students had one recitation in regulations during the present term, but none in tactics. The only text-book in use is "Elements of the Art of War," from which the students, seniors only, recite once a week, at which time it is endeavored to instruct them in the rudiments of the military profession. During the second term guard mountings are held daily and parades once a week.

Students march to all duties. The galleries extending around barracks afford good shelter for drilling; have also excellent grounds.

Lieutenant McCain stated that more time for theoretical instruction is the principal need. He has only one hour a week at present, but expects to have two after February. There are no funds available to fit the military department out as it should be. More encouragement to graduates who acquit themselves well in the military department, such as appointing them commissioned officers in the State militia by the State authorities, and giving them preference over other civilians in appointments to the Army, would go far toward improving the military at these schools. Or the placing of names of one or more of those students, who stand highest, in the Army Register would have a good effect. His department receives no material encouragement from the college authorities, although it seems to be satisfactory to the faculty.

There are about one hundred and twenty-five volumes, on different military subjects, in the library of this institution; some of the most important ones are the following:

"Hanley's Operation of War," "Jomini's Life of Napoleon and his Campaigns," "McClellan's Armies of Europe and European Cavalry," "Scott's Military Dictionary," "Napier's Peninsular War," "Military Bridges (Haupt)," "Outposts and Field Fortifications (Mehans)," etc.

The buildings and grounds occupied by the university belong to the United States Government. They were built for a garrison of troops, and were occupied as such up to 1878.

An effort will be made to give each graduate of the university such substantial military education as will enable him to take command without embarrassment of a company or regiment whenever the country shall need his services.

The battalion was drilled in turn by the cadet captains and afterwards each captain drilled his company. All the maneuvers were well executed, the guides were prompt, and officers well instructed in their duties.

Respectfully submitted.

Your obedient servant,

E. M. HEYL,
Colonel, Inspector-General.

MAINE STATE COLLEGE.

ORONO, MAINE, June 13, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.:

GENERAL: I respectfully submit the following report of an inspection, which I have just completed, of the military department of the Maine State College of Agriculture and the Mechanic Arts, which has its seat at this place.

The institution was established in 1868, upon the endowment of public lands under the act of the 2d of July, 1862. The lands given to the State of Maine by that act amounted to 210,000 acres, all of which was given to this college. These lands were disposed of and the proceeds have been and are now invested in State bonds. This investment amounts to \$131,300, at 5 per cent. interest. The college has been specially assisted by private endowment to the extent of an additional \$100,000.

The institution is non-sectarian in its character, and is governed by a board of trustees and the faculty. The latter consists of eight professors and three assistant professors. The corps of professors and the accommodations of the school could probably educate 225 students at one time. There have been 131 in attendance during the past year, but at this date those actually in attendance only number 115, one of whom is of the female sex.

The military department was organized at the date of the opening of the school, and has gone along under various vicissitudes until 1882, when an officer of the Army first assumed charge of it.

The chair of military science and tactics is now held by Second Lieut. E. E. Hatch, Eighteenth Infantry, who assumed the duties of that position on the 1st of July, 1888. Lieutenant Hatch is a member of the faculty and enjoys all the privileges accorded to the members of that body. He is supported in the performance of the duties of his office and is industrious and zealous in the discharge of the duties confided to him. In addition to his duties as military professor he has the classes in calculus this term, and had the class in analytical geometry last term. He does this additional work of his own accord, for which he receives no extra compensation from the college.

He is given three hours per week for strictly military work. The student body is required to attend all practical military instruction. He has at present 110 on his rolls—4 of the students being excused on medical certificates. The date of inspection

the senior class was absent by authority—it being the custom of the college to excuse that class for one week prior to examination to prepare their theses, and my arrival happened in that week—and one absentee, without leave, and consequently but 69 present at inspection. The organization is a battalion of two companies. The staff consists of an adjutant and quartermaster. The companies have four commissioned officers each. The officers are appointed by the faculty on the recommendation of the military professor who bases his recommendations upon the general fitness and capabilities of the individual man. The battalion is uniformed in forage caps, dark-blue blouse and light-blue trousers.

The college law intended to enforce attendance in the military department explicitly stipulates "that any student who absents himself from more than 25 per cent. of military exercises shall not receive a degree until he makes up the work lost." The books recording the daily attendance at military exercises and instruction are the best I have seen in any college in my inspection.

The record of small-arms target practice shows that 103 of the students have had practical instruction in this very important part of military instruction during the past year.

The United States property on hand consists of 120 cadet rifles, caliber .45; 120 sets of equipments for the same; 16 non-commissioned officer's swords, belts, and plates, and 5,000 rounds of ammunition.

This property is properly cared for, but some of the rifles were not in as clean a condition as they should have been when presented for inspection. I think before the term finally closes each student should be required to give his rifle a careful cleaning, under the personal supervision of the officer, and then oil it for storage.

There is no artillery on hand, and no effort is made to give instruction in artillery and cavalry. Anything that would be done in that line would probably be of very little real value.

It is the custom of this college to put the battalion in camp for one week each year. Last autumn it pitched and occupied a camp for one week at Lewiston in this State. It is proposed to camp near old Fort Knox this fall.

There is no special military building at the college. The institution is not so well endowed as many of the agricultural colleges, and the State does not pay as high a rate of interest for the money borrowed as most of the States do. It is quite possible that the college is not in such financial condition as to feel justified in erecting an armory and gymnasium building, but it is very much needed. Any inspector who has been accustomed to look at the physical condition of the men would not have to more than glance at this battalion to see how almost necessary a well-fitted-up gymnasium is for the physical cultivation of many of the students. They are young men of pluck and determination, many of them going through the college course on their own resources, but their physical exertions have had a tendency to develop those organs whose functions were in demand to the neglect and detriment of those that promised no material aid in gaining the end immediately in view. In looking along the line at inspection it was quite apparent that many of the students would be benefited by being required to take a maturely considered and systemized course of physical exercise for the purpose of giving these neglected organs their normal development. Such a course could be very easily carried out by simply making it a part of the military duty. But to do this the institution should be provided with a well-equipped armory and gymnasium where advantage could be taken of stormy days and inclement seasons of the year. I hope that the college may be provided with such a building in the near future, for it is needed.

Very respectfully,

R. P. HUGHES,
Colonel, Inspector-General.

MARYLAND AGRICULTURAL COLLEGE.

INSPECTOR-GENERAL'S OFFICE,
Washington, D. C., June 10, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,

War Department, Washington, D. C.:

SIR: I respectfully submit the following report:

Location? The college is located in Prince George's County, Md, three-fourths of a mile from College Station, on the Washington branch of the Baltimore and Ohio Railroad.

Date of establishment? The charter "to establish and endow an agricultural college in the State of Maryland" was granted in March, 1856.

Endowments? Special appropriations to the college are made by the State. The institution receives the benefits of the Congressional land grant to Maryland, under

the act of July 2, 1862; also, appropriations under the act of Congress of March 2, 1887.

Buildings? The main building, of brick, is 124 feet long and 54 feet wide. It contains accommodations for one hundred and fifty students, apartments for professors, class rooms, chapel, museum, library, reading room, armory, parlors, dining room, and necessary offices. The other buildings are the chemical laboratory, the gymnasium, and the agricultural experiment station.

Equipment? The college is well equipped as an agricultural college.

Government, in whom vested? In a board of trustees and the president of the college.

Religious denomination? Non-sectarian.

Requirements of law (sections 1225 or 1260, Revised Statutes) met? Yes. The institution has a capacity to educate, at the same time, 150 students.

Departments of instruction? Agriculture, chemistry, natural history, mathematics, physics and mechanics, language and literature, German, military.

Collegiate course?—Freshman year: Agriculture, natural history, history, English, French, and Latin, mathematics, book-keeping. Sophomore year: Agriculture, natural history, chemistry, English, French and Latin, mathematics, drawing. Junior year: Agriculture, natural history, chemistry, physics, English, Latin, German, mathematics, drawing. Senior year: Agriculture, physics, chemistry, English, history, Latin, German, mathematics, drawing, lectures. President, Henry E. Alvord, C. E.

Students and classes?—Regular collegiate students only; the ordinary college classes.

Discipline?—The military professor has little to do with the general discipline of the college. The discipline would no doubt be better with a larger number of students.

Expenses?—Tuition is free to all students. The necessary expenses of the year, including board, furnished room, heat, lights, washing, and the necessary text-books are covered by a charge of \$165. Students whose homes are in the neighborhood are charged \$40 per annum.

Date military department established?—Re-established October 11, 1888.

Has the detail been continuous since?—Yes.

Professor military science and tactics?—Second Lieut. Albert B. Scott, Thirteenth Infantry.

Date assumed duties?—October 11, 1888.

Suitable for the position?—Yes; Lieutenant Scott is an efficient officer, and has done good work at the college.

Number of hours per week to military duties?—Four to practical and one to theoretical.

Receive proper support from the authorities?—Yes.

What encouragement is given to the military department?—No special encouragement. It is treated the same as any other department.

Interest manifested by the faculty?—Very little.

Is the department popular with the students?—Yes.

Satisfactory to the faculty?—Yes.

Efficient as it should be?—Yes.

Requirements of General Orders, No. 15, of February 12, 1890, from the headquarters of the Army, strictly enforced?—As far as practicable.

Does the professor of military science and tactics reside at or near the institution?—Yes.

When in the performance of his military duties does he appear in proper uniform?—Yes.

In his relations to the institution does he observe the general usages and regulations therein established affecting the duties and obligations of other members of the faculty?—Yes.

Does he perform other than military duties at the institution, and what compensation, if any, does he receive therefor?—He is professor of mathematics and drawing, and receives \$400 per annum.

To what extent do these duties interfere with his military duties?—Not at all.

Are all rules and orders, appointments, promotions, etc., as indicated, made and promulgated by the professor?—Yes, with the approval of the president.

Does he enforce proper military discipline at all times, as required?—At all times during military instruction and also in his own class-room.

Upon occasions of military ceremony and in the performance of military duties does he require the students to appear in the prescribed uniform?—Yes.

Is the course of instruction both practical and theoretical?—Yes.

Does theoretical instruction occupy at least one hour, and practical at least two hours, per week?—Yes.

Does the practical instruction embrace everything required under the head "Course

of Instruction" on page 2 of the general order, and both for infantry and artillery?—No.

Specify any omissions?—No small-arms target practice, battalion drill, or instruction in artillery.

Does instruction include the duty of sentinels, and castrametation?—No.

Is instruction given by the professor personally, or under his immediate supervision?—By the professor personally.

Is theoretical instruction given by the professor, and by recitations and lectures, and does it include a systematic and progressive course in the subjects mentioned in the general order?—As far as practicable.

Specify any omissions, or recitations or lectures upon other subjects?—No lectures upon other subjects.

Are the quarterly reports duly rendered, and in the required form?—Yes.

Are copies of all reports and correspondents retained?—Yes.

Is copy of the graduation report duly furnished the adjutant-general of the State? Will be.

Is the professor of military science, etc., a member of the faculty, with all the rights, privileges, and authority, of other heads of departments or professors?—Yes.

And does he habitually exercise them?—Yes.

Is he provided with quarters on the same terms as other professors?—Yes. He occupies quarters in the college building.

Total number of students since military professorship was established?—Not known.

Total number of graduates?—Not known.

Largest number of graduates in one year?—Not known.

When?—Not known.

Number of students in institution last year?—Forty-five.

Number of graduates?—Six.

Other information which will indicate the present condition of the institution?—The records of the college are very incomplete.

How many students is the institution prepared to teach annually?—One hundred to one hundred and fifty.

Number of students in attendance, 32; males, 32.

Number of students in military department, 29; seniors, 5; juniors, 6; sophomores, 12; freshmen, 5.

Age of youngest student in military class, 14; age of eldest, 25; average age, 17½.

Age of youngest student in battalion, 14; age of eldest, 25; average age, 17½.

How many of the students live at the institution?—Twenty-three.

Of those in the military department?—Twenty-two.

How many live elsewhere?—Six.

Is the military course of instruction compulsory upon all under-graduate students?—Yes.

Who are excused?—Only those physically disqualified.

Are all under-graduate students, capable of performing military duty, required to attend the prescribed military exercises?—Yes.

What classes are required to attend?—All.

Who are excused?—None.

What causes excuse students?—Sickness. Daily excuses are given for special reasons.

Methods of military instruction?—By drill in the school of the company; by recitations in the school of the company and the school of the battalion; by lectures on organization and administration of armies, minor tactics, and military history.

Does this work occupy the whole time of the military professor?—No.

Facilities for military instruction?—Good; except that there are no facilities for in-door drill.

How many volumes on military subjects in library of institution?—None.

What are the text-books for each class?—"Reed's Standard Tactics" and "Upton's Tactics" for the junior and senior classes, respectively.

How many students are studying each?—"Reed's Tactics," 6; "Upton's Tactics," 5. Sophomores and freshmen do not recite in tactics.

What campaigns have the students studied?—Lectures have been delivered on the campaigns of Frederick the Great and Napoleon, the civil war, and the war of 1870-'71.

How many military essays by students?—None.

On what subjects?—The time allotted for military instruction is not enough for this work.

What other original work have the students done?—None in the military department.

Number of military recitations since last annual inspection?—Forty-nine.

Number of military lectures since last annual inspection?—Twelve.

Number of drills?—Infantry, 80 since last annual inspection.

Do the powers, methods, and distinction between military and martial law form a part of the military course?—Yes.

Instruction in Army regulations?—Yes. By lectures?—Yes. How many of each? One lecture.

In use of Army forms and blanks; including rolls and returns?—One lecture on the subject, explaining the use of all forms and books used in a company.

In methods of requisition and supply?—One lecture on the subject.

In probable fields of war, and military operations?—No.

Logistics?—By lecture.

Strategy?—Do.

Lines of supply?—Do.

Instructions in outpost, or reconnaissance, duty?—By lecture only.

Any night exercises?—No.

Any instruction relative to fire-arms?—Yes.

Practical gunnery?—No.

Projectiles?—Lecture.

Gunpowder?—No.

Other explosives?—No.

To what extent have the details of these several subjects been taught?—To a limited extent only, on account of want of time.

Estimating distances?—Some practice at drill.

Time allotted different studies at the institution (average per week)?—Agriculture, 3½ hours; natural history, 4 hours; chemistry, 6 hours; mathematics, 4½ hours; physics and mechanics, 3 hours; English language and literature, 3½ hours; Latin, 3 hours; modern languages, 3 hours; military, 4½ hours.

Value given different studies?—Equal.

What value has the military course in determining class standing, or relative standing on graduation?—Equal, on basis of time occupied.

Is the zeal and acquisition of knowledge in the military department satisfactory?—Yes.

Messing?—General mess.

Number and character of military buildings?—None.

What facilities for in-door drill?—No drill hall. The halls of the building are used for the purpose. The chapel is used for squad drill.

For small-arms target practice?—None.

For gallery practice?—None.

For signaling?—None.

For artillery practice?—None.

Gymnasium?—A gymnasium. No fencing.

Armory?—A suitable room in the main building is used as an armory and commandant's office.

Number of muskets?—Fifty cadet rifles, Springfield model, caliber .45.

Number of accouterments?—Fifty.

Field guns?—None.

Ammunition?—None.

When were the ordnance and ordnance stores received?—In December, 1888.

How stored and cared for?—Properly.

Condition of the ordnance as to repair and cleanliness?—Very good.

Any unserviceable United States property?—No.

Has any United States property been lost or destroyed?—Two cleaning rods lost.

Military organization?—One company. The officers are, two captains, two lieutenants, one adjutant, one sergeant-major, one first sergeant, three sergeants, three corporals. The students were originally organized into a battalion of two companies, which will account for the surplus officers.

What field officers are there?—None.

Uniform?—Of the West Point pattern, with gray forage cap and no dress hat.

Method of appointment and promotion of officers and non-commissioned officers?

Appointed by the commandant with the approval of the president.

From what class are commissioned officers appointed?—Senior.

Non-commissioned officers?—Senior and junior.

How is the band organized and maintained?—No band.

From what class is the field music?—Junior. One drummer.

National flags?—Yes.

Is the professor of military science commandant of cadets?—Yes.

In fact as well as in name?—Yes; but the responsibility for the discipline rests with the president.

Is there a separate artillery company?—No.

Select company for special drill?—No.

What practice or instruction in cavalry tactics?—None.

- What roll-calls are there?—For drill and for meals.
 What camp equipage?—None.
 What military camping?—None.
 What marches for instruction?—None.
 Is any guard duty performed?—No.
 Has each student walked post?—No.
 Drill ground adequate?—Yes.
 Average daily attendance at drill?—Twenty-five.
 Do the students march to any duty other than drill?—To and from meals.
 Do they assemble at other times?—No.
 What are the punishments for misconduct, etc.?—Reprimand, confinement to room for short periods, suspension, dismissal.
 What is the aptitude of students for military instruction?—Good.
 What is their interest therein?—Good.
 How long are new students exercised without arms?—About six weeks.
 How long are recruits practiced in the "setting-up" exercises?—About two or three weeks.
 How often are these exercises recurred to?—At the beginning of each year.
 Are all students frequently practiced therein?—At the beginning of each year only.
 What practice or instruction in grand or minor tactics?—Instruction by lecture only.
 What practice or instruction in each of the prescribed ceremonies and inspections?—None, except in company inspection.
 How often is there dress parade?—None.
 Reviews, how often?—None.
 Is there a monthly inspection of the battalion?—No.
 Are there weekly inspections of companies, under arms, on every Saturday?—Every Friday afternoon.
 Is there a Sunday morning inspection of the dress and general appearance of the students?—Yes.
 What other inspections are there?—Room inspection, daily, at 7 a. m.
 Is the number of inspections, reported as made, enough for thorough efficiency?—Yes.
 Is there guard mounting?—No.
 How often?
 Hospital?—Yes.
 What medical attendance have the students?—The services of a physician living near the college.
 Is there any opposition on the part of the faculty or students to the military course; or does discontent exist?—No.
 What improvements are needed in the military department?—Two pieces of field artillery for foot artillery drill, and facilities for gallery practice.
 What are immediately feasible?—Both should be.
 Condition of office, records, etc.?—Good.
 Review and critical inspection of battalion, and remarks thereon?—I inspected the company of cadets, which was commanded by its captain. The arms were clean and serviceable and the accouterments in good condition. The uniforms were neat and well fitting. A drill followed the inspection, the company being commanded by Lieutenant Scott. The drill embraced the manual of arms, the school of the company, and the skirmish drill, in all of which a commendable degree of proficiency was displayed.
 Number and grade of present and absent: Present: 1 captain, 2 lieutenants, 1 sergeant-major, 1 first sergeant, 2 sergeants, 3 corporals, 16 privates; total, 26. Absent: 1 captain (suspended), 1 adjutant (officer of day), 1 sergeant (sick); total, 3.
 Suggestions of president?—"None. The president is of the opinion that the tabulated statement of college work published in the last annual report of the Inspector-General of the Army is of value and should be continued."
 Suggestions of military professor?—"The military professor suggests that the relation of an officer on college duty to the general discipline of the institution should be clearly defined."

I am, general, very respectfully, your obedient servant,

P. D. VROOM,
 Major, Inspector-General.

ST. JOHN'S COLLEGE, ANNAPOLIS, MD.

INSPECTOR-GENERAL'S OFFICE,
Washington, D. C., June 6, 1890.The INSPECTOR-GENERAL U. S. ARMY,
War Department, Washington, D. C.:

SIR: I respectfully submit the following report:

Location?—The college is located at Annapolis, Md., on the banks of the Severn, a few miles from Chesapeake Bay.

Date of establishment?—The charter of St. John's College was granted in 1784, and the institution opened in 1789. It was originally established in 1701, as "King William's School," which was, in 1784, merged into St. John's College.

Endowments?—The college has a permanent endowment of three thousand dollars from the State, and six thousand dollars a year, for two years, to discharge indebtedness.

Buildings?—The college buildings are three in number: two dormitories, Pinkney Hall and Humphreys Hall, and the recitation building, McDowell Hall.

Equipment?—The college is fairly well equipped for its work.

Government, in whom vested?—In a Board of Visitors, and Governors.

Religious denomination?—Non-sectarian.

Requirements of law (sections 1225 or 1260, Revised Statutes) met?—Yes; the college has the capacity to educate, at the same time, two hundred students.

Departments of instruction?—Mental, moral and social science, ancient languages, modern languages, mathematics, natural science, history, English and law, mechanical engineering and field surveying, military science and tactics.

Collegiate courses?—Classical, Latin Scientific, Scientific Mechanical Engineering.

President?—Thomas Fell, A. M., Professor of Ancient and Modern Languages, Lecturer on Metaphysics, Moral Philosophy and Evidences of Christianity.

Students and classes?—The regular college classes, with a preparatory department. There is also a special course for candidates for the U. S. Naval Academy.

Discipline?—The ordinary college discipline. In the military department it is controlled by the military professors.

Expenses?—For college students, \$275.

Date military department established?—In 1884, under Lieut. C. W. Foster, Third Artillery.

Has the detail been continuous since?—Yes.

Professor of military science and tactics?—First Lieut. Mitchell F. Jamar, Thirtieth U. S. Infantry.

Date assumed duties?—September 10, 1887.

Suitable for the position?—Yes. The president regards Lieutenant Inmar as a very efficient officer and deserving of great credit for the work done by him at the college.

Number of hours per week to military duties?—Five.

Receive proper support from the authorities?—Yes.

What encouragement is given to the military department?—Every encouragement.

Interest manifested by the faculty?—Great interest appears to be manifested by the faculty.

Is the department popular with the students?—Yes.

Satisfactory to the faculty?—Yes.

Efficient as it should be?—Under the circumstances, yes. The varying ages and sizes of the students, and the lack of physical qualifications on the part of some of them, interfere somewhat with complete efficiency.

Requirements of General Orders, No. 15, of February 12, 1890, from the Headquarters of the Army, strictly enforced?—As far as practicable.

Does the professor of military science and tactics reside at or near the institution?—Yes.

When in the performance of his military duties does he appear in proper uniform?—Yes.

In his relations to the institution does he observe the general usages and regulations therein established affecting the duties and obligations of other members of the faculty?—Yes.

Does he perform other than military duties at the institution, and what compensation, if any, does he receive therefor?—He is lecturer on international and constitutional law.

To what extent do these duties interfere with his military duties?—Not to any extent.

Are all the rules and orders, appointments, promotions, etc., as indicated, made and promulgated by the professor?—Yes.

Does he enforce proper military discipline at all times, as required?—Yes.

Upon occasions of military ceremony and in the performance of military duties, does he require the students to appear in the prescribed uniform?—Yes.

Is the course of instruction both practical and theoretical?—Yes.

Does theoretical instruction occupy at least one hour and practical at least two hours per week?—Yes.

Does the practical instruction embrace everything required under the head "Course of Instruction," on page 2 of the general order, and both for infantry and artillery?—As far as practicable.

Specify any omissions.—No instruction in artillery.

Does instruction include the duty of sentinels and castrametation?—Duty of sentinels, yes; castrametation, no.

Is instruction given by the professor personally, or under his immediate supervision?—By the professor personally.

Is theoretical instruction given by the professor, and by recitations and lectures, and does it include a systematic and progressive course in the subjects mentioned in the general order?—As far as practicable.

Specify any omissions, or recitations and lectures upon other subjects?—No instruction in the preparation of the usual reports and returns pertaining to a company. Sufficient time is not allotted to the military course to enable the professor to fully comply with the requirements of the order.

Are the quarterly reports duly rendered and in the required form?—Yes.

Are copies of all reports and correspondence retained?—Yes.

Is copy of the graduation report duly furnished the adjutant-general of the State?—Yes.

Is the professor of military science, etc., a member of the faculty, with all the rights, privileges and authority of other heads of departments or professors?—Yes.

And does he habitually exercise them?—Yes.

Is he provided with quarters on the same terms as other professors?—He is allowed \$200 per annum in lieu of quarters.

Total number of students since military professorship was established?—Six hundred and ninety-eight.

Total number of graduates?—Forty-nine.

Largest number of graduates in one year?—Fifteen.

When?—1890.

Number of students in institution last year?—One hundred and forty-eight.

Number of graduates?—Twelve.

How many students is the institution prepared to teach annually?—Two hundred and fifty.

Number of students in attendance, 122; males, 122.

Number of students in military department, 113; seniors, 14; juniors, 7; sophomores, 30; freshmen, 28; subfreshmen, 34.

Age of youngest student in military class, 20 years; age of eldest, 26 years 10 months; Average age, 26½ years.

Age of youngest student in battalion, 12 years; age of eldest, 26 years 10 months; Average age, 19 years 5 months.

How many of the students live at the institution?—Eighty.

Of those in the military department?—Eighty.

How many live elsewhere?—Forty-two.

Is the military course of instruction compulsory upon all under-graduate students?—Yes.

Who are excused?—None, except those physically disqualified.

Are all under-graduate students, capable of performing military duty, required to attend the prescribed military exercises?—Yes.

What classes are required to attend?—All.

Who are excused?—Only those who are physically disqualified.

What causes excuse students?—Physical disability.

Methods of military instruction?—Recitations, lectures, and notes, theses, examinations of notes.

Does this work occupy the whole time of the military professor?—Yes.

Facilities for military instruction?—Good.

How many volumes on military subjects in library of institution?—None.

What are the text-books for each class?—No text-books are used. Instruction is given by lectures and notes.

What campaigns have the students studied?—Hannibal's campaign in Italy, Frederick the Great's campaign in Silesia, Napoleon's campaign in Italy in 1796, Napoleon's campaign in 1805, terminating with the capitulation of Ulm, Sherman's march to the sea.

How many military essays by students?—Numerous.

On what subjects?—The above subjects.

What other original work have the students done?—None.

Number of military recitations since last annual inspection ?—Sixteen.

Number of military lectures since last annual inspection ?—Fifteen.

Number of drills ?—Infantry, eighty-six ; artillery, none ; cavalry, none, since last annual inspection.

Do the powers, methods, and distinction between military and martial law form a part of the military course ?—Yes.

Instruction by lectures ?—Yes.

How many of each ?—Four lectures.

In use of Army forms and blanks ; including rolls and returns ?—None.

In methods of requisition and supply ?—None.

In probable fields of war, and military operations ?—None.

Logistics ?—None.

Strategy ?—Yes.

Lines of supply ?—Yes.

Instruction in outpost, or reconnaissance duty ?—Yes.

Any night exercises ?—No.

Any instruction relative to fire-arms ?—Yes.

Practical gunnery ?—No.

Projectiles ?—No.

Gunpowder ?—No.

Other explosives ?—No.

To what extent have the details of these several subjects been taught ?—Such instruction has been given as the limited time would permit, and only to the senior class.

Estimating distances ?—No.

Time allotted different studies at the institution ?—Departments of mental, moral, and social science, 3 hours per week ; ancient languages, 4 hours per week ; modern languages, 3 hours per week ; mathematics, 4 hours per week ; natural science, 5 hours per week ; history, English and law, 3 hours per week ; mechanical engineering, 4 hours per week ; military science and tactics (theoretical), 2 hours per week.

Value given different studies ?—According to number of hours assigned to them.

What value has the military course in determining class standing, or relative standing on graduation ?—Two as above.

Is the zeal and acquisition of knowledge in the military department satisfactory ?—Yes.

Messing ?—College commons and college club.

Number and character of military buildings ?—None.

What facilities for in door drill ?—None.

For small-arms target practice ?—The use of the 1,00-yard range at the U. S. Naval Academy ; limited to the senior class.

For gallery practice ?—None.

For signaling ?—None.

For artillery practice ?—None.

Gymnasium ? There is a good gymnasium. No instruction in fencing.

Armory ?—A room in one of the college buildings is used as an armory, recitation room for the military department, and commandant's office.

Number of muskets ?—One hundred and thirty cadet rifles, Springfield model, caliber .45, the property of the United States.

Number of accouterments—sets ?—One hundred and thirty.

Field guns ?—Two 3-inch rifled guns, the property of the United States.

Are field guns properly housed ?—Yes.

Are they covered with paulins ?—No.

Artillery implements ?—Yes.

Artillery harness ?—None.

Ammunition ?—A small supply of blank ammunition.

When were the ordnance and ordnance stores received ?—January 28, 1885. Fifty cadet rifles were received in 1888.

How stored and cared for ?—Properly.

Condition of the ordnance as to repairs and cleanliness ?—The arms and field pieces are in good condition. The accouterments are much worn.

Any unserviceable United States property ?—Two rifles ; stocks broken.

Has any United States property been lost or destroyed ?—No.

Military organization ?—For purposes of tactical instruction the students are organized into a battalion of three companies. Each company has one captain, one first lieutenant, one second lieutenant, one first sergeant, four sergeants, and four corporals. The staff consists of an adjutant, a quartermaster, a sergeant-major, and a quartermaster sergeant.

What field officers are there ?—None.

Uniform ?—Forage caps of dark blue cloth, with ornament consisting of gold-em-

broidered wreath on dark blue ground encircling the letters "S. J. C." in old English characters. Dress coats and trousers of gray cloth; pattern a modification of that worn at the United States Military Academy.

Method of appointment and promotion of officers and non-commissioned officers?—Officers and non-commissioned officers are appointed and promoted by the military professor on account of particular fitness.

From what class are commissioned officers appointed?—Senior.

Non-commissioned officers?—Junior and sophomore.

How is the band organized and maintained?—No band.

From what class is the field music?—No field music.

National flags?—Yes.

Is the professor of military science commandant of cadets?—Yes.

In fact as well as in name?—Yes.

Is there a separate artillery company?—No.

Select company for special drill?—No.

What practice or instruction in cavalry tactics?—None.

What roll-calls are there?—None, except at drill.

What camp equipage?—None.

What military camping?—None.

What marches for instruction?—None. Short street marches are occasionally made.

Is any guard duty performed?—No.

Has each student walked post?—No.

Drill ground adequate?—Hardly. It is much broken up by trees.

Average daily attendance at drill?—One hundred and five in both squad and battalion.

Do the students march to any duty other than drill?—No.

Do they assemble at other times?—At chapel.

What are the punishments for misconduct, etc.?—Demerits, deprivation of privileges, suspension, dismissal.

What is the aptitude of students for military instruction?—Good.

What is their interest therein?—Considerable interest appears to be manifested.

How long are new students exercised without arms?—About two months.

How long are recruits practiced in the "setting-up" exercises?—About two months.

How often are these exercises recurred to?—About four times a week.

Are all students frequently practiced therein?—No.

What practice or instruction in grand or minor tactics?—None.

What month is the battalion most frequently formed?—April and May.

What least frequently?—In the winter months.

How often each?—In the spring daily, weather permitting.

Cause of difference?—In the fall months company drills only are had; in the spring, battalion drills.

What practice or instruction in each of the prescribed ceremonies and inspections?—Frequent.

How often is there dress parade?—Frequently. No stated time.

Reviews, how often? A complete review is not practicable, owing to the conformation of the ground, trees, etc.

Is there a monthly inspection of the battalion?—No. Every drill is preceded by an inspection.

Are there weekly inspections of companies, under arms, on every Saturday?—No.

Is there a Sunday morning inspection of the dress and general appearance of the students?—No.

What other inspections are there?—None.

Is the number of inspections, reported as made, enough for thorough efficiency?—Yes.

Is there guard mounting?—Only for practice.

How often?—Six or eight times a year.

Hospital?—No.

What medical attendance have the students?—Visiting physicians.

Is there any opposition on the part of the faculty or students to the military course; or does discontent exist?—None whatever.

What improvements are needed in the military department? None, considering the position of the military department to the other departments of the college.

What are immediately feasible?—None.

Condition of office, records, etc.—Good.

Review and critical inspection of battalion, and remarks thereon?—I received a review of the battalion, which was commanded by Lieutenant Jamar. Owing to the unfavorable nature of the ground, the march past was dispensed with. The inspection of the battalion immediately followed the review. The arms were found to be in excellent order. Many of the accouterments were badly worn and presented

a shabby appearance. The uniforms were very neat. After the inspection the battalion was exercised in the manual of arms, and a short battalion drill followed. The different movements were fairly well executed. Absolute precision was, of course, not looked for. With the limited time allotted to the military department Lieutenant Jamar has succeeded in doing good work, and the zeal displayed by the students is commendable.

Number and grade of present and absent:

Present: Captains, 4; first lieutenants, 3; second lieutenants, 4; sergeants 11; corporals and privates, 59; total, 81. Absent: Quartermaster, 1;* quartermaster sergeant, 1;* first lieutenant, 1;* sergeant, 1;* privates, 28; total, 32.

Present at inspection, 81; absent from inspection, 32; total, 113.

Absentees: Too small to handle rifles, 19; physically disqualified and sick, 8; without authority, 1; total, 28.

Suggestions of president: The president expressed himself as satisfied with the military course and had no suggestions to make. He thinks that the tabulated statement of college work published in the last annual report of the Inspector-General of the Army is of value and should be continued.

Suggestions of military professor: None.

I am, general, very respectfully, your obedient servant,

P. D. VROOM,
Major, Inspector-General.

MASSACHUSETTS AGRICULTURAL COLLEGE.

AMHERST, MASS., June 6, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.:

GENERAL: I respectfully submit the following report of an inspection of the military department of the Massachusetts Agricultural College, which is located at this place.

The chair of military science and tactics is now occupied by Lieut. L. W. Cornish, Fifth Cavalry, who relieved Lieut. G. E. Sage, Fifth Artillery, last autumn.

Lieutenant Cornish is industrious and attentive to his duties and thoroughly capable. He seems to give general satisfaction. He is a member of the faculty, and is fully and generously supported by the president (H. H. Goodell), who was an officer during the war of the rebellion, and has a full appreciation of the necessity for and value of discipline in a body of men when good work is to be accomplished without unnecessary and extravagant expenditure of energy.

The school is non-sectarian, and was given a part of the endowment of lands granted by the act of Congress of the 2d of July, 1862. The entire grant given to this State was divided between this institution and the School of Technology, of Boston. The military department here is almost co-extensive with the establishment of the school.

The military department is given five hours per week, and the professor is not called upon to discharge any collegiate duties other than those belonging to his specialty, unless in cases of emergency. He does not receive any extra compensation from the institution for the discharging of his regular duties, but if called upon to take the place of another professor temporarily he is paid for the time he performs special duty.

The college is provided with the necessary educational staff to accommodate two hundred and fifty students. There were ninety-six in attendance at date of inspection. Of the ninety-six in attendance, ninety-four were required to take military instruction. In this college attendance in the military department is required of all the various classes.

The uniform is cadet gray.

The student body is organized in the military department into a battalion of three companies. The battalion staff consists of an adjutant, quartermaster, and fire marshal. There are three captains and six lieutenants in the companies. The commissioned officers are taken from the senior class. The non-commissioned officers are taken from the junior class. There are three drills per week, and during the winter term the military professor delivers lectures. I was present at the examination of the senior class in military science and tactics. They evinced a very fair idea of the subjects touched upon in the examination. The seniors are required to submit essays upon designated military subjects.

The text books in use are Home, Wheeler, Upton, etc. The college library is a fine one, and although there is no special and technical military collection, still there is enough in the general collection to satisfy any ordinary student.

The battalion is supplied with the old model cadet rifles. These small-arms are

*Present for duty, but absent from formation.

supplied with the old style of sight, and do not have gun-slings. I think these rifles should be exchanged for others having the improved sights and provided with arrangements for slings.

This is one of the colleges that is provided with a good rifle-range, and I think care should be taken to provide the means necessary for giving the students a thorough course of instruction in the capabilities and skillful application of their small-arms. Practice is held with the arms now on hand, but it must necessarily be discouraging with these rough sights. There are ninety-six cadet rifles, caliber .45, and ninety-four sets of equipments on hand that are the property of the United States. There are also two 12-pounder brass pieces on hand that are the property of the United States. These guns are serviceable of their type, but the carriages and caissons have lived their lives, and are now entirely unserviceable. Proper shelter is provided for this material during the non-drill season. There are two obsolete siege-mortars also on hand. I think all the equipment of this college should be called in and a better one furnished.

There is a fine armory provided for this battalion. It is to be greatly regretted that it is not supplied with a full gymnastic equipment for the physical development of the students.

The organization has had no practice marches, nor has it yet been in camp.

In such of these schools as have recitations in tactics and target practice I think it would be advantageous for the War Department to issue a reasonable number of copies of the authorized drill regulations and rifle and carbine instructions.

Very respectfully,

R. P. HUGHES,
Colonel, Inspector-General.

MICHIGAN MILITARY ACADEMY.

ORCHARD LAKE, MICH., November 21, 1889.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.:

GENERAL: I respectfully submit the following report of an inspection of the Michigan Military Academy located at this place:

The chair of military science and tactics is occupied by Second Lieut. F. T. Van Liew, Second Infantry. By reason of this being a military school Lieutenant Van Liew is *ex officio* commandant of the corps. Military instruction is compulsory upon all the pupils.

There are two drills daily of an hour each. The battalion numbers one hundred and fifty-two, and although the academic year has only lately begun the battalion appeared exceedingly well. I do not hesitate to say that it is the finest in my inspection excepting that at Cornell University, where the students are considerably older.

This being a preparatory school, many members and possibly most of the battalion are from fifteen to sixteen years of age.

The gymnasium and drill-hall of the institution was accidentally burned last spring and has not yet been replaced, but it is contemplated doing so in the near future.

The methods pursued in the school are copied from West Point, but are carried to greater refinements here than there. Military discipline prevails everywhere and at all times, and the daily list of demerits are startling to one not accustomed to such things.

It is difficult to form any opinion of the amount of interest and valuable information upon military subjects these youngsters may carry with them after leaving the institution, but there is no doubt that for the time being they are subjected to an amount of discipline that is quite surprising. If, in my inspections of military garrisons and posts, I were to find a company with as many men undergoing punishment as I saw here, I should certainly consider it necessary to make it the subject for special investigation. Of course the offenses here are light, and the punishments that are awarded are correspondingly so.

Colonel Rogers was so unfortunate as to lose some Government property by a fire last spring, and, with other things, a Gatling gun. The fire was one for which he is in no way responsible, and I think he should be relieved of so much of his accountability as was destroyed in the fire, and the articles resupplied without unnecessary delay.

The gun-carriages and caissons in his possession are utterly worn out and worthless, except for the old iron in them, and as the old iron is scarcely worth shipping to an arsenal, I would recommend breaking up these old things and selling the old iron. They are an actual disgrace to us. They are out in the open, exposed to the weather, but they are not worthy of a shed.

Some of the gun materials have been worn out, and they should be replaced.

Some of the infantry rifles were in need of small parts to make them serviceable, such as firing-pins, etc. I would recommend making a reasonable annual allowance to these institutions of small extra parts.

This institution is certainly entitled to much consideration, and Colonel Rogers tells me that he has usually received it.

Lieutenant Van Liew is thoroughly satisfactory to Colonel Rogers, and is doing his work well.

The only improvement I can see in which the Government might still further aid the school might be in lending to it a sufficient amount of tentage, once per annum, to allow of its going into camp for a few weeks to teach the youngsters something about field life and work.

Very respectfully, your obedient servant,

R. P. HUGHES,
Colonel, Inspector-General.

AGRICULTURAL COLLEGE OF MICHIGAN.

LANSING, MICH., November 20, 1889.

The INSPECTOR-GENERAL U. S. ARMY,
Washington, D. C.:

GENERAL: I would respectfully submit the following report of my inspection at the Agricultural College of Michigan, near this place:

The chair of military science and tactics is occupied by Second Lieut. W. L. Simpson, Twenty-fourth Infantry.

Lieutenant Simpson has been here about two years, and in that time has fully established himself as a member of the faculty of the institution clothed with all the rights and powers that that implies. He has succeeded in getting military instruction made compulsory for the three lower classes, but the military work of the senior class is still elective. He is making an effort to get his officers, etc., from the senior class and his efforts are fairly successful.

The past session he has had 212 students under instruction, and the report shows that the average attendance has been 187. In this connection I desire to invite attention to the fact that quarterly reports are apt to create erroneous impressions in this case as well as in one or two other schools which I have visited, in this way, to wit:

The quarter occasionally includes the ending of one term and the opening of another. In such cases one whole class may disappear and a new class be taken up, and they are both carried on the report as under instruction during the term. Where a school has three or more terms per annum would it not be better to have a report made for each term?

The property on hand consists of one hundred and fifty rifles and one hundred and fifty sets of equipments. There are not enough rifles to supply the command, and, if practicable, the number should be increased.

The institution is not supplied with any field guns for instruction in artillery matters. As we have a goodly number of 3-inch iron guns now on hand it might be well to supply this institution with enough for drilling purposes, although any work done with these old guns may be of very doubtful value. The *entente cordiale* existing between Lieutenant Simpson and his associate professors is excellent, and he seems to be the right man in the right place.

He can not obtain more than the minimum time, three hours per week for military instruction, but he is given all the students during the hours assigned him, and three hours per week will accomplish considerable when given to a man as energetic as Lieutenant Simpson.

The institution has quite a fine gymnasium, which is also used as a drill-hall during inclement weather. The apparatus and appliances for physical exercises have been made and put up by the students themselves, and the arrangements are quite creditable.

The faculty have not yet made wearing a uniform compulsory, and there are still a few who do not provide themselves with any.

Of course in such a battalion the uniforming of the men is simply a question of appearance and is of no material consequence, but it is quite trying to a young man with the zeal of Lieutenant Simpson.

Very respectfully, your obedient servant,

R. P. HUGHES,
Colonel, Inspector-General.

UNIVERSITY OF MINNESOTA.

HEADQUARTERS DEPARTMENT OF DAKOTA,
INSPECTOR-GENERAL'S OFFICE,
St. Paul, Minn., May 28, 1890.

ASSISTANT ADJUTANT-GENERAL, DEPARTMENT OF DAKOTA,
St. Paul, Minn.:

SIR: I have the honor to report that I have this day inspected the military department of the University of Minnesota, and submit the following:

I reported, on my arrival, to the president of the university, and was afforded the necessary facilities for the inspection.

There are about 700 students, including the agricultural students; of these but 74 were in ranks at inspection. There were three company organizations, and a commissioned and non-commissioned staff. The inspection was by battalion, preceded by review, and the young men appeared to feel much interest in their military duties. The commands were correctly given, and movements generally well executed.

The battalion was drilled by the instructor, and the companies by their respective captains. The squads by the non-commissioned officers present with each company.

A neat and suitable uniform of gray cloth, trimmed with black, has been adopted for the cadets, and was worn by all at inspection, except a few, who still had the old uniform.

The cadet officers are bright and energetic young men, and good material from which to select officers in case the country should need them.

The officers are regularly commissioned by the president of the university, on recommendation of the instructor, and the non-commissioned officers receive warrants signed by the instructor. All military details are left to the instructor. The course of instructions required by General Orders, No. 15, Adjutant-General's Office, current series, appears to have been carried out, except in practical instructions for camping and guard duty.

Theoretical instruction has been by recitation in tactics and lectures on military subjects. The practical course has been confined largely to infantry drill up to include battalion drill, but I was informed that there had been target practice, artillery drill, and saber exercise.

There appears to be no system for enforcing discipline. The military instructor stated that he had no serious breaches of discipline or misconduct to report, but he had reported a number of cases of absence from military duty. Heretofore many students have been excused from drill by the faculty, but hereafter, I am informed, it is the intention of the faculty to require the whole of the freshman class, numbering about one hundred and fifty, the young ladies as well as the young gentlemen, to attend two drills and one recitation per week. The young ladies have a separate company, which is reported well drilled, and the exercise is said to be beneficial. They are not supplied with rifles. (Members of other classes who wish to do so may also attend the recitations on military subjects and drills.) The regular military exercises for the past year have been held between 12 m. and 1 p. m., the hour usual for lunch and recreation. For the next year I am informed that the hour will be from 1 p. m. to 2 p. m.

Copies of all returns and correspondence are kept on file.

There are no dormitories at the university proper, and many of the students live some distance away. The agricultural department, which is some 2 miles from the main building, and has some seventy-eight students, has dormitories. It is thought that more students would be available for military instruction if they lived at the institution.

The auditorium of the college is used for drill purposes, but owing to the shape of the floor (half circle) only one company can drill at one time. There is no way of heating the room, and in winter it is too cold for drill purposes.

Lieutenant Glenn is a member of the faculty of the institution, and appears to be a suitable person for the work. In addition to his army pay he receives \$500 per annum from the university, and last year had classes in mathematics besides his military duties. He is also taking a course in law.

I am inclined to believe that the faculty have not, heretofore, taken much interest in the military department, but Lieutenant Glenn is apparently encouraged by what is promised for next year.

I inclose with this report catalogue for the years 1888 and 1889, and 1889 and 1890; also a program of recitations for first term 1890 and 1891.

It is the plan to have two drills and one recitation per week in first term of next school year, one gallery practice, one recitation, and one lecture per week in the second term, and in the third term the instructions to be the same as the first.

The following arms and accouterments are reported in the possession of the college

authorities, and appeared to be in good condition, except that the waist-belts were shabby, not having been blacked; it is recommended that material be issued for cleaning the accouterments. They are cared for by a man employed for that purpose: Two 3-inch wrought-iron rifles with implements; 2 3-inch wrought-iron rifle gun-carriages; 150 Springfield cadet rifles; 150 infantry accouterments; 50 sabers and belts; 24 non-commissioned officers' swords.

Very respectfully, your obedient servant,

W. F. DRUM,
Lieut. Col. Twelfth Infantry, Acting Inspector-General U. S. Army.

AGRICULTURAL AND MECHANICAL COLLEGE OF MISSISSIPPI.

HEADQUARTERS DIVISION OF THE MISSOURI,
INSPECTOR-GENERAL'S OFFICE,
Chicago, Ill., January 25, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C. :

SIR: I have the honor to report that I made the annual inspection of the military department at the Agricultural and Mechanical College of Mississippi, near Starkville, Miss., on the 17th instant, in pursuance to instructions from your office dated September 27, 1886.

Lieut. J. V. White, First Artillery, assumed charge of the military department June 3, 1889, in compliance with special orders No. 93, Adjutant-General's Office, 1889, relieving Lieut. H. C. Davis, Third Artillery. He is also assistant professor of mathematics, teaching three hours a day, for which the college authorities allow him \$800 per annum. This he reports does not interfere with his duties as professor of military science and tactics. The enforcement of discipline is in his hands, subject to the approval of the president, who supports and assists him at all times in preserving good order and discipline at drills and elsewhere. He is also a member of the faculty.

This college has at present 250 students, all males. Military drill is compulsory upon all students. Sickness and sometimes for urgent reasons, when excused by the president, are the only causes excusing scholars from drill. There are 17 seniors, 20 juniors, 33 sophomores, 72 freshmen, and 108 subfreshmen. These are organized into five companies of infantry. There is one field officer, with the rank of major; one first lieutenant as adjutant, one as quartermaster; one sergeant-major, and an ordnance sergeant and six field musicians. The color of their uniform is gray and pattern that of the undress uniform of the regular Army. The commissioned officers belong to the senior and junior classes, and the non-commissioned officers and band to the junior, sophomore, and freshmen classes. Their age is from 15 to 32 years, the average being about 18 years. There are 202 scholars living in the dormitories and 48 in the town of Starkville and vicinity. These latter form one company (E). The discipline of the students and their interest in the military drill is reported good.

The battalion is armed with two 3-inch M. L. rifles. There have been 250 cadet rifles, caliber .50, and 250 accouterments, but 150 of these belonging to the United States have been returned to Rock Island Arsenal in exchange for 250 of caliber .45, and new accouterments. Arms, etc., are stored in building and cared for by the ordnance sergeant. The recent burning of the mess hall necessitated putting the carriages for the field pieces outside under paulins. The sponges are somewhat worn and one staff is broken, but the college replaces the broken parts from time to time.

Each company has two drills per week in military tactics from the last of September to December 1; from December 1 to March 1 one day per week is set apart for inspection, with some ceremony or battalion drill, when all companies are required to be present. From March 1 to June 1 each company drills one day in the week by itself, and on Saturdays they all have battalion drill and ceremonies; guard mounting daily and a limited amount of target practice. The sophomore class has artillery drill once a week from March to June. For in-door drill the halls of the dormitories, where the manual of arms or squad drills can be held, are used. Have also a parade ground, which is about 75 by 300 yards. The students also march to meals and recitations, and all have walked post except those living outside of dormitories.

The senior class, consisting of seventeen members, has just completed a six weeks' course in military science. The course has now been changed to the junior class, of twenty members, which has heretofore taken Upton's infantry tactics—a six weeks' course. This latter class will hereafter have a three months' (the third term) course of infantry tactics and military science—six weeks to each subject.

A morning report of each company is required once a week.

Lieutenant White thought it would be well if the Government could furnish a

guard-report book, consolidated morning-report book, and such blanks as are considered most important for the students to be familiar with.

The military course at this college is given the same weight as other subjects in graduating class standing, but the time in this course is limited. The students are required to pass an examination on the subjects studied and make an average of 60 out of a possible 100 points. In this connection Lieutenant White recommends that some course of instruction be prescribed to insure uniformity, as different officers do not attach equal weight to the same subject.

The battalion was paraded, inspected, and drilled, with very satisfactory results. The cadets seem to take great interest in all their military duties, and have improved very much since my last inspection.

Respectfully submitted.

Your obedient servant,

E. M. HEYL,
Colonel, Inspector-General.

MISSOURI STATE UNIVERSITY.

[Inspected by Maj. J. P. Sanger, inspector-general, on the 21st and 22d of May, 1890.]

President (acting), M. M. Fisher. Military professor, Lieut. B. B. Buck, Sixteenth Infantry.

1. General description and location of college and date of its establishment?—University organization. Open to both male and female students. Average attendance about 450, of which 100 are females. Ample facilities for instructing 900 students. One club house, which accommodates 120 pupils, is connected with the institution. Located at Columbia, Mo., one-third mile from business center. Established 1840.

2. Religious denomination, if any?—None.

3. Date of military professorship?—First appointment, 1869. Present incumbent's detail began September 1, 1889.

4. Government of the college—what, and in whom invested?—Invested in a board of curators, who make rules for the government of the faculty and the university. Their power is largely delegated to an executive committee, which meets monthly. The faculty govern in all questions of methods of instruction, administration, of discipline, course of study, etc.

5. Is the military professor a member of the faculty, and was the detail made at the request of the college authorities?—He is. Detail was made at request of college authorities.

6. Has the college the capacity for educating 150 male students? Yes.

7. Is military instruction obligatory?—No. Beginning with the next scholastic year it will be obligatory on the part of the 170 State cadets, appointed in accordance with a new law. Extracts from this law which affect the cadets may be seen in the General Regulations for the Government of Cadets, Missouri State Military School.

8. Facilities for military instruction?—Have not been good during the year now drawing to a close, on account of having no suitable place for drill. A suitable drill-ground is now being built of broken rock and gravel; size, approximately, 150 by 500 feet. This is located in midst of a still larger grass plot.

9. Number of male and female students?—Male, 360; female, 70.

10. Number of male students under military instruction over 15 years of age?—One hundred and fourteen.

11. Average daily attendance at drill?—Ninety.

12. How are unauthorized absences dealt with?—Demerited. At discretion of military professor reported for delinquency; two such reports drop from department; dropped from two departments carries dismissal from the university.

13. Military organization of students?—A battalion of four companies (infantry) and a band; also a platoon of field artillery, and a signal detachment.

14. Uniform, if any, and when worn?—Undress uniform, consisting of a dark-blue blouse and forage cap, similar to those in use in the United States Army, and gray pantaloons with black stripes. Required to be worn on military duty only.

15. How many students wear the uniform?—All who belong to the military department.

16. How many wear a mixture of uniform and civil dress?—About twelve, but none habitually.

17. What penalty, if any, for being out of uniform?—Demerits.

18. Are all military rules and orders and all appointments and promotions of officers and non-commissioned officers made upon the recommendation of the military professor?—Yes.

19. System of demerit and punishment for misconduct during military exercises,

such as trifling, inattention, talking, being late?—Demerits have been found sufficient during the present year. Any special punishment must be given by the faculty upon recommendation of the military professor.

20. Number and character of military ceremonies during the past college year?—Three battalion inspections, 35 dress parades, 3 reviews, and 11 guard mountings.

21. Number and character of drills during the past college year?—Forty infantry drills by company, 12 infantry battalion drills, 20 artillery drills (foot battery), 20 signal drills with flag and lanterns.

22. Any other practical instruction?—Eight days instruction in castrametation, from May 3 to 10 inclusive, at which all the usual duties of camp life were performed by the cadets. Tents were furnished by the State. The State also furnished rifle ammunition for target practice. The military department own camp equipage and utensils sufficient for their use in camp. Expenses of the encampment paid jointly by the cadets and by university and by subscription among citizens of Columbia.

23. Any small-arms or artillery target practice, gallery or field?—Target practice with rifles at 100, 200, and 300 yards. Every cadet required to fire ten shots at each range. Have also ranges 400 and 500 yards. This is a new rifle-range just completed by the college authorities, and is located at the cadet encampment grounds about one-half mile from the university.

24. Where do drills take place in winter or during inclement weather?—In halls of university building.

25. Number and character of lectures and recitations?—About fifteen. Subjects: Guard duty; tactics (infantry, school of the soldier and company); advance and rear guards; defiles; reconnaissances; organization; equipment and administration of Army of United States; reports and returns of companies and posts; target practice fire arms; ammunition; street fighting, etc.; the Articles of War; military law and customs.

26. Text-book used?—Upton's Infantry Tactics; Hamilton's "Elementary Principles connected with the Art of War"; United States Army Regulations.

27. Military books in college library?—"Hanley's Operations of War"; "Jomini's Art of War"; "Report on the Conduct of the War"; "Mercur's Art of War"; "Grant's Memoirs"; "Shaw's Modern Tactics"; "Life of Napoleon"; various authors on the war of the rebellion, with topographical maps, and thirty-other volumes of similar character.

28. Number of arms and accouterments?—One hundred and fifty Springfield cadet rifles, caliber .45, and bayonets; 150 sets equipments (boxes, belts, and plates).

29. Condition as to repair and cleanliness?—In good repair and condition; every gun recently overhauled by a competent gun-smith.

30. Number of guns, carriages, and equipments?—Two field guns (12-pounder Napoleon) with limbers and caissons. No equipments except the amount necessary to a foot battery.

31. What ammunition on hand during year?—Furnished by United States: 1,000 ball, 1,000 blank metallic cartridges, caliber .45 (carbine); 100 blank cartridges for field-pieces; 300 friction primers. Furnished by the State: 5,000 ball and 5,000 blank cartridges, caliber .45, and 50 blanks for field-gun; 100 friction primers.

32. Any unserviceable property?—The carriages and limbers and caissons are very old and should be replaced. They could not stand active service. National color entirely worn out in service.

33. What duties, if any, are performed by officer apart from the military professorship?—Instructor of two classes (two hours daily) in mathematics.

34. Do such duties interfere with military duties?—No.

35. What compensation received from the college?—Compensation received from the professor whose classes are taught. Professor sick. Compensation, \$525.

36. What is the attitude of the college authorities towards the military department?—Favorable throughout. The professor of military science and tactics has never asked for any concession or favor to his department which was not granted, and he has asked many.

37. What that of the students?—Favorable.

38. Suggestions of president of college?—"Allow me to suggest that the same inspector be sent two consecutive years during the detail of the military officer in charge here. I may also add that the presence of the military department here is beneficial to our institution in all respects."

39. Suggestions of military professor?—"The military department at this university should be supplied with target frames, paper targets, posters, streamers, a storm flag, markers' disks, a score book, a number of copies of the new manual of guard duty, a copy of Blunt's Manual of Small Arms Practice, for use in the annual encampment. Also 25 or 30 shells for field-gun target practice."

40. Does the military professor reside at or near the institution?—Yes.

41. Is he provided with quarters on the same terms as other professors?—No quarters supplied to any.

42. Does he, when performing military duties, appear in proper uniform?—Yes.

43. Have the reports required by General Orders 15, Adjutant-General's Office, of 1890, been regularly made?—Yes.

44. Copies of all reports and correspondence affecting the military department on file?—Yes.

45. Is the military professor a suitable person for the position?—Dr. Fisher, acting president, spoke in terms of unqualified commendation of Lieutenant Buck. The latter appeared to me to have a fine sense of his position, and to be fully equal to all its demands.

The military department of this college is about to undergo a change *Remarks.* from which very important and beneficial results may be expected, not only to the college but to the State of Missouri. Under a recent act of the State legislature the military department is "created the Missouri State Military School." The corps of cadets of this school is to consist of one cadet from each senatorial and representative district of the State, who will be admitted to the university on the same terms as other students, but will receive their tuition free with some slight exceptions. As thus established the corps of cadets becomes a part of the National Guard of the State, with the same organization and entitled to all such provisions as are, or may be hereafter, made for it. The cadets are made individually responsible for the State property issued to them, and constitute a guard for the safe keeping of the property of the university.

Taking this act and the militia laws of the State respecting military discipline as a basis, a committee of the university, of which Lieutenant Buck, military professor, was chairman, prepared and submitted, in March last, a code of general regulations for the government of the school. This received the approval of the governor April 2, and will go into effect with the commencement of the next college year. By these regulations the military professor is made "commandant of cadets," with full power over the administration, discipline, and instruction of the cadets, having authority to appoint, promote, and change all officers, and to issue all orders affecting the military school specially. On any other matter of importance he can not issue an order contrary to the known wishes or judgment of the faculty, of which he is supposed to acquaint himself. The age of cadets is fixed at "between sixteen and twenty-five years," and their height at "not less than 5 feet." On graduation the names of all cadets showing special aptitude for military service are reported to the Adjutant-General of the Army and adjutant-general of the State. The uniform is the same as that now prescribed for the National Guard of the State, with some minor and appropriate differences; and it is laid down that "no cadet shall at any time wear a part of his uniform with civilian clothing," a provision which will, no doubt, protect the uniform from the contempt shown it in some other institutions, even if it does not insure it a proper degree of respect. The cadets are made amenable to the militia laws of the State in matters of discipline, and may be dismissed or suspended by the faculty or by sentence of a general court-martial.

The regulations further prescribe an annual encampment of from eight to ten days; instruction in target practice, in military science and tactics, and in the duties pertaining to camp life. They cover everything needful for the proper instruction and discipline of the cadets, and are in the main practical and excellent.

An unusual degree of military spirit pervades the University of Missouri, and it is the intention of the authorities to make this military school not only a model which may be safely copied by other States, but an authority on military questions so far as they affect the State and a source of correct military information and influence.

The battalion was reviewed, inspected, and drilled, and presented a very good appearance, but one cadet not being fully uniformed. During the exercises the cadets showed much steadiness and attention, and I observed none of the trifling which sometimes mars such performances. The signal drill was slow but accurate. The artillery drill while fair, would, no doubt, be vastly improved if the heavy 12-pounder guns furnished the college could be exchanged for 6-pounders or 3-inch rifles. I recommend this to the favorable notice of the Secretary of War, and also recommend that ammunition, including some case-shot and shell, be provided with the guns for use at the annual encampment.

This school merits the full support of the Government, and Lieutenant Buck, as its representative, is worthy of its confidence.

Dr. Fisher, the acting president, thinks the tabulated statement concerning colleges in the report of the Inspector-General of the Army for 1899 both valuable and desirable.

Respectfully submitted.

J. P. SANGER,
Major and Inspector-General.

UNIVERSITY OF NEBRASKA.

HEADQUARTERS DEPARTMENT OF THE PLATTE,
INSPECTOR-GENERAL'S OFFICE,
Omaha, Nebr., December 21, 1889.
The ADJUTANT-GENERAL, UNITED STATES ARMY,
Washington, D. C.:

SIR: I have the honor to report that in accordance with instructions from the office of the Adjutant-General of the Army, under date of June 19, 1886, I made an inspection of the military department of the University of Nebraska, at Lincoln, Nebr., on the 18th and 19th instants.

The University of Nebraska was established in 1869 and is non-sectarian. The government of the university is vested in a board of regents elected by popular vote for terms of six years. The institution has been liberally endowed by the United States with a grant of seventy-two sections of land "for the support of the State University," and one of 90,000 acres of land "for the Industrial College for the benefit of agriculture and the mechanic arts." In accordance with the requirements of the law, military instruction is made a part of the regular under-graduate course. The current expenses of the university are met by legislative appropriations made every two years. The military department was established in 1872, although for about two years there was no instructor. The officer now on duty as professor of military science and tactics is First Lieut. Thomas W. Griffith, Eighteenth Infantry, who is well qualified for the position, the duties of which he assumed October 17, 1888. Lieutenant Griffith is a member of the faculty, and participates in the deliberations of that body. He is properly supported by the authorities, and receives no compensation in addition to his Army pay. His military duties occupy thirteen hours in each week, and he is not employed upon other duties.

The course of under-graduate instruction at the university covers four years of three terms each. There is also a preparatory course. The university has a capacity of 500 students. The number of students now in attendance is 361, of which number 231 are male and 130 female.

The number of students in the military department is 131. The military course is compulsory. Under the rules and regulations established by the board of regents all male students in the college classes, or having two studies therein, not excused by the chancellor, are required to drill for six consecutive terms during their course. It is obligatory upon the student to drill each term until the six terms required are completed or the student graduates. Students may take part or all of the required number of terms whilst members of the preparatory department. Only such students as are physically disqualified from performing military duties are excused from drill.

The students are organized into a battalion of four companies. The battalion staff consists of an adjutant and a quartermaster. Each company is officered by a captain, one first and one second lieutenant. Officers of the cadet battalion are appointed by the commandant. The selection of officers is made upon a basis involving both scholarship and capacity and fitness for command. Cadets holding appointments in the battalion at the time of graduation are certified with their proper rank to the governor of the State, who thereupon issues his commission to them, which they hold as retired officers of the university cadets. Officers are selected from the senior and junior, and non-commissioned officers from the junior and sophomore classes.

The university band consists usually of about twenty pieces, and service in the band is credited the same as if in the ranks of the battalion. There are three gun detachments, service in which is voluntary.

The uniform consists of a dark-blue flannel blouse, with trousers of the same material, or of any dark color. The forage cap is dark blue. Appropriate insignia of rank are worn by the commissioned and non-commissioned officers.

Military instruction is both theoretical and practical. The theoretical course consists of regular recitations and lectures. During the junior and senior year there is a course of instruction in field fortification, art and science of war, etc., which is elective. The text-books in use are Wheeler's Field Fortification, Wheeler's Art and Science of War, Hamilton's Elements of the Art of War, and the United States Infantry and Artillery Tactics.

The university library contains some military works, and a military library is gradually being formed.

Practical instruction is given in infantry and cavalry tactics. Infantry drills are had three times and artillery drills twice a week. A record is kept of the attendance of cadets upon their duties in the military department, and the relative standing of the companies and band is published each week.

I received a review of the battalion of cadets which was commanded by First Lieut.

I. W. Griffith, Eighteenth Infantry. The ceremony was fairly well rendered. The inspection of the battalion immediately followed the review. The arms were seemingly clean and serviceable, but many of the belts and cartridge-boxes were old and very much worn.

The arms used by the students are the property of the United States, and consist of one hundred cadet rifles, Springfield model, caliber .45. The number of accouterments is one hundred. The field guns furnished for the use of the university are two 3-inch rifle guns without cassions. The United States property appears to be well cared for.

The number of university buildings is four. A handsome structure known as "Grant Memorial Hall" has recently been erected by the State for military and gymnastic purposes. The main floor contains a spacious drill-hall and gymnasium, a recitation room, and the commandant's office. In the basement there are a bowling-alley, a magazine, and a gun-shed. The arms and accouterments are kept in racks in the drill-hall.

The instructor reports that small-arms target-practice was had during the fall term with satisfactory results. Artillery practice has not been attempted.

The drill ground is hardly large enough for the purposes of battalion drill. The cadets are placed in camp for a few days during each spring term.

Very respectfully, your obedient servant,

P. D. VROOM,
Major, Inspector-General.

STATE UNIVERSITY OF NEVADA.

HEADQUARTERS DIVISION OF THE PACIFIC,
INSPECTOR-GENERAL'S OFFICE,
San Francisco, Cal., June 3, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.:

SIR: I inspected the State University of Nevada, located at Reno, Nev., on the 2d instant. First Lieut. A. C. Ducat, Twenty-fourth Infantry, is the professor of military science and tactics. He was detailed thereat November 9, 1888, and originally established that branch of science at the institution. He stands relieved by the War Department, to take effect the 6th instant. No officer has as yet been ordered to duty there in his stead.

The institution is governed by a board of regents and the college faculty. The latter are actively interested in the military department and desire its maintenance. The regents I did not see, but Lieutenant Ducat thinks they are lukewarm to the military branch. I am inclined to the opinion that Lieutenant Ducat, through his zeal and anxiety to promote the growth and prosperity of his department, has made demands which seemed reasonable to him, but probably were not acquiesced in by the board because of the necessity of economy.

The necessary State appropriations for the university are very limited and the board consequently have to weigh the expense accounts of all demands, no matter how meager they may appear.

The military course is compulsory for all male students. There were present at the institution at the date of inspection 99 students of both sexes. There have been, during the past winter months, as many as 120. Of those in attendance at the end of the school term, 42 are males, 30 of whom are organized into a company, and 12 excused for various reasons which seemed reasonable. The organization is uniformed for drill purposes. The cadet commissioned and non-commissioned officers are selected by the professor of military science and tactics from all the classes indiscriminately. They have fifty stand of arms of the United States pattern, caliber .45, and the same number of accouterments. I found the arms and equipments in excellent condition.

The company was drilled by the cadet captain. Their practical instruction embraces all the company manoeuvres and skirmish drill. They have not yet been instructed in bayonet exercises. They comprehend and execute all the commands with promptness, but they have not been exercised with sufficient persistence to execute them with much precision. Their step and wheel are the most perfect part of their drill. Three hours per week are set apart for practical instruction and one for theoretical. The latter consists of lectures on the art of war, camping, marching, field fortifications, the organization of the U. S. Army, etc. All male students attend lectures.

In addition to his military duties, Lieutenant Ducat is secretary of the school, and teaches two classes in French and drawing, for which he receives a compensation amounting to \$1,200 per year. This work does not seem to interfere with his military duties.

The president, professors, and citizens all speak in high praise of Lieutenant Ducat's zeal, intelligence, and energetic efforts to push the military department to the fore, and make it a success. They regret that he is to leave them, and would prefer his retention. Barring his zeal to build his department up with more rapidity than the board of regents can conceive and find the means to execute, and his possible want of tact to follow where they should apparently lead, Lieutenant Ducat deserves credit for all the praise bestowed upon him. One of his material causes of complaint was based on the indifference exhibited by the board of regents to his application for a proper drill-ground. This want, I was informed by the president, is to be provided for at once.

In consequence of the poverty of the State, the institution is run necessarily on economical lines, and their good will and wishes toward the military department are greater than their means to fulfill; therefore, while it seems to be a fact that the State is losing population, and the school attendance bids fair to grow less unless the present conditions change, still their appreciation of the value of military instruction seems sufficiently earnest to command a continuance of Government aid.

I have observed that the success of the military branch at these colleges depends almost wholly upon the character of the officer detailed. If he has years, ability, dignity, interest, and sufficient knowledge of men to develop a sympathetic interest for his department through his personality, it prospers, grows, and challenges respect from professors and students alike. If the individual importunes without due reason, or makes officious demands regardless of the economic conditions existing, his efforts end in irritation, loss of prestige for his department, and a general decadence of military spirit. Again, if the officiating officer is subservient to the detriment and disregard of his office, he receives the contempt and neglect that obsequiousness merits, and thus his department languishes, and the Army suffers through his want of dignity and proper self-assertion.

During my limited experience of college inspecting, I have observed all the conditions obtaining that I have described above, to a greater or less degree. I therefore venture to suggest that the present method of making details, viz, only on the application of the faculty, is faulty, in this, that the faculty, in the nature of their isolation from the Army, can rarely ever know the officer whom they recommend, and in their ignorance depend upon politicians for information and support that should come from the War Department and the General of the Army. Furthermore, the loss to the college sustained by an ill-selected representative is coupled with a demoralization to the service induced by invitation to use all kinds of influence to obtain details which merit only should determine, and hence the incentives to study and labor for preferment are lost in the general scramble which is won oftener by importunities and wire-pulling than by recognized merit. In my judgment every institution entitled to an officer as professor of military science and tactics would prefer the War Department to select for it the best possible, and rest their cause on the War Department's known judgment and knowledge of the officer for the place he has to fill.

Respectfully submitted.

G. H. BURTON,
Lieutenant-Colonel, Inspector-General.

RUTGERS COLLEGE, NEW JERSEY.

NEW BRUNSWICK, N. J., May 15, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.:

GENERAL: I respectfully submit the following as my report of an inspection just made of the military department of Rutgers College at this place.

The military professorship was established in 1866. The institution is governed by a board of trustees and is non-sectarian, but may probably be called of the Reformed Dutch Church in denomination.

This institution received the endowment of public lands accruing to the State of New Jersey by the act of July 2, 1862. Its endowment is reported to me to amount to \$116,000.

There has been a marked improvement in the military department since my visit last year. The faculty have now determined that all the students of the scientific department shall receive military instruction and drill, except in individual cases when special exceptions are made. There are 88 students reported on the rolls for the year, but at the date of the inspection there were 76 on the roll, of which number 58 were present at inspection. The students are organized into two companies, and each member provides himself with a neat and serviceable uniform of dark blue, very much like our commissioned officers' undress uniform.

The chair of military science and tactics is now occupied by Second Lieut. Samuel E. Smiley, Eighth Infantry, who has now filled that position for nearly two years. He seems to give satisfaction to the faculty of the college. The officers of the companies are appointed by the president of the college. The only staff officer of the battalion is the adjutant.

The faculty grants the professor of military science and tactics the three hours per week demanded by existing orders, and supports him in enforcing existing requirements.

Lieutenant Smiley reports that he lectured to the senior class once per week during the winter term, and had recitations in tactics by the junior and sophomore classes during the spring and fall terms. I was present at one of the recitations in tactics of the junior class. The only criticism I have to make upon the course of the recitation is that the text was adhered to too closely, and the logical and historical features were not made sufficiently prominent.

The text-books in use are Reed's Tactics and Califf's Notes on Military Science. There is no special collection of military literature in the college library, but as it contains 70,000 volumes, the histories furnish a great abundance of military information.

There are now but 108 students in attendance at Rutgers, but it has ample capacity for educating 400 students.

The United States does not supply anything to this institution except a very trifling annual allowance of ammunition for target practice. The arms and the equipments are supplied by the State of New Jersey. There are 84 rifles, caliber .45, and 100 sets of equipments now on hand and in serviceable condition.

There are no field-guns or mortars supplied, and no place to use them if furnished. The small-arms target practice is held during the autumn term.

The room used as an armory is also equipped as a gymnasium.

Lieutenant Smiley does not perform any other duty at the college than that pertaining strictly to the chair of military professor. He lives in New York, and attends the law school of Columbia College. While I do not wish to put any obstacle in the way of Lieutenant Smiley's gaining a full legal diploma, still I am inclined to think that he might accomplish something more here if he were to avail himself of a vacation period and take a course in theoretical physical culture, and then move to New Brunswick and devote some of his time allowed for military instruction to the physical development or "setting up" of some or all of his military students in the gymnasium.

There are no military buildings at the college. The buildings connected with the institution number 8.

There have been no marches made by the battalion, nor has it been in camp during this collegiate year.

Very respectfully submitted.

R. P. HUGHES,
Colonel, Inspector-General.

ST. JOHN'S COLLEGE, FORDHAM, N. Y.

NEW YORK CITY, *May 30, 1890.*

The INSPECTOR-GENERAL, U. S. ARMY,

Washington, D. C.:

GENERAL: I respectfully submit the following report of an inspection which I have just made of St. John's College, Fordham, N. Y.

The institution was founded in 1841. It is Roman Catholic, and is governed by a board of trustees and the principal of the school, Father Scully. It is without endowment, and has not received any assistance from the General Government.

The professorship of military science and tactics was established in 1855, when the present occupant, Lieut. H. G. Squiers, assumed the duties of that chair here.

He is a member of the faculty; is thoroughly supported in his work by the faculty, and is granted four hours per week for theoretical and practical military work. He is not required to do any other work, and receives no extra compensation from the school.

The college as it now stands has a corps of over 30 professors, and can accommodate between 300 and 400 pupils. At date there are 268 in attendance, and of this number the second and third forms and the preparatory departments receive military instruction. These three classes place 187 pupils under military instruction.

The pupils of the second and third forms, numbering about 125, are neatly uniformed, in forage cap, dark-blue blouse and gray trousers. They are organized into a battalion of 4 companies, with 1 staff officer and 6 company officers. These officers

are appointed after examination. The battalion was on drill when I arrived at the college, and was formed at once for review and inspection. It is a battalion of which the officer in charge, the principal of the school, and the college itself may well be proud. The younger boys of the preparatory department were formed separately. This company numbers 60 members. All the boys in it are probably under fourteen years of age. The college has provided light rifles for them, and the little fellows show great pride and zeal in their military exercises.

This college has never been supplied with any field-guns. The principal informs me that they have been making efforts to secure some such guns. I would simply state in this connection that cover for some of the exposed artillery material at Washington Barracks might be found here.

No effort has been made to secure a cavalry organization in the college. Father Scully has had the subject under consideration, but on asking my opinion as to the real value of such an organization I was compelled to say that the benefits accruing to the General Government from such a course would probably not equal the detriment that horses and grooms might be to the students.

The only text-books in use are the authorized tactics, Kennon's Guard-Duty, and the United States Regulations.

The military library consists of the historical works of the general library.

There has been no target practice, and there is no range on the college grounds where firing with service charges would be safe.

There are 150 cadet rifles, caliber .45, and 150 sets of equipments on hand. This property is in fair condition.

The arrangements are being made to go into camp for one week about the middle of next month.

I have seen the order relieving the officer now here, and have noted that no one is provided to take his duties. This is a growing institution, and if we are to locate Army officers where they can exercise the greatest influence I think the withdrawal of Lieutenant Squiers, without designating a successor, is a mistake. The college is just undertaking new buildings, one of which is to be 270 feet by 50 feet, and the capacity of the college will soon be double what it is to-day. When Lieutenant Squiers took charge of the military department five years ago he started with 18 military students. He now has over ten times that number. I think it is to be regretted that Lieutenant Squiers is to quit the institution just at this juncture. He is zealous in his work, and had persuaded the faculty to permit him to introduce the military system of discipline into the daily routine of the student's life. His being relieved will probably stop such an arrangement, and, from a personal and close observation of different systems, I have no hesitation in stating that the introduction of the military organization and system into the daily routine of a college gives results in the military department that can not be obtained in any other way.

I do not know how assignments to these colleges are made, but I desire to say that, looked at from an inspector's point of view, the detailing of an officer to Allegheny College, Pennsylvania, and not detailing one to St. John's College, New York, is a military mistake. At the former all military duties are purely optional, and, as the officer remarked to me a few days ago, the new students attend a little while, hoping to get appointments as officers, and, if they don't get such appointments they quit.

Allegheny College has forty-four students in the military department, or less than one-quarter the number in that department at St. John's. If these details are determined on purely military grounds, and without regarding State lines, I do not hesitate to recommend that the detail be continued at St. John's and the reduction made by cutting off the detail at Allegheny College, Meadville, Pa.

Very respectfully,

R. P. HUGHES,
Colonel, Inspector-General.

CATHEDRAL SCHOOL OF ST. PAUL, GARDEN CITY, N. Y.

GOVERNOR'S ISLAND, N. Y., May 26, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.:

GENERAL: I respectfully submit the following report of an inspection of the military department of the Cathedral School of St. Paul, located at Garden City, Long Island, N. Y., which I have just completed.

The school was established in 1873, and is governed by a board of trustees, and is of the Episcopal denomination.

The military professorship is now held by First Lieut. M. F. Waltz, Twelfth Infantry, who assumed the duties of that position on the 12th day of January, 1888. He is conscientious in the discharge of the duties of his position, and is suitable in every

way. His work is done to the satisfaction of the faculty and they speak in very high terms of his fidelity and zeal.

He has some work connected with the standing and discipline of the school confided to him, for which he receives \$600 per annum.

The school is military in its system and character, and of the ninety-six students in attendance ninety-five attend military instruction.

The battalion is organized into two companies, and the uniform is a very neat one of dark blue.

There are four gun detachments that have been instructed in the manual of the piece.

There are two cadet staff officers and eight company officers.

Drills are held five days in the week. Military essays have not been required. There is no special military library.

There has been no target practice during the year, and there is no suitable range in the immediate vicinity of the school.

There has been no artillery target practice. There are one hundred and twenty-five cadet rifles, caliber .45, and a like number of sets of equipments on hand and in serviceable condition.

There are two 3-inch muzzle-loading iron rifles on hand and properly cared for.

There is an armory and gymnasium a short distance from the college buildings.

The military work at this school is very well done, and although the numbers of students is not large I think the results are better than those of some of the less military schools where the numbers are much greater.

I find Lieutenant Waltz has removed his residence from Garden City to New York. This I think is a mistake. An officer should stay where his work is unless the circumstances are very exceptional.

Very respectfully,

R. P. HUGHES,
Colonel, Inspector-General.

CORNELL UNIVERSITY, NEW YORK.

ELMIRA, N. Y., May 20, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.:

GENERAL: I respectfully submit the following report of an inspection which I have just made of the military department of Cornell University, Ithaca, N. Y.:

The institution was established in 1865, and was endowed with the entire land grant of the act of July 2, 1862. It is non-sectarian.

The military department was organized in 1868. The chair of military science and tactics is now occupied by First Lieut. Herbert E. Tutherly, First Cavalry, who entered upon the duties of his office as a member of the faculty on the 1st of October, 1889.

Lieutenant Tutherly has had much experience in this sort of work and is familiar with the many obstacles in the way of obtaining satisfactory results in the military department. He is given the required three hours per week for practical and theoretical instruction in military matters, and is not engaged in any other duties.

He receives theoretically \$800 per annum from the university, but \$500 of this amount is charged up as rental for a house that he occupies, and which is the property of the corporation.

Lieutenant Tutherly seems to feel that the legal requirement of the act of July 2, 1862, which gave this university its fine endowment, is not fully complied with. He thinks that a more stringent ruling should be secured against excusing students from instruction in the military department. His argument is as follows: There are 677 sophomores and freshmen in the university. Nominally these two classes are compelled to attend the military course of instruction. Instead of having 677 students under instruction at the date of inspection, there were but 492. This leaves an absentee list of 185 students, all of whom Lieutenant Tutherly holds should attend in his department, unless excused for obvious physical reasons.

I suppose the act of July 2, 1862, is construed very differently by different persons. It seems to me that a liberal construction of the act would be, that each and every student should "include military instruction" in his course, unless excused for good and sufficient reasons. The history of the act and the psychological condition of the legislative body at the time of its passage certainly give good grounds for such construction. If such a construction of the law is correct, it simply remains to determine what may constitute a good and sufficient reason for omitting the military course. In talking over the matter with President Adams he informed me that there were probably forty or fifty young men who were struggling through the university

by their own exertions, and that it was decided by the faculty that all students thus situated should be excused from military instruction. This decision is certainly a proper one. There is still quite a wide margin between this number and the figures given above. The particular cases mentioned by Lieutenant Tutherly were about as follows: Students belonging to the university boat crew, to the base-ball nine, to the foot-ball eleven, etc., were excused from his department especially. I must sympathize with Lieutenant Tutherly in this matter, whether he is right or wrong, and for this reason: The very fact of these men being occupied as they are shows that they are physically strong and active; that they have a quick and correct *coup d'œil*; prompt in decision and vigorous in execution. They have keen minds in well-developed bodies. Such men are sure of success in the military department, and their absence must injure it.

After looking carefully over the battalion, I became convinced of one thing, viz: A closer alliance between the military professor and the professor of physical culture might result beneficially for both departments. I was sorry not to have the professor of physical culture along with me during the inspection, in order that he might see the amount of exertion it seemed to be to the students to raise their rifles to the position of "inspection arms." There is such a close relationship between the two departments that co-operation would seem to be very beneficial. If the compulsory attendance during military instruction were taken advantage of to systematically develop the muscular man while qualifying him for military work it would certainly meet two ends—physical development and increased military efficiency.

The university is equipped for the accommodation of 1,500 students, and the catalogue of 1889-'90 shows an attendance of 1,306, of whom 149 are reported to be females.

The military student body is organized into one regiment of infantry, having ten companies, one platoon of field artillery, and a signal detachment, and a very good band. There were 352 present at inspection. I regret to say that the battalion did not appear quite as well this year as it did last. Lieutenant Tutherly explains this by the fact that they have been disarmed for some time. The old armament was "turned in" in order to secure a new one, and in doing so it was necessary to close up the old bond and furnish a new one, and after all these preliminaries were gone through it was found that the rifles had to be manufactured. The battalion had but 200 serviceable rifles in possession at date of inspection, but 200 more were promised by June proximo. The 400 sets of equipments on hand are new and in good condition.

The uniform is dark blue, the infantry wearing the white helmet, the artillery the hussar cap.

The cadet officers consist of 1 lieutenant-colonel, 1 major, 2 cadet corps staff officers, 2 regimental staff officers, 30 line officers.

These appointments are made by examination from the senior and junior classes, as far as possible. It is necessary that they volunteer to serve as such, for no military duty is required of those classes.

The practical drills are three per week during the fall and spring terms. Lectures are delivered during the winter term.

There is no special military library, but in the university library there is enough to satisfy the most ambitious student. No target practice has been had during the current year, but tentative efforts are being made to provide for it in the future.

The two field guns at the university should be provided with shelter. The armory is now shared with the department of physical culture. The other buildings of the university number about sixteen. The battalion has made no marches, and has not been in camp during the past year.

In conclusion I wish to state that the condition "to give military instruction," which was agreed to by this institution in accepting the endowment granted by act of Congress approved July 2, 1862, seems to be conscientiously carried out. It is quite possible that a faculty composed of members who had made military organization and systems a special study might make decided improvements in the military course as now pursued, without doing great detriment to other courses of study, but when all things are considered I think the General Government should be fully satisfied with the manner in which the authorities of Cornell are executing their part of the agreement.

The only recommendations I have to submit are a closer alliance between the military and physical culture departments, and the establishing and using of a good rifle-range.

Very respectfully,

R. P. HUGHES,
Colonel, Inspector-General,

BINGHAM SCHOOL, NORTH CAROLINA.

INSPECTOR-GENERAL'S OFFICE, WAR DEPARTMENT,
Washington, D. C., January 25 1890.

The INSPECTOR-GENERAL, U. S. ARMY:

SIR: I respectfully submit the following report:

Location?—This school is pleasantly situated in the hill country of North Carolina, in Orange County, immediately on the railroad, three-quarters of a mile from Mebane, and 30 miles east of Greensborough. It is a flag station, and the post-office bears the name of the school. Mebane is a telegraph station.

Date of establishment?—The school was founded in 1793, nearly one hundred years ago, by Rev. William Bingham, grandfather of the present superintendent. It was first opened at Wilmington, and after several migrations, was established in January, 1865, at its present location. "After a successful existence of more than seventy years as an unincorporated institute, the school was incorporated by act of the assembly, December, 1864, and since that time has been empowered to confer such degrees and marks of distinction as are usually conferred by literary institutions."

Endowments?—This is a private school. It has no endowments. There are about 350 acres of land pertaining to the school.

Buildings and equipment?—There are twenty academic buildings, of which seven-teen are classed by the superintendent as military. These latter are used for the various requirements of a military school, viz, administration, recitation-rooms, barracks, mess-hall, guard-house, bath-house, gymnasium, etc. Three or four small structures, for solitary confinement, were building. Two barrack buildings were under construction, and nearing completion. All the buildings are plain structures, and plainly furnished. The bath-house is lighted by gas and heated by steam. Besides twenty-one long metallic tubs there is a tank 20 by 6 feet and from 4 to 6 feet in depth, for swimming. The well-equipped gymnasium was built in 1882, and is 36 by 70 feet in dimensions. Attached, marked A is a letter-heading on which is a fair bird's-eye view of the Bingham School.

Government, in whom vested?—The superintendent and faculty.

Religion, denomination?—Non-sectarian.

Academic course?—The length of this course is three* scholastic years of forty weeks each, and the term is divided into half terms of twenty weeks each. The ninety-sixth academic year began September 11, 1889, and the spring half-term January 29, 1890, the year closing June 13.

Students?—The pupils are largely from families of means and influence, and are generally boys of intelligence and culture, but the school educates the sons of clergymen free of tuition, and does not reject any reputable young man because unable to pay tuition.

Discipline?—Parental, mild but firm. Its aim is to develop the student's sense of honor and moral responsibility and respect for the truth, so that he becomes a law unto himself. The discipline of the pupils is reported good.

Requirements of law met?—Under section 1225 Revised Statutes, yes. The institution has capacity to educate at the same time not less than 150 male students.

President?—Maj. Robert Bingham is the superintendent and proprietor of the school. The faculty is composed of the teachers he secures as his assistants.

Date military department established?—In 1861. The first army officer detailed was Second Lieut. Joseph B. Batchelor, jr., Twenty-fourth Infantry, in September, 1863; relieved August, 1866. Capt. Henry Wygant, Twenty-fourth Infantry, was detailed August, 1886, and relieved August, 1889. Second Lieut. James B. Hughes, Tenth Cavalry, the present incumbent, was then detailed and reported August 7, 1889. He had been on duty but a short time when I inspected the school.

Professor of military science and tactics?—Second Lieut. James B. Hughes, Tenth Cavalry, a graduate of the United States Military Academy in the class of 1884, born in North Carolina, and an alumnus of the Bingham School.

Suitable for position?—Yes, I think so; but he has not been in his present position long enough to develop such special qualifications as are requisite in a teacher and the professor of military science at a college, if he possesses them.

Member of faculty?—Yes; with an equal vote in all matters.

Receive proper support from authorities?—Yes; a hearty support from all within the limits of the existing scope of his duties. There is no theoretical instruction in military subjects. The military department is popular with the students.

Efficient as it should be?—With no instructions or standard by which to judge of

*"We offer instruction to fourth-year pupils only when their number justifies the employment of the necessary teaching force."

the requirements of the War Department, it is difficult to determine exactly where the line of efficiency shall be drawn. If the Department is satisfied with merely practical instruction in tactics, I reply affirmatively; but if it desires also theoretical systematic instruction in tactics and military science be imparted to the students at large, I must answer no. I will discuss this subject further on, and present the views of Major Bingham, the superintendent.

Number of hours per week to military duties?—Six hours per week, one hour per day. Lieutenant Hughes' whole time is not given to his military duties. He instructs two classes, junior and freshman, in mathematics, and one class, freshman, in English. His compensation therefor is \$375 per annum. He states this employment does "not at all" interfere with the duties contemplated by his detail as professor of military science and tactics. Neither does it, as the military duties are at present performed. But, in my judgment, a thorough, faithful compliance with the spirit of the law would consume the entire time of the officer.

Number of students, capacity for?—One hundred and seventy-five.

Number of students in attendance?—One hundred and sixty-six, males.

Number of students in military department?—One hundred and sixty-three.

Military course compulsory?—Yes; on all classes. Cripples, those physically disabled, and two students who earn their board by labor in the afternoons are excused from drill. These latter pay no tuition. By regulation, military discipline pervades the entire school.

Uniform?—Cadet gray blouse and trousers for fatigue; West Point coats for full dress now being made; no regulations as to collars or cravats; button, school, with letters B. S.

Military organization?—Battalion, as provided in Upton's Infantry Tactics; four companies, A, B, C, and D. The organization of the school is military, introduced during the late war. The school officers (teachers) are commissioned by the State.

Method of appointment and promotion of cadet officers and non-commissioned officers?—Appointed by the faculty by the advice and with the approval of the army officer. The commissioned officers from the oldest, most military, and most influential cadets; the non-commissioned officers according to the same rule. Promotions are made by seniority. The cadets are not classified. A cadet may be a senior in one study and a freshman in another during the same term.

There is 1 staff officer, the adjutant; there are 12 company officers, 4 captains, 4 first lieutenants, and 4 second lieutenants; there is no band; there is no instruction in cavalry tactics; practical instruction in artillery tactics (reported), drill; manual of the piece by the artillery detachment one week, to be resumed during the winter when weather permits (daily) half hour. The superintendent states not less than sixty artillery drills annually.

Number of drills per week?—Five, infantry, one hour each, in the school, of the soldier, company, and battalion, which cease about November 20, and are resumed about March 15, according to weather. Between these dates daily artillery drill as stated above, and gymnastic drill.

Military lectures?—None.

Military essays by students?—None. No campaigns have been studied. The students have done no original work.

Text-books used?—Upton's Infantry Tactics. Recitations in tactics one hour per week by the cadet officers and non-commissioned officers.

There are no military books in the library.

There is no small-arms target-practice; none can safely be had. No artillery target practice. No signalling.

Number of muskets?—One hundred and fifty Springfield cadet rifles, model of 1884, caliber .45; 125 arms and equipments were (reported) received in August, 1889; 25 arms and equipments in November, 1889. Arms and equipments in hands of students, and used only by students, during sessions of school. During vacation they are stored in the armory, a room in one of the school buildings, a dry and well-protected place.

Number of accouterments?—Sets, 150, received as above stated.

Ammunition?—One thousand carbine ball cartridges and 700 carbine blank cartridges. The arms, accouterments, and cartridges are all in good condition, and are the property of the United States. Two gun-stocks broken, which will be paid for by the school.

Field artillery pieces?—Two 3-inch rifled guns, wrought-iron, model 1861, marked J. M. W., No. 208, P. I. Co., 1862; and T. T. S. L., No. 308, P. I. Co., 1862. Implements stored in armory. Guns not housed; not covered with paulins. All United States property in fair condition. Major Bingham stated to me: "The guns will be placed under shelter within a month."

Number of military buildings?—Seventeen, and the floor space allotted to each two cadets is 15 square feet. All the cadets live at the school in barracks, except a few, termed "locals;" (1) those whose parents or near relatives live in the immediate

vicinity, and (2) those who accept the school's offer of "tuition free or on time." The number living in barracks at date of inspection was 156.

Messing?—The boarding department is owned and controlled by Mrs. William Bingham, and the health, morals, and manners of pupils are under the constant care and supervision of the faculty, the cadets and three of the teachers messing at the same table. The charges are \$12 per month for food and lodging; 4 cents per day for lodging, and 13 cents for each (3) meal, or about 43 cents per day.

Drill Ground?—The drill ground is ample. For in-door drill the gymnasium can be used.

Gymnasium?—There is an excellent gymnasium, well equipped; and during the winter a systematic course of instruction under the direction of the instructor in tactics. There have been no marches for instruction, and no military camping. The age of the youngest student (a sergeant) in the military class is 15 years and 9 months. The age of the eldest, a sergeant, is 22 years and 9 months. Average age, 18 years. The age of the youngest student in the battalion is 13 years. The age of the eldest student is 22 years and 9 months. Average age of battalion and school, 17 years.

The total number of students who have attended the school since the military professorship was inaugurated August 1, 1883, is 770. The number for the year ending June 15, 1889, was 160. There are no graduates as contemplated by college regulations. The school gives no diplomas. Each pupil is classified according to his knowledge of the subject taught in any class; and so a cadet may be in the first-year class in Latin, and in the third-year class in mathematics. Instruction is so arranged as to make the school either a preparatory or finishing institution at the option of parents. To first-honor men, distinguished cadets who complete the regular course, certificates of proficiency are given for academic work only. Proficiency in tactics has no weight or value in determining a cadet's qualifications for this certificate. The school has a larger number of pupils in attendance this session than for several years. The zeal and acquisition of knowledge of the school are reported satisfactory in military and academic work; that the improvement in the military department is more marked; that more time is required for practical and theoretical military instruction; that no opposition or discontent exists.

No practical instruction in outpost duty, nor any night exercises. There is not a separate artillery company or select company for special drill. Cadets are exercised three weeks without arms. There is in grand tactics no practical instruction; in minor tactics, none.

Ceremonies and inspections?—The superintendent reports that under Captain Wygant, Lieutenant Hughes' predecessor, there was a weekly Sunday morning inspection of personnel, without arms, and of quarters (this is the practice now), and as early in the autumn as the proficiency of the battalion justified it, the cadets were instructed in the ceremonies of review and dress parade, and thereafter daily parades when weather permitted, with occasional reviews. This is not sufficient for thorough efficiency. The cadets march to church, to meals, to the school assembly, and to the first recitation thereafter. They assemble at reveille. To avoid exposure and loss of time there is no guard duty, except for security of barracks during meals and drill—one sentinel posted daily during meals detailed from men in barracks. The military feature of this school is made distinctly secondary. No military exercise is permitted to interfere with the prosecution of study. Introduced during the late war, it has been found so conducive to discipline, health, and scholarship, that it has been retained. "The infantry and light-artillery drill is considered part of the regular instruction and receive careful attention, but the time thus occupied, averaging about three-quarters of an hour a day, is taken entirely from recreation hours."

Methods of military instruction?—Lieutenant Hughes states: "The theoretical instruction includes recitations in infantry tactics by the cadet officers and non-commissioned officers." Indeed, this is all the theoretical instruction they receive. He continues: "The complete practical military instruction at this institution comprises the following drills: Infantry—Squad drill, company drill, company skirmish drill, battalion drill, reviews, and inspection. Artillery—Artillery detachment drill. My work here is principally that of a drill-master. I superintend the squad and all company drills, generally taking charge of a company or squad during the drill hour and rotating so as to have each at some time under my direct command. I have direct command of all battalion formations, am instructor of tactics, and in charge of the gymnasium. The only change I have inaugurated is that of including platoon drill in the company drill. In addition to my military duties I instruct two classes in mathematics and one in English. This is the first and only work of this kind I have ever performed, except the drilling and tactical recitation that I have had charge of while serving with a troop of my regiment."

The battalion is most frequently formed in the month of May; then daily; least

frequently in December, January, and February; seldom formed during these months, due to the weather.

Theoretical instruction—In an institution of this character, purely a private school, having no official status, dependence, or support, State or national, it is extremely perplexing to decide how much theoretical instruction should be demanded under section 1225; Revised Statutes, by the Government. Nearly thirty years ago Major Bingham ingrafted the military system as a powerful and efficient aid to the civil organization in the education and training of his pupils—but never to the extent of including in the curriculum the study of tactics or military science, and a systematic, thorough instruction therein. To this Major Bingham objects, and I will present his views in his own language: “In regard to the matter of theoretical instruction on military subjects, which we do not give at Bingham school at all, I remark: First, that it is impossible to give theoretical with any success at a school like this. A large number of our patrons and pupils do not wish it, and some disapprove of the military entirely, but submit to it in order to get the benefits of the literary and physical training for which we have a high report, and for the benefit of the discipline. Again, while the average age of our pupils is quite high, there are many of them too young to appreciate theoretical military instruction. Again, the Government has one Army officer on duty at West Point to every six or seven pupils, while here there is one Army officer detailed to instruct one hundred and seventy pupils; and if it takes one man to teach six or seven boys at West Point, how can one man teach much theory to one hundred and seventy here? But we put the military instruction on the same basis with English and mathematics, require every boy to take it (except for disability) as we require every one to take English and mathematics, while the other studies in the course are subject to the election of parents or pupils. Again, we give three-fourths of an hour a day each to English and mathematics. We give a full hour a day in all available weather to the military exercises, and require every pupil to attend them, so that the military feature is made as prominent as the circumstances will admit of, and I doubt if the detailed officer is as cordially supported in any other school with a detail as he is here, or if he is so thoroughly identified with the teaching force.

With regard to any general regulations made by a committee of Army officers to govern the detailed officer, I have only to add that I think such regulations would do more harm than good. The conditions are so different, and the purposes of the schools are so different, that no ironclad regulations could be made available. If the detailed officer and the school officers work harmoniously and faithfully, much good can be done by the detail. If they do not work harmoniously the detail should be discontinued. And the conditions should be kept before the proper authorities by frequent and careful inspections, such as you have made. An Army officer constantly on the ground, and an inspecting officer visiting the schools from time to time, can secure better results, in conjunction with the school officers, than any fixed rules made by any persons whatsoever who are not acquainted with the varying conditions.

The Department, in pursuance of law, provides for this school an Army officer, presumably competent, as professor of military science and tactics, and supplies ordnance and ordnance stores in ample quantity. This officer is paid by the United States a salary equal, it is believed, to the average salary paid to college professors. These acts are gratuitous. For this gratuity I believe these institutions of learning should in equity render some adequate remuneration. I think theoretical military instruction should be required at this school, and that at least five hours each week should be allotted by the superintendent for the purpose, and that the little leaven of theory thus disseminated through the “one hundred and seventy” cadets, would be abundantly productive of beneficial results.

The battalion was reviewed and inspected in the afternoon of the 14th, Major Bingham accompanying me. The formation was in single rank. The wheelings were very good. In marching, distances were admirably preserved. Shoes neatly blackened. I noticed both standing and turn-down collars, and cravats of all descriptions. Some cadets not cleanly shaved. Some needed rather more “setting up.” Some articles of clothing not clean; soiled; awaiting new uniforms. Some blouses ill-fitting, drawn up, wrinkled. Nevertheless, I was much pleased with the appearance of the battalion. There were some small boys. The inspection was followed, at my request, by a drill by companies, which was very satisfactory. The manual of arms and firings were well executed. Considering the cadets were nearly all new, and had had less than two months’ drill, their performance was very fine.

During my absence with Lieutenant Hughes and the superintendent, at his office, procuring information and data relative to the school, in the evening, I was called upon by many of the cadet officers and non-commissioned officers, a courtesy which I duly appreciate. The next morning I met several of these young gentlemen, and in conversation found them bright and intelligent youths, who left a pleasing impression.

The barracks, considering their condition, which did not strike me favorably, were

probably as cleanly as practicable. I could not help being reminded of the *old* barracks of our enlisted men, both by the appearance of these, and, indeed, somewhat by the odor. The bedding I could not examine, as all beds were turned up against the walls, under orders.

Of the 166 cadets in attendance at date of inspection there were present 140, viz: 4 captains, 8 lieutenants (including the adjutant), 13 sergeants (including the sergeant-major and color-sergeant), and 115 privates. The absentees were 1 lieutenant (sick), and 25 privates, accounted for as follows: 6 sick, 2 excused, 2 excused permanently, 2 physically disabled, 1 absent from school, 4 not uniformed, 7 unassigned (not sufficiently drilled), 1 unaccounted for. A return of the corps of cadets, dated November 14, showing the present and absent and giving the name, age, and service of each officer and non-commissioned officer is filed herewith, marked "B."

Proper designation of the detailed officer?—The text of this law is "An officer of the Army or Navy to act as superintendent or professor thereof," and by the act approved May 4, 1880, relative to the detail of retired officers, "An officer of the Army on the retired list to act as president, superintendent, or professor thereof." In the catalogue of the Bingham school of 1889, this officer is designated "instructor in tactics," and at the Virginia Agricultural and Mechanical College, in the catalogue of 1888-'89, "instructor in tactics and commandant of cadets." Law and propriety both demand a correction in the designation of the officers at these institutions.

The superintendent?—Major Bingham is a man of high character and good sense, a gentleman, energetic, evidently fully alive to the advantages of the military system in his school, and thoroughly appreciates the benefits derived from the "detail," notwithstanding he is averse to the adoption of a course of theoretical instruction; and if the patrons of the school will not sustain him, it can not be expected he will institute any radical change in his methods of administration.

Major Bingham met me at the train, which stopped in front of his quarters, escorted me to his house, and most cordially and courteously entertained me. Unsolicited he placed himself at my disposal, and was very anxious to show me everything and furnish me any and all information with regard to the school. He is justly proud of the institution, which, under his management, has attained its greatest efficiency.

This report is accompanied by the following eight papers, viz: Letter heading with bird's-eye view of school, A; return of present and absent at inspection of battalion, B; copy of school orders (rules and regulations) and scale of demerits, C; two printed testimonials of school, D and E; daily report by officer of the day of delinquencies, F; blank subreport, G, and catalogue for 1889, H.

I am, general, very respectfully,

H. CLAY WOOD,
Assistant Adjutant-General.

UNIVERSITY OF NORTH DAKOTA.

HEADQUARTERS DEPARTMENT OF DAKOTA,
INSPECTOR-GENERAL'S OFFICE,
St. Paul, Minn., June 10, 1890.

ASSISTANT ADJUTANT-GENERAL,
Department of Dakota, St. Paul, Minn.:

SIR: I have the honor to report that I proceeded to Grand Forks, N. Dak., in compliance with Par. 1, Special Orders No. 71, current series, from these headquarters, and made an inspection of the military department of the University of North Dakota on the 9th instant.

On reaching the university I called on the president, who offered me every facility to make the required inspection.

The maximum number of students reported in attendance in the past year was: Young men, 80; young ladies, 75—total, 155. The number of young men present at date of inspection was 40.

The president stated that the failure of crops for the past two years in North Dakota had impoverished the people, and in consequence a smaller number of students had attended the university. Towards the close of this term some of the young men had been obliged to leave the institution and go to work.

The university has capacity to educate at the same time more than one hundred and fifty male students, and with prosperous times and a larger population from which to draw students, will undoubtedly be a successful institution of learning. The faculty are highly spoken of, and are said to be excellent teachers. Lieut. Leon S. Roudiez, Fifteenth Infantry, the officer detailed at the university, is regarded a bright and efficient young officer, but is not a member of the faculty. It is understood that some of the professors are opposed to admitting him to the rights and privileges of a member of the faculty. Lieutenant Roudiez reported for duty at the

school in April last. He found two company organizations, but, owing to the small number of students, reorganized them into one company, and commenced instructions in the school of the soldier, setting up, etc. The arms in the possession of the university are heavy and unsuited for the instruction of young men, and Lieutenant Roudiez has preferred to wait before drilling them in the manual of arms until next term, when he hopes that proper arms will be supplied by the Government. The delay has occurred in consequence of the neglect of the board of trustees to give the necessary bonds for the arms. The president informed me that the trustees were soon to have a meeting, and he would call their attention to the matter.

The students are now without a distinctive uniform, but it is proposed to adopt a uniform for the next school year. With the increased number of students expected more companies are to be organized.

The company was turned out for drill and inspection. Total present, 40. There being no arms, the movements were confined to the setting-up exercises and school of the soldier, which were fairly well executed. The drill was conducted by Lieutenant Roudiez and the captain and first lieutenant of the company. The young men appeared to take much interest in the drill, and when properly uniformed and armed will undoubtedly present a very creditable appearance.

All matters of military organization are left to the professor of military science and tactics. He stated that there had been no breach of discipline or misconduct, but that provisions had been made by the faculty for such cases, and that tardiness, absence, or inattention to military duties would be subject to the rules for treatment of similar offenses in other studies.

Military instruction is held forty minutes each day, between 9 a. m. and 10 a. m., and has been both practical and theoretical, largely practical, to prepare them for next year's work. All male students are required to attend unless specially excused by the faculty. Lieutenant Roudiez appears to have done well for the short time he has been at the institution, and the difficulties he has had to contend with.

There is no drill-hall, but it is hoped that the next session of the legislature will make an appropriation for one.

Having joined in April, Lieutenant Roudiez has not yet made the quarterly report to the Adjutant-General required by General Orders No. 15, current series, Adjutant-General's Office.

Lieutenant Roudiez receives no extra compensation, and is not employed in giving instruction in other branches, but it is possible that he may be employed next year in giving instruction in French. He is taking a course in law with a firm of attorneys in Grand Forks. There being no quarters for professors at the university, he lives in the town of Grand Forks, about 2 miles distant, as do all the professors except the president, who resides in one of the college buildings.

About one hundred and twenty students can be quartered in the college buildings; others will have to live in Grand Forks.

A company of young ladies has also been organized, and is instructed in military tactics by the military professor. Such organizations in schools for both sexes appear to stimulate the young men, and the setting-up drill is believed to be of great benefit to the young ladies. A copy of catalogue of the university is herewith inclosed.

Very respectfully, your obedient servant,

W. F. DRUM,
Lieutenant-Colonel Twelfth Infantry, Acting Inspector-General, U. S. A.

OHIO STATE UNIVERSITY.

HEADQUARTERS DIVISION OF THE MISSOURI,
INSPECTOR-GENERAL'S OFFICE,
418 Pullman Building, Chicago, Ill., May 28, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.:

SIR: I have the honor to submit the following report of my inspection of the military department at the Ohio State University, at Columbus, Ohio, inspected May 16, in accordance with instructions from the War Department dated Adjutant-General's Office, May 7, 1890.

At present there are 306 males and 54 females—a total of 360 students at this institution. About 80 live at the college; their discipline is reported good, and their interest in the military department fairly good.

The battalion of cadets, consisting of 203 members, is organized as a battalion of infantry, with four companies, with officers from lieutenant-colonel down, a platoon

of artillery, and a band of sixteen pieces. Their uniform is blue blouse, trousers, and cap with appropriate insignia of rank. The commissioned officers belong to the senior, junior, and sophomore classes; the non-commissioned officers to the sophomore, freshmen, and first preparatory classes. The members of the band do not belong to any particular class. The age of the youngest member of the battalion is 15 years—average about 18 or 19 years. They are armed with two 3-inch rifles, two hundred Springfield cadet rifles, with the usual equipments. The small-arms and small-arm ammunition is stored in armory at university, and the 3-inch rifles, when not in use, are stored in stable.

Military drill is obligatory upon all male students, except those physically disqualified, or who are specially excused by the president. One hour daily, on five days of the week, is assigned to the military department. The officer in charge has entire control, subject to the general regulations of the institution. At the beginning of the college year, in September, the cadets are organized into provisional companies and drilled in the school of the soldier without arms, until well set up, after which the battalion is organized and the vacancies in officers filled by promotion. These promotions are filled by seniority when the service, conduct, and acquisitions are satisfactory. The promotions to corporals have always been the result of competitive drills and an examination of the records of the candidates. Officers receive commissions, and non-commissioned officers warrants, issued by the university; these are forfeited for any lack of interest or misconduct which renders the holder unfit to be an officer or non-commissioned officer. The first term is given up entirely to practical work. Drills have been had daily through the school of the soldier and company, and a few battalion drills and ceremonies. The drills are conducted by the company officers superintended by the commandant. During the greater part of the winter term recitations have been held.

All commissioned officers and sophomores, unless excused by the commandant, have recited twice each week to the commandant in the art of war. All non-commissioned officers and freshmen recited twice a week in the tactics of their arm to their captains. The cadet lieutenant-colonel had supervision of the theoretical instruction and the cadet major of the practical instruction, during the absence of the commandant at recitations in art of war. The text books used are the authorized tactics and Hamilton's Art of War. Sixty-one students studied the former and twenty-four the latter.

Battalion drills have been held from time to time and all the important movements taught. As a rule company inspections are held each Friday. Guard-mounting and duties of sentinels will close the instructions for the year. Each company has a morning report. The reports of the companies of infantry, battery, and band are then consolidated.

Lieut. C. E. Kilbourne, Second Artillery, was detailed here in 1887, and will be succeeded by Lieut. A. Ogle, Seventeenth Infantry, in accordance with special orders 56, current series, Adjutant-General's Office. He stated he is received into the faculty as a member in all respects, but does not reside at or near the university. He also teaches mathematics for which he receives an extra compensation of \$1,100; but states that this work does not at all interfere with his military duties. He reports that a suitable drill hall and armory are badly needed; at present the facilities for indoor drill are poor, being in the basement of the main building. The outdoor facilities are excellent. No relative class standing is determined at this college. He stated that no portion of the income from the land grant is set aside for the benefit of the military feature of this college, but that the necessities of the department are cordially met. Two hours more a week should be given the military department, in addition to the five hours now given for theoretical instruction. The following students he recommends, as having shown special aptitude for the military service:

Cadet Lieut. Col. J. E. Thompson, Cadet Maj. L. F. Kiesewetter, Cadet Capt: Ed. Siegerfoos, F. H. Gale, S. C. Kershaw, R. S. Goodell, N. W. Storer, and P. Martin, the first three named especially so.

Lieutenant Kilbourne stated that he has not seen the last annual report of the Inspector-General. It is recommended that a copy be furnished the commandant of cadets at each college.

The review, inspection, manual of arms, and company drills, were very satisfactory. The battalion presented a very soldierly appearance; the cadets are well set up and intelligent.

Lieutenant Kilbourne certainly deserves a great deal of credit for the excellent appearance of the battalion, as well as the discipline and soldierly bearing of the cadets and officers.

Lieutenant Kilbourne is well supported in all his efforts to keep the battalion up to its high standard by the president and professors. The president informed me that he considered Lieutenant Kilbourne not only an excellent officer in every respect, but the best he has ever had at the college as instructor. From what I have seen of Lieutenant Kilbourne he fully deserves the encomium of the president, which I am sure is fully merited.

I wish to call particular attention to the artillery detachment; the execution of the mechanical manuevers of the piece were as well done as I have ever witnessed in a regular battery.

Respectfully submitted.

Your obedient servant,

E. M. HEYL,
Colonel, Inspector-General.

UNIVERSITY OF WOOSTER, OHIO.

HEADQUARTERS DIVISION OF THE MISSOURI,
INSPECTOR-GENERAL'S OFFICE,
418 Pullman Building, Chicago, Ill., May 23, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.

SIR: I have the honor to submit the following report of my inspection of the military department at the University of Wooster, at Wooster, Ohio, made May 15, in accordance with instructions from the War Department, dated Adjutant-General's Office, May 7, 1890.

There are at present 368 students at this college, exclusive of musical and medical students, about one-fourth of these are females. Military drill is obligatory on all classes, except the senior collegiate and junior preparatory classes. Disability and the necessity of working for self-support excuse scholars from drill.

The corps of cadets is composed of about 177 members, organized into a battalion of six companies, two preparatory and four collegiate, no band, and a separate artillery detachment, which is only partially under Lieutenant Wilkinson's personal instruction. The age of the youngest person in the battalion is 15 years and the oldest about 27, the average is about 20 years. None of the students live at the college. Their discipline is reported good and their interest in the military instruction very good. Their uniform is the regular Army cap and blouse and civilian trousers. The officers are chosen from the seniors, sergeants from juniors, and corporals from sophomores. They are armed with two field pieces, one hundred and fifty cadet rifles and equipments, in fair condition, they are kept in armory and cared for by the janitor. Ammunition in good condition.

Each infantry company has three drills a week. The complete practical instruction at this school has been limited to tactics; infantry, artillery, and signal drills. In the schools of the soldier, company, and battalion—saber exercise, target practice, and some guard duty. Parades and inspections irregular, as they must take the place of drills; had three since last September. Guard mounting will be carried on, with guard duty, during the remainder of term. The junior class has three artillery drills a week, signal and military telegraphy, and saber exercise. The time allotted does not permit thorough instruction in these drills. The facilities for indoor drill is a gymnasium, which can only be used for the manual of arms. The facilities for outdoor drill are good.

Theoretical instruction has been confined to recitations in infantry tactics by commissioned officers of senior collegiate and senior preparatory classes during the first term of the year, and one lecture per week to senior class during last two terms, on the following subjects: Organization of armies, small-arms and changes in tactics caused by improvements in arms in the hands of troops, minor and grand tactics, strategy and subject of army regulations. No other recitations or instructions are allowed or authorized by the faculty. Have no text books for classes. No weight is given the military course in graduation class standing.

Lieut. J. W. Wilkinson, Seventh Cavalry, the officer detailed here, stated that he is not a member of the faculty. He resides near the college. He performs no other duties than that pertaining to the military department, and receives no extra compensation. He states the president of the university and principal of the preparatory department lend encouragement to his department by their occasional presence. But outside the fixed (minimum) allowance of time, etc., no other encouragement of special nature is given by other members of the faculty. Two of the weekly drills being for only one-half hour each, no improvements can be made without additional allowance of time. Also, to be of practical benefit, recitations should be had on notes taken at lectures. The students are not permitted now to have recitations upon subjects treated. Text books should be used for study and recitations. The library at this institution contains about seventy volumes on different military subjects.

Lieutenant Wilkinson reports the following names of students as having shown special aptitude for the military service:

W. H. Wilson, C. M. Moderwell, M. H. Frank, Geo. A. Nesbitt, T. P. McKee, C. E.

McKinley, class 1889. W. E. Forgy, J. G. Graft, Wm. Houston, J. P. Leyerberger, W. A. McBane, Chas. Miller, W. W. Riddle, and J. P. Slagle, of senior class of 1890.

Lieutenant Wilkinson has not received a copy of the last report of the Inspector-General, containing tabulated statement of colleges. It is recommended that, if it is intended to continue the tabular statements, a copy be sent to the commandant of cadets at each college.

The battalion was reviewed and inspected; the arms were not as clean as they should be.

Battalion drill satisfactory, except as to guides. At inspection the lieutenants of first and second companies did not take positions in front of their companies, at the command rear open order. The artillery detachment seemed well instructed in the manual of the piece.

The skirmish drill of the battalion was well conducted, and shows careful instruction.

Lieutenant Wilkinson is an excellent officer, is highly spoken of by the president and faculty of the university.

The young men composing the companies are well set up, bright and intelligent looking, and will make efficient material, in the event of their services being required in the future, as officers of volunteers.

This university has a great advantage over the one at Ada in drill-grounds; the campus is large and the ground of such a nature as to be admirably adapted for skirmish drill.

The gymnasium is an excellent feature at this college in setting up the cadets. Taken altogether the inspection and drill was very satisfactory. Lieutenant Wilkinson seems well adapted for this character of work; his system of training and instruction has had an excellent effect upon the students in teaching them self-reliance and subordination to authority.

The location of this university is excellent and very attractive. The president is a gentleman of the highest standing and of great ability. He is fully in accord with the military feature of the school, and is willing to assist Lieutenant Wilkinson in all his efforts to make a success of his part of the work.

With the large amount of musical talent at hand, I should think it an easy matter to organize an excellent band at this university. I trust it will be done, as it improves the military feature greatly.

Respectfully submitted.

Your obedient servant,

E. M. HEYL,
Colonel, Inspector-General.

OHIO NORMAL UNIVERSITY.

HEADQUARTERS DIVISION OF THE MISSOURI,
INSPECTOR-GENERAL'S OFFICE,
418 Pullman Building, Chicago, Ill., May 28, 1890.
The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.:

SIR: I have the honor to submit the following report of my inspection of the military department at the Ohio Normal University, at Ada, Ohio, made on May 13, in accordance with instructions from the War Department, dated Adjutant-General's Office, May 7, 1890.

Ada is a pleasant village of about two thousand three hundred inhabitants, situated on the Pittsburg, Fort Wayne and Chicago Railroad.

The enrollments last year at this university amounted to 2,473; this is the largest the school has ever had. At present there are about 650 males and about 250 females at the college.

Military drill is voluntary. At present there are 170 students in the military department; the term closing next week, a number of the members have already gone home. The age of the youngest person in the battalion is 16 years and the oldest 28 years, the average being about 21 years. They all live with private families, and their discipline is reported very good and their interest in the military department is satisfactory.

The battalion of cadets is organized into four companies and band, with full complement of officers. Their uniform consists of dark blue blouse and trousers, Ohio State crest buttons, regulation forage cap and white gloves. The battalion is armed with two pieces of field artillery; one hundred and fifty cadet rifles and equipments, in good condition. Their annual allowance of ammunition has all been expended in practice firing. The supplies are properly stored and cared for. The officers and non-commissioned officers mainly belong to the senior and junior classes. The band

was only lately organized and made up from the best musicians in school without regard to classes.

There are five terms, of ten weeks each, in a school year, and at each term the battalion is reorganized with an addition of from fifty to eighty new students.

The battalion has five regular drills each week in schools of the squad and company. Battalion drill and ceremonies are held whenever practicable. The students upon first joining are drilled without arms from ten days to two weeks. One week during each term is given to company and battalion skirmish drills. Artillery drills are held for ten days during each term. There is no separate artillery company. Target practice is held every Saturday afternoon, weather permitting. During the month of June instruction in guard duty will be given, and for a period of ten days sentinels will be posted at 8 p. m. and relieved at 6 a. m.

Two classes of about forty students recite in tactics once a week, and from six to fifteen in military science, three terms during the year. The text-books used are "Reed's Infantry Tactics," "Califf's Notes on Military Science," "Wheeler's Art and Science of War," and Hamilton's for instruction in guard duty. Besides a course of eighteen lectures were given on the following subjects: "Army Organization and Administration," "Lines and Order of Battle," "Frederick's and Napoleon's Military Systems," "Modern Tactics, Arms, Equipments and Ammunition Supply," "Strategy," "Cannon," "Practical Gunnery," "Pyrotechny and Projectiles," "Fortifications," "Siege Operations," "Torpedoes and Submarine Mines," "Grand Guards and Outposts," "Military Law and Courts-Martial"

Students completing the course in tactics and military science are graded according to school standard and these grades count in making up final graduating class standing.

The following students of the present battalion organization are reported as having shown special aptitude for the military service and whom Lieutenant Baxter considers well fitted for appointment to a lieutenant in the Army: H. L. Williams, J. G. M. Haag, Wm. McLaughlin, H. F. Price, C. C. Ross, G. R. Anderson, S. H. Meyers, H. H. Shipton, J. F. Axline, J. M. Rapp, H. K. Bell, G. F. Riese, V. D. Hartman, E. J. Miller, R. H. Schoonover, D. H. Foster.

Lieut. John Baxter, Ninth Infantry, the officer detailed here, assumed charge of the military department in 1887, succeeding Lieutenant Roberts, Nineteenth Infantry, who was the first officer detailed under Revised Statutes, section 1225, at the time the military department was established at this college, in 1885. Lieutenant Baxter also gives instruction in descriptive geometry, but receives no compensation for this work. He states that this employment to no extent interferes with his military duties. He is a member of the faculty and resides near the college. He reports that every encouragement and facility is given the military department, but recommends that the membership of the military department and attendance at drill be made compulsory upon all male students. The facilities for outdoor drill are ample, but the main drill-ground should be graded and drained. For indoor drill there are facilities for battalion, manual, and company drill. He states there are many volumes of military history, etc., in society and school libraries.

The ground during inspection was very wet and muddy, which prevented battalion movements. The ceremony of dress parade was very creditable, the manual of arms excellent; the arms and equipments were in good condition and well cared for. One Springfield rifle is reported unserviceable, but will be repaired at the college.

The professors and all the faculty speak in the most flattering terms of Lieutenant Baxter's ability, his character as an officer and gentleman. In fact, I heard nothing but praise for Lieutenant Baxter from not only the college faculty but from the citizens of the town and officers of the Ohio State National Guard.

Lieutenant Baxter impressed me as being an officer of more than ordinary ability, and one who could be selected for any responsible duty.

The students of the college are bright and intelligent looking, particularly the officers. The only thing that marred the good effect of the battalion was the lack of uniforms. The cadets are only partially uniformed with caps, dark-blue blouses, and dark-blue trousers. A good band, composed of the cadets, has been organized; they play very well and are quite a credit to the institution. The artillery detachment is well instructed.

Professor Lehr, president of the university, is a gentleman of culture, and of high standing as a savant. He takes great interest in the military feature of the college, and assists the commandant in every possible way. The discipline and subordination to authority of the cadets is remarkable, and is due to the admirable management and judgment of President Lehr and Lieutenant Baxter.

Respectfully submitted.

Your obedient servant,

E. M. HEYL,
Colonel, Inspector-General.

PENNSYLVANIA MILITARY ACADEMY.

INSPECTOR-GENERAL'S OFFICE,
Washington, D. C., June 11, 1890.

The INSPECTOR-GENERAL U. S. ARMY,
War Department, Washington, D. C.:

SIR: I respectfully submit the following report:

Location?—The Pennsylvania Military Academy is located at Chester, Pa.

Date of establishment?—The institution was incorporated as a military university in 1862.

Endowments?—None.

Buildings?—The buildings consist of the main building, 217 feet long, 50 deep, and four stories high; the laboratory; the drill hall, 130 feet long, 40 wide, and 20 high; the gymnasium, 60 feet long, 30 wide, and 25 high, adjoining the drill hall, and the riding hall, 150 feet long by 50 deep.

Equipment?—The academy is thoroughly well equipped for its work.

Government, in whom vested?—In the president and board of trustees.

Religious denomination?—Non-sectarian.

Requirements of law (sections 1225 or 1260, Revised Statutes) met?—Yes.

Departments of instruction?—There are four regular courses of study; the civil engineering, the chemical, the architectural, and the classical, in any of which a cadet may graduate and take a degree.

Collegiate course?—The ordinary collegiate course, leading to the degree of Bachelor of Arts.

President?—Col. Charles E. Hyatt, C. E.

Students and classes?—The graded department and the preparatory department. There are four regular courses, and two preparatory, the scientific and classical.

Discipline?—Strictly military at all times.

Expenses?—The terms are \$500 per year for tuition, with board, washing, light, fuel, and use of arms. Cadets in the highest three classes are charged additionally, \$30.

Date military department established?—In 1862.

Has the detail been continuous since?—Yes, since enactment of the law in 1870.

Professor military science and tactics?—Second Lieut. Beverly W. Dunn, Third Artillery.

Date assumed duties?—September 9, 1888.

Suitable for the position?—Yes. The president of the academy speaks of Lieutenant Dunn in terms of the highest praise.

Number of hours per week to military duties?—Eight.

Receive proper support from the authorities?—Yes.

What encouragement is given to the military department?—Every encouragement.

Interest manifested by the faculty?—Very great.

Is the department popular with the students?—Yes.

Satisfactory to the faculty?—Yes.

Efficient as it should be?—Yes; although perhaps deficient in theoretical instruction.

Requirements of General Orders, No. 15, of February 12, 1890, from the Headquarters of the Army, strictly enforced?—As far as practicable.

Does the professor of military science and tactics reside at or near the institution?—Yes.

When in the performance of his military duties does he appear in proper uniform?—Yes.

In his relations to the institution does he observe the general usages and regulations therein established affecting the duties and obligations of other members of the faculty?—Yes.

Does he perform other than military duties at the institution, and what compensation, if any, does he receive therefor?—He is assistant professor of mathematics, and receives \$1,200 per annum.

To what extent do these duties interfere with his military duties?—They really assist him in his military work.

Are all rules and orders, appointments, promotions, etc., as indicated, made and promulgated by the professor?—No; by the president, who always consults the military professor.

Does he enforce proper military discipline at all times, as required?—Yes.

Upon occasions of military ceremony and in the performance of military duties does he require the students to appear in the prescribed uniform?—The cadets are required to appear in uniform at all times.

Is the course of instruction both practical and theoretical?—Yes.

Does theoretical instruction occupy at least one hour, and practical at least two hours, per week?—Theoretical less than one, and practical more than two.

Does the practical instruction embrace everything required under the head "Course of Instruction" on page 2 of the general order, and both for infantry and artillery?—No.

Specify any omission?—Saber exercise and target practice for artillery.

Does instruction include the duty of sentinels, and castrametation?—Not castrametation.

Is instruction given by the professor personally, or under his immediate supervision?—Both.

Is theoretical instruction given by the professor, and by recitations and lectures, and does it include a systematic and progressive course in the subjects mentioned in the general order?—Instruction is given by recitation and lectures. The course is not yet arranged to be systematic and progressive.

Specify any omissions, or recitations or lectures upon other subjects?—The preparation of company reports and returns other than the "Morning Report."

Are the quarterly reports duly rendered, and in the required form?—Yes.

Are copies of all reports and correspondence retained?—Yes.

Is copy of the graduation report duly furnished the adjutant-general of the State?—Yes.

Is the professor of military science, etc., a member of the faculty, with all the rights, privileges, and authority of other heads of departments or professors?—Yes. And does he habitually exercise them?—Yes.

Is he provided with quarters on the same terms as other professors?—Is not provided with quarters.

Total number of students since military professorship was established?—Eight hundred.

Total number of graduates?—Two hundred and thirty-nine.

Largest number of graduates in one year?—Twenty-one. When?—1881 and 1890.

Number of students in institution last year?—One hundred and fifty-three.

Number of graduates?—Twelve.

Other information which will indicate the present condition of the institution?—The number of students at present in the institution is 142, two being on furlough and four having recently been discharged. The cadets represent twenty-three States and three foreign countries.

How many students is the institution prepared to teach annually?—One hundred and fifty.

Number of students now in attendance, 142; males, 142.

Number of students in military department, 142; seniors, 21; juniors, 10; sophomores, 21; freshmen, 40; subfreshmen, 50.

Age of youngest student in military class, 18; age of eldest, 22.

Age of youngest student in battalion, 14; age of eldest, 22; average age, 18. 1.

How many of the students live at the institution?—All.

Of those in the military department?—All.

How many live elsewhere?—None.

Is the military course of instruction compulsory upon all under-graduate students?—Yes.

Who are excused?—None.

Are all under-graduate students, capable of performing military duty, required to attend the prescribed military exercises?—Yes.

What classes are required to attend?—All.

Who are excused?—None.

What causes excuse students?—Sickness only.

Methods of military instruction?—Theoretical instruction is given by recitations and lectures. Practical instruction by daily drills.

Does this work occupy the whole time of the military professor?—No.

Facilities for military instruction?—Excellent.

How many volumes on military subjects in library of institution?—About a dozen. The library was destroyed by fire about ten years ago.

What are the text-books for each class?—Only the first and second classes are under theoretical military instruction. The only text-book is the Drill Regulations. The works of reference are "Notes on Military Science" and Kennon's "Manual of Guard Duty."

How many students are studying each?—The first and second classes, aggregating thirty-three.

What campaigns have the students studied?—None.

How many military essays by students?—Three during the session.

On what subjects?—"Coast defense," "Electricity in war," "The war of 1870-71." These essays were written in the literary department and only partly from information obtained in the military department.

What other original work have the students done?—None in the military department.

Number of military recitations since last annual inspection?—Three.

Number of military lectures since last annual inspection?—Ten.

Number of drills?—Infantry, 122; artillery, 50; cavalry, 110, since last annual inspection.

Do the powers, methods, and distinction between military and martial law form a part of the military course?—No.

In use of Army forms and blanks; including rolls and returns?—Only company morning report and ordinary official communications.

In methods of requisition and supply?—Yes; by lectures.

In probable fields of war, and military operations?—Yes; by lectures.

Logistics?—Yes; lectures.

Strategy?—Yes; lectures.

Lines of supply?—Yes; lectures.

Instruction in outpost, or reconnaissance, duty?—Lectures only.

Any night exercises?—No.

Any instructions relative to fire-arms?—Yes.

Practical gunnery?—Lectures on field artillery.

Projectiles?—No special instructions.

Gunpowder?—Yes; by lectures.

Other explosives?—Yes; by lectures.

To what extent have the details of these several subjects been taught?—General principles only, explained in lectures.

Estimating distances?—No.

Time allotted different studies at the institution?—Pages 15 to 20 of the catalogue give the number of recitations weekly in the different courses of study. Theoretical instructions in the military department occupies less than one hour per week.

Value given different studies?—Mathematics, 4; natural science, 3; languages, 2; English, 3.

What value has the military course in determining class standing, or relative standing on graduation?—In calculating the average grade attendance counts 1; department, 2; scholarship, 4; military exercises, 2.

Is the zeal and acquisition of knowledge in the military department satisfactory?—Satisfactory for the time allowed. The practical part is satisfactory.

Messing?—A general mess.

Number and character of buildings?—The main building, the drill hall, with gymnasium adjoining, and the riding hall.

What facilities for in-door drill?—Drill hall and riding hall.

For small-arms target practice?—Three hundred yard range, with all necessary implements.

For gallery practice?—None.

For signaling?—Flags and heliographs.

For artillery practice?—None.

Gymnasium?—An excellent gymnasium. Fencing is not taught.

Armory?—Yes; in the main building.

Number of muskets?—One hundred and fifty cadet rifles, caliber .45, the property of the United States.

Number of accouterments—sets?—One hundred and fifty.

Field guns?—Six brass field guns, the property of the State of Pennsylvania.

Are field guns properly housed?—Yes.

Are they covered with paulins?—No.

Artillery implements?—Full set.

Artillery harness?—None.

Ammunition?—Blank ammunition only.

When were the ordnance and ordnance stores received?—The cadet rifles, etc., were received in March, 1882.

How stored and cared for?—Properly stored and cared for.

Condition of the ordnance as to repair and cleanliness?—Good.

Any unserviceable United States property?—No.

Has any United States property been lost or destroyed?—The equipment was lost by fire in 1882.

Military organization?—For administration and company drill the corps of cadets is organized as a battalion of two companies. For battalion drill it is divided into six companies.

What field officers are there?—None. Cadets act as field officers in the battalion drill.

Uniform?—The uniform of cadet, gray, consists of a dress suit, an undress suit, and an overcoat. The dress uniform is the same as that worn at the United States Military Academy, with the helmet instead of the dress cap.

Method of appointment and promotion of officers and non-commissioned officers?—Officers and non-commissioned officers are appointed by the president after consultation with the military professor.

From what class are commissioned officers appointed?—From the first class.

Non-commissioned officers?—First, second, and third classes.

How is the band organized and maintained?—No band.

From what class is the field music?—Not confined to any one class.

Flags?—National, yes; State, yes.

Is the professor of military science commandant of cadets?—No; the president of the academy is commandant of cadets, but the control of the military department is practically in the hands of the military professor.

Is there a separate artillery company?—No; all cadets participate in the artillery drill except those disqualified by youth or physical infirmity.

Select company for special drill?—No; there is a select battery for artillery drill at commencement.

What practice or instruction in cavalry tactics?—The schools of the soldier and platoon mounted, and riding school instruction patterned after West Point.

What roll-calls are there?—Morning and evening prayers, drill, and retreat.

What camp equipage?—None.

What military camping?—None.

What marches for instruction?—Frequent marches for instruction are made by the cavalry detachment.

What is the longest march made by the battalion?—Twenty miles, by the cavalry detachment.

How many miles per hour?—Four.

Is any guard duty performed?—Yes.

Has each student walked post?—All except eight of the preparatory class.

Drill ground adequate?—Yes; the drill ground is admirably adapted to the purpose.

Average daily attendance at drill?—For the present quarter 144.

Do the students march to any duty other than drill?—To church.

Do they assemble at other times?—Yes.

What are the punishments for misconduct, etc.?—Demerits, confinement to room, delinquent guard-duty, and in extreme cases, dark prison, dismissal, and expulsion.

What is the aptitude of students for military instruction?—Excellent.

What is their interest therein?—Excellent.

How long are new students exercised without arms?—About three weeks.

How long are recruits practiced in the "setting-up" exercises?—About three weeks.

How often are these exercises recurred to?—At the beginning of each session.

Are all students frequently practiced therein?—At the beginning of each session and when deemed necessary.

What practice or instruction in grand or minor tactics?—None, except by lectures.

What month is the battalion most frequently formed?—It is formed every day of the session.

What practice or instruction in each of the prescribed ceremonies and inspections?—Practice and instruction in all of the ceremonies for a battalion.

How often is there dress parade?—About twelve times a session.

Reviews, how often?—About twelve times a year.

Is there a monthly inspection of the battalion?—Weekly.

Are there weekly inspections of companies, under arms, on every Saturday?—Yes.

Is there a Sunday morning inspection of the dress and general appearance of the students?—Yes.

What other inspections are there?—An inspection of quarters daily, special inspection every Sunday.

Is the number of inspections, reported as made, enough for thorough efficiency?—Yes.

Is there guard mounting?—Yes.

How often?—Daily.

Hospital?—Yes.

What medical attendance have the students?—There is a regular surgeon of the academy, and a hospital steward is constantly in attendance.

Is there any opposition on the part of the faculty or students to the military course, or does discontent exist?—None whatever.

What improvements are needed in the military department?—An extension of the theoretical instruction is the improvement most needed.

Condition of office, records, etc.?—Good.

Review and critical inspection of battalion, and remarks thereon?—I received a review of the battalion of cadets, which was commanded by Second Lieut. B. W. Dunn, Third Artillery, the professor of military science. The ceremony was highly creditable. In the march past the step was good, the wheels and alignments excel-

lent, and the distances well preserved. The battalion passed in review a second time, at "double time," when the same faultless alignments were observed.

An inspection of the battalion followed the review. The battalion was found to be in admirable order. The arms and accouterments were clean and serviceable, and the uniforms exceedingly neat and well fitting. The cadets were well set up and their bearing was soldierly in the extreme. The Pennsylvania Military Academy has every reason to be proud of its corps of cadets.

Number and grade of present and absent?—Present at inspection, 1 adjutant (captain), 4 captains, 9 lieutenants, 1 sergeant major, 1 chief musician, 2 first sergeants, 10 sergeants, 16 corporals, 6 buglers, 5 drummers, 81 privates, total, 136. Absent from inspection, 1 lieutenant (officer of the day), 1 bugler of the guard, 3 privates (in awkward squad), 1 private (under size), 2 privates on leave, total, 8.

Suggestions of president?—The president suggests that the detail of the military professor be made for four years instead of three as at present. Each officer would then be enabled to carry one class through the entire four-years' course. I agree with Colonel Hyatt that an extension of the time of detail is desirable.

Suggestions of military professor?—"The military professor suggests that when an officer is detailed for college duty he should be sent to the institution at least a month before the old officer is relieved. He also suggests that a suitable text-book for the military course at colleges be prepared."

Remarks and recommendations?—Upon my arrival at the academy I reported to the president, Col. Charles C. Hyatt, by whom I was very courteously received, and who afforded me every facility for the performance of my duty.

I just witnessed a drill of the cavalry detachment, which took place in the riding hall under the charge of Lieutenant Dunn. The detachment was armed with saber and pistol. The drill, which lasted over an hour, embraced the school of the platoon mounted, the saber exercise, running at heads and rings, dismounting and mounting at the walk, trot, and gallop, firing blank cartridges, leaping the bar, etc. The whole drill was very satisfactory and reflected great credit upon the instructor and the cadets participating in it. The cavalry drill is not part of the regular course and is held during the recreation hour, from 12 m. to 1 p. m.

With the president and other officers of the academy, I visited the mess hall while the cadets were at dinner. Everything I saw indicated order, neatness, and discipline.

An inspection of the cadet quarters was made prior to the review of the corps. The rooms, each intended for the occupancy of two cadets, are located on the third and fourth floors of the main building. They are bright and well ventilated, and models of order and neatness. The building has ample bathing facilities, is lighted by electricity and heated by steam. It was observed to be throughout in excellent police.

After the review and inspection of the battalion it was drilled by Lieutenant Dunn in the manual of arms and the school of the battalion. The manual was exceedingly good. The manner in which the different movements in the school of the battalion were executed gave evidence not only of most careful and thorough instruction, but of a very commendable *esprit de corps*.

The drill of the battalion was followed by a short artillery drill, from which it was apparent that instruction in this branch has also been very thorough.

The signal detachment was practiced in sending and receiving messages with the heliograph, and displayed a marked degree of proficiency.

I am, general, very respectfully, your obedient servant,

P. D. VROOM,
Major, Inspector-General.

ALLEGHENY COLLEGE, PENNSYLVANIA.

MEADVILLE, PA., May 23, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.:

GENERAL: I respectfully submit the following as my report of an inspection of the military department of Allegheny College, of this place.

The institution was established in 1815, and the endowment of \$150,000 that it enjoys is not from the General Government. The college is under no special obligation to keep up a chair of military science and tactics in its course. From information gained while in Meadville I am inclined to the belief that the detail of an Army officer to this college was rather submitted to in order to accommodate mutual friends of army officers and the college than actually desired by the institution.

This opinion is very strongly supported by the situation, as I found it, of the military department. But 25 per centum of the male students are taking any part in

military instruction, and the attendance of that small number is uncertain and irregular.

The professorship of military science and tactics is still occupied by Lieut. J. F. Kreps, Twenty-second Infantry, who is ordered relieved by Lieut. J. K. Cree, Third Artillery.

Lieutenant Kreps is entirely competent for the duty confided to him, and has evidently sought to obtain such results as were possible under the system pursued by the faculty of the college.

The institution is prepared, both in accommodation and instruction, to educate 250 students.

There are 210 students in attendance, 175 males and 35 females.

The military course is entirely optional with the students and the roll called for 44 as the aggregate. There were 43 presented for inspection. The number is quite small, but what there are of them appeared very well indeed.

The uniform is a very neat one of dark blue, and the young gentlemen are well set up and vigorous looking. The state of instruction was not such as we hope to find at a subsequent visit. I do not wish to be understood as criticising Lieutenant Kreps's course, for I think he has done very well in keeping up an organized military body at all under the existing circumstances. I think it is generally understood by military critics that patriotism alone will not hold an army together after one severe engagement, and military enthusiasm does not secure the attendance of the students here after they find that promotion is very slow or that the work is monotonous and tiresome. The instructor informs me that quite a percentage of the newly matriculated join his department, but after staying awhile and failing in receiving promotion to commissioned officers they drop out.

The 44 men are organized into two companies and a drum corps.

The cadet officers are appointed after passing an examination in the duties of the positions sought.

The college does not possess an armory, but a basement is hired in the town for drilling purposes. There has been no small-arms target practice during the past year. There is no range to be had in the vicinity of the college, and no hall in which gallery practice can be conducted. There has been no artillery target practice, and the college is not supplied with guns that would answer such a purpose.

There are 146 cadet rifles, caliber .45, now on hand and in fair condition. The 2 6-pounder brass pieces on hand are in serviceable condition probably, but the carriages are not. Time has done its usual work and they are falling to pieces.

I think the college should restore these "antiques" to the Ordnance Department.

The following equipments are on hand: 132 cartridge-boxes, 110 waist-belts, 100 waist-belt plates, 131 bayonet-scarbards, 17 non-commissioned officers' swords, 16 non-commissioned officers' scabbards, 16 non-commissioned officers' belts.

The battalion has not been in camp nor has it made any marches during the past year.

It is respectfully submitted that the military work done here does not seem to me to justify the General Government in maintaining an officer here, and unless he is detailed here for some reason not purely military in its character I would respectfully recommend that this institution be erased from the list of those to whom officers are to be accredited and that the assignment be given to some institution that will give the officer such support as may enable him to accomplish more telling results.

I do not think any institution should be given an officer that will not make the taking of the military course compulsory on at least a portion of the student body.

Very respectfully,

R. P. HUGHES,
Colonel, Inspector-General.

PENNSYLVANIA STATE COLLEGE.

BELLEFONT, PA., May 21, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.:

GENERAL: I have just completed the inspection of the Pennsylvania State College. It is located in the Nittany Valley in Centre County, Pa., and is about three miles from any railroad and in a region of beautiful scenery and fine lands.

The institution was one of the first of its kind that was organized in our country. It was organized in 1859. It was given the entire endowment coming to the State of Pennsylvania by the act of July 2, 1862. It thus received 780,000 acres of land, which was sold at a low figure and from which it now receives \$30,000 per annum, the proceeds of the sale of the land being invested in one bond running fifty years, at 6 per cent. interest, payable by the State.

The government of the institution is vested in a board of trustees, part of whom become so *ex officio*, and part of whom are elected by industrial societies of the State, and part of whom are chosen by the board itself.

There seems to have been a very conscientious discharge of the agreement to have military instruction given in the institution ever since it succeeded in getting the endowment fund. The full history of the military department was not obtainable, but it seems to have existed since 1864. The professor's chair of military science and tactics has been filled by officers on the active list of the Army since 1883. First Lieut. Silas A. Wolf is now in charge. He has occupied the chair since September 1, 1889. He seems to be entirely qualified to fill the requirements of his position and occupies a seat in the faculty of the institution. The faculty lends him its support in executing the work of his department.

The authorities give from three to five hours per week to the military professor, which is more than is generally granted to that department. Lieutenant Wolf has classes in astronomy and a part of the year in mechanical drawing in addition to his own department. He does not receive any additional compensation for this additional work.

The college is prepared to educate 300 students, but at date there are only 164 in attendance, and of this number 22 are females who are excused from military duty. All the other students are required to take military instruction unless excused individually by the faculty for good and sufficient reasons.

The uniform is a dark-blue cap and blouse, similar in make and cut to those worn by army officers, and light blue trowsers with a stripe of dark blue running down the legs. The uniforms are apparently of good material and well made.

The cadets are formed in a battalion of four companies and a drum corps. The officers are appointed from the seniors and juniors by examinations. There are four captains and seven lieutenants. At inspection there were 103 of the 142 cadets present in line.

It is very much pleasanter to say pleasing things than those that are disagreeable, but it is necessary for me to say in this case that the condition of the battalion is not just what I think it ought to be. There were special reasons for this state of things that are now removed. The armory, which is a fine building and well equipped as a gymnasium, has just been completed and put in possession of the military instructor. He promises me a very different state of things when the inspection comes round again, and he has certainly been put in the way of accomplishing a good deal. It is evident that the opportunities are going to be given him, and he seems to have the energy and zeal to avail himself of them.

The military library seems to be somewhat limited. There has been no target practice during this year, which I think is to be regretted. Some practical use of a rifle, accompanied by a careful course of instruction in the theory of internal and external ballistics, should be given each year to the graduating class, who are generally cadet officers.

There are four field pieces at the college—2 three-inch iron muzzle-loading rifles of the United States, and 2 twelve-pounder brass pieces of the State of Pennsylvania. There are 100 cadet rifles, caliber .45, and 100 sets of equipments.

The 2 three-inch guns are out in the open at present, but I am told that protection will be found for them after the drill season is over. The small arms and equipments are in fairly good condition.

There have been no military marches or camps made since Lieutenant Wolf assumed the chair at this college.

It is the very evident intention of the institution to carry out, in good faith, the clause of the law of 1862, which specifies that military instruction shall be included in the course.

Very respectfully,

R. P. HUGHES.
Colonel, Inspector-General.

THE SOUTH CAROLINA MILITARY ACADEMY.

INSPECTOR-GENERAL'S OFFICE, WAR DEPARTMENT,
Washington, D. C., February 11, 1890.

The INSPECTOR-GENERAL, U. S. ARMY:

SIR: I respectfully submit the following report:

Location?—The South Carolina Military Academy occupies the building known as the Citadel, one main building inclosing a rectangular court with two connecting wings, situated on the north side of Marion Square, city and county of Charleston, S. C. Marion Square is in the heart of the city, bounded on the north by Hudson street, on the south by Calhoun, on the east by Meeting, and on the west by King street.

Date of establishment?—A military school is established at the Citadel at Charleston by act of the general assembly, passed December 20, 1842, "the students and members of which shall be employed in performing such services as may be assigned them;" "the students, when admitted, shall be formed into military corps, and shall constitute the public guard of the Citadel in Charleston." The school continued in operation until the close of the late war in 1865. By an act of the general assembly approved January 31, 1832, the board of visitors is authorized to re-open the South Carolina Military Academy, and this action was taken October 1, 1832.

Government, in whom vested?—In a board of visitors appointed by the governor, pursuant to law, consisting of five persons, with the governor and adjutant and inspector-general, by law, *ex-officio* members of the board. The board is directed by the act of 1842 to establish such regulations "as they may deem necessary and proper for the organization and good government" of the academy. It likewise has power to establish "such by-laws for the management" of the academy "as shall not be inconsistent with the laws of this State" or of "the United States." Accordingly on October 4, 1887, a book of regulations, adopted by the board of visitors, was published, a copy of which book accompanies this report, marked "A."

Religious denomination?—None.

Endowments?—The general assembly, I am informed, annually appropriates \$20,000 for its support, to which is added the tuition fees of the pay cadets.

By act of the general assembly approved January 31, 1882. "SEC. 4. The amount which may be received of the State for the rent of the Citadel buildings and for damages for the destruction of the west wing thereof shall, when collected, and all the expenses of said collection be paid therefrom, be paid into the treasury of the State, to be held subject to the purposes of the said academy as may hereafter from time to time be determined by the general assembly," etc.

By the deficiency act approved October 19, 1838, Congress appropriated "for rent of the Citadel Academy at Charleston, S. C., from August 20, 1866, to February 2, 1882, including the sum equitably due to the said State for the loss by fire of the west wing of said building while in the occupation of the United States, seventy-seven thousand two hundred and fifty dollars." Paid by the Third Auditor, November 13, 1888.

By law the academy "shall be deemed and taken to be a branch of the South Carolina University, constituting the military school thereof, to be subject however to the sole control and supervision of the said board of visitors." The university, I am informed, has an agricultural annex and therefore gets the assistance from the Government as an agricultural college.

Buildings and equipment?—The Citadel building is wholly devoted to the use of the academy, offices, quarters, chapel, barracks, hospital, mess-room, bathing apartments, kitchen, etc. Apparently there is a reading-room and a library. There is a lieutenant and quartermaster, and I presume a quartermaster's store-room for clothing and supplies, but as I was not invited by the superintendent to inspect the building, its interior and arrangements and the equipment of the academy are to me a sealed book.

Academic course?—The academic course is four years. The academic year begins on the first Wednesday in July. On or before that date the result of the annual examination held in June is announced, and cadets are advanced from one class to another. The cadets engaged on the first year's course of study constitute the fourth class; those on the second year's course, the third class; those on the third, the second class; and those on the fourth year's course, the first class. There is a suspension of academic study from the first Wednesday in July to the 1st day of October, during which months instruction is ordered to be exclusively military, and furloughs are granted to such cadets as have deserved the indulgence.

The regular session of the academy closed on July 3, 1889. An encampment was held at Greenville, S. C., from July 5, to July 18. "Since last date no duties have been performed; officers and cadets have been on furlough."

There are two examinations, the annual, the last week in June, and the semi-annual, the second week in February.

Students?—Two classes of young men can be matriculated at this academy, styled beneficiary cadets and pay cadets. The beneficiary cadets are maintained and educated at the public expense, and are apportioned among the counties of the State in proportion to representation in the house of representatives; and they are required to teach after graduation for two years in the free public schools of the county from which they received their appointment.

Competitive examinations, held at the respective county seats, determine the selection of beneficiaries. Their term of service is until graduation or regular discharge, and on entry they subscribe a promise to that effect, and also agree to teach for two years, as provided by law. They may be released from their matriculation obligation to teach, at the expiration of one month after the opening of the ensuing school year, should their services not be required.

Pay cadets are received from without as well as from within the State. They are not subject to competitive examination, but are, like the selected beneficiary applicants, examined by the academic board as to their qualifications under the standard for admission. They likewise promise to serve until graduation or regular discharge. They pay annually \$300 in installments of \$100 each. All applicants for cadetships must not be less than fifteen nor more than nineteen years of age at date of admission, must be of good moral character, etc. No distinction is made in the treatment or duties required between the two classes of cadets other than that arising from merit. From an examination of the "Official Register" of 1889, a few facts relative to these two classes of cadets appear which are worthy of record. In the first class which was graduated last July, the first 4 are beneficiaries, and the remaining 9 alternate beneficiaries and pay. In the second class, of 37 members, the first 14 are beneficiaries; there are but 6 pay cadets in the class. In the third class, numbering 30, the first 6 are beneficiaries and the last 9 are pay. In the fourth class, the first 10 with one exception, number 4, are beneficiaries, and the last 10 are pay; the class numbers 26. Possibly it may not be a fair deduction, but these facts would seem to indicate that the beneficiaries rise to the head of classes and the pay cadets gravitate to the foot.

Of the 58 new cadets (present fourth class), 46 are pay cadets and but 12 are beneficiaries.

There are now 68 beneficiaries and 85 pay cadets.

Discipline?—By the regulations, made pursuant to law, the superintendent is made responsible for the discipline of the academy, and he is directed to prescribe such rules and regulations of discipline as he may deem proper, to insure propriety of conduct and strict attention to and due performance of duty on the part of all under his orders. The punishments to which a cadet shall be liable are of eight classes, viz: First, privation of recreation; extra tours of duty. Second, private reprimand. Third, public reprimand. Fourth, arrest, or confinement to prescribed limits. Fifth, imprisonment in a light room, or in a dark room. Sixth, suspension until the board of visitors can act upon the case. Seventh, dismissal. Eighth, expulsion. The penalties of the first six classes may be inflicted by the superintendent or officer in command; those of the seventh and eighth classes by the board of visitors only, upon the report of the superintendent, and after such examination of the case as the board may think proper to make. There is also a system of merits and demerits upon which the "conduct roll" is based.

Lieutenant Cabaniss states: "The discipline is military, and the superintendent is solely charged with maintaining it; the professor of military science and tactics has nothing more to do with it than has any other professor or assistant professor, *i. e.*, he is required to report cadets for all violations of the regulations of the academy that may come under his observation—nothing more. The cadets render explanations in writing direct to the superintendent, and he alone acts upon them, removing the reports if the explanation be satisfactory, or imposing demerits and inflicting punishments if they are otherwise. Although, through the extreme jealousy of the superintendent, the means at my disposal for imparting instruction are so restricted, and my authority over the cadets so very limited, I take pleasure in testifying to their implicit and careful obedience whenever under my command. On no occasion during my tour of duty here has any cadet shown the slightest indication of disrespect or insubordination; and my commands are obeyed promptly and intelligently." I believe the discipline of the corps of cadets is good.

Requirements of law met?—Under section 1225 Revised Statutes. Yes. The academy has capacity to educate at the same time not less than one hundred and fifty male students.

President?—General George D. Johnston is superintendent and professor of moral and political science. The academic board (faculty) is composed of the superintendent, the professor of military science and tactics, three professors and four assistant professors, all having military rank. There is a surgeon and quartermaster. Apparently the professor of military science, either by length of service at the academy or by a local rank, is the senior professor. The board of visitors appoints all these officers, except the army officer, with such titles and such relative rank in the academy as may be conferred by the board.

Date military department established?—Military tactics have always been a feature of the academy. The first army officer detailed was First Lieut. Erasmus M. Weaver, jr., Second Artillery, October 1, 1853, relieved August 15, 1886. Second Lieut. Albert L. Mills, First Cavalry, was detailed August 15, 1836, and relieved July 1, 1837. First Lieut. Charles H. Cabaniss, jr., Eighteenth Infantry, the present incumbent, was then detailed, reported September 29, 1887, and assumed duties October 1.

Professor of military science and tactics?—First Lieut. Charles H. Cabaniss, jr., Eighteenth Infantry, a graduate of the United States Military Academy in the class of 1874, born in Virginia.

Suitable for position?—Yes. I deem him well qualified for the position.

Member of the faculty?—Yes; and whenever there are meetings he attends, but, (he reports) it is of rare occurrence that there are any.

Receive proper support from authorities?—He says: "The superintendent has assumed to himself the active control of the military department; the professor of military science and tactics, instead of being at the head of his department, is merely a subordinate in it, having no voice in the selection of theoretical or practical course, the superintendent making use of the officer simply as a drill-master to superintend, or command, the military exercises which he sees fit to prescribe."

This academy is organized on the plan of the United States Military Academy, and is patterned very closely after it in its government and administration. It is a military school, under military discipline, and commanded by the superintendent. By the regulations he has the immediate government of the academy, and is held primarily responsible in every department. All professors, teachers, academic officers, cadets, and others, belonging to or employed about the academy, are under his command and subject to his orders. He appoints the cadet commissioned and non-commissioned officers; he designates the hours for drill, for parades, inspections, and other ceremonies. Lieutenant Cabaniss may have forgotten these mandatory requirements of the regulations, and on his part the superintendent may be extremely conscientious in the performance of his duties, or very tenacious of his rights. There is not a commandant of cadets. There is an "officer in charge for the day" who superintends all drills and military exercises. I think all friction might be avoided if the army officer detailed was appointed commandant of cadets, and given the powers, duties, and responsibilities that pertain to the commandant of cadets at West Point, or even at the Virginia Agricultural and Mechanical College, viz, immediate personal command of the corps of cadets and primarily responsibility for its organization and thorough efficiency. I quote from my report on this college: "He has immediate charge of the drills and other military exercises, and through him are submitted all permits for privileges, all excuses and explanations for delinquencies. It is his duty to report to the president, for his action, all violations of the college regulations, and in every way assist the president and faculty in their efforts to enforce discipline, and to see that punishments given by them are served, etc." This institution would then still further conform to the West Point Academy. I believe if this matter were brought to the attention of the board of visitors they would amend the regulations accordingly.

Lieutenant Cabaniss continues: "It was not until 1883 that the detail of an army officer was asked for. The superintendent has several times informed me that he does not wish an army officer at the school. The board of visitors, however, differ with him on this point, as do the faculty of the academy. The superintendent, failing to induce the board of visitors to give up the detail, endeavors to make a detail here as unpleasant as possible." Lieutenant Cabaniss reports the detail of an army officer satisfactory to the academic board, except the superintendent. To him it is not. He does not wish an army officer at the academy.

Is the course of military instruction as efficient as it should be?—It is not as efficient as it should be. In the curriculum as published in the Official Register I find assigned to the first class: First term, lectures on military law and procedure of courts-martial. None have been given. For the second term, civil and military engineering. Military engineering has never been taught at the school; it has been placed in the department of mathematics and engineering. By an order of the board of visitors, November 5, 1889, it was assigned to the military department and ordered to be taught. The theoretical course is prescribed for the first and second classes only. At present theoretical instruction is limited to one (1) recitation of one (1) hour's duration per week, by the first class, in Wheeler's Art and Science of War, during the session from October 1 to first Wednesday in July; and one (1) recitation of one (1) hour's duration per week, by the second class, in Upton's Infantry Tactics, during the half session from February 15 to first Wednesday in July. At the last annual meeting, November 5, 1889, the board of visitors issued an order directing the superintendent to have field fortifications, instructions as to conduct of sieges, and permanent fortifications taught in the military department.

Under date of February 12, Lieutenant Cabaniss writes: "The error which I made might seem inexcusable, but I believe that I stated to you that I was not permitted to exercise any command over cadets except as drill-master on drill ground; no returns or reports are made to me, and when I wish to know the number of cadets, for example, I have to obtain the information unofficially as best I can; I have no access to any of the records of the academy, not even to the 'order-book.' The cadets have no idea how to make out any military returns or reports, not even the ordinary company morning report and consolidated morning report of a post, and I am not allowed to embrace this in my course of instruction. Beyond infantry drill and a few ceremonies, the military instruction which is prescribed by the authorities of this school is not of such a character or scope as to render the graduates of the South Carolina Military Academy any more efficient as officers of volunteers than the ma-

majority of young men who have not passed four years here." There is no instruction in army regulations.

Methods of military instruction?—Of this, Lieutenant Cabaniss says: "The theoretical course, as laid down in the Official Register of the Academy, is the same that I found in use when I entered upon duty here, October 1, 1887; it was prescribed I believe by the superintendent at the instance of the board of visitors. At the last annual meeting for the first time was I consulted with reference to instruction theoretically in my department. The practical course is prescribed by the superintendent without any reference to the wishes or opinion of the military instructor; and it is published from time to time in general orders; no latitude whatever is allowed the military instructor in selecting the kind of drills to be had; he is simply required to superintend, or command, those ordered by the superintendent. In infantry tactics the practical instruction embraces the school of the soldier, the school of the company, the school of the battalion, a few company skirmish drills, and the ceremonies of guard mounting, dress parade, and review and inspection of a battalion; when in camp, the duties of guards and sentinels. In artillery tactics there are a few—not more than twelve annually—drills in the manual of the piece. All of the classes receive practical instruction in infantry tactics; only the first and second classes in artillery tactics. From October 1, to about February 1, drills are conducted daily, Sundays excepted, for one hour; from about February 1, to July 1, they are conducted daily, Saturdays and Sundays excepted, for one hour. By an order of the superintendent, during those months that the new cadets (fourth class) are being instructed in the school of the soldier (the months of October, November and December), the practical instruction of the first, second, and third classes is entirely taken from me, and I am during these months solely charged with superintending the squad drill of the new cadets, whilst the superintendence of the company drills of the older classes is delegated to the 'officer in charge' on duty for the day. There are no dress parades from October 1, until about February 1. The battalion of cadets under arms is reviewed and inspected by the Superintendent every Saturday morning from about February 1, until close of session in July; the 'officer in charge' commands the battalion on these occasions. On this account it so happens that I never have an opportunity of personally inspecting the pieces of the cadets, and am thus debarred from giving any practical instruction as to care of arms, etc. There is no inspection under arms from October 1, until February, and from my observation of the appearance of the pieces at drills during that time, I have reason to believe that but little attention is paid to their care. Dress parades are commanded by the 'officer in charge' on duty for the day; this is an anomalous duty which each professor and assistant professor performs in turn."

Number of hours per week to military duties?—At present time eight per week—two hours to theoretical instruction and six hours to practical. Lieutenant Cabaniss has no other than military duties, and receives no compensation from the academy or State. His whole time is not given to his military duties; they are not sufficient.

Number of students, capacity for?—Easily about one hundred and seventy-five; by crowding, two hundred might be accommodated.

Number of students in attendance?—One hundred and fifty-three at present time, males, viz, first class 37, second class 30, third class 26, and fourth class 60.

Number of students in military department?—One hundred and fifty-three. The professor of military science and tactics, however, at present instructs theoretically only the first class (37 members) and superintends drills of the new cadets of the fourth class (58 in number).

Military course compulsory?—Yes; on all classes. The cadets are by law a military corps.

Uniform?—Gray—very similar to that of the cadets of the United States Military Academy—with State buttons (palmetto). For full description of uniform and allowance to each cadet, see Article III of the Regulations, page 15. The insignia of rank worn by cadet officers and non-commissioned officers: Captain, chevrons of four bars of single lace on each arm above the elbow, points up; lieutenants, chevrons of three bars of single lace on each arm above the elbow, points up; adjutant, the lieutenant's chevron with an arc; quartermaster, the lieutenant's chevron with a horizontal bar; sergeant-major, the sergeant's chevron with an arc; quartermaster-sergeant, the sergeant's chevron with a horizontal bar; first sergeants, chevrons of two bars of single lace on each arm above the elbow, points up, with a lozenge; sergeants, chevrons of two bars of single lace on each arm above the elbow, points up; color-bearer, the sergeant's chevron with a star; hospital orderly, chevrons of three bars of single lace, with an arc of one bar, inclosing a white cross, on each arm above the elbow, points up; corporals, chevrons of one bar of single lace on each arm above the elbow, points up; corporals of the color guard, the corporal's chevron with a star. All of the above-named chevrons, except those of hospital orderly, are stitched upon black velvet; those of hospital orderly are stitched upon dark blue cloth.

Military organization?—Battalion, four companies, A, B, C, and D.

Method of appointment and promotion of officers and non-commissioned officers?—The regulations prescribe that "The commissioned and non-commissioned officers shall be appointed by the superintendent from those cadets who have been most active and soldierlike in the performance of their duties and most exemplary in their general deportment. In general the commissioned officers will be taken from the first class, sergeants from the second class, and corporals from the third class; but in all cases the appointments will be made from those most distinguished for general good conduct and soldierlike deportment." The professor of military science and tactics is not consulted. He should be consulted, and the appointments as a rule should be made upon his recommendation.

There is no band; there are 2 hired musicians, a drummer and fifer, one a negro, the other a retired United States soldier, as I was informed.

There is no practical or theoretical instruction in cavalry tactics.

There are no field officers.

There are 2 staff officers, adjutant and quartermaster.

There are 3 non-commissioned staff officers, sergeant-major, quartermaster-sergeant, and a sergeant who is styled "hospital orderly," who performs the duties of hospital steward and hospital attendant and ranks next after first sergeants.

There are 12 company officers, 4 captains, 4 first lieutenants, and 4 second lieutenants.

Number of drills per week?—Six squad drills for the new cadets (fourth class), superintended by the professor of military science and tactics at date of inspection; the officer in charge superintends the company drills of the other classes.

The regulations provide that each drill shall continue three-quarters of an hour at least and shall not exceed one hour and a half.

Who are excused from drill and causes for which excused?—From squad and company drills, the battalion staff, and non-commissioned staff; cadet officer of the day; cadet orderly; those unable to attend on account of sickness, and those excused by special permission of the superintendent. The "hospital orderly" is excused from all military ceremonies and only turns out when specially ordered by the superintendent. From battalion drills, the same as above, except staff and non-commissioned staff. By the regulations, no cadet, unless excused by the surgeon, shall be relieved from any duty whatever, without permission from the superintendent.

There are no military lectures.

There are no military essays, no campaigns have been studied, and the cadets have done no original work.

Text books used.—Wheeler's Art and Science of War, for the first class (37 members) only. For second class, Upton's Infantry Tactics. Theoretical instruction of second class (30 members) begins in February.

There are no military books in library.

There is no small-arms target practice.

There is no artillery target practice.

There is no signaling.

Number of muskets?—One hundred and forty-six cadet rifles, Springfield, caliber 45, reported as the property of the State of South Carolina; 130 of these, model of 1878, were received, with bayonets, bayonet scabbards, cartridge boxes and belts, in original packages, in November, 1887; they were perfectly new, and were a portion of the ordnance and ordnance stores received by the State from the United States; they were shipped to the quartermaster of the academy (who is also the ordnance officer) by the adjutant and inspector general of South Carolina. The remaining 16 muskets, also cadet rifles, Springfield, caliber 45, model of 1873, were received, it is reported, soon after the Academy was reopened in 1882, but from whom, or by whom, is unknown, as no record is kept of such matters by the quartermaster. If any of these arms and equipments were received by the State from the United States subsequent to July 1, 1887, they are by law the property of the United States; but if received by the State prior to that date the question of ownership is mooted. They were not issued to the Academy under section 1225, Revised Statutes. Their condition is barely fair. Those not issued to cadets are stored and cared for by the quartermaster.

Number of accouterments, sets?—One hundred and forty-six, in poor condition.

There is no ammunition.

Field guns.—Four cast-iron 10-pounders, Parrott, with wrought-iron jackets. These guns stand on Marion Square about 25 yards in front of the main building of academy; they are only serviceable for "standing gun drill" and for salutes; their carriages are rotten; there are no caissons; they are badly cared for. In addition to these guns there are (reported) 2 brass 12-pounders, unserviceable, which are stored away in one of the ground floor store rooms of the main building. As far as could be learned, these guns were supposed to be the property of two volunteer batteries organized before the war and disbanded since; when they disbanded they left their guns at the Citadel for safe-keeping, allowing them to be used for the instruc-

tion of the cadets. No Parrotts were manufactured prior to 1861. These were probably captured. I think the 12-pounders are bronze howitzers and are two of those issued to the State in 1859.

Number of military buildings.—One. The entire citadel may be regarded as a military building. All the cadets live therein.

Floor space allotted.—Unknown.

Drill ground adequate.—Yes, Marion Square in front of the citadel; a paved square of about 3 acres in extent. There are no drill rooms. In-door drills to a limited extent might be had on interior galleries of main building.

There are no marches for instruction.

The cadets of the first, second, and third classes have walked post.

The corps of cadets is encamped for two weeks in July of each year.

No practical instruction in outpost duty, nor any night exercises.

There is not a separate artillery company; first and second classes drill together.

There is no select company for special drill; to fire salutes there is a select detail.

Cadets are exercised about a month and a half without arms.

There is no practical instruction in grand or minor tactics.

There are no monthly inspections and reviews; guard mounting every day; dress parades every day, Saturdays and Sundays excepted, from about February 15, to July 1. Reviews and inspections every Saturday during same period. There are not enough dress-parades, reviews, and inspections for thorough efficiency.

During the period of three months ending September 30, 1889, there were 20 dress-parades of one-half hour's duration each, and two reviews and inspections of three-quarters of an hour each, with an average attendance of 75 cadets, and an average absence of 20 cadets.

The regulations provide that "there shall be an inspection of the corps under arms every Saturday morning (when the weather permits) according to the form of the U. S. Army. There shall also be under direction of the superintendent a minute and thorough inspection of the academy in all of its appointments."

There is no instruction in the use of army forms and blanks or of rolls or returns.

In methods of requisition and supply and army organization, the instruction is theoretical.

There is theoretical instruction in probable fields of war and military operations, in logistics, strategy and lines of supply.

The cadets march to and from all duties; they assemble at reveille, retreat, and tattoo, and for prayers, recitations, and meals. By the regulations, five general roll-calls are prescribed daily and invariably, reveille, breakfast, dinner, retreat, tattoo, at which all cadets not on duty, or absent by permission, or excused by the surgeon are required to attend.

Gymnasium.—There is no gymnasium, nor are there facilities for military gymnastics, physical training, or fencing.

The age of the youngest cadet in the academy and the battalion is 15 years. The age of the eldest is 21 years.

The total number of cadets who have attended the academy since the military professorship was inaugurated, October 1, 1883, is 497. The total number of graduates during same period is 85. The largest number matriculated in 1882, viz, 180. The largest number was graduated in 1886, viz, 53. Thirty-six entered the session of 1888-'89, and 13 graduated July 3, 1889. The number admitted in October last is 58. The largest number in attendance at one time during the academic year, July, 1889, was 129.

The natural aptitude of the cadets for military instruction is very good and the interest manifested by them is very satisfactory. Lieutenant Cabanis reports that recitations in all of the other subjects taught at the academy are given more time and none less than military recitations.

The weight (paragraph 51, regulations) to be given to the different subjects in forming the general merit roll of each class is represented by the numbers in the established scale, viz: First class, engineering and mathematics, 3; physical science, 3; history, belles-lettres, and ethics, 2½; modern languages, 2; tactics and drawing, 1; discipline, 3. Second class, mathematics and engineering, 3; physical science, 3; history, belles-lettres, and ethics, 2; modern languages, 2; tactics, etc., and drawing, 1; discipline, 2½. Tactics, or military science, does not appear in the curriculum of the third and fourth classes, nor in that of the second class for the first term. No weight is given to practical instruction in grading the several classes. In theoretical instruction out of a total maximum possible in all subjects of 732.50, the maximum, as per the official register, in military science is only 30, viz: maximum in each branch: mathematics, 180; physics, 165; modern languages, 120; English, 127.50; drawing and book-keeping, 45; elocution, 45; military science, 30; conduct, 20. Total, 732.50.

The battalion is most frequently formed in April; least frequently in December; in April generally battalion drill and dress parade every day, Saturday and Sunday

excepted. On Saturdays the battalion is formed for review and inspection by the superintendent. In December not at all. In December the new cadets are not in ranks with their companies, and again on account of bad weather. It is also rarely, if ever, formed in either October, November, or January.

Commons (messing) ?—The quartermaster superintends the cooking and serving of all food and articles of diet for the cadets. He hires the cooks and waiters, and purchases all necessary supplies. The 'officer in charge' for the day is the inspector of the commons. The detailed instructions relative to the commons will be found in the regulations, paragraphs 174 to 186 inclusive.

The battalion was reviewed and inspected at 4.30 p. m. on Marion Square. I requested the superintendent, General Johnston, to receive the review and inspect the corps, and stated I would accompany him. He declined, but he sent Second Lieut. J. T. Coleman, assistant professor of chemistry and physics, to accompany me. The superintendent left the academy and grounds during the ceremony. The formation was in single rank. The new cadets in citizens' clothing were formed in rear of the battalion. The wheelings were good and the marching was admirable. There were evidences that the battalion had been thoroughly drilled. It was a fine-appearing body of intelligent boys. The arms were (many) rusty and showed great want of care. The condition of the accouterments was poor, belt-plates dirty, and from many the letters were missing. Clothing generally much worn; many suits thread-bare; some much soiled, especially the trousers. I was informed this condition is due to the fact that an insufficient sum is allowed to each cadet for the purchase of clothing; but few cadets have more than one dress-coat and two pairs of gray trousers. As the stripes on trousers are of black velvet of inferior quality, which soon becomes dirty, this of itself injures the appearance of the uniform. The fit of the uniforms was only fair, generally too loose about the neck or cut too low, trousers too tight, and with too much spring at the bottoms. Many cadets wore soiled gloves. Deducting say 58 (the new cadets), there were probably in ranks, fully equipped, 81 cadets.

Of the 153 cadets in attendance at date of inspection, there were present 139, viz: 3 captains; 8 lieutenants (including the adjutant and quartermaster); 16 sergeants (including the sergeant-major and quartermaster-sergeant); 19 corporals, and 93 privates. The absentees were, 1 captain, on furlough; 2 lieutenants, 1 officer of the day and 1 absent sick; 3 sergeants, one hospital orderly (excused by superintendent), 1 sick in hospital, and 1 excused by surgeon; 1 corporal, on guard; and 7 privates, excused by the surgeon. A consolidated morning report of the battalion of cadets, dated November 18, showing the total present and absent in attendance and the total present and absent at inspection, both in detail, is filed herewith, marked "B". A list of officers and non-commissioned officers, giving names, company, rank, class, age, and service at the academy, is filed herewith, marked "C".

Remarks by the professor of military science and tactics:

"I stated to you verbally that while the superintendent was opposed to having an officer of the Army detailed here, the board of visitors favored such detail and were desirous of continuing it. I learned a few days ago that a prominent member of the board said quite recently that it was uncertain whether they would ask for the detail of another officer when my time expires, which will be September 29, of this year. Neither the board of visitors nor the superintendent have ever fully appreciated the status of an officer detailed under section 1225, Revised Statutes, nor what his duties should be, or that he owed any obligation to the General Government. I should certainly recommend that no other officer be sent here, until the Secretary of War publishes regulations clearly defining status, duties of officer, and amount of instruction to be given. I am interested in this matter, and although I am soon to leave here, I should like to see some change made in military instruction at colleges, and to see recognized a principle that is entirely lost sight of, viz: that the Government expects to reap a return for benefits conferred. The regulations of the South Carolina Military Academy make no mention of an officer of the U. S. Army serving as professor of military science and tactics; consequently upon entering on duty here I sought to have my status clearly defined by the superintendent; he, however, evaded the question, referring me to the "Regulations" relative to the duties, etc., of professors; and also to an indorsement which had been placed by him upon a communication of similar tenor forwarded by one of the officers who have preceded me in the military department here, in which he stated as follows: 'The relation of an officer of the Army on detail at the academy is, and can only be, that of a professor, with all the rights and obligations as such under long-standing and well-defined regulations.' This was concurred in by the chairman of the board of visitors. This theory has never, however, been carried out. The 'Regulations' of the academy distinctly state that 'each professor and instructor, at the head of a department, shall be the judge of the proper mode of conveying instruction in his own department.' In the military department this is not done. Only once have I been allowed to exercise my discretion and to give instruction in accordance therewith; this was during this encampment of the battalion of cadets at Greenville, S.

C., from July 5 to July 18, 1889, during which time the entire practical military instruction was wholly confided to me, and with very good results."

I am just in receipt of General Orders, No. 15, of February 12, 1890, and am truly much gratified. It is a long step in the right direction, and if faithfully executed will be productive of the most beneficial results.

I invite special attention to the letter of November 17, 1889, from Lieutenant Cabaniss, which accompanies this report and is marked "D," as indicating the limited scope of the duties of the inspector in the mind of the superintendent.

I called upon the superintendent, General Johnston, whom I found to be a most agreeable gentleman. He received me very cordially, and in the short conversation had with him I was favorably impressed. Relative to the impending ceremonies, he rather urged that the inspection be preceded by the review.

I invite attention to the annual report of the board of visitors for October 31, 1889, just received and filed herewith, marked "E." On page 17 will be found a schedule of hours of daily recitations, from which the time allotted to the several subjects of study will appear, and by comparison the short time assigned to military science.

This report is accompanied by the following eight papers, viz: Regulations of the Academy, 1887, "A;" Morning Report of Battalion, "B;" List of Cadet Officers, etc., "C;" Letter from the Professor of Military Science and Tactics, "D;" Annual Report of Board of Visitors, 1889, "E;" Quarterly Return of the officer for September 30, 1889, "F;" and Catalogues for 1889, "G," and July, 1888, "H."

I am, general, very respectfully,

H. CLAY WOOD,
Assistant Adjutant-General, Inspector.

AGRICULTURAL COLLEGE OF SOUTH DAKOTA.

HEADQUARTERS DEPARTMENT OF DAKOTA,
INSPECTOR-GENERAL'S OFFICE,
St. Paul, Minn., June 18, 1890.

ASSISTANT ADJUTANT-GENERAL, DEPARTMENT OF DAKOTA,
St. Paul, Minn.:

SIR: In compliance with paragraph 2, Special Orders No. 73, current series, Department of Dakota, I proceeded to Brookings, S. Dak., and on the 17th instant made an inspection of the military department of the Agricultural College of South Dakota, and have the honor to submit the following report:

On arrival at the college I called on the president, who afforded me all necessary facilities for making the inspection. First Lieut. Peter Leary, jr., Fourth Artillery, reported for duty in March last, and has since been engaged in organizing the military department of the college; he has instructed those students who wished to receive military instruction—the attendance not being compulsory—for three hours each week, between 5 and 6 p. m., by lectures and drill in the school of the soldier, particularly in the setting-up exercises. The only arms being some old rifles belonging to the State, no instruction with arms had been given. The necessary bonds had but recently been completed, and requisition for suitable arms will soon be made. Military instruction may be said to have only begun, but there is reason to believe that it will be successful. Lieutenant Leary is a member of the faculty, and receives all the support his associates are able to give him.

Thirty-nine young men were in ranks at drill, some of them being well set up, and carried themselves in a soldierly manner. Only about one-half were in uniform, but it is hoped that by another year all who attend drill will be able to provide themselves with uniforms. The uniform adopted is the Army forage cap, blouse, and trousers, with State buttons. An effort is being made to obtain authority from Congress to permit the Quartermaster's Department to sell clothing to students at cost price. The matter of making it compulsory for at least two of the classes to attend military instruction is now under consideration by the college trustees. Many of the young men are poor, having to work their way through college, and, having citizens' clothes, do not feel able at present to spend money for a uniform.

The young men were, in my presence, drilled in the school of the soldier; the setting-up exercises were very well executed, while the other movements were creditable, considering the short time they had been drilled.

The young ladies have also formed a company, and executed the various movements in the school of the soldier very well, which were, at their request, witnessed by the inspector.

The setting-up exercises used by Lieutenant Leary are those said to be adopted by the tactical board.

The college has a capacity to educate over 500 students, but there is probably not dormitory room for more than 100; the remainder could find board and lodging in the town of Brookings. At date of inspection there were 147 male students.

The president of the college informed me that the college had been laboring under some embarrassments for the past year or two, owing principally to the poverty of the people of the State. Two professors had to be dropped, owing to the small appropriation by the last legislature; but with prosperous times it is believed that the college will prove a success.

Lieutenant Leary is not employed in teaching other branches and receives no extra pay. He is represented to be very earnest in his work, and has made a good start.

Very respectfully, your obedient servant,

W. F. DRUM,
Lieutenant-Colonel, Twelfth Infantry,
Acting Inspector-General, U. S. A.

UNIVERSITY OF TENNESSEE.

INSPECTOR-GENERALS' OFFICE, WAR DEPARTMENT,
Washington, D. C., June 9, 1890.

The INSPECTOR-GENERAL, U. S. ARMY:

SIR: I respectfully submit the following report:

Location?—West Knoxville, one-half mile from the custom-house in Knoxville, Knox County, Tenn.

Date of establishment?—Blount College was chartered in 1794. The East Tennessee College was chartered in 1807, and to it were transferred the franchise and property of Blount College. In 1840 the name of the institution was changed to East Tennessee University, and in 1879 the name was again changed to its present title, the University of Tennessee.

Endowments?—Total of \$427,000 approximately. This institution owes its existence chiefly to the bounty of the United States. The Congressional land grant of 1806 donated the proceeds of the sale of a moiety of 100,000 acres of land to it, but the East Tennessee College received, in fact a very small fund from this magnificent grant. The largest portion of its income is derived from the proceeds of the sale of public lands granted by the act of Congress of July 2, 1862. In 1887 the general assembly made the agricultural experiment station of the university the recipient of the appropriation made by the United States Congress in the Hatch experiment-station act, \$15,000 annually. There is the fine college farm, fairly stocked and equipped, of 260 acres, adjacent to the university; and, I think, also another unproductive outlying tract of land.

The income, in detail, of the university is as follows:

Proceeds of land scrip invested in Tennessee bonds, bearing 6 per cent....	\$397, 000
Knoxville City bonds, bearing 6 per cent.....	20, 000
State certificates, bearing 5 per cent.....	9, 000
Turnpike stock, paying 7 per cent., at present.....	1, 000
Income.....	427, 000
(a) Fixed income:	
Interest on State bonds.....	\$23, 760
Interest on city bonds.....	1, 200
State certificates.....	450
Total fixed income.....	25, 410
(b) Contingent income:	
From college fees, about.....	10, 000
From farm and real estate.....	3, 000
From electric light plant.....	600
Sundries.....	600
Total contingent income.....	14, 200
Total income, fixed and contingent.....	39, 610

Buildings?—Twelve, including the gun-shed and conservatory, viz, the president's house; five college buildings for recitation rooms and dormitories; natural history and agricultural building; a mechanical department building; a steward's hall for

messing purposes; infirmary building hospital; and two, a "science hall" and gymnasium, under construction. See sketch of grounds and buildings marked A.

These buildings have been erected on 40 acres of land known as

Remarks. "Barbara Hill," and overlooking the Tennessee River. Accompanying this report is the very interesting and instructive biennial report of the board of trustees for 1887-'88, which is replete with information relative to the organization, endowments, buildings, and equipment of the university, the gross mismanagement of its donation funds, and the consequent most praiseworthy struggle for bare existence, attention to which report is earnestly invited.

Equipment?—Chemical laboratory, only fairly equipped; botanical and zoological laboratories, well equipped; engineering department, well equipped; mechanical department, fairly equipped; drawing and mechanical engineering, partially; library, general, about 6,000 volumes; scientific, about 2,500 volumes.

Government, in whom vested?—A Board of Trustees, of which the Governor, the Secretary of State, and the Superintendent of Public Instruction, are *ex-officio* members. The President of the university is President of the Board of Trustees. The interior administration and instruction are lodged in the President and faculty. The government and discipline of the students is vested in a governing committee of the faculty, consisting of the President, the Dean of the college, and the Commandant of cadets.

Religious denomination?—Non-sectarian; a State institution.

Requirements of law (sections 1225 or 1260 Revised Statutes) met?—Yes; the institution has capacity to educate at the same time not less than 150 male students.

Departments of instruction?—"A." The Academic Department.

(1) The College of Agriculture, Mechanic Arts, and Sciences: The Academic Department is divided into ten schools, of which two are the classics, and the tenth is the school of military science and tactics.

(2) The University Department.

"B." Professional departments: (1) Department of law. (2) department of medicine. (3) department of dentistry. The medical and dental schools are located at Nashville, Tenn.

Collegiate course?—The collegiate course is four scholastic years of forty weeks each, divided into two terms, beginning the third Thursday of September, and closing with the Wednesday of the fortieth week, which is commencement day. The second term begins in 1891, on Thursday, February 12. Seven courses of study are embraced in the collegiate course: (a) Literary scientific; (b) Latin science; (c) agriculture; (d) civil engineering; (e) mechanical engineering; (f) chemistry; (g) mining engineering.

President?—Charles W. Dabney, jr., Ph. D. LL.D., is the president and administrative head of the university.

Students and Classes?—Students are designated as university or collegiate. University students include post-graduates, professional and special, or elective students, and they are free from military regulations and drills. Collegiate students include all undergraduate students. This class is largely composed of State students, each senator and representative appointing two annually to scholarships, free of tuition, in the university, after examination and under certain prescribed conditions. Negroes appointed are matriculated at Knoxville College. The catalogue of the university reports seventeen at the college this year. The colored appointees have regular and systematic instruction in sciences, etc., and in military tactics, as required by law, under the direction of the faculty of the university. There were no negroes in the battalion. The collegiate classes are senior, junior, sophomore, freshman, and sub freshman, numbering respectively, 8, 16, 54, 87, and 56, a total of 221; but at the date of the inspection the number had been reduced to 151. Sub freshman classes will be dropped as soon as possible.

Discipline?—For professional and special students, ordinary university discipline. For college students, on the modified military plan. The rules and regulations relating to discipline were based upon the regulations of the Military Academy, West Point. The "modified military plan" refers to changes that were required to meet the demands of an institution that was not strictly military.

The commandant, Capt. Kenneth G. Matheson, is the executive officer for discipline and government during study hours, and in the dormitories. "He has, by careful attention, firmness and zeal, combined with an excellent system and method of organization, made already a great improvement in the order, quiet, and attention to duty of the students. Punctual attendance upon, and the faithful performance of all duties is insisted upon as the first condition of progress and of good discipline. Unexcused absences are counted as serious delinquencies. Vicious conduct or idleness will not be tolerated at all." I believe the discipline of the students is good.

Expenses?—For a student per session of nine months: State students about \$20⁰⁰; other students about \$25⁰⁰. Details relative to expenses can be found on pages 49, 50, and 51 of the catalogue.

Date military department established?—The military department was established in 1871. The first Army officer detailed was First Lieut. Thomas T. Thornburgh, Second Artillery, October 31, 1871; relieved June 20, 1873. First Lieut. Jacob E. Bloom, Fourth Artillery, was detailed September 22, 1876; relieved June 30, 1879. First Lieut. Edward E. Gayle, Second Artillery, the present incumbent, has been detailed since October 1, 1888.

Has the detail been continuous since?—No. Intervals during which no detail was made, 1873-'76, 1879-'88.

Professor military science and tactics?—First Lieut. Ed. E. Gayle, Second Artillery, a graduate of the United States Military Academy in the class 1876, a native of Virginia, and appointed to the academy from North Carolina.

Date assumed duties?—October 5, 1888.

Suitable for the position?—Yes. (By the president): I believe Lieutenant Gayle is specially well qualified for the duty upon which he is engaged.

Number of hours per week to military duties?—From beginning of session to April 5, five hours; since April 5, 1890, seven and a half to eight. Increase due to target practice.

Receive proper support from the authorities?—Yes.

What encouragement is given to the military department? No special encouragement is given by the faculty. Prizes and medals of value are offered annually by the citizens of Knoxville, officers of the institution, and individual students, for best drilled company and cadet.

Interest manifested by the faculty?—Is favorable.

Is the department popular with the students?—Yes.

Satisfactory to the faculty?—Yes.

Efficient as it should be?—Yes. (By the president): No. (By Prof. Gayle): "Both practical and theoretical instruction are as efficient as the present schedule will admit of, but in my opinion the department will not be as efficient as it should be until the purposes of the professor of military science, etc., as indicated in the catalogue, 1889-'90, are literally carried out."

Requirements of General Orders No. 15, of February 12, 1890, from the headquarters of the Army, strictly enforced?—No, not fully. The President states, as nearly as possible. The schedule of exercises and courses had already been made out for this session, and it was impracticable to change. Certain provisions of it were carried out immediately, *e. g.*, target practice.

Does the professor of military science and tactics reside at or near the institution?—Yes; at the university.

When in the performance of his military duties does he appear in proper uniform?—Yes.

In his relations to the institution does he observe the general usages and regulations therein established affecting the duties and obligations of the other members of the faculty?—Yes.

Does he perform other than military duties at the institution, and what compensation, if any, does he receive therefor?—Yes. Has two classes in mathematics. Allowed quarters rent free. I do not think free quarters should be regarded in the light of a compensation for the extra duty performed.

To what extent do these duties interfere with his military duties?—Not at all.

Are all rules and orders, appointments, promotions, etc., as indicated, made and promulgated by the professor?—Under previously existing rules, which it has been impracticable to change yet, the professor, in connection with other members of the military committee, nominated to these places and the faculty appointed.

Does he enforce proper military discipline at all times as required?—Has not the authority. The commandant of cadets has authority under present rules to inflict minor punishments. Governing committee and faculty, major punishments.

Upon occasions of military ceremony, and in the performance of military duties, does he require the students to appear in the prescribed uniform?—Yes.

Is the course of instruction both practical and theoretical?—Not theoretical yet, as schedule had already been arranged.

Does theoretical instruction occupy at least one hour and practical at least two hours per week?—No theoretical instruction. Practical instruction; drill and ceremonies, five hours per week; target practice two and one-half to three hours per week.

Does the practical instruction embrace everything required under the head "course of instruction," on page 2 of the General Order, and both for infantry and artillery?—No.

Specify any omissions?—Saber exercise, target practice with field-guns; duties of sentinels and castrametation.

Does instruction include the duties of sentinels and castrametation?—No.

Is instruction given by the professor personally, or under his immediate supervision?—Always under his immediate supervision. Battalion drills, inspection, parades, and frequently company drills in person.

Is theoretical instruction given by the professor, and by recitations and lectures and does it include a systematic and progressive course in the subjects mentioned in the general order?—No theoretical instruction has been given for reasons above enumerated.

Specify any omissions or recitations or lectures upon other subjects.—No recitations or lectures on any subject.

Are the quarterly reports duly rendered and in the required form?—Yes; as far as the professor of military science and tactics is aware of.

Are copies of all reports and correspondence retained?—No copies of correspondence; copies of reports have been retained since receipt of order regulating it.

Is copy of the graduation report duly furnished the adjutant-general of the State?—None has ever been furnished by the present professor of military science and tactics.

Is the professor of military science, etc., a member of the faculty, with all the rights, privileges, and authority of other heads of departments or professors?—Yes.

And does he habitually exercise them?—Yes.

Is he provided with quarters on the same terms as other professors?—The university has only two quarters suitable for professors' families. The dean of the college occupies one of these and the professor of military tactics the other. The regular professors do not receive any allowance for quarters, but are paid a fixed salary. The dean of the college is professor of Latin language and literature. He receives the uniform salary of \$2,000 for his professional work, and has quarters free of rent in consideration of his additional official work as dean. Esteeming it especially desirable to have the professor of military science and tactics on the university grounds, he has been given similar quarters, free of rent, in return for certain instruction in mathematics, which he is giving the institution.

Total number of students since military professorship was established?—Regular college students for two years past, 476.

Total number of graduates?—Seventeen.

Largest number of graduates in one year?—Nine.

When?—1889.

Number of students in institution last year?—Total collegiate, 225.

Number of graduates?—Nine.

Other information which will indicate the present condition of the institution?—The institution is fairly prosperous. The increase in number of buildings and facilities for instruction would indicate greater prosperity in the immediate future. If not the fault will not rest with the authorities.

How many students is the institution prepared to teach annually?—About 300 collegiate.

Number of students in attendance?—Collegiate and special, 164. Males, all; females, none.

Number of students in military department?—One hundred and fifty-one. Seniors, 7; juniors, 10; sophomores, 36; freshmen, 52; subfreshmen, 46. There are 13 special students.

Age of youngest student in military class?—Fifteen years. Age of eldest, 24 years; average age, 17 years.

Age of youngest student in battalion?—Fifteen years. Age of eldest, 24 years; average age, 17 years.

How many students live at the institution?—One hundred and eight.

Of those in the military department?—Ninety-seven.

How many live elsewhere?—Fifty-four.

Is the military course of instruction compulsory upon all undergraduate students?—Said to be compulsory upon all undergraduate or collegiate students not physically incapacitated; but in the catalogue, p. 24, it is stated: "Drill is required of freshmen and sophomores and optional with juniors and seniors. Military training has been found conducive to discipline, health, and scholarship, but the military feature, though kept up to a high standard of excellence, is only a means to this end, being distinctly secondary, and is not allowed to interfere with the prosecution of study."

Who are excused.—The physically disabled and special students who are over twenty-one and have more advanced studies.

Are all undergraduate students capable of performing military duty required to attend the prescribed military exercises?—Same as above.

What classes are required to attend?—Senior, junior, sophomore, freshman, and subfreshman.

Who are excused?—Those mentioned above.

What causes excuse students?—Physical incapacity.

Methods of military instruction?—At the beginning of the fall term all students not incapacitated, and who are not commissioned officers, are organized into squads for drill in the "setting-up" exercises. Each squad is assigned to a commissioned officer for instruction. This drill is continued until a sufficient number are suitably

instructed for the formation of a separate squad, when rifles are issued, and drilled as before by a commissioned officer. These squads are formed from time to time as the students become proficient in the exercises. Several squads are then united or formed into a company. This formation and drill is continued until there is a sufficient number to warrant the formation of the battalion, when the students are permanently assigned to companies. The drill is then in the school of the company, and is conducted by the captain usually, the instructor of tactics, etc., giving it personal instruction and drill from time to time. There will usually be one battalion drill per week until the companies are well drilled in the school of the company, after which battalion drills will be as often as two or three per week. Dress parade takes place once a week after the battalion is permanently formed. Practice reviews and formations for inspection are then given. The different maneuvers are taken up as nearly as possible in the order in which they are prescribed in Infantry Tactics.

Early in the term of last year two artillery detachments were organized, consisting of one lieutenant, two corporals, and fourteen privates, for drill at the field-guns. After a few drills the ranks of the artillery detachments were depleted to such an extent that these drills were suspended, and have not been resumed this term on account of the small size of the companies. The depletion referred to was due to students leaving the university; it was continued during the entire session, and is a serious impediment to proper instruction.

Target practice with small arms was begun April 5, 1890, as soon after the receipt of General Order No. 15, February 12, 1890, as possible. The preliminaries were attended with considerable difficulty. Targets had to be made out of any material available, and they were, at best, rude. Application has since been made for regulation targets, and they have been received within the last week. Methods of instruction have been those usually pursued in regular army practice, as far as it was practicable to do so. The different elements essential to accurate practice were pointed out, their functions explained. The various positions and methods in use by marksmen were described, and those believed to be the best recommended. The number of students taking part in target-practice was about forty, a team of ten from each company. The allowance of ammunition, 1,000 rounds annually, is inadequate for this instruction.

Does this work occupy the whole time of the military professor?—No.

Facilities for military instruction?—Facilities are very poor for practical instruction, especially drill, on account of the very contracted and uneven drill ground.

How many volumes on military subjects in library of institution?—All published volumes of Rebellion Records, and three on other subjects, strictly military: "Wilhelm's Military Dictionary," "Strategos" (Totten), "American War Game" (Livermore).

What are the text-books for each class?—There is no class instruction.

How many students are studying each?—None.

What campaigns have the students studied?—None.

How many military essays by students?—None.

On what subjects?—None.

What other original work have the students done?—None.

Number of military recitations since last annual inspection?—None.

Number of military lectures since last annual inspection?—None.

Number of drills since last annual inspection?—Infantry, about 205; artillery, 21; cavalry, none. There are no records at the university from which this information could be obtained.

Do the powers, methods, and distinction between military and martial law form a part of the military course?—No.

Instruction in Army regulations?—No. By recitations?—None. Or lectures?—None. How many of each?—None.

In use of army forms and blanks, including rolls and returns?—None.

In methods of requisition and supply?—None.

In probable fields of war and military operations?—None.

Logistics?—None.

Strategy?—None.

Lines of supply?—None.

Instruction in outpost or reconnaissance duty?—None.

Any night exercises?—No.

Any instruction relative to fire-arms?—Only in their practical use and care.

Practical gunnery?—No.

Projectiles?—No.

Gunpowder?—No.

Other explosives?—No.

To what extent have the details of these several subjects been taught?—None have been given.

Estimating distances?—No.

Time allotted different studies at the institution?—See pages 39, 40, and 41, Register 1889-'90, herewith. (Catalogue.)

Value given different studies?—No relative valuation.

What value has the military course in determining class standing, or relative standing on graduation?—None. There is no class or relative standing.

Is the zeal and acquisition of knowledge in the military department satisfactory?—Yes, on the part of a majority of the students.

Messing?—Is provided by the university, under the direction of a steward, for those students who reside on the university grounds. Quantity and quality are ample, but variety is somewhat necessarily limited.

Number and character of military buildings?—There are no distinctly military buildings except the gun-shed. This is a frame building with corrugated iron roof, substantial and suitable in every respect for its purpose. It has been only recently finished.

Floor space allotted?—For armory, a room in west college, with dimensions about 20 by 20 feet.

What facilities for in-door drill?—None.

For small-arms target practice?—A very good range for 100, 200, 300, and probably 400 yards, 1 mile from university.

For gallery practice?—None.

For signaling?—None. No equipment.

For artillery practice?—None.

Gymnasium, military gymnastics, physical training, and fencing?—No facilities for above. Plans have been submitted and adopted for gymnasium building to be erected next fall.

Armory?—One room of barrack building. Inadequate.

Number of muskets?—One hundred and fifty cadet rifles from Government; one hundred and twenty from State.

Number of accouterments?—One hundred and fifty sets.

Field guns?—Two.

Are field guns properly housed?—Yes; only recently.

Are they covered with paulins?—Yes.

Artillery implements?—The usual complement, which have been kept in armory, but now kept in field-gun house.

Artillery harness?—None.

Ammunition?—In armory, 975 ball cartridges, 2,000 blank cartridges, 83 rounds field-gun.

When were the ordnance and ordnance stores received?—January 24, 1889.

How stored and cared for?—Small-arms and equipments in armory, in charge cadet quartermaster. Field guns in gun-shed; also equipments. Rifles and accouterments kept in rooms by resident students. A room in basement of south college is set aside in which the arms and accouterments of town students are kept. It is in charge of cadet quartermaster, who is responsible for its condition. Is kept locked from 4 p. m. to 7.50 a. m. This room is provided with closets in which are racks for guns. Each town cadet is required to have name on closet door. Any damage is repaired at expense of cadet responsible for piece, and it is the duty of the cadet quartermaster to collect same from cadets.

Condition of the ordnance as to repair and cleanliness?—In good condition.

Any unserviceable United States property?—No.

Has any United States property been lost or destroyed?—No.

Military organization?—All students in academic, agricultural, and mechanical colleges, not physically disabled, are subject to military duty. The students are organized into a battalion consisting of four companies, staff, and band. The officers of each company consist of one captain, two lieutenants, three sergeants, three corporals. The staff consists of one lieutenant and adjutant, one lieutenant and quartermaster, one sergeant-major, one quartermaster-sergeant, and one hospital orderly detailed permanently from the corps, whose duty it is to assist in the care of the sick. The band is a voluntary organization among the students. It is required to practice during drill hour, take part in all ceremonies, and conform to all the duties of a regularly organized military band. The leader is a first lieutenant, assisted by a second lieutenant (both extra), and a corporal.

What field officers are there?—None.

Uniform?—Consists of dress and fatigue, the former being modeled after that of the U. S. Military Academy, both in material and cut. The blouse (fatigue) is dark blue, after the pattern of the regular army blouse, cap dark blue, and overcoat gray, of the cadet pattern.

Method of appointment and promotion of officers and non-commissioned officers?—Appointed and promoted by the faculty on the recommendation of the military committee, which is composed of the professor of military science and tactics, the com-

mandant of cadets, and the professor of mechanical engineering, Lieutenant Burghdorff, U. S. Navy, on duty at University of Tennessee.

From what class are commissioned officers appointed?—Senior, as far as possible; after they are exhausted, then from junior.

Non-commissioned officers?—From juniors are taken the sergeants, and from sophomores the corporals, as far as possible.

How is the band organized and maintained?—By voluntary enlistment. Instruments are furnished in part by the State. Individual members frequently furnish their own.

From what class is the field music?—None.

Flags, national?—No. State?—No. College?—One.

Is the professor of military science commandant of cadets?—No. A professor, H. G. Matheson, is commandant of cadets and has charge of interior or barrack discipline, care of company papers, etc., such as morning reports, police reports, permits, and explanations. Has no connection with or part in practical or theoretical instruction of cadets in military matters. A change in the above arrangement is contemplated for next year. The present commandant will sever his connection with the university, and the present professor of military science and tactics will have, in addition to his present duties, those of the present commandant.

In fact as well as in name?—See above.

Is there a separate artillery company?—No.

Select company for special drill?—For competitive or prize drills each captain selects the specified number of men from his own company. There is no separate select company.

What practice or instruction in cavalry tactics?—None.

What roll-calls are there?—No stated roll-calls under paragraph 417, Army Regulations. Three mess roll-calls daily; drill roll-call daily, except Saturday and Sunday; roll-calls at all class formations about six daily except Saturday and Sunday, roll-call for church squads on Sunday, 9.30 a. m.

What camp equipage?—None.

What military camping?—None.

What marches for instruction?—None.

What is the longest march made by the battalion?—Approximately three or four miles, in street procession, May 8, 1890.

How many miles per hour?—Unable to estimate.

Is any guard duty performed?—No.

Has each student walked post?—No.

Drill ground adequate?—No.

Average daily attendance at drill?—One hundred and thirty-seven.

Do the students march to any duty other than drill?—Yes; mess and all recitations. The battalion is formed and cadets march to meals in that formation.

Do they assemble at other times?—Teams for target practice assemble on Saturday at 7.50 a. m.; for church on Sundays at 9.30 a. m.

What are the punishments for misconduct, etc.?—Dismissal, suspension, deprivation of privileges, arrest, extra duty, and demerits.

What is the aptitude of students for military instruction?—Good.

What is their interest therein?—By a majority, interest seem to be well marked.

How long are new students exercised without arms?—From four to six weeks.

How long are recruits practiced in the setting-up exercises?—Until they are proficient in them; about two or three weeks.

How often are these exercises recurred to?—Whenever the occasion seems to demand it.

Are all the students frequently practiced therein?—At beginning of term all students except commissioned officers, and during the term all recruits are practiced in them.

What practice or instruction in grand or minor tactics?—None.

What month is the battalion most frequently formed?—May.

What least frequently?—December.

How often each?—In May 13 times. In December about 3.

Cause of difference?—Partly due to inclement weather on regular parade day, but principally to a suspension of exercises for two weeks during the holidays.

What practice or instruction in each of the prescribed ceremonies and inspections?—The battalion has been practiced on seven different days in the ceremony of review. Regular battalion inspection is had every Friday afternoon, weather permitting. This is followed by dress parade.

How often is there dress parade?—Every Friday afternoon, weather permitting.

Reviews, how often?—Only practice reviews, as above.

Is there a monthly inspection of the battalion?—No monthly, but a weekly inspection of the battalion under arms on Friday.

Are there weekly inspections of companies under arms every Saturday?—No.
Is there a Sunday morning inspection of the dress and general appearance of the students?—No.

What other inspections are there?—By the commandant, a weekly inspection of quarters and buildings, infirmary, armory, etc. Daily evening inspection of quarters by commandant. Morning, afternoon, and evening inspection of quarters by cadet officer of the day.

Is the number of inspections reported as made enough for thorough efficiency?—Yes.

Is there guard-mounting?—No.

Hospital?—Consists of separate brick building, suitably equipped and cared for by hospital matron, assisted by hospital orderly.

What medical attendance have the students?—A physician from the city in daily attendance at sick-call, 6.30 a. m.

Is there any opposition on the part of the faculty or students to the military course, or does discontent exist?—No serious opposition, but a desire on the part of a majority of the faculty for a modification of the present military government, brought about by the opinion that too much time is consumed in the performance of military duty, thereby seriously interfering with the time allotted other studies. No apparent or expressed discontent.

What improvements are needed in the military department?—Armory and armory outfit, signal outfit, shells, projectiles, and fuses for field-gun practice; set reloading implements for service ammunition, facilities for drilling under cover during inclement weather. A more suitable drill ground, or one of greater extent, is absolutely necessary for proficiency in drill.

What are immediately feasible?—None. Application will be made for such equipment as it is deemed likely will be furnished by the Ordnance Department.

Condition of office, records, etc.—No office; such records as are on hand are in good condition.

Review and critical inspection of battalion, and remarks thereon.—The battalion was reviewed and inspected at 8 a. m., June 3. The formation was in single rank. The marching to and from the parade ground and in column was fair. The company alignments were not well maintained. The wheelings were good. Distances were not well preserved. Companies A and B were commanded by lieutenants. The company commanders seemed well instructed, but were lacking in animation, snap. There was a want of energy and life in handling pieces. The adjutant was well posted. At inspection the marker on right flank of color company stood fast. The "setting-up" of the cadets as compared with their condition on entrance at the university, was good; as compared with perfection, was poor. The general appearance of the cadets was fair. Coats generally in good condition; one with a button missing; another, one button not buttoned. Uniform fitted fairly well. Many coats wrinkled, due generally to fact waist-belt appeared to have been hurriedly put on, and too low down. Trousers were, with a few exceptions, very much worn and soiled. Regulation belts and cartridge-boxes indicated rough usage; more so than the length of time in use would warrant. No indication of the application of polish apparent. Shoes in fair condition. Many gloves with holes. Standing collars; cravats not visible; hair closely cropped. The arms were in serviceable condition, and the parts worked smoothly. They were not as clean as they should be, with ordinary care given them. The uncleanness consisted principally in rustspots in chamber, around ejector-stud, bayonet-shank, and firing-pin. The band (volunteer) played quite well. The drum-major and band were not well instructed as to the requirements of paragraph 3, page 360, Upton's Tactics, as to inspection of instruments and "open order;" neither were complied with. The band played at intervals during the inspection of companies. This is an average battalion. The cadets were very quiet and decorous, apparently under very good discipline. They did not seem to enthuse over the ceremonies. The limited time allowed for the military exercises, until 9 o'clock, did not admit of any drill. The date of the inspection was during the annual examinations, and these, of course, could not be deferred. In this connection, request was made that the annual inspection be made in the month of April, and this I recommend.

Number and grade of present and absent?—Of the 151 cadets in the military department, 132 were present at inspection, viz., 2 captains, 8 lieutenants (including the adjutant and band leader), 15 sergeants (including one sergeant-major, the quartermaster sergeant, who acts also as drum-major, the color-sergeant and the hospital orderly), 10 corporals (1 in the band), and 97 privates. The absentees were 1 captain and 3 lieutenants (including the quartermaster and second lieutenant of the band,) on furlough, 7 privates on furlough, and 8 privates absent without leave. There are two vacancies of company officers, 1 captain and 1 first lieutenant. There is a vacancy for a corporal in D company.

Suggestions of president?—Such a modification of General Orders, No. 15, February

12, 1890, as will permit college authorities to adjust conflicts of provisions of this order and existing schedules and rules of the institution.

Suggestions of military professor?—That the time to be devoted to practical instruction be increased from two hours, as provided by the above order, to four per week. So much ground can not be covered in so short a time with anything like satisfactory results.

During the first quarter of 1890 there were forty-one infantry drills of one hour each, with one hundred and fifty-five cadets present, nine absentees, seven dress parades and seven battalion inspections.

I called upon the president, Dr. Dabney, accompanied by Professor Gayle. He returned my visit, and I held a long and agreeable conversation with him. Dr. Dabney is a cultivated gentleman, of scarcely middle age, of great energy, who will bring this university to the forefront among literary institutions.

Professor Gayle was very courteous and attentive to me at all times.

I am, general, very respectfully,

H. CLAY WOOD,
Assistant Adjutant-General, Inspector.

THE UNIVERSITY OF THE SOUTH.

INSPECTOR-GENERAL'S OFFICE, WAR DEPARTMENT,

Washington, D. C., May 12, 1890.

The INSPECTOR-GENERAL, U. S. ARMY:

SIR: I respectfully submit the following report:

Location?—The University of the South has its seat at the edge of the Cumberland Mountain Plateau, Sewanee, Franklin County, Tenn., a beautiful and healthful spot in the native forest, 2,000 feet above the sea-level. Sewanee is reached by the Tracy City branch of the Nashville, Chattanooga and St. Louis Railway, at a distance of 8 miles from Cowan, a hamlet 87 miles southeast from Nashville, and 64 miles west from Chattanooga. There is a post-office and telegraph office at the station.

Date of establishment?—The university was chartered in 1858; organized in 1860; reorganized and substantial work begun in 1868, when the grammar school was opened. The academic and theological departments (the theological fully organized in 1878) were soon after established, and these constitute the present university. The first academic degrees appear to have been conferred in 1874.

Endowments?—From private sources, in lands, buildings, and money, about \$250,000. It has a domain of 10,000 acres surrounding the university, understood to be a gift from the State of Tennessee, and some lands, said to be in Texas, not productive of revenue.

Buildings?—The buildings are several handsome, permanent stone structures, viz, the Convocation House, erected at an expense of some \$30,000 (in which is now the gymnasium), and to which, I was informed, there is soon to be added a chapel to cost about \$40,000; St. Luke's Memorial Hall, erected by the benefactions of Mrs. Henry M. Manigault, of England; it cost, probably, \$20,000. This is devoted to the theological school, and contains, besides chapel and section rooms, accommodations for thirty-six students. Science Hall, or Thompson Hall, named for Hon. Jacob Thompson, of Memphis, the largest donor to it, is the scientific school, and contains recitation-rooms, lecture-rooms, and laboratory, and cost about \$10,000. The Hodgson Library, built by the liberality of the vice-chancellor, at a cost of, perhaps, \$10,000, and reported to contain some twenty-four thousand volumes; and other wooden buildings, halls, offices, etc., worth about \$5,000. St. Augustine's Chapel is of the number. I noticed at least one other small, substantial stone building, the chapter hall of one of the Greek-letter societies. The residence of the vice-chancellor is a fine dwelling, and Bishop Quintard has constructing and near completion a spacious stone house. This university is yet in its infancy, but a foundation has been here laid for a great institution of learning.

Government, in whom vested?—The Protestant Episcopal Church, through a board of trustees. Right Reverend Dr. Alexander Gregg, bishop of Texas, is the chancellor and president of the board. The educational interests are controlled by the hebdomadal board, composed of the professors, with the vice-chancellor as chairman.

Religions denomination?—Protestant Episcopal.

Departments?—Two departments are at present in operation—the theological and academic; there is also a grammar school, a preparatory course to the junior classes of the university. There is a further subdivision into what are termed "schools,"

each of which consists of merely the different branches of study, in the academic curriculum, presided over by each professor; *e. g.*, the school of ancient language and literature, the school of modern languages, etc.; and in which the length of the course of study varies.

Collegiate course?—The length of the university course, both theological and academic, is three scholastic years of about nine months each, divided into two terms, trinity and lent, of twenty weeks each, beginning respectively in August and March. The length of the grammar-school course, I understand, is also three years—though I infer a pupil can remain for a longer period—and the terms, vacation, etc., are identical with those of the university. The course of studies for the grammar school embraces such branches as are usually pursued by boys between the ages of twelve and sixteen. The vacation of twelve weeks begins in December and ends in March. Commencement day—here a reality—is the first Thursday in August, and terms are dated from this date. In 1890 commencement day is August 7.

Students and classes?—Applications for admission to the theological department must produce satisfactory evidence of graduation in arts from some university or college in which the learned languages are duly studied. For admission to the academic department, speaking in general terms, students must have passed through the preparatory course or its equivalent. In the academic department the classes are three—junior, intermediate, and senior. The theological students, with the distinctive badge of this department, and the seniors, wear the scholastic (Oxford) cap and gown, and are known as “Gownsmen.” The other academic students are called “Juniors,” and these, with the pupils of the grammar school and such gownsmen as may volunteer, compose the battalion.

Discipline?—Wholly proctorial, as directed by the statutes. The general duties of discipline are intrusted to the proctor, and are directed chiefly to the maintenance of that good order and quiet necessary to study. Regular attention to all stated duties is absolutely required. Lieutenant Stone states: “The discipline is very loose. Students are however very well behaved. For military officers I award punishment and have charge of its execution. Punishments inflicted for breaches of discipline are confinements and extra tours, as at the U. S. Military Academy. The demerit system was abolished before I came, and a more general one adopted that has not been at all satisfactory in its results with the younger pupils.”

Requirements of law met?—Under section 1225, Revised statutes, yes. The institution has capacity to educate at the same time not less than one hundred and fifty male students.

President?—Rev. Dr. Telfair Hodgson, the vice-chancellor, is the administrative head of the University.

Date military department established?—In 1880. The first Army officer detailed was First Lieut. Robert M. Rogers, Second Artillery, in May, 1880; relieved in August, 1883. Second Lieut. Robert W. Dowdy, Seventeenth Infantry (promoted while at the university) was detailed August, 1883; relieved in August, 1886. First Lieut. Edmund K. Webster, Second Infantry, was detailed in August, 1886; relieved in August, 1889. Second Lieut. William P. Stone, Second Artillery, the present incumbent, was then, April 11, 1889, detailed, and assumed duty August 15, 1889.

Professor of military science and tactics?—Second Lieut. William P. Stone, Second Artillery, a graduate of the U. S. Military Academy, in the class of 1883, born in Arkansas.

Suitable for position?—The vice-chancellor states that this officer is suitable for the position. I did not meet him. Some ten days before I arrived at the university, Lieutenant Stone left for his home, Camden, Ark. I attach a letter from him on this subject, marked “A.”

Member of the faculty?—No, at date of inspection. The vice-chancellor states, “but will be after March, 1890.”

Receive proper support from authorities?—The support of the faculty and trustees in so far as they are able, possibly. Lieutenant Stone states sufficient encouragement is not given to the military department; changes are needed in it. I have suggested these to the executive committee. “I have not yet been able fully to determine whether the course is satisfactory to the faculty. They all seem to want the course, but do not realize its deficiencies or the excellence to which it could be brought by an alteration of the present policy.” It is very popular with the students.

Efficient as it should be?—No. It does not meet the requirements of General Orders No. 15, of February 12, 1890. Theoretical instruction is limited to recitations by cadet officers and non-commissioned officers (obligatory), and by privates (optional), in drill regulations. Its scope should be materially enlarged. It may not be amiss to present here the views of one of the cadets as showing how the matter is viewed in the ranks, who states: “Under the present system of government of the university, the military department can not be as efficient as it should be. Until the students under military instruction all reside in one building, the battalion can

not be perfect. It is better now than it has been for three years, and it is as good as could be expected under the circumstances."

Number of hours per week to military duties?—Four infantry drills, one hour each, and two artillery drills, one half-hour each per week. Three recitations in Upton's Tactics per week. Lieutenant Stone has no other duties. Vice-Chancellor Hodgson states that after March, 1890, Lieutenant Stone "will instruct in English and mathematics, for which his compensation will be \$500 a year."

Number of students, capacity for?—Five hundred.

Number of students in attendance?—Two hundred and eighty-nine, all males.

Number of students in military department?—One hundred and thirty-seven, exclusive of some twenty-odd "gownsmen" (organized for a competitive drill), reported by Lieutenant Stone as not constituting a part of the battalion, and including 23 small boys, eleven to fourteen years of age (about), who are organized into Company E, and drill in the school of the soldier; and also including an awkward squad of 7. This reduces the effective strength of the battalion to 107 cadets. And yet the military course is stated to be compulsory "on all students except the most advanced (called here 'gownsmen')." There is an average of 100 cadets at infantry drill and 15 at artillery drill.

The catalogue for 1889-'90 gives the number and class of students as follows:

Theological, 19; post-graduates, 2; special, 2; total, 23; gownsmen (seniors) 38; juniors, 112; grammar school, 116; total, 266.

A total of 289; reported by the vice-chancellor to be in attendance at date of inspection.

Excluding the 23 theological, post-graduate, and special students, 18 gownsmen, and 23 (reported) boys under fifteen years of age (when at the university I understood the number to be but 15) now in the battalion, but including, say, 20 volunteer gownsmen and allowing 15 per cent. to cover those physically disabled, the battalion ought (unless the term "compulsory" is a mere fiction) to number nearly 200 or about 175 exclusive of the volunteer gownsmen. Indeed, I see no valid reason why military drill should not be compulsory on all students except those physically disabled and those under 15 years of age at the university; and all gownsmen should be required to attend the theoretical instruction also. And even in a purely literary institution, like this university, if the trustees desire the detail under the law of an army officer, a scale of merit in the military department should be established and proficiency therein should have some fixed weight or value in determining class standing at the several examinations, and relative standing on graduation. With the theological student, as his mission is popularly supposed to be one of peace, the military course might be optional. Might it not possibly peculiarly fit him for the constant warfare of the church against her enemies? Gownsmen and special students are exempt from military duty, also those physically incapacitated and those too poor to buy uniforms, *i. e.*, those excused by the surgeon or vice-chancellor.

Uniform?—Gray coat, similar to that worn at West Point, with university button; trousers, identical. Officers wear red sash and shako with white plume. Non-commissioned officers and privates wear forage caps. Fatigue uniform: Blue blouse, bound for officers. Forage cap: Gold band for officers; black band for non-commissioned officers and privates. In full-dress, officers and non-commissioned officers wear chevrons; in undress officers wear shoulder-straps. The uniform may be worn at all times, but is required only at drill and on Sunday.

Military organization?—Battalion, as prescribed in Upton's Infantry Tactics, of four companies.

There are 12 company officers, 4 captains, and 8 lieutenants; 12 sergeants, 16 corporals, and 64 privates. Some vacancies exist among non-commissioned officers. There is one staff officer, the adjutant, a first lieutenant, one non-commissioned staff officer, the sergeant-major, and a color-sergeant.

Method of appointment and promotion of officers and non-commissioned officers?—Entirely in the control of the professor of military science and tactics; may be selected at large from the battalion. The officers are all juniors except Second Lieut. Robertson, who is a senior and a gownsman. Second Lieut. Kirk is also a gownsman, but a junior. It appears that a student who in age, character, and attainments shows himself to be a real university student may become a gownsman though a junior. The non-commissioned officers are all juniors except two, Sergeant Wilder and Corporal Noble.

There is no band.

There is no instruction in cavalry tactics.

Military lectures?—None, except explanation of the principles of minor tactics (drill regulations) in the section room.

Military essays by students?—None. No campaigns have been studied. The students have done no original work.

Number of drills per week?—Four, infantry, one hour each. This term, since August 15, has been devoted almost exclusively to the schools of the soldier and

company. Five or six battalion drills have been had. Artillery drills, one hour each week, and about twenty-five annually.

Text book used?—Upton's Infantry Tactics.

There are no military books in the library, Lieutenant Stone states, so far as he knows.

There is no small-arms target practice. Dr. Hodgson states there was in the Autumn of 1888.

No artillery target-practice.

No signaling?—Target and signal apparatus reported as worn out.

Methods of military instruction?—The only theoretical instruction is recitations in Upton's Tactics by essentially the cadet officers and non-commissioned officers, with explanatory remarks thereon by the instructor. Practical instruction since Lieutenant Stone reported has been confined practically to the schools of the soldier and company. Lieutenant Stone states: "So much work was needed in the schools" [named] "that I deemed it unwise to spend more time on battalion formations, about three ceremonious inspections during the term. I personally inspected every cadet at each drill. I considered the battalion so deficient in the schools" [above named] "that I thought it best not to have ceremonies oftener than was sufficient to teach the tactics. If the personnel of the battalion is not very much changed next term, much time may be given to ceremonies. Reviews, inspections, and dress-parades have been held on the drill-ground, and the officers know the tactics for them. When I arrived, August 15 last, it was the opening of a new term and the proportion of new students was unusually large, and the battalion was turned over to me disbanded. I organized it into three companies and appointed the officers and non-commissioned officers recommended by my predecessor and at once started drill in the school of the soldier, principally in the exercises. Company drills were not fairly begun till September 15. Then those incapable of drilling in the companies were placed in a common awkward squad. The boys too small to carry a rifle properly were organized into a separate company officered by themselves, and drilled chiefly in the setting up motions. The usual competitive drill was held November 7." [Programme herewith marked B.] "The boys take great interest in preparing for this. With a view to bringing up the battalion to better work next term, I required each company to have 24 men in ranks (six sets fours) instead of 16 as heretofore. Considering the shortness of time for preparation the drill was wonderfully good. After this contest I had each captain pick 12 privates, and appointed officers for another company and had its captain pick 16 privates from those left, dividing remainder among the four companies. This last company is Company D. Companies A, B, and C and the volunteer company of gownsmen had another contest November 14" [programme herewith marked C] "with 16 men in ranks. The drill was excellent. The judges and commandant reviewed the battalion November 15, and that was the last military formation except for church. It is customary to stop drilling about that time on account of bad weather and the near approach of examinations (December 6). There was not a day after November 15 and before I left the university (November 21) when drill would have been practicable, as bad weather set in immediately."

There is a separate artillery company?—"Yes; I found one on my arrival, a volunteer company; its members very irregular in attendance. It is my intention to abolish it next term and drill the older students in artillery during the early part of the term while the new ones are at squad drill." From the catalogue I extract the following:

This is a volunteer battery, organized and managed by the students, but under the control of the authorities. The guns used are 3-inch field rifles, and are supplied by the United States. It drills in artillery once a week and seeks to perfect its members in the school of the battery dismounted. The battery owns a complete camping outfit, and during the summer is allowed to go into camp at some convenient place for four days.

No recitations in army regulations.

No instruction in use of army forms and blanks, including rolls and returns.

No instruction in outpost duty, nor any night exercises.

Cadets are exercised without arms about two weeks altogether and for about two weeks more during part of the drill.

Select company for special drill?—As indicated in Lieutenant Stone's remarks in reference to competitive drills.

No instruction in methods of requisition and supply as to army organization; in probable fields of war and military operations, logistics, strategy, and lines of supply.

Cadets are not instructed as to the power, methods, and distinction between military and martial law.

Number of muskets?—One hundred serviceable Springfield rifles.

Number of accouterments—sets?—One hundred serviceable.

Remarks?—The rifles and equipments (originally 150) were received from the State of Tennessee in 1880, and are very old and worn and defective. When not in hands of the cadets they are stored, as is also the ammunition, in an armory, and are (not very well) cared for by the janitor and students.

Ammunition?—Received annually from the United States. Blank cartridges, caliber .45, 880. Ball cartridges, caliber .45, 7,400. Blank cartridges, 3-inch rifle, 100. Friction primers, 1,105

Field guns?—Two 3-inch wrought-iron guns and two 3-inch carriages, issued by the United States. The implements are very badly worn. The guns are not properly housed. They have been hauled under a band stand, too small to afford them much if any, certainly not suitable, adequate protection. They are not covered with paulins. They are reported not efficient, too heavy for boys. Said to be cared for by the janitor and students.

Armory?—There is a room in one of the college buildings used for an armory hardly suitable and scarcely ample for the purpose. It seems to me it is unsafe to store the ammunition here.

Number of military buildings?—None; two not large rooms, one used as armory, are allotted to the military department.

Number of other buildings?—Eleven.

Gymnasium?—The gymnasium, a spacious room in the convocation house, is equipped with well selected apparatus and is in charge of a capable instructor, always present to advise and direct the cadets. Every student is examined by the health-officer, and such exercises prescribed as may best suit his physical condition. For those who take gymnastics, however, there is a fee of \$5 a term. Fencing is not taught. Physical exercises are encouraged; there are two base ball clubs, a foot ball club, and several tennis clubs. An athletic association has been organized for the purpose of encouraging field sports. There are two contests per annum, and medals are given as prizes.

Drill ground adequate?—It is at least not too large. The cadet captain in charge of the battalion stated to me it was not adequate.

No military camping.

No marches for instruction.

Time allotted different studies?—The instructor reports that recitations in all studies are given more time than those on military tactics (which is all that has been taught) and none less.

The schedule of university studies in the academic department will be found on pages 32 and 33 of the catalogue.

An examination of this schedule will show that military science is not embraced in the curriculum.

Value given different studies?—Military science or instruction has no value or weight in class-standing or graduation, and, of course, everything has greater weight, and nothing less.

Age of students?—The age of the youngest student in the military class is 15 years and 6 months (14 years?). The age of the eldest is 19 years and 5 months (25 years?). Average age about 18 years.(?)

The age of the youngest student in the battalion is about 15 years (12 years.?) The age of the eldest is 25 years. Average age, about 16 years and 6 months.

Lieutenant Stone reports the zeal and acquisition of knowledge of the school about average. There is great zeal in the military department. The interest taken in the academic department is, in my opinion, least satisfactory. The improvement is greater, so far as I can tell by observation and the opinions of others, in the military department. The cadets take so much interest that they know the tactics very well. Practically no opposition or discontent exists.

Messing?—The university has no halls (dormitories)—except the accommodations for 36 students in the theological hall—barrack nor boarding-department. Students board in licensed houses, under the supervision of the authorities.

Expenses?—The academic charges are fixed and invariable; personal expenses vary, and are stated thus: Academic, \$111; personal (including contingent deposit to cover cost of books, etc., \$40), \$252.50; cadet uniform, \$29, a total of \$392.50. In addition a matriculation fee paid on entrance, \$15, and \$5 for the gymnasium. Tuition proper is \$100 each year. Theological students have special rates. The academic charges are payable in advance for each term. Cadet uniforms are furnished at tailor's rates. Ordinarily one suit per annum suffices for required use.

Total number of students and graduates?—Since the military professorship was established, total number of students has been 2,246; total graduates, 49, but different degrees have been conferred upon many more. The largest number in attendance was 333 in 1887. The largest number of graduates was 6 in 1882. The number last year was 301, with 3 graduates. Lieutenant Stone states the university has declined during the last two years, due to the abolition of the merit system, a want of harmony among its officers, and the lukewarmness or misdirected efforts of the

board of trustees. An attempt to remedy these defects will doubtless be made at the next meeting of the board.

The battalion is formed habitually while drill lasts, four times a week. It is most frequently formed in June and less frequently in December. It is formed for parades, reviews, inspections, and battalion drill, about eight times in June, and not at all in December. The cause of difference is the weather.

There is no practical or theoretical instruction in grand tactics nor in minor tactics, as distinguished from drill.

Each cadet has not walked post. No guard duty is performed. They are required to march to church, and do not assemble at other times except for drill.

It is reported there are no facilities for in-door drill. I think the gymnasium might be utilized at least for all exercises embraced in the school of the soldier.

Lieutenant Stone states improvements are needed in the military department as follows: (a) The prescribed uniform should be worn at all times. (b) Complete disciplinary powers (subject to review by the vice-chancellor) over the members of the battalion in all matters relating directly to its welfare, should be vested in the commandant. (c) For the use of the instructor in preparing lectures, books on strategy, logistics, grand tactics, the report of the German staff on the Franco-Prussian war, and the report on the Turco-Russian war should be furnished his department. (d) A place for in-door drill should be built, combining armory, drill-room, and gymnasium. (e) All juniors should be required to live in a barrack under the same system, with slight modifications, as that used at West Point. I have been making an effort towards securing the adoption of this plan. The first three (a), (b), (c), he states, are immediately feasible.

There should be an armory, spacious recitation and lecture rooms, improved drill-ground, and increased authority lodged in the commandant, and a sincere, exact compliance with the provisions of General Orders No. 15, of February 12, 1890, and Circular B of the same date.

During part of the fourth quarter, ending November 14, 1889, there were twenty-three infantry drills, of one hour each, with 124 cadets present; two artillery drills, of one hour each, by volunteer company, attendance very irregular; one dress parade, of one hour, with 124 cadets present, and twelve recitations in tactics, attended by 2 captains, 7 lieutenants, 11 sergeants, 12 corporals, and 1 private.

The general aptitude of the cadets for military instruction, etc., is excellent, and their interest therein great. The interest manifested by the faculty is fair.

The battalion was reviewed and inspected on December 2, a bright and frosty morning. As there is little or no turf, when the sun got well up it was quite soft and slippery under foot, embarrassing the cadets and badly soiling their shoes. The battalion was in charge of Acting Commandant Francis Langing Coyle, a "passed" captain and gowdsman, who acquitted himself most creditably. Indeed, at these ceremonies the professor of military science was hardly missed. For service the battalion seemed to be in excellent condition, better than for parade. The marching and carriage of the cadets were superb. Distances admirably preserved, wheelings good. Inspection was followed by company drill; the movements were well executed. The line was again formed, when the battalion was exercised in the manual of arms, which exercises were effected with precision and promptness. Evidently the cadets by one means or another had been thoroughly drilled. In the essentials of the soldier they were well up. Considering that the battalion had been disbanded for the term, and the arms and equipments turned in some two weeks before my arrival, the personnel was in as good condition as could be expected. I have already remarked upon the arms. The cadets are a body of intelligent, fine young men and boys, and can be brought as a military quantity to any degree of perfection desired.

One hundred and forty-six cadets were present at inspection and eleven were reported absent, viz: Second Lieut. James C. Morris, sick; Second Lieut. Albert L. Kirk, on leave; Privates Joseph M. Lovell, sick; Franklin E. Jones and William L. London, gone home; ——— Tucker, excused on account of rheumatism; Harry Campbell, excused by health officer, and Harry B. Stout, Joseph Palmer, Curtis Richardson, and William C. Horlbeck, absent without excuse. A roll dated December 2, giving the name, rank, age, class, and service of each officer and non-commissioned officer is filed herewith marked "E."

The professor of military science and tactics (in the catalogue styled "instructor") is the commandant of cadets *de titulo* but not *de facto*. He has control of the cadets only at drill, ceremonies, marching to chapel, and in the section-room. His authority, subject always to the direction of the vice-chancellor, should, I think, even at this institution, be extended. I regretted very much finding Lieutenant Stone absent, especially since he was aware that I was en route. However, I succeeded better in my work than I anticipated. Lieutenant Stone writes: "I had worked faithfully to improve the battalion and all said it was in a better condition than ever before. I feel it to be unjust to the battalion and to me that the inspection had to come more than two weeks after all drills had ceased, when the boys were engrossed with their

studies, and the weather and ground doubtless unfavorable for drilling. I say this most respectfully and not in a captious spirit, but to call attention to the reasons for many shortcomings you doubtless found. I respectfully request that you lay this matter before the Inspector-General's Department and recommend an earlier inspection. November 1, or July 15 to August 1, would be the time to get the truest notion of the condition of the battalion."

Remarks!—I reached Sowance after dark Saturday night. I was disappointed on learning the hotel was closed, but fortunately, through the courtesy of the vice-chancellor, I was met at the station by Capt. F. L. Coyle, who conducted me to a dwelling where I was lodged. I found at the university General E. Kirby Smith, the professor of mathematics, whose acquaintance I had made thirty-odd years ago in Texas, when he was captain in the Second (now Fifth) U. S. Cavalry, by whom I was cordially received and most kindly entertained. He called upon me at once, as did also Dr. Hodgson, Bishop Quintard, and one or two others of the professors. I consider myself happy in having made the acquaintance of these excellent gentlemen and scholars, Bishop Quintard and Dr. Hodgson. Through the attention and civility of the polite young gownsman, Captain Coyle, of Louisiana, I was brought into communication with many of the cadets, and had opportunities for agreeable conversations with them. Among others, one, Mr. Ernest H. Rowell, a gownsman and assistant in the grammar school, from my own State. In fact there were several lodging in the house with me. They are a splendid lot of young fellows. To Captain Coyle, who was with me much of the time, I am indebted for important information in regard to the military department. The vice-chancellor cheerfully furnished me valuable data relative to the university. In correspondence, Lieutenant Stone replied to a series of military questions.

This report is accompanied by the following seven papers, viz: Letter dated November 21, 1889, from Lieutenant Stone, A; programme competitive drill, November 7, 1889, B; programme competitive drill, November 14, 1889, C; quarterly return of the officer to November 14, 1889, D; roll of cadet officers and non-commissioned officers, E; catalogue of the university for 1888-'89, F, and catalogue (in duplicate) for the year 1889-'90.

I am, general, very respectfully,

H. CLAY WOOD,
Assistant Adjutant-General, Inspector.

TEXAS MECHANICAL AND AGRICULTURAL COLLEGE.

HEADQUARTERS DEPARTMENT OF TEXAS,
INSPECTOR-GENERAL'S OFFICE,
San Antonio, Tex., April 29, 1890.

Inspected Tuesday, April 22, 1890.

This college was last inspected by Maj. E. B. Beaumont, Fourth Cavalry, acting inspector-general, Department of Texas, December 13, 1889.

At that time the corps of cadets consisted of 217 pupils in aggregate, and now numbers but 177, a loss of 40 cadets.

This loss is due to the failure of some to show fair progress in studies, and have been recalled by parents at the request of the faculty; some have been dismissed, and others voluntarily left the school. Cadets are allowed to enter this school at too early an age, and as all of them are required to take the mechanical or agricultural courses, it is obvious that they have not the strength requisite for either. The system of discipline is that followed at the West Point Military Academy, delinquencies being divided into military and academic. The army officer on duty at the school, Second Lieut. W. S. Scott, First Cavalry, is commandant, and to him is left the duty

If such rule is followed at other military colleges it requires a particular fitness on of investigating all offenses and awarding punishment therefor.

the part of the officer, as the good order, military discipline, and the best interests of the institution are at stake. Lieutenant Scott seems to give perfect satisfaction, and states that the board of directors are in full accord with the system of military discipline and instruction.

The faculty of the college is very strict, and a delinquent reported to it is summarily dealt with. The cadets prefer the military punishment to being left to the mercy of the faculty.

The arms and accouterments are new, having been but just received. It should be required of the army officer on duty at a military school to report whether the authorities take proper care that the arms and other Government property are kept in good order, and a new officer should be required to report condition in which he finds the property and the precautions taken for its preservation. Artillery should not be issued unless good weather-proof gun-sheds are guaranteed.

The battalion drill was not as good as at last inspection, owing to the fact that the corps was entirely without arms for a period and but one drill had taken place since

December 13, 1889. The manual of arms and firing were very good. The companies drilled very well. The second class were drilled at foot battery, and handled the guns intelligently, limbering and unlimbering, changing front, firing, and showing careful instruction.

Report of drills: Artillery, No. 6; length, one hour; total present, 29. Infantry, No. 6; length, one hour; total present, 186. Recitations on tactics, No. 20; length, one hour; total present, 27. Lectures on military science, No. 10; length, one hour; total present, 16.

The uniforms, as a general thing, were well fitted and neat, though some were quite worn. A want of uniformity in color of cravats and ties detracts from the military appearance. The young men are very well set up, and by commencement, in June, Lieutenant Scott reports that the battalion will be in an excellent state of drill. The third class study and recite in infantry tactics, but the artillery instruction of the second class is confined to practical maneuvers with pieces. One thousand ball cartridges are allowed by the United States for target practice, and the State of Texas occasionally donates some, but the latter is uncertain. The present first class numbers but 16 pupils and has made a good target record, but a larger supply of ammunition would result in greater excellence and larger ranges.

Cadets are required to attend roll-calls at reveille, breakfast, dinner, and supper, and sentinels are posted from supper time to tattoo and preserve order in barracks. The cadet mess is well supplied with food of the best kind, and many of the instructors eat of the food prepared for the cadets. Besides vegetables and beef, they have large quantities of fresh milk and butter, mutton, chickens, turkeys, fresh pork, and sausage.

The cadet barracks are very crowded, some rooms containing three pupils, but the sick list is very small. For drinking, rain-water is used. The water-closets are indifferent. The Army officers' quarters are on the third floor of a wing of the mess hall, and have no conveniences for house-keeping. Suitable quarters should be erected for the military instructor. Cadets pay about \$13 per month for tuition, board, and washing. The uniform costs about \$18 in addition. Pupils should be obliged to deposit a small sum to make good injuries to Government and State property.

The professors and instructors in their various styles of citizens' dress present a strong contrast to the uniformed cadets, and it would seem more in keeping with the military character of the school if some modest uniform was worn while on duty. The military instructor wears his uniform habitually. The artillery was condemned last year, but the college has not funds now to pay transportation to the arsenal. Prof. L. S. McInnis, chairman of the faculty, accompanied the inspector through the academic buildings and workshops. Cadets were found in the carpenter, machine shops, stables, laboratories, recitation rooms, mechanical and industrial work, pursuing their studies.

The following extract from the annual catalogue of the college for 1889 is quoted to show the high estimate placed upon the military system:

"While the instruction in this department is as thorough as practicable in the limited time allowed, in liberal compliance with the requirements of the acts of Congress endowing the college it is not proposed to graduate soldiers. The military exercises are designed principally to straighten and strengthen the students, to give them an erect carriage and graceful bearing, rather than to make them proficient in military evolutions.

"The military system is the means of enforcing discipline and securing regularity in the performance of academic duties, and tends to inculcate in the students that habit of truthfulness and manliness of character that characterize young men as gentlemen."

No stronger indorsement of the correctness of the methods pursued in the Army for the cultivation of a high standard of morality and excellence could well be adduced.

Lieutenant Scott's return of April 21, 1890: Aggregate present, 163; aggregate absent, 14; aggregate present and absent, 177. Aggregate last return when inspected, 217.

The following extract is from a communication received from Lieutenant Scott "relative to the tabulated report of inspector-general regarding college work that as a matter of reference it is of some consequence, and the chairman of the faculty requests that it be continued."

Two hundred and thirty cadet rifles, with belt, boxes, etc., were received this year from the San Antonio Arsenal.

It is to be regretted that the inspector could not have visited the college nearer the end of the term, but it would have been attended with greater expense, and was, therefore, combined with a trip to Galveston, Tex.

In conclusion it is apparent that the department of military science and tactics is well administered and the State has a reserve force of young men who will be of service if it should need military officers.

E. B. BEAUMONT,
Major Fourth Cavalry, Acting Inspector-General.

UNIVERSITY AND STATE AGRICULTURAL COLLEGE OF VERMONT.

BURLINGTON, VT., June 10, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.:

GENERAL: I respectfully submit the following report of an inspection of the military department of the University and State Agricultural College of Vermont, which is located at this place.

The University of Vermont was chartered in 1790. The agricultural part was added after the act of the 2d of July, 1862, in order to comply with the law. This college received all the endowment that that act gave to the State of Vermont. The funds obtained by the sale of the lands are still held by the State, and the college receives the annual interest of \$8,130.

The college is non-sectarian and is governed by a board of trustees. The military department has been in existence since the organization of the institution as an agricultural college.

The present incumbent of the chair of military science and tactics is First Lieut. A. S. Cummins, Fourth Artillery, who assumed the duties here on the 14th of September, 1887. He is thoroughly suitable for the position and is a member of the college faculty. His only duties outside of those strictly pertaining to the military department are those of room inspector. He receives no additional compensation from the university.

The institution is probably capable of educating 250 students at one time. The number now in attendance is reported as 125, of which 20 are females.

The military course is compulsory on the junior, sophomore, and freshman classes, and it is a rule that any student who fails to be present at 75 per cent. of the military duties shall not be given a degree. The officers are taken from the senior class.

The student body is organized into a battalion, and the uniform consists of dark-blue forage cap, blouse, and trousers. There has been a total of 80 students in the military department. There are 2 battalion staff officers, adjutant and quartermaster. There are 2 companies having 6 officers.

The officers are appointed upon the nomination of the military professor.

The military department has been given two hours per week, which is not in accord with General Orders No. 15 current series, Headquarters of the Army.

There have been no military lectures during the past year, and no essays on military subjects have been required of the students. Recitations in tactics have not been held. The course has been limited to drills as infantry, manual of the piece, and mechanical maneuvers with the field-guns and small-arms target practice. The last-mentioned has been mainly held in the gallery. There is a good range open to the students 2 miles away, but it has been little used. There are no provisions made for practice firing with the 3-inch guns; no projectiles are supplied for this work. I was not able to see the battalion and judge of its efficiency, as it seems to have been the habit here to discharge the military department after the close of Decoration Day ceremonies. I was not notified of this abbreviation of the annual course in the military department and found the battalion dismissed when I arrived.

The Billings Library furnishes an abundant supply of military history.

There are 100 rifles (caliber .50) on hand, 100 sets of equipments, 20 non-commissioned officers' swords and belts, 2 3-inch rifles, carriages, and limbers.

This material is all well cared for. The small arms are of obsolete model, and I think they should be replaced by better. The ammunition called for last spring has not been received.

The organization has had no practice marches, nor has it had any experience in camping.

Lieutenant Cummins is preparing to leave this station. I think, under the existing decisions, he would naturally be away before the arrival of his successor. Should it so happen that his successor is a man who has had no previous experience in college work, I would submit that my observation makes me think that it would be wise to detain Lieutenant Cummins here until he can give his successor a general idea of the workings of the department.

Very respectfully,

R. P. HUGHES,
Colonel, Inspector-General.

NORWICH UNIVERSITY, VERMONT.

NORTHFIELD, VT., June 9, 1890.

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.:

GENERAL: I respectfully submit the following report of an inspection of the military department of the Norwich University, which is located at this place.

This institution was established in 1819 at Norwich, but the buildings were destroyed by fire in 1866, and in rebuilding it was considered advisable to change the location. The institution was originally opened under Captain Partridge, who had resigned his commission in the United States Engineers to take charge of it. It has always been managed on a strictly military basis, and the discipline and methods are excellent.

It is non-sectarian in its character and has never received any endowment from the Government. The school is not under any obligation to the General Government except for a limited amount of ammunition and for the services of an officer. The first detail of an Army officer was that of Lieutenant Catlin, Second Artillery, who was detailed and reported for duty in January, 1887. The present occupant of the chair of military science and tactics is Second Lieut. J. McI. Carter, Third Cavalry, who assumed the duties in March last. Lieutenant Carter seems to be entirely capable, zealous, and interested in his work, and gives entire satisfaction to the authorities and to his fellow-professors. He is a member of the faculty and is thoroughly supported in his efforts by the authorities. He is given an hour daily for military exercises and the senior class is required to recite in tactics and on other military subjects and to pass an examination in this department as well as the others before receiving their degrees.

I was present at the examination of the senior class. The young gentlemen had evidently made good note of the lectures delivered.

The military professor is not expected to, nor does he, do any other work than such as is part of his specialty. He is not given any additional compensation for the discharge of his military duties.

The institution is reported to be capable of educating 150 students at one time. At present there are only 58 in attendance. Of the 58 in attendance 54 belong to the military organization. The students are organized into one company, the officers of which are taken from the senior class.

There are two uniforms, one full-dress: helmet, dark-blue cut-away dress-coat, dark-blue trousers with red leg-stripe. The undress is the forage cap, blouse, dark-blue trousers. The uniform is required to be worn habitually.

The State has supplied the college with 50 Remington rifles, caliber .43, and 50 sets of equipments; also with 2 6-pounder brass pieces, carriages, and limbers.

These pieces of artillery are of an obsolete type, and although the manual of the piece and some mechanical maneuvers have been practiced it is evident that such instruction is of but little value.

Target practice is carried on, but in order to do so it is necessary for the officer to exchange the caliber .45 ammunition sent here for caliber .43, which he is able to do.

The grounds about the college and in the vicinity afford ample room for drill. The company had not yet gone into camp at date of inspection, but was preparing to do so in a few days.

It is to be regretted that this university has no gymnasium, where the setting up of the students could be carried on when the weather may not permit other work to be done.

In conclusion I wish to say that for its numbers there is no school in my inspection where the military department presents a better condition than that at Norwich University, Vermont.

Very respectfully,

R. P. HUGHES,
Colonel, Inspector-General.

 VIRGINIA AGRICULTURAL AND MECHANICAL COLLEGE.

INSPECTOR-GENERAL'S OFFICE, WAR DEPARTMENT,
Washington, D. C., January 18, 1890.

The INSPECTOR-GENERAL, U. S. ARMY:

SIR: I respectfully submit the following report:

Location!—This college has a pleasant and healthful location amidst the hills at Blacksburg, Montgomery County, Virginia, distant 8 miles from Christiansburgh, the nearest railroad station on the Norfolk and Western Railroad, which station is 86 miles west from Lynchburgh. There is telegraph communication to Christiansburgh and thence by telephone to Blacksburg.

Date of establishment?—In 1862, Congress granted to each State public lands to the amount of 30,000 acres for each of its Senators and Representatives in Congress according to the census of 1860, for "the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life." In 1872, the General Assembly of Virginia accepted the grant, and in the autumn of that year the college was opened for the reception of students.

Endowments?—The college receives from the State of Virginia the interest on its bonds, endowment fund under the act of July 2, 1862, annually, \$20,658.72. Its grounds consist of 369½ acres of land. Of this land 339½ acres were transferred to the agricultural experiment station established by the act of Congress approved March 2, 1887, leaving 30 acres for the college proper and its buildings. This farm of 339½ acres was purchased by the county of Montgomery and given to the college. The remainder, 30 acres, was given to the college by the trustees of the Olin and Preston Institute.

Equipment and buildings?—A choice library is open to all students under regulations made by the president. The physical and chemical laboratories are well equipped and receive additions annually. The experiment plat is under the supervision of the professor of agriculture. Ample space is devoted to horticulture, orchards, and vineyards. The mechanical department is furnished with a 30 horse-power engine and excellent machinery. A new and larger shop has been constructed to accommodate additional machinery. The college is provided with large-sized charts illustrating natural history, also with geological maps of the United States and Virginia. The two large college buildings, each 135 by 45 feet, are used for lecture-rooms, laboratories, drawing-rooms, offices, library, and society hall. The basement rooms of one of these buildings are used as mess-halls. The new barrack recently erected by the State provides good and suitable accommodations for the cadets. This building is heated by steam and supplied with water for baths and other purposes.

Government, in whom vested?—In a board of visitors of eight members, appointed by the governor of the State and the president of the college. The superintendent of public instruction is *ex officio* a member of the board.

Religious denomination?—Non-sectarian.

Collegiate course?—The length of the course is four scholastic years of nine months each, each year being divided into two terms. The eighteenth academic year, 1889-'90, began September 12, 1889, and the spring term will begin January 29, 1890, the year closing June 12.

State students?—The act of the General Assembly of Virginia establishing this college provides that "a number of students, double the number of members of the house of delegates, making two hundred, shall have the privilege of attending said college free of tuition, to be selected by the school trustees of the respective counties, cities, and election districts for said delegates, with reference to the highest proficiency and good character, from the free schools of their counties, or, in their discretion, from others than those attending said free schools." When the quota of a county is filled other applicants from that county may be accredited by the president of the college to a county in which a vacancy exists. The appointee should be at least sixteen years of age and of requisite proficiency. No charges are made for tuition, room rent, use of lecture room, laboratories, library, or apparatus. Board is given at actual cost, books at wholesale price; everything is done to cheapen education, and thus accomplish the end contemplated in the endowment of the college.

Discipline?—The government of the college is administered by the president in accordance with rules and regulations prescribed by the board of visitors. Vigilant oversight, together with military law and system, constitutes the discipline. The daily duties are opened with prayer in the chapel, students being required to be present. On Sundays students must attend some church in the town of Blacksburgh. Lieutenant Knight reports the discipline of the students excellent.

Requirements of law met?—Under Section 1225, Revised Statutes, yes. The institution has capacity to educate at the same time not less than 150 male students.

President?—General L. L. Lomax. The president, by college regulations, is responsible for the government and management of the college, and supervises all the departments, collegiate and otherwise, and by him are given all punishments of certain grades, and he makes out the scale of demerits.

Date military department established?—The military department was established in 1872. The first army officer detailed was First Lieut. John C. Gresham, Seventh Cavalry, in August 1884; relieved in January 1887. First Lieut. Lewis H. Strother, First Infantry, was detailed January 1887; he reported February 25 and was relieved March 18, 1887. Second Lieut. John T. Knight, Third Cavalry, the present incumbent, was then detailed to report September 1, 1887.

Professor of military science and tactics?—Second Lieut. John T. Knight, Third Cavalry, a graduate of the United States Military Academy in the class of 1884, born in Virginia.

Date assumed duties?—September 1, 1887.

Suitable for position?—I was very favorably impressed with Lieutenant Knight. I regard him as well fitted for the duties of his position. His work at this college is highly commendatory. I quote from his report to me: "I reported for duty on September 1, 1887, and found the military department in a confused and unsettled state. For six months preceding it had been in the hands of a civilian who managed things 'after his own idea.' The barracks were poor and not well adapted for the purpose. Regulations were few and indefinite, and little attention was paid to military rules or etiquette. The uniform was worn or not, as the fancy struck the student. The discipline was very poor, and, further than a few drills in the spring, no military instruction was given, so I was informed. I applied at once to the adjutant of the military academy for a copy of the rules and regulations, and revised and rewrote a new set for this school. [Copy filed with this report.] Taking the military academy as my guide, I followed as closely as I could in every particular, especially in regard to wearing uniform, recognition of and courtesies to superior officers, marching to and from all duty, punishment, reports and excuses, and promotion of officers and non-commissioned officers. When I reported for duty, I found the adjutant to be a student in the primary department, while more competent men were of the senior class and in the ranks. Demerits were not limited or did not affect a student's class standing. I brought about that change. These are the changes effected in the internal management of the department."

Member of faculty?—Yes. Is secretary of the faculty, elected by the body.

Receive proper support from authorities?—Yes, possibly; from the president a very cordial support. The faculty, as a body, approve of the course, though some individual members disapprove of so much, or any, theoretical or class-room work.

The military department is popular with the students.

Efficient as it should be?—It is not as efficient as it should be. Lieutenant Knight states "there should be means of giving practical and theoretical instruction in artillery and cavalry tactics, small-arms and field-artillery practice, signalling, etc." This institution is so military at least in practice and efficient in many respects that, if it be in any way practicable for the department to induce the college to give the required bond, it should be done. The text of the law founding these colleges is and including military tactics. This college is required by law to provide instruction in military tactics. Tactics embraces minor tactics and grand tactics. Thorough efficiency should require instruction in the higher branches of tactics.

Number of hours per week to military duties?—Twenty-five, including office hours and time devoted to instruction. Lieutenant Knight has no other than military duties and receives no compensation from the college. His whole time is given to his military duties, and he is always present on the grounds and on duty.

Number of students capacity for?—Two hundred, provided other rooms than those in the barrack are utilized or by crowding the barrack.

Number of students in attendance?—One hundred and eighteen male students.

Number of students in military department?—One hundred and thirteen. Five are exempt from military duty and instruction, viz: One has broken arm, two are blind, and one with crooked back; one post graduate.

Military course compulsory?—Yes, by college regulations, on all classes except those physically disabled, as certified to by college surgeon; and post-graduates, who, however, are amenable to military rules and regulations. Military discipline pervades the entire school.

Uniform?—Coatee and trousers of cadet gray, West Point pattern. Blouse, dark blue, United States regulation pattern, seven buttons in front. Forage cap, United States regulation pattern. Device, cross rifles with letters "V. A." in upper angle, "A. M. C." in lower angle, all embroidered. Button, college, with letters "V. A. M. C."

Military organization?—Battalion, as prescribed in Upton's Infantry Tactics. Two companies in permanent organization. For purpose of battalion drill there are four, single-rank formation.

Method of appointment and promotion of officers and non-commissioned officers?—Appointed by the president on the recommendation of the officer. The commissioned officers from the first class, or senior, the non-commissioned officers from the second (junior) and third (sophomore) classes.

There is no band.

There is no practical instruction in artillery or cavalry tactics; there are no facilities.

There are two staff officers, adjutant and quartermaster.

There are six company officers, two captains and four lieutenants.

Number of drills per week?—Five, from opening of session September 12 to No-

November 15 and from March 15 to May 31; duration, one hour at time of this inspection; in early autumn and spring one and one-half hours. This will probably amount to not to exceed annually one hundred days, one hour each day. Infantry drills in the schools of the soldier, company, battalion; as soon as proficient in one, then advanced to next higher. Dress parades, reviews, guard-mounting, and inspections on Saturdays in the afternoon.

Military lectures?—Twice per week to the first class from November 15 to March 15 each year.

Military essays by students?—None; and no campaigns have been studied up to this time, and they have done no original work.

Text-books used?—Upton's Infantry Tactics, Hamilton's Elementary Principles Art and Science of War, Army Regulations.

How many students are studying each?

	Regu- larly.	Irregu- larly.
First class.....	8	2
Second class.....	4	6
Third class.....	12	17
Fourth class.....	16	37
Sub-fourth class.....	13	37
Total.....	53	62
Total.....		115
Post-graduates.....		3
Aggregate.....		118

The powers, methods, and distinction between military and martial law form a part of the course of the first class.

Recitations in Hamilton's Art and Science of War (Elementary) and in Army Regulations by the first class. Recitations in Upton's Infantry Tactics three times per week for the second class from November 15 to March 15 each year. All classes receive practical instruction.

Excepting histories there are no military books in library.

There is no small-arms target practice, no ammunition, no range.

No artillery practice, no facilities whatever.

No signaling, no facilities.

Number of muskets?—One hundred and thirteen, caliber 45; of which 105 are the property of the State of Virginia and 8 are the property of the college. They are generally in very poor condition; a great many of spare parts are broken or lost and no means of repairing or replacing them. The arms were drawn from the adjutant-general of the State at different times; the exact date of receipt can not be ascertained. They are stored in the armory, a room in one of the college buildings, a dry and well protected place, and cared for by the college.

Number of accouterments, sets?—One hundred and thirteen, complete; condition poor, obsolete pattern, and badly worn.

There is no United States Government property.

Number of military buildings?—Two; number of other buildings, eight.

Floor-space allotted?—There are seventy-four rooms in the new cadet barrack, and with two cadets per room; rooms about 14 by 16 feet, 112 square feet each.

All the cadets live at the college, in the barrack.

The drill ground is adequate; every facility for outdoor drill; no facilities for indoor drill.

There have been no marches for instruction and no military camping; there is no time allotted to, or facilities for, such instruction; no camp equipage.

Value given different studies?—The value given to different studies is represented by the number 10; all are valued alike. With the class which graduated in June, 1889, weight was valued at 10, and this is the first time any notice was ever taken of class-room work in the military department. A student who fails to attain an average of 7.5 on any study in his class, at his examination, is not allowed to pass to a higher class unless on re-examination, on re-entering college, he be found qualified.

Time allotted different studies?—The schedule of time allotted to the several subjects of study, as given in the catalogue for 1888-'89, on pages 20 and 21, is that used in 1887-'88, and from it it does not appear that any time was then assigned to theoretical instruction in tactics and military science.

By the schedule of 1888-'89 three-quarters of an hour, 8.30 to 9.15 a. m., is allotted to tactics for the first class on Mondays, Wednesdays, and Fridays; and three-quarters

of an hour, 9.15 to 10 a. m., for the second class on Tuesdays, Thursdays, and Saturdays; a total of four and one-half hours during a week.

By the schedule of 1889-'90 one hour, 8 to 9 a. m., is allotted for the first class on Mondays and Wednesdays; and one hour, 12 to 1 p. m., for the second class on Mondays, Wednesdays, and Fridays; a total of five hours during a week for theoretical instruction in tactics and military science, from November 15 to March 15 each year. The schedule shows that an additional hour, viz, from 8 to 9 a. m., allotted to first class for Fridays, has been erased by order of the faculty.

The schedule of hours for 1888-'89, and 1889-'90, accompany this report (marked A and B).

By the latter schedule it appears that recitations in mathematics, English, mechanics, chemistry, agriculture, Latin, German, French, and drawing are given more time than is allotted to the military branch, and recitations in geology, physics, heat, natural history, mineralogy, veterinary science, physiology, book-keeping, penmanship, and biology are given less time, viz: From 8 a. m. to 1 p. m. during a week; mathematics has allotted 24 hours, English 15 hours, mechanics 9, agriculture 9, Latin 9, German 9, chemistry 6, French 6, drawing 6 (and 5 hours in afternoons). Tactics has 5 hours, geology 3, physics 3, heat 3, natural history 3, mineralogy 3, veterinary science 3, physiology 3, book-keeping 3, penmanship 3, and biology 2 hours.

From 2 to 4 p. m. daily except Saturday, including 5 hours to drawing, the time is devoted to practice at the farm, the shop, laboratories, etc., to engineering field-work, to United States history, and the business course.

The age of the youngest student in the military class is eighteen years and one month; the age of the eldest is twenty-three years and one month. Average age, nineteen years.

The age of the youngest student in the battalion is fourteen years and nine months. The two markers are the only students under fifteen years of age.

The age of the eldest student is twenty-four years; average age, eighteen years.

The methods of military instruction, theoretical and practical, are, in the infantry tactics and ceremonies, by recitations by the students and questions by the professor. Lieutenant Knight states: "I hope this winter to introduce the game of 'Strategos' (its appliances) as an aid in this instruction in minor tactics. The practical work is done on the drill field under my personal supervision, all cadet officers being given opportunities of handling and drilling their companies and the battalion. With the first class the theoretical work is by means of lectures and questions (including final written examinations) upon such subjects as Army organization and administration, modern tactics, strategy, orders of battle, Napoleon's and Frederick's military system, obstacles, sieges, sentinel and outpost duty, and camping, etc."

The practical work is similar to that of the second class.

Lieutenant Knight reports the zeal and acquisition of knowledge of the school satisfactory. He also reports opposition on the part of individual members of the faculty to the strict and rigid rules, so essential in a thorough military organization; that, with the present condition of affairs, the greatest improvement necessary is better arms, ammunition, field artillery, and, as a sequence, target practice. This could all be supplied by the United States Government upon the execution of the requisite bond. Besides this, a set of general rules and regulations governing officers on such duty; a clear definition of the duties of such officers. He reports a general opinion prevails among the college authorities that more benefit would be reaped and a better result shown should the detail of Army officers be made for four instead of three years.

The records show the total number of students who have attended this school since the year (1872) it was founded, up to and including the number now present, to be 2,467. The total number of graduates during same period is 145. This great difference may be taken as an index of the annual changes in the personnel of the corps of cadets. Most of the students attending this college are sons of farmers and students who are financially unable to take a full course with a view to graduation; they attend college for a few months or a year, then leave and engage in some pursuit; and this change is so great that at the beginning of the session Professor Knight reports he has to start the battalion at the "position of a soldier" and build it up. At the present date—November 13, 1889—the total number of matriculates is 122; of that number but 51 are old students or have had any military training, and from these I appointed all officers and non-commissioned officers, 30 in all; the remaining 21 are in ranks in the two companies.

According to the catalogue of 1887-'88, the total number of matriculates was 152, and the number of graduates was 9. The last catalogue, 1888-'89, gives the matriculates as 127, and the members of the first class as 7, exclusive of 3 irregulars.

The battalion is most frequently formed in the months of April and May, for drills five times a week and also for parades and inspections. At the beginning of each session (in September) the personnel of the corps is so changed that, after selecting and appointing the officers and non-commissioned officers, there are but few old cadets

left. Of course then the material is raw, and, as mentioned before, must be worked up from the very "position of a soldier." By the 15th of November, the date set for cessation of drills, the corps is just in the midst of company drill and not ready for battalion drill. The battalion is formed though for the purpose of marching to and from meals, chapel, and retreat. April and May are devoted to battalion drills. There is an inspection of arms on Saturdays, and of quarters and persons on Sundays.

When the battalion is prepared, by April and May, there are inspections preceded by reviews, every Saturday afternoon. Guard-mounting once per week. Lieutenant Knight thinks these exercises are sufficient for thorough efficiency, if strictest attention is paid to them.

No practical instruction in outpost duty, nor any night exercises.

There is not a separate artillery company.

There was last year a select company for special drill, none so far this year.

Cadets are exercised about two weeks, without arms, depending more or less upon the rapidity of their improvement.

There is in grand tactics no practical instruction; in minor tactics, nothing beyond field movements of small bodies of infantry.

All the available time is devoted to theoretical instruction in these branches.

There is both theoretical and practical instruction in each of the prescribed ceremonies and inspections.

In use of Army forms and blanks practice is given in such forms as, letters to superior authority, to subordinates, briefs, indorsements by superior and subordinate, transmittal applications, how made and to whom, how sent, etc.; company morning reports, sick reports, battalion morning reports, etc.; rosters of different kinds are kept.

In methods of requisition and supply and Army organization the instruction is theoretical.

By June, 1890, each cadet will have walked post.

The cadets march to and from the chapel and the class rooms, and assemble whenever ordered for any duty. They march to and from their meals in the mess hall, where good order and proper conduct are insisted upon. The different classes and sections march to and from class rooms under command of one of their number called "the section marcher."

I could not review the corps of cadets because the battalion was reported by Lieutenant Knight as not sufficiently drilled. There were too many new men who had drilled only since September 19. Accordingly I inspected the two companies, formed in double ranks. The arms were in fair condition. Some of the cadets needed more "setting up." There was a want of confidence or strength apparent in handling the arms at inspection. Many seized the piece with the left hand covering the rear sight. There were some quite small boys. The companies presented a handsome appearance.

Of the 118 cadets in attendance at date of inspection there were present 117, 1 private being absent with leave, viz: Two captains, 6 lieutenants (including the adjutant and quartermaster), 11 sergeants (including the sergeant-major), 8 corporals, 1 bugler, 83 privates, 1 private sick, and 5 unassigned; the unassigned being those exempt from military duty. A morning report of the corps of cadets for November 12, 1889, is filed herewith marked F.

The military professor is the commandant of the corps of cadets, and is responsible for the military organization. As inspector of commons he reports to the president all irregularities in the mess-hall, every infraction of mess-hall regulations, and the character of the food, when complaints of the fare are made by the students. He has immediate charge of the drills and other military exercises, and through him are submitted all permits for privileges, all excuses and explanations for delinquencies. It is his duty to report to the president, for his action, all violations of the college regulations, and in every way assist the president and faculty in their efforts to enforce discipline, and to see that punishments given by them are served.

The military organization is not made the special feature of the college, and always yields to the interests of the "more important," the agricultural and mechanical departments. I am of opinion the cadet captains, the adjutant, and probably others of the officers and non-commissioned officers are competent to organize and command, so far as tactical instruction and maneuvers are concerned, a company of infantry. The cadets as a corps appeared bright and intelligent.

This institution, in my judgment, notwithstanding the reported lack of full accord with the military course on the part of individual members of the faculty, is most favorably circumstanced for a complete fulfillment of the provisions of law, under the act of 1862 and section 1225, Revised Statutes. Its president is a graduate of West Point of the class of 1856, was a major-general of cavalry in the South in the late war, and is in thorough sympathy with the military feature, and the professor of tactics. There is a fine new barrack in which all the cadets are domiciled, and they mess in another college building, and hence are constantly under military control and supervision, and are required to wear the college uniform.

It would seem that, before long, rules and regulations should be promulgated for the information and guidance of the Army officers detailed for college duty, under the law, and definitely fixing the scope of their duties; also that a blank form might be prepared which, on completion by the inspector, shall embrace all the information requisite for college inspections.

The autumn is an unfortunate time to inspect colleges; in most institutions a new class has just entered, and at this college particularly, owing to the great change in the personnel of the entire corps of cadets, due to causes before alluded to. The battalion is then seen at its worst. The spring, prior to the latter part of May, is, I think, a preferable time, as the battalion should then be found in its best condition, viewed from a military stand-point.

The president of the college, General Lomax, stated to me he wished an inspector might be sent by the Treasury Department to examine into the manner in which the "endowment funds," under the law of 1862, were disbursed. I suggested an official from the Department of the Interior instead of the Treasury Department. I did not think the matter came within my province.

This report is accompanied by the following six (6) papers, viz: Schedule of hours of division of time, A and B; quarterly return of the officer for September 30, 18c9, C; rules and regulations for government of students and military department, D; a catalogue for 1888-'89, E; and morning report of battalion, F.

I am, general, very respectfully,

H. CLAY WOOD,
Assistant Adjutant-General, Inspector.

THE WEST VIRGINIA UNIVERSITY (STATE AGRICULTURAL AND MECHANICAL COLLEGE).

ADJUTANT-GENERAL'S OFFICE, WAR DEPARTMENT,
Washington, D. C., June 13, 1890.

The INSPECTOR-GENERAL, U. S. ARMY:

Sir: I respectfully submit the following report:

Location?—This university has its seat at Morgantown, Monongalia County, West Virginia.

Date of establishment?—The West Virginia Agricultural College was chartered February 2, 1867. The title was subsequently changed to West Virginia University, and authority given to the Board of Regents to establish professional schools and otherwise enlarge the scope of its work.

Endowments?—The proceeds of the sale of the public land scrip under the act of July 2, 1862, form a part of the endowment fund. This fund now amounts to about \$108,000. The interest on this fund, about \$6,400, and the annual appropriation, about \$25,000 from the State, constitute the income of the university. The grounds comprise about eighteen acres. The estimated value of the buildings and equipment is \$140,000.

Buildings?—Two large and commodious structures, three stories high, containing the lecture and recitation rooms, library, museum, commencement hall, and the rooms of the two literary societies. One frame building for field guns, one constructing building for an armory, gymnasium, and commencement hall, the old armory building enlarged, having been converted into a laboratory for the the Experiment Station.

Equipment?—Such as usually found in colleges. I am unable to give a specific answer.

Government, in whom vested?—In a board of thirteen regents. The interior administration and instruction are vested in the president and the faculty.

Religious denomination?—Non-sectarian.

Requirements of law (section 1225 or 1260, Revised Statutes) met?—Yes. The institution has capacity to educate at the same time not less than one hundred and fifty male students.

Departments of instruction?—The collegiate department, the department of civil and mining engineering, the military department, the law department, the preparatory department, and a post-graduate course.

Collegiate course?—The collegiate course is four scholastic years of forty-one weeks each, divided into three terms, beginning, respectively, the first Wednesday of September, the fourth Wednesday of November, and the second Wednesday of March. Commencement day, 1890, is the second Wednesday of June. There is a recess of two weeks for the Christmas holidays, otherwise the work of the scholastic year is continuous.

President?—E. M. Turner, LL. D., is the president and administrative head of the university.

Students and classes?—Eight young men not less than sixteen nor more than twenty-one years of age, from each of the thirteen senatorial districts of the State, are appointed by members of the Board of Regents, under prescribed regulations, who receive tuition free, and also their books and stationery. These students mainly constitute the corps of cadets. Cadets are enlisted for not less than two or more than five years. They are not permitted to resign before the expiration of two years, except for cause. Other students are allowed to enter the corps as volunteer cadets. Each county also is entitled to one free student for every five hundred of its population or fraction exceeding half that number. Tuition is free to all students from West Virginia over fifteen years of age, except in the school of law. All other students may be regarded as pay students. The collegiate department of the university is open to female students under certain regulations announced in the catalogue. There are ten in the university. The college classes are known as fourth year, third year, second year, first year, and preparatory, according to the studies they are pursuing.

Discipline?—The discipline is excellent. See page 13 of the catalogue.

Expenses?—From \$138 to \$254.50 annually, according to the status of the student, viz, cadet, State, or from other States. See pages 11, 12, and 13 of catalogue.

Date military department established?—February 2, 1867, under Col. J. R. Weaver. The first Army officer detailed was Second Lieut. Henry H. Pierce, unassigned, afterwards of Twenty-first Infantry, June 30, 1869; relieved May 21, 1875. First Lieut. Ephraim T. C. Richmond, Second Artillery, was detailed August 14, 1875, and relieved December 18, 1877. First Lieut. James M. Ingalls, First Artillery, was detailed December 28, 1877; relieved July 6, 1878. First Lieut. James L. Wilson, Fourth Artillery, was detailed September 29, 1884, and relieved September 1, 1888. Second Lieut. Edward S. Avis; Fifth Infantry, the present incumbent, was then detailed.

Has the detail been continuous since?—The interregnum between Lieutenants Ingalls and Wilson was filled by Majors Thomas F. Snyder, W. O. Ison, and James McM. Lee.

Professor military science and tactics?—Second Lieut. Edward S. Avis, Fifth Infantry, a graduate of the United States Military Academy, a native of Virginia and appointed to the Academy from West Virginia.

Date assumed duties?—September 11, 1888.

Suitable for the position?—Yes. He is capable and energetic and apparently much interested in his duties.

Number of hours per week to military duties?—Five hours for drill.

Receive proper support from the authorities?—Yes.

What encouragement is given to the military department?—Nearly all the recommendations of the military professor are adopted.

Interest manifested by the faculty?—Good. The military department has received the hearty support of the president and the board of regents, and while it is clearly recognized the university can not become a military school, all concerned have shown the greatest desire to go to the utmost limits in favoring this department.

Is the department popular with the students?—Yes; with those in the military department.

Satisfactory to the faculty?—Yes.

Efficient as it should be?—Lieutenant Avis states as efficient as can be under the circumstances, *i. e.*, time allowed for drill and the weather. I have not yet inspected an institution where the military department was as efficient as it should be, and this university is not an exception. Of course there are drills, and it is stated there are lectures, but an examination of the catalogue does not disclose, in the schedule of hours allotted to the different studies, that any time has been allotted to the military department for theoretical instruction or, for that matter, even for drills. I think the War Department should insist upon a literal and rigid compliance with General Orders No. 15, current series, as the least the Department will expect from these land-grant institutions.

Requirements of General Orders No. 15, of February 12, 1890, from the headquarters of the Army, strictly enforced?—Yes; so reported to me.

Does the professor of military science and tactics reside at or near the institution?—Near the institution.

When in the performance of his military duties does he appear in proper uniform?—Yes; at all times during college year.

In his relations to the institution does he observe the general usages and regulations therein established affecting the duties and obligations of other members of the faculty?—Yes. By authority of board of regents his attendance upon chapel exercises is optional.

Does he perform other than military duties at the institution, and what compensation, if any, does he receive therefor?—Professor of mathematics, at \$500 per year.

To what extent do these duties interfere with his military duties?—Not at all.

Are all rules and orders, appointments, promotions, etc., as indicated, made and promulgated by the professor?—Yes.

Does he enforce proper military discipline at all times, as required?—Yes.

Upon occasions of military ceremony and in the performance of military duty does he require the students to appear in the prescribed uniform?—Yes; and from 8 a. m. to 6 p. m. on Monday, Tuesday, Wednesday, Thursday, and Friday.

Is the course of instruction both practical and theoretical?—Yes.

Does theoretical instruction occupy at least one hour, and practical at least two hours per week?—It will exceed one hour in the average after this year. Practical instruction exceeds two hours now.

Does the practical instruction embrace everything required under the head "course of instruction," on page 2 of the General Order, and both for infantry and artillery?—Yes; or nearly.

Specify any omissions?—A few official forms have been used. Monthly return and company report used.

Does instruction include the duty of sentinels and castramentation?—Includes duty of sentinels. Camping referred to in lectures.

Is instruction given by the professor personally or under his immediate supervision?—Both.

Is theoretical instruction given by the professor, and by recitations and lectures, and does it include a systematic and progressive course in the subjects mentioned in the general order?—Lectures by officer, recitations in tactics under captains, progressive.

Specify any omissions or recitations or lectures upon other subjects?—Sixteen lectures on minor tactics.

Are the quarterly reports duly rendered and in the required form?—Yes.

Are copies of all reports and correspondence retained?—Yes. Correspondence is, since General Orders, No. 15.

Is copy of the graduation report duly furnished the adjutant-general of the State?—Will be. Not required heretofore.

Is the professor of military science, etc., a member of the faculty, with all the rights, privileges, and authority of other heads of departments or professors?—Yes.

And does he habitually exercise them?—Yes.

Is he provided with quarters on the same terms as other professors?—No one provided with quarters.

Total number of students since military professorship was established?—Three thousand one hundred and thirty-nine.

Total number of graduates?—One hundred and thirty, exclusive of law school.

Largest number of graduates in one year?—Thirteen.

When?—1873.

Number of students in institution last year?—One hundred and ninety-five.

Number of graduates?—Twelve.

Other information which will indicate the present condition of the institution?—The attendance is increasing and is almost double that when present president was appointed in 1834. The institution is in a flourishing condition.

How many students is the institution prepared to teach annually?—About 300.

Number of students in attendance?—Two hundred and eight. Males, 198; females, 10.

Number of students in military department?—Eighty-two (5 of whom are on extended furlough); seniors, 7 (3 of whom are in the law school); juniors, 9; sophomores, 13; freshmen, 23; subfreshmen, 30.

Age of youngest student in military class?—Seventeen years one month.

Age of eldest?—Twenty-four years eleven months.

Average age?—Twenty-one years one month.

Age of youngest student in battalion?—Fifteen years four months.

Age of eldest?—Twenty-four years eleven months.

Average age?—Nineteen years, four months.

How many of the students live at the institution?—Only four, in two rooms, as guard of property. There are no dormitories at the university.

Of those in the military department?—Four.

How many live elsewhere?—Two hundred and four.

Is the military course of instruction compulsory upon all undergraduate students?—No; only on State cadets.

Who are excused?—All except appointed cadets, and those who volunteer.

Are all undergraduate students, capable of performing military duty, required to attend the prescribed military exercises?—Only appointed cadets and volunteers.

What classes are required to attend?—Appointed cadets and volunteers, irrespective of classes.

Who are excused?—Those physically disqualified.

What causes excuse students?—Physical disability.

Methods of military instruction?—Practical exercises, recitations and lectures, company drill and battalion drill; manual of the piece, and signaling; guard duty; ceremonies.

Does this work occupy the whole time of the military professor?—No.

Facilities for military instruction?—Sufficient arms, insufficient ammunition for small arms; armory in course of construction.

How many volumes on military subjects in library of institution? Eighty-six on military history in library, and twenty-two on minor tactics in commandant's office.

What are the text books for each class?—United States Army Tactics and Reed's Military Science and Tactics.

How many students are studying each?—Twenty-one in Reed.

What campaigns have the students studied?—None as campaigns.

How many military essays by students?—None.

What other original work have the students done?—None. Each officer and non-commissioned officer performs his duty and learns the company papers.

Number of military recitations since last annual inspection?—Fourteen for each company.

Number of military lectures since last annual inspection?—Sixteen.

Number of drills since last annual inspection?—One hundred and one drill days, besides target practice and guard mounting.

Infantry?—Ninety-two for infantry, 5 bayonet exercises, 5 aiming and pointing drills.

Artillery?—Four for each company of artillery, and some extra drill for a detachment.

Cavalry?—Five saber exercises for each company.

Do the powers, methods, and distinctions between military and martial law form a part of the military course?—The matter has only been incidentally referred to, not enough, perhaps, to impress the distinction.

Instruction in army regulations?—Incidentally in connection with duties.

By recitations?—No.

Or lectures?—Only incidentally.

How many of each?—None.

In use of army forms and blanks, including rolls and returns?—No rolls; only monthly returns.

In methods of requisition and supply?—Only incidentally.

In probable fields of war and military operations?—Only incidentally.

Logistics?—Only incidentally.

Strategy?—Only incidentally.

Lines of supply?—Only incidentally.

Instruction in outpost, or reconnoissance, duty?—By lecture.

Any night exercises?—No; except guard.

Any instruction relative to fire-arms?—Yes; not as to nomenclature.

Practical gunnery?—No.

Projectiles?—No.

Gunpowder?—Incidentally referred to.

Other explosives?—Incidentally referred to.

To what extent have the details of these several subjects been taught?—Generally in lecture. Can not say that details have received special attention.

Estimating distances?—No.

Time allotted different studies at the institution?—Given on pages 40, 72, 73, and 74 of the catalogue. No time appears to have been authoritatively assigned to military science and tactics.

Value given different studies?—No special value, but recitations and examinations are graded on a scale of 10. A student must attain an average standing of 7, in any subject, for each term, in order to pass from a lower to a higher class.

What value has the military course in determining class standing, or relative standing on graduation?—None; it is not graded.

Is the zeal and acquisition of knowledge in the military department satisfactory?—Yes.

Messing?—Students do not mess at the university. They rent rooms in the village and board either in private houses at a stated price per week, or more generally by the system of clubs.

Number and character of military buildings?—One in process of construction for an armory and gymnasium, foundation not completed; superstructure not contracted for. One for field pieces, frame. One brick magazine, small.

Floor space allotted?—Use of large hall; four rooms for recitation.

What facilities for indoor drill?—Use of large hall for indoor drill.

For small-arms target practice?—Range of 200 yards.

For gallery practice?—None.

For signaling?—Use of the flag.

For artillery practice?—Manual of the piece; no horses. A target range could probably be secured, but it would be dangerous to use it. None.

Gymnasium?—In construction.

Military gymnastics?—None at present.

Physical training?—None.

And fencing?—None, bayonet exercise.

Armory?—In construction. A room at university is used for a store-room, sufficient, dry, and safe.

Number of muskets?—One hundred and seven cadet rifles, United States.

Number of accouterments, sets?—One hundred and seven.

Field guns?—Four (belong to the State); 2 Napoleon guns and 2 three-inch rifles.

Are field guns properly housed?—Yes.

Are they covered with paulins?—Not necessary; no.

Artillery implements?—Rammers, etc.

Artillery harness?—None.

Ammunition?—Fifty rounds for each kind of cannon issued by Chief of Ordnance annually, and a number of old projectiles; 1,000 ball cartridges, small; 1,000 blanks, small; 300 friction primers, artillery.

When were the ordnance and ordnance stores received?—Eighty-two United States rifles and sets of accouterments in March (3 or 4), 1887, and 25 United States rifles and sets of accouterments in the spring of 1888.

How stored and cared for?—In magazines or buildings.

Condition of the ordnance as to repair and cleanliness?—Those in store need cleaning.

Any unserviceable United States property?—Four rifles have broken stocks; two cam-latches broken; several have broken sights, and in seven the locks are out of order.

Has any United States property been lost or destroyed?—Stolen, 2,000 rounds carbine ball cartridges, 200 friction primers, 300 metallic blank cartridges, carbine (in 1888).

Military organization?—Battalion of 3 companies, infantry, according to Upton's Tactics. A and B companies: Captain, first lieutenant, second lieutenant, first sergeant, 2 sergeants, 4 corporals. C company: Captain, first lieutenant, second lieutenant, first sergeant, color-sergeant, 2 sergeants, 4 corporals, 3 color-corporals, 1 signal corporal. Staff: Captain of artillery, adjutant, sergeant-major, quartermaster sergeant, 1 principal musician.

What field officers are there?—None.

Uniform?—Similar to West Point with State buttons. Officers: Helmet, belt, and shoulder-knots. The adjutant wore an aiguillette. Men: Forage-cap. Non-commissioned officers: Chevrons.

Method of appointment and promotion of officers and non-commissioned officers?—According to apparent fitness.

From what class are commissioned officers appointed?—Not confined to special class. Captains, when practicable, are taken from the graduating class.

Non-commissioned officers?—Not confined to class.

How is the band organized and maintained?—No band.

From what class is the field music?—Not confined to class. Our principal musician and 2 musicians, and occasionally 2 volunteers.

Flags?—National, 1. State?—None. College?—None.

Is the professor of military science commandant of cadets?—Yes.

In fact as well as in name?—Yes.

Is there a separate artillery company?—No.

Select company for special drill?—No.

What practice or instruction in cavalry tactics?—None.

What roll-calls are there?—For drill.

What camp equipage?—None.

What military camping?—None for several years.

What marches for instruction?—None.

What is the longest march made by the battalion?—None.

How many miles per hour?—None.

Is any guard duty performed?—Yes, merely for instruction, two tours each. Guard mounting.

Has each student walked post?—Yes.

Drill ground adequate?—No; new one next year, but will be very limited.

Average daily attendance at drill?—Seventy-five for whole year.

Do the students march to any duty other than drill?—No.

Do they assemble at other times?—No.

What are the punishments for misconduct, etc.?—Diminution of marks, not reducing class standing; privation of perquisites; reprimand; suspension from rank, and discharge with privilege of resigning; public and dishonorable discharge.

What is the aptitude of students for military instruction?—Excellent.

What is their interest therein?—Excellent.

How long are new students exercised without arms?—About one week to ten days.

How long are recruits practiced in the "setting-up" exercises?—About one week to ten days.

How often are these exercises recurred to?—From time to time, during the winter, nearly every day.

Are all students frequently practiced therein?—All under rank of officers.

What practice or instruction in grand or minor tactics?—Lectures.

What month is the battalion most frequently formed?—October, 1889.

What least frequently?—December, 1889.

How often in each?—Twenty-one times in October and not at all in December.

Cause of difference?—No hall available in December; weather unsuitable for drill.

What practice or instruction in each of the prescribed ceremonies and inspections?—Reviews, parades, inspections, and guard-mountings, in connection with drill occasionally.

How often is there dress parade?—From time to time at the close of drill.

Reviews, how often?—From time to time at close of drill.

Is there a monthly inspection of the battalion?—No.

Are there weekly inspections of companies under arms on every Saturday?—No.

Is there a Sunday morning inspection of the dress and general appearance of the students?—No.

What other inspections are there?—One every Monday.

Is the number of inspections reported as made enough for thorough efficiency?—Yes; so reported by the military professor.

Is there guard-mounting?—Yes; ten during the year.

How often?—During the time sentinels are posted. Ten to June 1.

Hospital?—No.

What medical attendance have the students?—Appointed surgeon, to examine and excuse. Cadets are not restricted in the choice of medical attendance.

Is there any opposition on the part of the faculty or students to the military course, or does discontent exist?—No.

What improvements are needed in the military department?—[Incorporated in report to the president of the university.] Copy filed herewith.

Review and critical inspection of battalion and remarks thereon?—The battalion was reviewed and inspected at 1.30 p. m., June 6. Professor Hartigan, the acting medical officer of the university, in the uniform of a major and surgeon, accompanied the reviewing officer. The captain of artillery was acting major of the battalion. The formation was in single rank. The battalion passed the reviewing officer in quick and double time. The marching and wheelings were good. Distances were well preserved. The clothing generally was in good condition; a few coats worn and soiled; one coat ripped; one torn; some trousers were much worn and soiled. In most of these instances, I was informed, the cadets were either too poor to afford the expense of new uniform, or did not expect to return to the university another year. It is also fair to remark in their behalf that this year they have been required to wear the uniform much more than heretofore. Uniforms fitted well. Hair closely cropped; standing collars, cravats not visible. Gloves clean; shoes in fair condition. Regulation waist-belts and cartridge-boxes. Arms were in good condition, clean. At inspection the boxes were not opened. The cadets presented a very creditable appearance.

The inspection was followed by company and battalion drill. By direction of Lieutenant Avis, the captain of Company A (W. F. Reynolds) drilled the battalion, and Second Lieut. J. W. Francis, of the same company, drilled the battalion at the bayonet exercise. All the drills were excellent. There were some minor errors in company drill. Commands were given with spirit and force, and were intelligently, promptly, and correctly executed. But one mistake, that I noticed, was made, and in this instance the company commander did not, I think, hear the command. The performance of Captain Reynolds and Lieutenant Francis is deserving of great praise. Lieutenant Francis had given but five lessons previous to this drill, and his work may be considered exceptionally good. The cadets are bright, active young gentlemen, and as has been implied are exceedingly well drilled. They are a credit to the institution. It is a superior battalion.

Number and grade of present and absent?—Of the 82 cadets in the military department 67 were present at inspection; 4 captains (including Shaffer, of artillery); 6 lieutenants (including the adjutant); 12 sergeants (including the sergeant-major, quartermaster-sergeant, principal musician, and color-sergeant); 14 corporals (including the color-corporal and signal corporal); 2 musicians, and 29 privates. The absentees were 1 first lieutenant; 1 first sergeant; 2 color-corporals, and 2 privates absent on leave; 3 privates absent sick; and 6 privates, absent without leave.

Suggestions of president?—Inspection before 1st of June, at any time in May.

Suggestions of military professor?—That an ample supply of all blanks be furnished, muster rolls, clothing rolls, requisitions, ordnance returns, descriptive lists, etc. It is only by actually making out these papers that men can be taught to use them properly. Enough property can be found to do this by means of transfer from one company to another. That the allowance of ammunition be increased, or there be a special detail at some point to reload shells, and thus increase the amount. That an armorer be sent at the close of the college year to examine and repair all arms. That a sufficient number of United States tents be under the charge of a non-commissioned officer, and available for camping by this college. That cadets, especially graduates, be allowed the privilege to appear before an examining board for appointment into the Army in the same manner as now done by non-commissioned officers in the regular Army. Having been declared candidates, they shall be sent to the infantry and cavalry school for two years at \$100 per month, and will then be given appointments as officers. That if any scheme of theoretical instruction for cadets be adopted, that it contain only such matter as is suited to their attainments, and that no subject higher than Minor War be given more than cursory mention. The treatment should be such as to admit of instant application. This proposition is so self-evident that it is not necessary to enter into an argument or to cite authorities. Attention is called to this because there is not now a suitable book for this work, nor can one be prepared until the new tactics are published and it is seen how much is given to practical exercises and in what manner they are treated. Shaw's Elements of Modern Tactics and Clerly's Minor Tactics are both too advanced for college instruction. Strategy, campaigns, etc., can wait. I think it will be admitted that there has always been too much time given to such studies in this country, and too little to the duties that officers are called on to perform in time of war. Every man is ready to be a general, but very few are competent to do the duties entailed by Minor War. This is submitted with all deference to those so much more capable than myself to form an opinion upon such subjects. [Written by Lieutenant Avis.]

During the first quarter of 1890, there were 20 infantry drills of one-half hour each, with 75 cadets present; 14 absentees. Ten recitations in tactics of one-half hour each, for duty sergeants and corporals. And ten lectures of one-half hour each for commissioned officers, non-commissioned staff, and first sergeants.

At the present meeting of the board of regents, several orders were passed. To appropriate \$700 to improve the new drill ground; to furnish tents and blankets for camping; to recommend the legislature to increase the number of State cadets from eight to sixteen for each district; to authorize all officers of the National Guard to attend upon the cadet corps for theoretical instruction; to leave the discipline and manner of instruction of the cadets to be regulated by the commandant and the president; they have made the drill four hours per week, and have set apart a hall for in-door drill.

In company with Professor Avis, I called upon the president, Mr. Turner, by invitation at his residence. During a pleasant conversation, I learned much of value relative to the university.

Professor Avis met me at the railway station on my arrival at Morgantown, and was obliging and attentive during my stay.

This report is accompanied by the following seven papers, viz, report of Lieutenant Avis to the president of the university, A; quarterly return of the officer for March 31, 1890, B; field return of the battalion, C; rules and regulations for government of the students, D; catalogues of the university for 1889-'90, E, and 1888-'89, F; and statement by Professor Avis of his work at the university, G.

I am, general, very respectfully,

H. CLAY WOOD,
Assistant Adjutant-General, Inspector.

UNIVERSITY OF WISCONSIN.

HEADQUARTERS DIVISION OF THE MISSOURI,
INSPECTOR-GENERAL'S OFFICE,
Chicago, Ill., June 4, 1890.

The INSPECTOR-GENERAL, U. S. Army,
Washington, D. C.:

SIR: I visited the University of Wisconsin May 26, in compliance with instructions from the War Department, dated Adjutant-General's Office, May 7, 1890. I found that Lieut. J. A. Cole, Sixth Cavalry, had been granted leave of absence by the War Department, with permission to go beyond the sea, April 26, and that he is now in Europe.

President Chamberlin informed me he was perfectly willing to have the battalion paraded for inspection, but that for some unaccountable reason the keys to the armory where the arms and equipments were kept could not be found. It is supposed that

Lieutenant Cole, thinking there would be no further use for the arms and equipments during his absence, failed to turn over the keys of the armory to the janitor.

The president stated that the drill, instead of being limited to the fall and spring terms as heretofore, was this year extended throughout the winter and up to April 18. He also stated that Lieutenant Cole's work during the year has been exceptionally satisfactory, and that the battalion was in a most admirable state of discipline, also that the amount of drills during the year has been greater than heretofore, better distributed and in every way more satisfactory.

The corps of cadets is organized into a battalion of four companies and composed of 192 members, of which 63 are sophomores and 129 freshmen. Military drill is compulsory upon these two classes only. Their uniform consists of dark blue blouse (U. S. Army pattern), trousers, and cap, and their armament of 2 field pieces, 172 rifles, and 162 sets of equipments. Twenty-five rifles and equipments are in excellent condition, the rest are poor. Ammunition stored in cement vault in machine shop, and is in excellent condition.

The drill season opens with the fall term, and drill is held four days a week for freshmen until November 1. The commissioned officers are the instructors, assisted by the well-instructed freshmen (young men from military schools who have had two years' experience). The sophomore privates begin drill November 1, and are equally divided between the four companies. The battalion, on account the cramped space indoors is divided, A B companies drilling Monday and Wednesday of each week, C D on Tuesday and Thursday. A crack company is chosen by competition from each of these divisions. The crack companies are excused from the regular drill on Monday and Tuesday, and are drilled by themselves after the drill. The results with these companies have been exceedingly satisfactory, the young men showing at the close of the drill season a thorough knowledge of the school of the soldier and company. Their drill in platoons is equal to anything I have seen. Sixty men have taken part in these drills. At the close of the winter term a competitive drill is held to decide the appointments of non-commissioned officers. In the spring five drills a week are held.

The study of tactics and artillery drill were begun January 1. The class has gone over the first two hundred pages of Upton's Infantry Tactics. A written examination is given weekly and the entire lesson is also recited on by questioning. Officers and non-commissioned officers are expected to study tactics. A saber squad is also formed January 1. Battalion drill is given in the spring term, also target practice. There being no safe range, a float is moored in the lake, a target being mounted on the float. The hits can be observed with certainty and the manner of shooting admits of rapid progress. The target has been hit at least one hundred and fifty times out of one thousand shots at 500 yards by men, many of whom never fired a gun of any kind before their rifle practice. The dangerous ricochet precludes practice at a less range. This practice will be resumed with the sophomores at the opening of the fall term.

The battalion has had eight battalion drills since the opening of the spring term, and due to the fact that they have had a continuous drill season, the students composing the same are better drilled than ever before.

A class of twenty-three volunteers was formed for general military instruction, meeting once a week, on Army organization, regulations, customs of service, taught by lectures. Also talks on modern artillery and small-arms and the effect on recent developments on battle formations. No text-books are used. The study value of tactics and the lecture course is one-third study each.

A drill hall is emphatically needed, there being no building where the whole battalion can be decently formed. The library hall is now used for indoor drill, with a clear space of only 40 by 60 feet, which is entirely too small. For outdoor drill the lower campus is used which is ample for the school of the battalion is perfectly level, but too small for battalion skirmish drill.

The income of this university from the land grant of 240,000 acres received, amounts to about \$15,600 yearly. No definite portion of it is set aside for the military department, but the amount actually needed is appropriated.

Lieutenant Cole reported for duty at this college July 15, 1888; he resides in the city of Madison and is a member of the faculty. No other than military subjects are taught by him nor does he receive any extra compensation on account of his detail here. I was informed that he was not furnished with a copy of the inspector-general's annual report for 1889, containing the tabulated statement of college work. I would recommend, that if it is intended to continue the publication of same, a copy be furnished to the commandant of cadets at each college. The following names of students are submitted, having shown special aptitude for the military service: Cadet captains, A. T. Holbrook, L. C. Mayhew, C. W. Bennett, R. W. Beck. Cadet lieutenants, F. H. Bartlett and E. W. Sawyer.

Respectfully submitted. Your obedient servant,

E. M. HEYL,
Colonel, Inspector-General.

SHATTUCK SCHOOL, MINNESOTA.

HEADQUARTERS DEPARTMENT OF DAKOTA,
INSPECTOR-GENERAL'S OFFICE,
St. Paul, Minn., June 7, 1890.

ASSISTANT ADJUTANT-GENERAL, DEPARTMENT OF DAKOTA,
St. Paul, Minn.:

SIR: I have the honor to report that in accordance with instructions I made an inspection yesterday of the military department of the Shattuck School at Faribault, Minn., and submit the following:

All the students of the school are in uniform and are organized into four companies with commissioned and non-commissioned staff officers and band.

The inspection was by battalion, preceded by a review, Lieutenant Abbott commanding.

Orders were properly given and all the movements were very well executed; the wheels were particularly good.

The full dress consisted of a very neat gray suit, with helmet like that used by the regular infantry, and with white enameled leather waist belt. Rank of officers was designated by shoulder knots similar to those worn by officers of the regular Army.

The command presented a particularly neat and military appearance.

The condition of the arms was good.

The inspection was followed by drill, as follows:

Battalion drill, including skirmish drill and manual of arms, by Lieutenant Abbott; the movements were very well executed with but one mistake, and the manual of arms was excellent. Commands to skirmishers were by the bugle.

The company drill, by captains, was very good, and the squad drill by the company non-commissioned officers was good.

Artillery drill, by officer of artillery detachment, was excellent. The cannoniers were formed in double rank and members of each gun detachment promptly took their places; the manual of the piece, including firing with blank cartridges, was executed with promptness and precision, while the following mechanical maneuvers were particularly good: To change wheels from gun to limber, and reverse; to dismount pieces; to mount pieces; to dismount gun-carriages; to dismount limbers, and to mount gun-carriages and limbers.

The work of these bright young men in both infantry and artillery movements is seldom excelled.

There are 194 students, and of these 172 attended inspection and drill.

After the regular inspection and drill a squad of young men gave an exhibition of a fancy drill in the drill hall, which for ingenuity and precision of movements was very good.

Probably one-third of these young men had only attended the school for the past year.

An hour in summer and half an hour in winter is devoted to drill or theoretical instruction daily. There is also half an hour of setting-up exercise every evening in winter.

There are roll-calls at reveille, breakfast, chapel, dinner, drill, and tattoo.

The cadets are marched to chapel and to meals. In the mess hall one of the professors or a cadet officer sits at each table. To leave the hall the bell is tapped by the head master, when those at a certain number of tables rise and leave the hall, at another tap more rise and leave and so on.

Military discipline is enforced when necessary, by extra drills, walking post, demerit, loss of rank in case of officers, deprivation of privileges, and dismissal.

Punishment for all purely military offenses are regulated by the military instructor.

Lieutenant Abbott is a member of the faculty and appears to maintain harmonious relations with his associates, by whom he is sustained; he, however, expresses a desire to have more time for recitations and lectures on military subjects. Besides his purely military duties Lieutenant Abbott has charge of the messing of the students, which appears well managed.

The band is formed by selecting those young men who have a talent for music and teaching them to play on some instrument, thereby forming a very creditable band.

The calls are sounded on the bugle; those I heard were accurately sounded and were promptly obeyed, showing them to be well understood.

For a school so thoroughly military as this, I recommend that modern field guns be supplied in place of the old style muzzle-loaders.

The following Government property was reported on hand and appeared to be well taken care of, the guns being kept under cover: 2 six-pounder guns with carriages

and limbers, 175 Springfield cadet muskets, 50 sabers and belts, 175 cartridge-boxes, 2 non-commissioned officers' swords.

Lieutenant Abbott appears to be a competent and hard-working officer and takes much interest in his duties.

Very respectfully, your obedient servant,

W. F. DRUM,
Lieutenant Colonel, Twelfth Infantry,
Acting Inspector-General, U. S. Army.

MILITARY ACADEMY OF PEEKSKILL, N. Y.

NEW YORK, *May 29, 1890.*

The INSPECTOR-GENERAL, U. S. ARMY,
Washington, D. C.:

GENERAL: I respectfully submit the following as my report of an inspection, that I have just made, of the military academy of Peekskill, N. Y.:

The academy was established in 1833, and is governed by its faculty and a board of trustees; it is non-sectarian and without endowment of any kind.

The military professorship is in charge of First Lieut. Louis H. Orleman, U. S. Army (retired), who is an officer of fine ability and zealous and conscientious in the discharge of the duties confided to him. He gives entire satisfaction to the authorities, and so far as I could see they have every reason to congratulate themselves on the possession of so industrious an officer.

Lieutenant Orleman is a member of the faculty and is well supported. The principal of this school was an officer during the war of the rebellion, and knows the value of military discipline and organization in the management of his institution.

Lieutenant Orleman instructs in other branches, for which he receives \$800 per annum.

The principal informs me that the school has capacity for 150 students. There are now 130 students in attendance, all of whom are required to take instruction in the military department.

The uniform is similar to that worn by the United States cadets at West Point, N. Y., except in the color, which is dark blue.

The battalion is organized in four companies and a drum corps. The commissioned staff consists of 1 adjutant, 1 quartermaster, 1 ordnance officer. There are 8 company officers.

The military bearing and appearance of these young gentlemen were so good that I had hoped to find a little higher degree of proficiency in the practical and theoretical instruction. Lieutenant Orleman explained the situation by stating that he had only gotten the department well in hand and had not had time to go through the full course of instruction this year.

The cadet officers seemed to be quite at home in performing their routine duties, but when cadet captains were called upon to take charge of the battalion and perform defined evolutions they were not so much at home. Experience will remedy this.

The drills are held five days in the week, and some practical instruction has been given in the use of field pieces and Gatling guns.

Some target practice has been held with portative arms, but none with field-pieces. There are 125 cadet rifles, caliber .45, and the usual equipments on hand. This United States property is well cared for and in excellent condition.

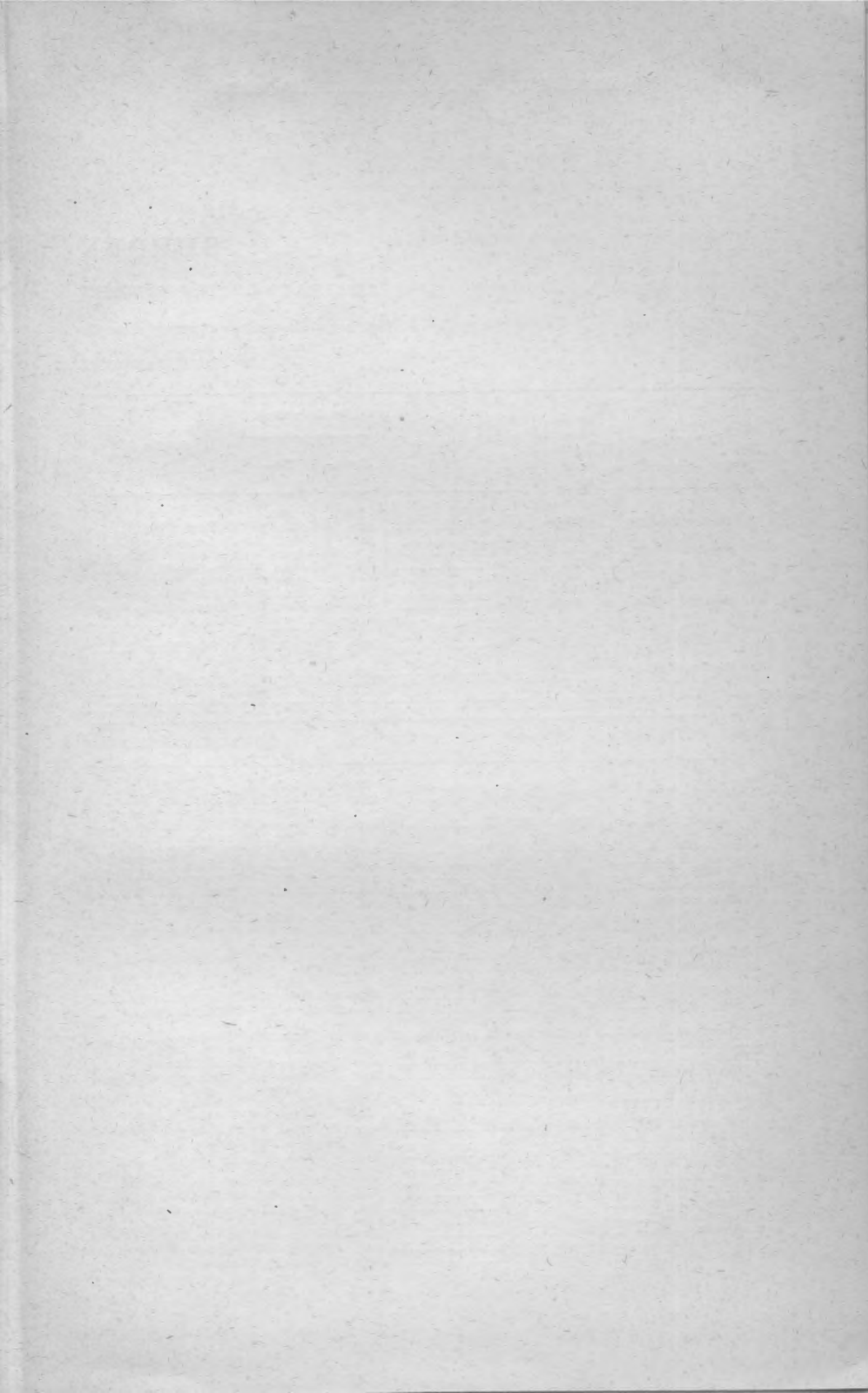
There are two Gatling guns on hand, which are also the property of the United States. They are in excellent condition and well cared for.

There are two brass field-guns on hand, but they do not belong to the United States.

I have no hesitation in saying that this battalion presented the best and most efficient appearance of any school battalion that I have inspected this season.

Very respectfully,

R. P. HUGHES,
Colonel, Inspector-General.



SUPPLE

ABSTRACT OF INSPECTIONS

Abstract of inspections of money accounts

ADJUTANT-GEN

Times inspected.	Disbursing officer.	Rank or grade.	Corps.	Period inspected.		Station.
				From—	To—	
				1889.	1890.	
2	Barber, Merritt	Major.	A. Adj. Gen.	Apr. 18	Apr. 10	St. Paul, Minn.
2	Greene, O. D.	Lt. Col.	do.	Aug. 8	Apr. 7	Ft. Leavenworth, Kans.
2	Martin, J. P.	Lt. Col.	do.	Apr. 11	Apr. 4	San Antonio, Tex.
3	Ruggles, G. D.	Col.	do.	May 16	June 7	San Francisco, Cal.
3	Sheridan, M. V.	Major.	do.	Nov. 1	June 23	Omaha, Nebr.
2	Volkmar, W. J.	Major.	do.	June 17	June 20	Los Angeles, Cal.
2	Ward, Thomas	Major.	do.	Oct. 3	Mar. 21	Vancouver Bks., Wash.
3	Williams, Robert	Col.	do.	June 4	Apr. 28	Chicago, Ill.
1	Wood, H. C.	Lt. Col.	do.	May 31	Sept. 21	St. Paul, Minn.
2	Hickey, J. B.	Lt. 8th Cav.	do.	June 5	Mar. 31	New York, N. Y.
24	Total					

QUARTERMASTER-GEN

3	Atwood, E. B.	Capt.	A. Q. M.	1889. Apr. 12	1890. Apr. 7	San Antonio, Tex.
2	Barrett, A.	Capt.	M. S. K.	1889. Sept. 17	1890. Dec. 16	Jeffersonville, Ind.
2	Batchelder, R. N.	Lt. Col.	D. Q. M. G.	1889. Aug. 13	1890. May 7	New York, N. Y.
2	Beall, G. T.	Capt.	M. S. K.	Apr. 21	Feb. 11	St. Louis, Mo.
3	Belcher, J. H.	Major.	Q. M.	Apr. 9	Mar. 22	Portland, Oregon.
3	Bingham, J. D.	Col.	A. Q. M. G.	June 5	Apr. 28	Chicago, Ill.
2	Bird, Charles	Capt.	A. Q. M.	Oct. 31	Apr. 2	Fort Monroe, Va.
1	Blunt, A. P.	Capt.	do.	1889. Mar. 8	1890. Oct. 4	Boston, Mass.
2	Booth, C. A.	Capt.	do.	1890. June 15	1890. June 9	San Francisco, Cal.
3	Campbell, L. E.	Capt.	do.	Mar. 12	Apr. 30	Denver, Colo.
2	Chandler, J. G.	Lt. Col.	D. Q. M. G.	1889. July 31	1890. Dec. 31	Philadelphia, Pa.
1	Clem, J. L.	Capt.	A. Q. M.	June 16	Nov. 22	Columbus Bks., Ohio. .
3	Dandy, G. B.	Lt. Col.	D. Q. M. G.	Apr. 20	June 24	Washington, D. C.
2	Floyd, D. H.	Capt.	A. Q. M.	June 11	May 10	St. Paul, Minn.
3	Forsyth, L. C.	Capt.	do.	Apr. 22	June 17	Boston, Mass.
3	Foster, C. W.	Major.	Q. M.	Mar. 2	Apr. 8	Ft. Leavenworth, Kans.
2	Furey, J. V.	Major.	do.	1889. Apr. 15	1890. Dec. 31	Schuylkill Arsenal, Pa.
3	Hathaway, T. H.	Capt.	A. Q. M.	Apr. 19	Apr. 7	Ft. Leavenworth, Kans.
2	Haynsworth, H. I.	Cap.	do.	Feb. 28	Feb. 22	Buffalo, N. Y.
1	Hoyt, G. S.	Capt.	do.	Nov. 4	Feb. 12	Jefferson Bks., Mo.
3	Hughes, W. B.	Lt. Col.	D. Q. M. G.	June 18	June 24	Omaha, Nebr.
4	Hull, G. A.	Capt.	M. S. K.	May 9	June 9	San Francisco, Cal.
3	Humphrey, C. F.	Capt.	A. Q. M.	June 24	June 25	Omaha, Nebr.
1	Hyde, I. McE.	Capt.	do.	Nov. 12	May 12	David's Island, N. Y. .
1	Ingalls, C. H.	Capt.	do.	Nov. 23	Mar. 20	Vancouver Bks., Wash.
2	Jacobs, J. W.	Capt.	do.	May 31	Mar. 28	Atlanta, Ga.
1	Jones, F. B.	Capt.	do.	May 15	May 13	Ft. Snelling, Minn.
8	Kimball, A. S.	Major.	Q. M.	June 13	June 24	Los Angeles, Cal.

MENT 3.

OF MONEY ACCOUNTS.

made during the year ending June 30, 1890.

ERAL'S DEPARTMENT.

Balance last report.	Received since.	Total.	Expended and transferred.	Balance.	How distributed.		
					Subtreasuries.	National banks.	Cash on hand.
\$41.78	\$402.50	\$444.28	\$311.01	\$133.27		\$133.27	
197.00		197.00	157.50	39.50		39.50	
83.92	200.00	283.92	261.19	22.73		22.73	
93.55	200.00	293.55	252.26	41.29	\$41.29		
	168.25	168.25	168.25				
22.18	185.00	207.18	177.13	30.05		30.05	
	120.55	120.55	90.50	30.05		30.05	
58.44	200.00	258.44	220.46	37.98	37.98		
110.48	200.00	310.48	110.48	200.00		200.00	
20.78	75.00	95.78	55.84	39.94	39.94		
628.13	1,751.30	2,379.43	1,804.62	574.81	119.21	455.60	

ERAL'S DEPARTMENT.

\$15,200.77	\$315,876.66	\$331,077.43	\$319,231.02	\$11,846.41	\$8,449.40	\$3,397.01	
62,714.07	152,639.32	215,353.39	187,804.84	27,548.55	19,407.13	8,141.42	
	238,226.11	238,226.11	228,208.80	10,017.31	10,017.31		
14,329.34	54,269.81	68,599.15	62,742.43	5,856.72	5,856.72		
25,587.45	192,801.25	218,388.70	169,435.08	49,253.62	19,164.90	30,088.72	
8,366.86	140,045.51	148,412.37	133,356.36	15,056.01	15,056.01		
12,618.26	55,335.59	67,953.85	60,238.77	7,715.08	7,661.17		\$53.91
14,093.80	98,248.05	52,341.85	42,873.38	9,468.47	9,468.47		
10,188.03	254,962.11	265,150.14	262,876.08	2,274.06	2,274.06		
127,664.87	351,903.45	479,568.32	429,201.96	50,366.36	22,219.80	28,146.56	
	661,558.61	661,558.61	531,472.58	130,086.03	130,086.03		
7,928.97	90,588.03	98,517.00	79,551.92	18,965.08	13.42	18,951.66	
66,057.02	714,887.61	780,944.63	688,549.66	94,394.97	94,363.30		31.67
62,923.66	315,487.00	378,410.66	339,017.74	39,392.92	16,881.47	22,511.45	
6,607.13	47,778.97	54,386.10	51,454.12	2,931.98	2,931.98		
63,627.88	906,514.56	970,142.44	916,503.21	53,639.23	42,658.49	10,980.74	
8,886.26	272,482.80	281,369.15	276,355.90	5,013.25	5,013.25		
3,277.83	46,416.87	49,694.70	45,146.75	4,547.95	1,378.78	3,169.17	
455.19	37,468.01	37,923.20	37,878.43	44.77	12.89		31.88
	54,537.26	54,537.26	42,574.64	11,962.62	11,962.62		
60,021.07	690,182.29	750,203.36	732,831.17	17,372.19	44.61	17,327.58	
2,140.55	377,890.64	380,031.19	379,298.44	732.75	732.75		
16,076.70	101,893.74	117,970.50	96,479.57	21,490.93	13,543.43	7,947.50	
	42,935.55	42,935.55	38,226.96	4,708.59	4,708.59		
	28,981.95	28,981.95	19,804.93	9,677.02		9,677.02	
9,074.39	128,988.83	138,063.22	71,237.10	66,826.12	66,826.12		
	8,137.72	8,137.76	8,137.76				
72,926.27	957,483.56	1,030,409.79	985,887.99	44,521.80	31,613.25	12,908.55	

Abstract of inspections of money accounts made

QUARTERMASTER-GENERAL'S

Times inspected.	Disbursing officer.	Rank or grade.	Corps.	Period inspected.		Station.
				From—	To—	
2	Kirk, E. B	Major.....	Q. M.....	1889. Feb. 28	1889. Dec. 17	Jeffersonville, Ind
3	Lee, J. G. C	Major.....	Q. M.....	Apr. 13	Mar. 20	Vancouver Bks., Wash.
1	Lord, J. H	Major.....	Q. M.....	Feb. 6	Jan. 6	Governor's Island, N. Y.
2	Ludington, M. S.....	Lt. Col.....	D. Q. M. G.	Nov. 6	June 9	San Francisco, Cal
2	McCauley, C. A. H.....	Capt.....	A. Q. M.....	June 5	Apr. 29	Chicago, Ill.
2	McGonigle, A. J.....	Major.....	Q. M.....	Mar. 27	Apr. 10	Baltimore, Md
2	Marshall, J. M.....	Capt.....	A. Q. M.....	June 30	Feb. 11	St. Louis, Mo
2	Miltimore, A. E.....	Capt.....	A. Q. M.....	June 17	Jan. 9	Tucson, Ariz
2	Miller, C. P.....	Capt.....	A. Q. M.....	June 10	Apr. 29	Highland Park, Ill.....
2	Moore, J. M.....	Lt. Col.....	D. Q. M. G.	Apr. 19	Feb. 11	St. Louis, Mo
2	Patten, W. S.....	Capt.....	A. Q. M.....	Apr. 17	Nov. 29	Vancouver Bks., Wash.
3	Perry, A. J.....	Col.....	A. Q. M. G.	May 12	June 7	San Francisco, Cal
3	Pond, G. E.....	Capt.....	A. Q. M.....	Feb. 26	Apr. 5	Fort Riley, Kans.....
4	Pope, J. W.....	Capt.....	A. Q. M.....	June 8	June 30	Military Prison, Kans.
3	Pullman, J. W.....	Capt.....	A. Q. M.....	Apr. 30	Jan. 7	Philadelphia, Pa.....
2	Robinson, A. G.....	Major.....	Q. M.....	May 28	Jan. 16	New Orleans, La.....
2	Rockwell, A. T.....	Major.....	Q. M.....	May 31	May 10	St. Paul, Minn.....
2	Scully, J. W.....	Major.....	Q. M.....	May 31	Mar. 26	Atlanta, Ga.....
3	Simpson, John.....	Capt.....	A. Q. M.....	June 24	June 24	Omaha, Nebr.....
3	Smith, G. C.....	Major.....	Q. M.....	Feb. 28	Apr. 19	Helena, Mont.....
2	Summerhayes, J. W.....	Capt.....	A. Q. M.....	Aug. 25	June 21	Santa Fé, N. Mex.....
2	Tompkins, C. H.....	Col.....	A. Q. M. G.	June 4	Apr. 30	Governor's Island, N. Y.
2	True, T. E.....	Capt.....	A. Q. M.....	Nov. 25	June 14	Tucson, Ariz.....
2	Weeks, G. H.....	Lt. Col.....	D. Q. M. G.	Apr. 16	Mar. 31	San Antonio, Tex.....
2	Wheeler, D. D.....	Capt.....	A. Q. M.....	May 4	June 18	Los Angeles, Cal.....
2	Williams, C. W.....	Capt.....	A. Q. M.....	June 7	Feb. 20	West Point, N. Y.....
2	Young, A. H.....	Capt.....	A. Q. M.....	June 17	Dec. 25	Newport, Ky.....
130	Total.....					
1	Marsh, F.....	Lieut., A. A. Q. M.	1st Art	1889. May 6	1889. Sept. 18	Aicatzraz Island, Cal ..
1	Rafferty, Wm. C.....	Lieut., A. A. Q. M.	1st Art	Oct. 1	Mar. 7	do
1	Morgan, A. S. M.....	Capt., A. A. Q. M.	O. S. K.....	June 20	Nov. 25	Allegheny Arsenal, Pa.
2	Starr, C. G.....	Lieut., A. A. Q. M.	1st Inf	Apr. 23	May 13	Angel Island, Cal.....
2	Finley, L.....	Lieut., A. A. Q. M.	10th Cav.....	Aug. 21	June 21	Apache, Fort, Ariz.....
3	Rogers, J. S.....	Lieut., A. A. Q. M.	20th Inf.....	June 30	Feb. 28	Assiniboine, Fort, Mont.
2	Reilly, J. W.....	Major, A. A. Q. M.	Ord.....	May 25	Feb. 25	Augusta Arsenal, Ga.....
1	Hunter, A. M.....	Lieut., A. A. Q. M.	4th Art	Mar. 11	Mar. 21	Barranca, Fort, Fla.....
3	Palmer, A. M.....	Lieut., A. A. Q. M.	24th Inf.....	June 17	June 20	Bayard, Fort, N. Mex.
2	Kress, John A.....	Major, A. A. Q. M.	Ord.....	May 10	June 18	Benicia Arsenal, Cal ..
1	Connolly, Thomas ..	Lieut., A. A. Q. M.	1st Inf.....	Apr. 1	Sept. 30	Benicia Barracks, Cal ..
2	Mason, Jr., I. S.....	Lieut., A. A. Q. M.	1st Inf.....	Sept. 30	May 7	do
3	Hale, H. C.....	Lieut., A. A. Q. M.	12th Inf.....	Mar. 22	Mar. 20	Bennett, Fort, S. Dak.
1	Brett, L. M.....	Lieut., A. A. Q. M.	2d Cav.....	July 12	Mar. 4	Bidwell, Cal
2	Thompson, C. B.....	Lieut., A. A. Q. M.	5th Inf	May 16	Sept. 20	Bliss, Tex.....
2	Miller, S. W.....	Lieut., A. A. Q. M.	5th Inf	Sept. 20	Mar. 5	do
2	Michie, R. E. L.....	Lieut., A. A. Q. M.	2d Cav	Apr. 27	Mar. 21	Boisé Barracks, Idaho.
1	Black, William.....	Lieut., A. A. Q. M.	24th Inf.....	June 22	Oct. 24	Bowie, Fort, Ariz.....
1	Dickinson, W. M.....	Lieut., A. A. Q. M.	4th Cav.....	Nov. 2	Feb. 11	do
1	Irwin, F. G.....	Lieut., A. A. Q. M.	2d Cav.....	June 11	July 3	do
3	Brooke, E. H.....	Lieut., A. A. Q. M.	21st Inf.....	June 5	June 24	Bridger, Fort, Wyo
1	Tillson, C. F.....	Lieut., A. A. Q. M.	5th Inf.....	Mar. 28	Sept. 5	Brown, Fort, Tex.....
2	Chatfield, W. H.....	Lieut., A. A. Q. M.	5th Inf.....	Oct. 29	Apr. 9	do
2	Davis, T. F.....	Lieut., A. A. Q. M.	15th Inf.....	July 15	Mar. 6	Buford, Fort, N. Dak..
1	O'Neil, J. P.....	Lieut., A. A. Q. M.	14th Inf.....	June 1	Sept. 25	Canby, Fort, Wash.....
2	Johnson, F. O.....	Lieut., A. A. Q. M.	3d Cav.....	May 22	Dec. 7	Clark, Fort, Tex.....

during the year ending June 30, 1890—Continued.

DEPARTMENT—Continued.

Balance last report.	Received since.	Total.	Expended and transferred.	Balance.	How distributed.		
					Subtreasuries.	National banks.	Cash on hand.
\$50,838.96	\$210,793.80	\$270,632.76	\$235,506.01	\$35,126.75	\$14,024.36	\$21,102.89	.....
50,859.62	246,884.86	403,744.48	372,003.18	31,741.30	6,924.23	24,817.07	.....
1,203.99	43,844.71	45,048.70	43,131.43	1,917.27	1,917.27	.....	.....
.....	200,817.57	200,817.57	176,319.00	24,498.57	24,498.57	.....	.....
4,440.02	95,419.49	99,859.51	93,290.00	6,568.80	6,568.80	.....	.....
927.61	42,825.28	43,752.89	35,745.82	8,007.01	8,007.01	.....	.....
.....	19,937.55	19,937.55	17,321.25	2,616.30	2,616.30	.....	.....
14,800.66	171,974.36	186,275.02	159,031.75	27,243.27	.....	27,243.27	.....
121,168.16	247,780.67	368,948.83	306,646.48	162,302.35	162,287.97	.....	\$34.38
28,799.40	228,842.70	257,642.10	208,792.87	48,849.23	48,849.23	.....	.....
24,203.77	85,036.10	109,239.87	109,239.87	.....	.....	.....	.....
87,057.24	307,784.53	394,841.77	337,082.51	57,759.26	57,759.26	.....	.....
43,054.07	418,351.01	461,405.08	420,090.93	41,314.15	41,314.15	.....	.....
3,094.54	108,507.09	111,601.63	109,299.38	2,302.25	928.85	1,373.40	.....
.....	47,255.27	47,255.27	42,879.15	4,376.12	4,376.12	.....	.....
2,764.13	39,287.48	42,051.61	41,759.81	291.80	291.80	.....	.....
75,041.08	891,821.16	966,862.24	922,197.86	44,664.38	19,553.52	25,110.86	.....
34,741.58	70,736.40	105,477.98	71,317.28	34,160.67	34,160.67	.....	.....
5,039.87	68,066.58	73,106.45	70,070.72	3,035.73	.....	3,035.73	.....
2,265.54	53,122.79	55,388.33	50,152.59	5,235.74	.....	5,235.74	.....
.....	160,934.57	160,934.57	143,877.14	17,357.43	345.47	17,011.96	.....
50,125.47	756,836.77	812,962.24	731,730.98	81,231.26	81,231.26	.....	.....
.....	114,918.22	114,918.22	113,116.05	1,802.17	.....	1,802.17	.....
71,742.44	477,706.22	549,448.66	495,559.03	53,889.63	40,560.05	13,329.58	.....
2,777.84	145,557.64	148,335.48	141,911.78	6,423.70	345.52	6,078.18	.....
5,731.69	41,252.83	46,984.52	38,990.32	7,994.20	7,506.76	.....	487.44
62,646.29	119,532.36	182,178.65	96,692.48	85,486.17	85,486.17	.....	.....
1,422,611.57	12,794,983.49	14,217,595.06	12,705,688.73	1,511,906.30	1,191,879.29	319,387.73	639.28
51.23	631.86	683.09	683.09	.....	.....	.....	.....
.....	4,798.25	4,798.25	3,951.35	846.90	846.90	.....	.....
95.94	1,062.17	1,098.11	885.17	212.94	.....	209.68	3.26
338.19	16,420.57	16,758.76	16,354.12	404.64	404.64	.....	.....
2,778.65	29,542.88	32,321.53	19,955.88	12,365.65	2,459.02	9,906.63	.....
345.24	13,576.57	13,921.81	13,429.33	492.48	150.69	.....	341.79
151.06	1,577.28	1,728.34	1,485.72	242.62	242.62	.....	.....
.....	4,507.58	4,507.58	3,454.81	1,052.77	1,052.77	.....	.....
633.48	11,806.61	12,440.09	11,744.54	695.55	.....	695.55	.....
214.21	3,732.88	3,947.09	3,862.37	84.72	84.72	.....	.....
.....	6,704.19	6,704.19	3,751.49	2,952.70	2,936.90	.....	15.80
.....	6,620.97	6,620.97	4,304.07	2,316.90	2,316.90	.....	.....
194.51	2,814.86	3,009.37	2,690.62	318.75	.....	318.75	.....
52.96	3,138.75	3,189.71	3,119.56	70.15	39.95	.....	30.20
147.10	2,459.74	2,606.84	2,601.89	4.95	.....	2.16	2.80
.....	3,926.16	3,926.16	3,874.91	51.25	.....	47.50	3.75
879.57	12,358.60	13,238.17	12,805.56	432.61	.....	432.61	.....
2,072.23	2,628.67	4,700.90	4,539.37	161.53	.....	161.53	.....
.....	4,389.52	4,389.52	3,278.66	1,110.86	.....	761.87	348.99
.....	378.97	378.97	177.10	201.87	.....	175.41	26.46
277.80	6,387.66	6,665.46	6,663.26	2.20	.....	2.20	.....
233.75	4,017.78	4,251.53	4,171.53	80.00	80.00	.....	.....
.....	4,073.67	4,073.67	3,802.76	270.91	270.91	.....	.....
25.00	15,838.23	15,863.23	14,879.59	983.64	983.64	.....	.....
.....	964.76	964.76	890.14	74.62	.....	67.54	7.08
13.35	7,004.23	7,017.58	6,858.52	159.06	159.06	.....	.....

Abstract of inspections of money accounts made

QUARTERMASTER-GENERAL'S

Times inspected.	Disbursing officer.	Rank or grade.	Corps.	Period inspected.		Station.
				From—	To—	
1	Anderson, John . . .	Lieut., A. A. Q. M.	8th Inf . .	1890. Jan. 4	1890. Mar. 12	Fort Clark, Tex.
3	Littell, J. W.	Lieut., A. A. Q. M.	10th Inf . .	1889. Apr. 17	Apr. 4	Crawford, Fort, Colo. . .
3	Galbraith, J. G. . . .	Lieut., A. A. Q. M.	1st Cav. . .	Mar. 28	May 3	Custer, Fort, Mont. . . .
1	Footo, M. C.	Capt., A. A. Q. M.	9th Inf . .	July 21	Nov. 8	David's Island, N. Y. . .
3	Wilson, J. E.	Lieut., A. A. Q. M.	5th Inf . .	Aug. 1	Dec. 9	Davis, Fort, Tex.
2	Bowen, W. H. C. . . .	Lieut., A. A. Q. M.	5th Inf . .	Dec. 1	Mar. 7	Do
3	Geary, W.	Lieut., A. A. Q. M.	19th Inf . .	Aug. 22	Mar. 11	Del Rio, Camp, Tex. . .
3	Woodbury, T. C. . . .	Lieut., A. A. Q. M.	16th Inf . .	Aug. 1	June 19	Douglas, Fort, Utah . .
2	George, C. P.	Lieut., A. A. Q. M.	16th Inf . .	1889. July 1	1890. Jan. 17	Du Chesne, Fort, Utah.
3	Beach, W. D.	Lieut., A. A. Q. M.	3d Cav. . .	Aug. 1	Mar. 13	Eagle Pass, Camp, Tex.
3	O'Brien, W. J.	Lieut., A. A. Q. M.	13th Inf . .	Feb. *17	Apr. 2	Elliott, Fort, Tex. . . .
2	Baker, Frank.	Capt., A. A. Q. M.	Ordnance	Apr. 13	Dec. 31	Frankford, Arsenal, Pa.
1	Carrington, F. de L.	Lieut., A. A. Q. M.	1st Inf . .	May 31	Sept. 3	Gaston, Fort, Cal. . . .
2	Weaver, B. S.	Lieut., A. A. Q. M.	1st Inf . .	Oct. 31	May 24	Do
2	Anderson, John. . . .	Lieut., A. A. Q. M.	18th Inf . .	Feb. 16	Nov. 11	Gibson, Fort, Ind. T. . .
2	Atkinson, B. W. . . .	Lieut., A. A. Q. M.	6th Inf . .	Nov. 11	Apr. 2	Do
3	James, W. H. W. . . .	Lieut., A. A. Q. M.	24th Inf . .	Aug. 1	July 5	Grant, Fort, Ariz. . . .
3	Feshine, J. H. H. . . .	Lieut., A. A. Q. M.	13th Inf . .	Apr. 20	Apr. 2	Guthrie, Fort, Ind. T. . .
3	Logan, Thos. A. . . .	Capt., A. A. Q. M.	5th Inf . .	Sept. 18	Dec. 31	Hancock, Fort, Tex. . .
1	Perkins, Fred'k. . . .	Lieut., A. A. Q. M.	5th Inf . .	Dec. 31	1890. Mar. 6	Do
1	Heaton, C. B.	Lieut., A. A. Q. M.	18th Inf . .	Feb. 14	July 2	Hays, Fort, Kans. . . .
2	Stevens, R. R.	Lieut., A. A. Q. M.	6th Inf . .	Sept. 30	Apr. 13	Hot Springs, Ark. . . .
3	McClure, N. F.	Lieut., A. A. Q. M.	4th Cav. . .	Aug. 5	July 5	Huachuca, Fort, Ariz.
1	Rexford, W. H.	Capt., A. A. Q. M.	O. S. K. . .	May 14	Sept. 17	Indianapolis, Arsenal, Ind.
1	Comly, C.	Major, A. A. Q. M.	Ordnance	Dec. 4	1890. Feb. 10	Do
1	Wilson, J. L.	Lieut., A. A. Q. M.	4th Art. . .	Oct. 5	1889. Dec. 9	Jackson Barracks, La.
3	Michaelis, D. E. . . .	Major, A. A. Q. M.	Ordnance	July 1	June 12	Kennebec Arsenal, Me
3	Martin, M. C.	Lieut., A. A. Q. M.	22d Inf . .	Mar. 13	Mar. 24	Keogh, Fort, Mont. . . .
1	McIver, G. W.	Lieut., A. A. Q. M.	7th Inf . .	Nov. 11	Dec. 20	Laramie, Fort, Wyo. . .
3	Wetherill, A. M. . . .	Capt., A. A. Q. M.	6th Inf . .	Mar. 21	1890. Apr. 8	Leavenworth, Fort, Kans.
1	Torrey, Z. W.	Lieut., A. A. Q. M.	6th Inf . .	Apr. 16	1889. July 6	Lewis, Fort, Colo. . . .
1	Torrey, Z. W.	Lieut., A. A. Q. M.	6th Inf . .	Nov. 11	Dec. 17	Do
1	Williamson, G. M. . .	Lieut., A. A. Q. M.	6th Cav. . .	1890. Feb. 23	1890. Apr. 5	Do
3	Buck, Wm. L.	Lieut., A. A. Q. M.	13th Inf . .	July 9	Apr. 2	Little Rock Bks., Ark.
2	Clark, W. O.	Lieut., A. A. Q. M.	12th Inf . .	June 10	Feb. 26	Lincoln, A., Fort, N. Dak.
1	Kendrick, F. M. H. . .	Capt., A. A. Q. M.	7th Inf . .	May 31	1889. July 6	Logan, Fort, Colo. . . .
2	Greene, L. D.	Lieut., A. A. Q. M.	7th Inf . .	Nov. 30	Dec. 18	Do
2	Smith, A. L.	Lieut., A. A. Q. M.	4th Cav. . .	June 15	1890. Jan. 10	Lowell, Fort, Ariz. . . .
1	Overton, C.	Lieut., A. A. Q. M.	4th Cav. . .	June 15	1890. June 28	Do
1	Warwick, O. B.	Lieut., A. A. Q. M.	18th Inf . .	Feb. 18	1889. July 5	Lyon, Fort, Colo.
1	Reynolds, Alfred . . .	Lieut., A. A. Q. M.	20th Inf . .	Apr. 30	Aug. 30	Maginnis, Fort, Mont. .
2	Cronin, M. D.	Lieut., A. A. Q. M.	20th Inf . .	Sept. 30	1890. Mar. 31	Do
1	Wilson, E. T.	Lieut., A. A. Q. M.	1st Art. . .	Oct. 1	1889. Dec. 17	Mason, Fort, Cal.

INSPECTOR-GENERAL.

481

during the year ending June 30, 1890—Continued.

DEPARTMENT—Continued.

Balance last report.	Received since,	Total.	Expended and transferred.	Balance.	How distributed.		
					Subtreasuries.	National banks.	Cash on hand.
	\$2,474.44	\$2,474.44	\$2,276.04	\$198.40	\$198.40		
	5,235.59	5,235.59	5,235.59				
\$352.37	30,721.05	31,073.42	28,915.33	2,158.09	748.41		\$1,409.68
	77,882.42	77,882.42	55,035.40	22,846.93	22,846.93		
	2,408.91	2,408.91	2,091.98	316.93			316.93
	1,756.95	1,756.95	1,749.50	7.45		\$7.45	
	573.41	573.41	573.41				
	11,620.72	11,620.72	11,302.94	317.78		317.78	
	9,512.15	9,512.15	9,477.43	34.72		34.72	
	902.73	902.73	887.63	15.10	15.10		
75.85	9,161.83	9,237.68	9,097.58	140.10		25.53	114.57
272.29	2,221.93	2,494.22	2,311.54	182.68	144.28		38.40
	1,443.75	1,443.75	1,423.73	20.02			20.02
	1,524.48	1,524.48	1,456.88	67.60	67.60		
1,124.56	3,165.24	4,289.80	4,289.80				
	1,553.69	1,553.69	1,049.36	504.33	504.33		
3,483.55	13,087.26	16,570.81	16,359.55	211.26	37.05	73.84	100.37
	3,778.07	3,778.07	3,778.07				
	1,277.74	1,277.74	1,277.74				
	908.09	908.09	877.88	30.21	6.90	23.31	
23.20	1,476.11	1,499.31	1,499.31				
8,314.68	6,056.48	14,371.16	11,659.08	2,712.08	2,712.08		
	16,580.97	16,580.97	16,580.97				
53.80	120.59	174.39	128.61	45.78		45.78	
	146.97	146.97	92.30	54.67		54.67	
	1,698.36	1,698.36	1,101.42	596.94	596.94		
	1,607.61	1,607.61	1,262.57	345.04		345.04	
11.30	23,313.48	23,324.78	23,310.88	13.90	13.90		
	523.91	523.91	413.36	110.55		110.55	
6,118.55	35,110.13	41,228.68	40,054.16	274.52	10.13	264.39	
1,578.83	3,492.47	5,071.30	3,638.64	1,432.66	1,376.61	56.05	
	2,527.09	2,527.09	1,014.27	1,512.82	1,512.82		
	1,808.21	1,808.21	896.45	911.76	911.76		
	3,291.52	3,291.52	3,084.38	207.14	207.14		
2.25	4,972.00	4,974.25	4,063.51	10.74		8.44	2.30
	192.54	192.54	192.54				
	1,964.70	1,964.70	1,889.20	75.50		75.50	
219.25	5,407.70	5,626.95	5,088.64	538.31		440.26	98.05
	565.97	565.97	491.40	74.57		12.82	61.75
12.25	2,644.38	2,656.63	2,656.63				
329.10	2,520.36	2,849.46	2,307.78	541.68	541.68		
	4,752.74	4,752.74	4,752.74				
	1,558.15	1,558.15	1,551.70	6.45	6.45		

Abstract of inspections of money accounts made

QUARTERMASTER-GENERAL'S

Times inspected.	Disbursing officer.	Rank or grade.	Corps.	Period inspected.		Station.
				From—	To—	
3	Baldwin, J. A.	Lieut., A. A. Q. M.	9th Inf ..	1889. June 17	1890. June 20	McDowell, Fort, Ariz ..
2	Woodward, C. G.	Lieut., A. A. Q. M.	3d Art. ...	July 5	Apr. 12	McHenry, Fort, Md. ...
2	Liggett, H.	Lieut., A. A. Q. M.	5th Inf ..	Mar. 20	Dec. 12	McIntosh, Fort, Tex. ..
1	Johnson, F. O.	Lieut., A. A. Q. M.	3d Cav. ...	Jan. 31	Apr. 4	...do
1	Hearn, L. J.	Lieut., A. A. Q. M.	21st Inf. ...	Oct. 1	Nov. 14	McKinney, Fort, Wyo.
1	McCaskey, E. W.	Lieut., A. A. Q. M.	21st Inf. ...	Dec. 7	Feb. 14	...do
1	Stevens, E. J.	Lieut., A. A. Q. M.	9th Cav. ...	Mar. 31	June 21	...do
2	Jones, S. R.	Lieut., A. A. Q. M.	4th Art. ...	June 30	Mar. 28	McPherson, Fort, Ga. .
2	Gillmore, Q. O.	Lieut., A. A. Q. M.	8th Cav. ...	June 17	Feb. 24	Meade, Fort, S. Dak. .
2	Devol, C. A.	Lieut., A. A. Q. M.	25th Inf. ...	June 29	Mar. 7	Missoula, Fort, Mont. .
3	Horsey, M. L.	Lieut., A. A. Q. M.	9th Inf. ...	June 22	June 30	Mojave, Fort, Ariz. .
1	Foster, A. B.	Lieut., A. A. Q. M.	19th Inf. ...	Aug. 1	Mar. 15	Mt. Vernon, Bks., Ala.
1	West, B. K.	Lieut., A. A. Q. M.	6th Cav. ...	June 30	Apr. 6	Myer, Fort, Va.
3	Clifford, J. C.	Capt., A. A. Q. M.	Ordnance	June 10	June 5	National Armory, Mass.
1	Turner, R. B.	Lieut., A. A. Q. M.	6th Inf. ...	July 3	Nov. 22	Newport, Bks., Ky. ...
3	Ames, R. F.	Lieut., A. A. Q. M.	8th Inf. ...	June 18	June 26	Niobrara, Fort, Nebr. .
3	Thurston, W. A.	Lieut., A. A. Q. M.	16th Inf. ...	Oct. 6	June 20	Ogden, Fort, Utah. ...
2	Paulding, Wm.	Lieut., A. A. Q. M.	10th Inf. ...	Apr. 19	Dec. 14	Oklahoma, Camp, Ind. T.
2	Wilhelm, W. H.	Lieut., A. A. Q. M.	10th Inf. ...	Sept. 5	Apr. 2	...do
3	Sanson, H. B.	Lieut., A. A. Q. M.	2d Inf. ...	June 25	June 30	Omaha, Fort, Nebr. .
2	Rodiez, L. S.	Lieut., A. A. Q. M.	15th Inf. ...	June 2	Feb. 6	Pembina, Fort, N. Dak.
1	Barnum, M. H.	Lieut., A. A. Q. M.	3d Cav. ...	May 20	Sept. 17	Pena Colorado, Camp, Tex.
2	Rivers, T. R.	Lieut., A. A. Q. M.	3d Cav. ...	Nov. 4	Feb. 22	...do
3	Cochran, C. H.	Lieut., A. A. Q. M.	7th Inf. ...	June 10	June 23	Pilot Butte, Camp Wyo.
2	Humphrey, H. D.	Lieut., A. A. Q. M.	20th Inf. ...	Aug. 10	Mar. 1	Poplar River, Camp, Mont.
1	Pendleton, E. P.	Lieut., A. A. Q. M.	23d Inf. ...	July 1	Sept. 4	Porter, Fort, N. Y.
2	Cotton, G. P.	Capt., A. A. Q. M.	1st Art. ...	June 5	Mar. 5	Presidio of S. F., Cal. .
2	Oyster, J. S.	Lieut., A. A. Q. M.	1st Art. ...	July 6	Feb. 28	...do
2	Blow, W. N.	Lieut., A. A. Q. M.	15th Inf. ...	July 15	Mar. 15	Randall, Fort, S. Dak. .
3	London, R.	Lieut., A. A. Q. M.	5th Cav. ...	May 1	Apr. 6	Reno, Fort, Ind. T.
3	Fuller, E. B.	Lieut., A. A. Q. M.	7th Cav. ...	Feb. 15	Apr. 6	Riley, Fort, Kans.
3	Borden, G. P.	Lieut., A. A. Q. M.	5th Inf. ...	Apr. 30	Apr. 5	Ringgold, Fort, Tex. .
3	Taylor, C. W.	Lieut., A. A. Q. M.	9th Cav. ...	June 21	June 23	Robinson, Fort, Nebr. .
2	Rockwell, James. ...	Capt., A. A. Q. M.	Ordnance	May 11	Jan. 28	Rock Island Arsenal, Ill.
3	Chynoweth, E.	Lieut., A. A. Q. M.	17th Inf. ...	Nov. 1	June 22	Russell, D. A., Fort, Wyo.
3	Evans, W. P.	Lieut., A. A. Q. M.	19th Inf. ...	Apr. 12	Apr. 10	San Antonio, Tex.
2	Kirby, Henry	Lieut., A. A. Q. M.	10th Inf. ...	June 18	Jan. 25	San Carlos, Ariz.
1	Tayman, C. E.	Lieut., A. A. Q. M.	24th Inf. ...	Mar. 14	July 7	...do
3	Robertson, E. B.	Lieut., A. A. Q. M.	9th Inf. ...	June 19	June 29	San Diego Bks., Cal. .
3	Brett, J. E.	Lieut., A. A. Q. M.	24th Inf. ...	June 17	June 24	Selden, Fort, N. Mex. .
3	Farnsworth, C. S. ...	Lieut., A. A. Q. M.	25th Inf. ...	May 31	Apr. 17	Shaw, Fort, Mont.
3	Brown, R. P.	Lieut., A. A. Q. M.	4th Inf. ...	Apr. 29	May 16	Sherman, Fort, Idaho .
3	Edwards, F. A.	Lieut., A. A. Q. M.	1st Cav. ...	June 1	May 31	Sheridan, Camp, Wyo. .
3	Townsend, T. G.	Lieut., A. A. Q. M.	6th Inf. ...	Feb. 16	Dec. 31	Sheridan, Fort, Ill.
1	Taggart, E. F.	Lieut., A. A. P. M.	6th Inf. ...	Jan. 1	Apr. 1	...do
1	Palmer, F. L.	Lieut., A. A. Q. M.	21st Inf. ...	Nov. 2	Dec. 18	Sidney, Fort, Nebr.
2	Bailey, H. L.	Lieut., A. A. Q. M.	21st Inf. ...	Feb. 28	June 18	...do

during the year ending June 30, 1890—Continued.

DEPARTMENT—Continued.

Balance last report.	Received since.	Total.	Expended and transferred.	Balance.	How distributed.		
					Subtreasuries.	National banks.	Cash on hand.
\$509.55	\$7,231.33	\$7,740.88	\$7,697.93	\$42.95	\$10.20		\$32.75
	5,152.07	5,152.07	4,971.50	180.57	180.57		
399.85	4,050.41	4,450.26	4,435.21	15.05	15.05		
	2,747.16	2,747.16	1,687.52	1,059.64	1,001.34		58.30
	5,337.25	5,337.25	2,618.60	2,718.65		\$2,718.65	
	5,368.33	5,368.33	3,310.66	2,059.67		2,054.67	3.00
	5,078.06	5,078.06	4,552.33	525.73		525.73	
46.20	11,346.67	11,392.87	9,878.13	1,514.74	1,514.74		
31.74	14,779.57	14,811.31	13,317.78	1,493.53	344.11	1,159.42	
18.35	3,875.12	9,893.47	9,836.60	56.87		56.87	
11.72	2,217.09	2,228.81	2,202.80	26.01			26.01
	3,014.51	3,014.51	2,994.16	20.35	20.35		
248.85	13,375.02	13,623.87	13,064.89	558.98	558.98		
11.50	2,618.59	2,630.09	2,606.26	23.83	23.83		
	555.25	555.25	511.20	44.05	44.05		
9.79	12,386.79	12,396.58	12,396.58				
	7,010.26	7,016.26	6,970.37	39.89		39.89	
	1,000.98	1,000.96	1,000.96				
	4,089.05	4,089.05	4,080.05	9.00	9.00		
167.10	15,761.41	15,928.51	15,928.51				
20.68	5,112.61	5,133.29	4,715.45	417.84		417.84	
	754.09	754.09	754.09				
	724.17	724.17	721.17	3.00	3.00		
33.58	1,045.41	1,078.99	1,078.99				
	2,128.03	2,128.03	2,128.03				
	829.04	829.04	686.29	142.75	142.75		
	618.52	618.52	499.24	119.28	119.28		
1,533.29	28,476.08	30,009.37	29,701.08	308.29	6.21		302.08
3.15	4,590.79	4,593.94	4,527.96	65.98		65.98	
	28,474.44	28,474.44	27,957.23	517.21		517.21	
99.27	33,010.80	33,110.07	32,122.62	987.45		666.82	320.63
	9,737.82	9,737.82	8,933.29	784.53	432.08		352.45
1,533.22	19,896.60	21,429.82	21,153.93	275.89		264.05	21.84
56.40	2,069.04	2,125.44	1,593.46	531.98		531.98	
	8,416.13	8,416.13	8,416.13				
3.20	7,968.23	7,971.43	7,967.99	3.44			3.44
709.80	8,121.02	8,890.82	4,280.81	4,610.01	240.11	4,369.90	
	5,982.35	5,982.35	1,756.55	4,225.80		4,000.00	225.80
60.80	6,097.02	6,157.82	6,118.00	39.82		39.82	
20.42	1,713.00	1,733.42	1,733.42				
100.76	7,768.21	7,868.97	7,812.36	56.61		56.61	
1,077.07	15,660.24	16,737.31	16,475.79	261.52		261.52	
	5,217.57	5,217.57	5,163.56	54.01		54.01	
1,065.34	3,591.12	4,656.46	4,656.46				
	1,121.90	1,121.90	974.52	147.38	35.54		111.84
	855.98	855.98	320.13	534.95		534.95	
	2,096.89	2,096.89	2,090.03	6.86		6.86	

Abstract of inspections of money accounts made

QUARTERMASTER-GENERAL'S

Times inspected.	Disbursing officer.	Rank or grade.	Corps	Period inspected.		Station.
				From—	To—	
				1889.	1890.	
3	Varnum, C. A.	Lieut., A. A. Q. M.	7th Cav..	Feb. 28	Mar. 31	Sill, Fort, Ind. T.
2	Gerlach, William ...	Lieut., A. A. Q. M.	3d Inf. ...	July 15	Mar. 26	Snelling, Fort, Minn. ..
2	Pitman, John	Capt., A. A. Q. M.	Ordnance	Sept. 30	May 13	Snelling, Fort, Ordnance Depot, Minn.
3	Brown, E. H.	Lieut., A. A. Q. M.	4th Inf. ...	June 6	June 8	Spokane, Fort, Wash.
3	Scott, G. L.	Lieut., A. A. Q. M.	6th Cav. ...	June 19	June 23	Stanton, Fort, N. Mex.
3	Anglim, D. F.	Lieut., A. A. Q. M.	12th Inf. ...	Apr. 27	Apr. 14	Sully, Fort, S. Dak.
1	Cornish, L. W.	Lieut., A. A. Q. M.	5th Cav. ...	May 1	July 3	Supply, Fort, Ind. T. ...
					1890.	
2	Saffold, M. B.	Lieut., A. A. Q. M.	13th Inf. ...	Nov. 6	Apr. 3	...do
3	Angur, A. A.	Lieut., A. A. Q. M.	24th Inf. ...	Oct. 1	June 30	Thomas, Fort, Ariz. ...
3	Mosher, Thomas ...	Lieut., A. A. Q. M.	22d Inf. ...	Mar. 27	Mar. 24	Totter, Fort, N. Dak. ...
1	Reynolds, W. B.	Lieut., A. A. Q. M.	1st Inf. ...	Mar. 26	Aug. 8	Townsend, Fort, Wash.
1	Patterson, T. T.	Lieut., A. A. Q. M.	14th Inf. ...	Aug. 8	Sept. 16	...do
					1890.	
1	Sample, W. B.	Lieut., A. A. Q. M.	14th Inf. ...	Sept. 16	May 17	...do
3	Zalinski, M. G.	Lieut., A. A. Q. M.	2d Art. ...	June 30	June 26	Trumbull, Fort, Conn.
1	Shollenberger, J. H.	Lieut., A. A. Q. M.	10th Inf. ...	Apr. 12	July 3	Union, Fort, N. Mex.
					1890.	
2	Wooley, Frederick ..	Lieut., A. A. Q. M.	10th Inf. ...	Sept. 30	Mar. 8	...do
2	Phipps, F. H.	Major, A. A. Q. M.	Ordnance	June 1	May 14	U. S. Powder Depot, N. J.
3	Gustin, J. H.	Lieut., A. A. Q. M.	14th Inf. ...	Apr. 30	May 15	Vancouver Barracks, Wash.
3	Ramsey, F. De W. ...	Lieut., A. A. Q. M.	9th Inf. ...	June 18	June 25	Verde, Fort, Ariz.
					1890.	
1	Harris, P. C.	Lieut., A. A. Q. M.	13th Inf. ...	Oct. 17	Dec. 19	Wade, Camp, Ind. T. ...
					1890.	
1	Griffith, E.	Lieut., A. A. Q. M.	13th Inf. ...	Feb. 2	Apr. 1	...do
					1890.	
2	Kingsbury, F. W. ...	Lieut., A. A. Q. M.	2d Cav. ...	July 5	Apr. 14	Walla Walla, Fort, Wash.
3	Trout, H. G.	Lieut., A. A. Q. M.	9th Cav. ...	Nov. 1	June 21	Washakie, Fort, Wash.
1	Chase, Con.	Lieut., A. A. Q. M.	3d Art. ...	Feb. 28	Apr. 9	Washington Barracks, D. C.
3	Varney, A. L.	Capt., A. A. Q. M.	Ordnance	July 31	June 16	Watertown Arsenal, Mass.
2	Heath, Frank.	Capt., A. A. Q. M.	Ordnance	June 8	Feb. 24	Watervliet Arsenal, N. Y.
					1890.	
3	Palmer, George	Lieut., A. A. Q. M.	9th Inf. ...	June 17	June 21	Whipple Bks., Ariz. ...
2	Zinn, G. A.	Lieut., A. A. Q. M.	Eng.	May 31	May 13	Willet's Point, N. Y. ...
					1890.	
1	Dravo, E. E.	Lieut., A. A. Q. M.	6th Cav. ...	June 16	Nov. 10	Wingate, Fort, N. Mex.
					1890.	
2	Stotsenberg, J. M. ...	Lieut., A. A. Q. M.	6th Cav. ...	Dec. 3	July 2	...do
3	Von Schrader, T. ...	Lieut., A. A. Q. M.	12th Inf. ...	Apr. 22	Apr. 7	Yates, Fort, N. Dak. ...
296	Total					
	Total Quartermaster-General's Department.					

COMMISSARY-GEN

				1889.	1890.	
1	Alexander, W. L.	Capt.	Com. Subs	Dec. 1	Apr. 2	Monroe, Fort, Va.
1	Barringer, J. W.	Major	Com. Subs	Oct. 1	Feb. 11	St. Louis, Mo.
					1889.	
1	Beckwith, Amos	Col.	Asst. C. G. S.	Apr. 19	Sept. 12	...do
2	Bell, George.	Col.	Asst. C. G. S.	June 3	May 6	New York, N. Y.
1	Bell, W. H.	Major	Com. Subs	Mar. 12	Aug. 22	Denver, Colo.
					1890.	
3	...do	Major	Com. Subs	Sept. 27	June 23	Omaha, Nebr.
3	Clague, J. J.	Capt.	Com. Subs	Mar. 8	June 17	Boston, Mass.

during the year ending June 30, 1890—Continued.

DEPARTMENT—Continued.

Balance last report.	Received since.	Total.	Expended and transferred.	Balance.	How distributed.		
					Subtreasuries.	National banks.	Cash on hand.
\$882.84	\$20,714.37	\$21,597.21	\$21,597.21				
35.90	19,594.00	19,629.90	19,103.10	\$527.80		\$527.80	
	292.87	292.87	292.87				
3,152.43	19,581.08	22,733.51	14,447.50	8,286.01		8,286.01	
952.49	26,125.14	27,077.63	25,717.28	1,360.35		1,358.95	\$1.40
890.81	7,847.39	8,738.20	8,624.02	114.18		114.18	
	1,999.07	1,999.07	1,898.18	100.89		100.89	
	5,857.67	5,857.67	5,449.06	408.61		276.51	132.10
	4,763.40	4,763.40	4,445.02	318.38		275.58	42.80
74.45	4,765.18	4,839.63	4,823.78	15.85		15.85	
2,149.96	1,054.56	3,204.52	3,204.52				
	1,159.19	1,159.19	1,159.19				
	4,010.94	4,010.94	3,454.34	556.60		556.60	
494.44	4,500.91	4,995.35	4,185.68	809.67	\$809.67		
	970.04	970.04	911.44	58.60		33.50	25.10
	2,483.35	2,483.35	2,360.07	123.28	5.45	18.42	99.41
10.29	185.00	195.29	145.19	50.10	50.10		
2,562.71	12,376.22	14,938.93	11,771.81	3,167.12		3,167.12	
	6,499.95	6,499.95	6,443.84	56.31		56.31	
	565.14	565.14	565.14				
	355.47	355.47	355.47				
1,045.88	18,483.42	19,529.30	16,227.43	3,301.87		3,301.63	.24
	7,751.90	7,751.90	7,340.52	411.38		411.38	
452.02	18,879.46	19,331.48	16,793.12	2,538.36	2,538.36		
	2,797.96	2,797.96	2,753.69	44.27	44.27		
1,121.92	3,684.74	4,806.66	4,401.13	405.53		405.53	
206.31	11,921.16	12,127.47	11,804.53	322.94	255.14	67.80	
1,949.07	13,946.32	15,895.39	13,774.97	2,120.42	2,120.42		
8,871.65	12,599.74	21,471.39	13,768.30	7,703.09	4,526.40	3,014.40	162.29
	36,684.33	36,684.33	36,583.26	101.07	25.01		76.06
2,794.58	15,899.64	18,694.22	18,117.22	576.50		369.28	207.22
65,955.48	1,108,265.01	1,174,220.49	1,054,152.22	120,068.27	59,553.24	55,368.07	5,146.96
1,488,667.05	13,903,248.50	15,391,815.55	13,759,840.90	1,631,974.57	1,251,432.53	874,755.80	5,786.24

ERAL'S DEPARTMENT.

	\$4,026.65	\$4,026.65	\$3,537.67	\$488.98			\$488.98
	40,665.70	40,665.70	18,574.27	22,091.49	\$22,091.49		
\$10,453.40	23,759.63	34,213.03	24,099.40	10,113.63	10,113.63		
53,063.92	358,236.53	411,300.45	387,311.61	23,988.84	23,988.84		
4,000.98	22,000.00	26,000.98	15,073.88	10,927.10		\$10,927.10	
	73,458.55	73,458.55	63,569.84	9,888.71		9,888.71	
19,356.66	185,690.52	205,047.04	184,061.29	20,985.75	20,985.75		

Abstract of inspections of money accounts made

COMMISSARY-GENERAL S

Times inspected.	Disbursing officer.	Rank or grade.	Corps.	Period inspected.		Station.
				From—	To—	
2	Cushing, S. T.	Major	Com.Subs	1889. Aug. 21	1890. Apr. 7	Leavenworth, Fort, Kans.
2	Eagan, C. P.	Capt.	Com.Subs	1889. Aug. 19	1890. Dec. 6	San Antonio, Tex.
3	Elderkin, W. A.	Major	Com.Subs	June 15	June 25	Los Angeles, Cal.
3	Hawkins, J. P.	Major	Com.Subs	May 13	June 7	San Francisco, Cal.
2	Hay, Charles	Capt.	Com.Subs	Sept. 12	Apr. 30	Denver, Colo.
3	Morgan, M. R.	Lt. Col.	A. S. C. G. S. C.	June 4	Apr. 28 1889.	Chicago, Ill.
1	Nash, W. H.	Capt.	Com.Subs	June 30 1890.	Nov. 30 1890.	Monroe, Fort, Va.
1	do	Capt.	Com.Subs	Jan. 1	Mar. 20	Vancouver Barracks, Wash.
3	Nye, F. E.	Capt.	Com.Subs	1889. May 11	1890. June 27	Washington, D. C.
1	Osgood, M. B.	Capt.	Com.Subs	Jan. 31 1889.	Feb. 12 1889.	Jefferson Bks., Mo.
1	Penrose, C. B.	Capt.	Com.Subs	Mar. 19	Aug. 12	Leavenworth, Fort, Kans.
3	do	Capt.	Com.Subs	1889. Aug. 26	1890. Apr. 10	Baltimore, Md.
1	Scott, D. M.	Capt.	Com.Subs	1889. Sept. 16	1890. Nov. 8	Dauids Island, N. Y.
1	do	Capt.	Com.Subs	1890. Apr. 1	1890. June 24	Omaha, Nebr.
2	Sharpe, H. G.	Capt.	Com.Subs	1889. Aug. 1	1890. Mar. 24	Vancouver Barracks, Wash.
2	Small, M. P.	Lt. Col.	A. S. C. G. S. C.	Sept. 1	April 30	Governor's Island, N. Y.
2	Sullivan, T. C.	Major	Com.Subs	May 31	May 10	St. Paul, Minn.
2	Weston, J. F.	Capt.	Com.Subs	Oct. 3	Jan. 18	New Orleans, La.
3	Wilson, Thomas ...	Major	Com.Subs	June 6	April 29	Chicago, Ill.
1	Willard, Wells.	Capt.	Com.Subs	1890. Jan. 18	1890. April 8	San Antonio, Tex.
2	Woodruff, C. A.	Capt.	Com.Subs	Apr. 18	June 24	San Francisco, Cal.
54	Total					
1	Marsh, F.	Lieut., A. C. S.	1st Art. ..	1889. Apr. 30	1889. Sept. 18	Alcatraz Island, Cal. ..
1	Rafferty, W. C.	Lieut., A. C. S.	1st Art. ..	1890. Sept. 30	1890. Mar. 7	Alcatraz Island, Cal. ..
1	Morgan, A. S. M.	Capt., A. C. S.	O. S. K. ..	1889. June 20	1889. Nov. 25	Allegheny Arsenal, Pa.
2	Starr, C. G.	Lieut., A. C. S.	1st Inf. ...	1890. Apr. 23	1890. May 18	Angel Island, Cal.
3	Finley, L.	Lieut., A. C. S.	10th Cav. .	1889. Aug. 1	1889. June 21	Apache, Fort, Ariz. ...
1	Rogers, I. L.	Lieut., A. C. S.	20th Inf. .	1889. July 31	1889. Oct. 31	Assinniboine, Fort, Mont.
1	Gerhardt, Chas.	Lieut., A. C. S.	20th Inf. .	1890. Dec. 7	1890. Feb. 28	Assinniboine, Fort, Mont.
1	Grealish, M. J.	Capt., A. C. S.	O. S. K. ..	1889. May 25	1889. Nov. 23	Augusta Arsenal, Ga. .
1	Reilly, J. W.	Capt., A. C. S.	Ordnance	1890. Nov. 30	1890. Feb. 25	Augusta Arsenal, Ga. .
1	Hunter, A. M.	Lieut., A. C. S.	4th Art. .	Aug. 20	Mar. 21	Barrancas, Fort, Fla. .
3	Palmer, A. M.	Lieut., A. C. S.	24th Inf. .	June 17	June 20	Bayard, Fort, N. Mex. .
2	Kress, J. A.	Major, A. C. S.	Ordnance	May 10	June 18	Benicia Arsenal, Cal. .
18						
1	Connolly, Thos.	Lieut., A. C. S.	1st Inf. ...	Apr. 1	Sept. 30 1890.	Benicia Barracks, Cal. .
2	Mason, jr., J. S.	Lieut., C. A. S.	1st Inf. ...	Oct. 1	May 7	do
3	Hale, H. C.	Lieut., A. C. S.	12th Inf. .	Mar. 22	Mar. 20	Bennett, Fort, S. Dak. .
1	Brett, L. M.	Lieut., A. C. S.	2d Cav. .	July 12	Mar. 4 1889.	Bidwell, Fort, Cal.
2	Weeks, E. B.	Lieut., A. C. S.	5th Inf. ...	May 16	Sept. 20	Bliss, Fort, Tex.

during the year ending June 30, 1890—Continued.

DEPARTMENT—Continued.

Balance last report.	Received since.	Total.	Expended and transferred.	Balance.	How distributed.		
					Subtreasuries.	National banks.	Cash on hand.
	\$137,844.19	\$37,844.19	\$100,667.06	\$37,177.13	\$2,048.60	\$35,128.53	
	32,082.48	32,082.48	4,118.03	27,964.45	2,500.00	25,464.45	
\$20,479.08	112,646.82	133,125.90	98,085.61	35,040.29		35,040.29	
664.50	21,843.99	22,508.49	19,287.52	3,220.97	3,220.97		
	26,733.47	26,733.47	17,506.86	9,227.61		9,227.61	
377.31	2,712.00	3,089.31	2,408.31	681.00	681.00		
	5,666.27	5,666.27	5,666.27				
	4,800.00	4,800.00	959.53	3,840.47		3,840.47	
11,864.19	86,402.32	98,266.51	73,685.52	24,580.99	24,580.99		
	460.96	460.96	17.93	443.03	443.03		
42,681.45	52,987.84	95,669.29	67,599.17	28,070.12	18,246.35	9,823.77	
	39,626.23	39,626.23	33,087.02	6,539.21	6,539.21		
	3,376.59	3,376.59	2,547.70	828.89	648.56		\$180.33
	471.38	471.38	471.38				
	41,187.77	41,187.77	30,206.82	10,980.95	1,708.46	9,272.49	
	40,190.25	40,190.25	32,259.46	7,930.79	7,930.79		
4,329.34	81,607.08	85,936.42	76,561.87	9,374.55		9,368.05	6.50
	21,074.22	21,074.22	11,538.99	9,535.23	9,535.23		
14,129.46	285,149.87	299,279.33	282,477.80	16,801.53	16,759.50		42.03
	19,374.44	19,374.44	8,377.09	10,997.35	2,500.00	8,497.35	
2,418.56	176,683.09	179,101.65	149,976.23	29,125.42	29,125.46		
183,818.71	1,900,758.90	2,084,577.61	1,713,733.13	370,844.48	203,647.82	166,478.82	717.84
	2,169.74	2,169.74	1,974.23	195.51	75.93		119.53
	3,125.96	3,195.26	2,986.09	139.87	91.95		47.92
429.05	2,288.54	2,717.59	1,891.46	826.13	816.75		9.38
320.30	10,877.48	11,197.78	10,754.56	443.22	325.67		117.55
	16,925.47	16,925.47	15,746.43	1,179.04			1,179.04
	5,186.29	5,186.29	4,548.54	637.75	400.00		237.75
	4,485.91	4,485.91	3,794.58	691.33			691.33
85.44	759.69	845.13	609.50	175.63	175.63		
	407.43	407.43	235.25	172.18	172.18		
	3,528.00	3,528.00	3,263.39	264.61	206.76		57.85
696.23	10,911.29	11,607.52	11,416.47	191.05			191.05
341.23	1,789.76	2,130.99	1,947.66	183.33	172.56		10.77
1,872.25	62,455.56	64,327.81	59,228.16	5,099.65	2,437.43		2,662.22
	1,080.88	1,080.88	1,080.88				
	1,742.39	1,742.39	1,692.06	50.33	40.40		9.84
224.45	1,873.52	2,097.97	1,664.51	433.46			433.46
95.43	3,613.55	3,708.98	2,795.09	913.89	729.93		183.96
592.61	1,332.25	1,924.86	1,771.41	153.45		86.59	66.86

Abstract of inspections of money accounts made

COMMISSARY-GENERAL'S

Times inspected.	Disbursing officer.	Rank or grade.	Corps.	Period inspected.		Station.
				From—	To—	
2	Kimball, F. C	Lieut., A. C. S.....	5th Inf ..	1889. Sept. 20	1890. Mar. 4	Bliss, Fort, Tex
2	Michie, R. E. L.....	Lieut., A. C. S.....	2d Cav...	Apr. 27	Mar. 21	Boisé Barracks, Idaho.
1	Black, Wm	Lieut., A. C. S.....	24th Inf..	June 22	Oct. 24	Bowie, Fort, Ariz
1	Dickinson, W. M.....	Lieut., A. C. S.....	4th Cav ..	Nov. 1	Feb. 11	...do
1	Irwin, jr., F. G	Lieut., A. C. S.....	2d Cav...	June 10	July 2	...do
3	Chubb, C. St. J.....	Lieut., A. C. S.....	17th Inf..	June 5	June 24	Bridger, Fort, Wyo ...
1	Tillson, J. C. F	Lieut., A. C. S.....	5th Inf ..	Mar. 28	Sept. 5	Brown, Fort, Tex
2	Chatfield, W. H	Lieut., A. C. S.....	5th Inf ..	Oct. 21	Apr. 9	...do
2	Davis, T. F.....	Lieut., A. C. S.....	15th Inf ..	July 15	Mar. 6	Buford, Fort, N. Dak..
1	O'Neil, J. P	Lieut., A. C. S.....	14th Inf ..	June 1	Sept. 25	Canby, Fort, Wash ...
1	Johnson, F. O	Lieut., A. C. S.....	3d Cav...	May 22	Sept. 1	Clark, Fort, Tex
2	Wood, W. T	Lieut., A. C. S.....	18th Inf ..	Dec. 1	Mar. 12	...do
1	Clem, J. L.....	Capt., A. C. S.....	Asst. Q. M	June 15	Nov. 23	Columbus Bks., Ohio..
3	Littell, J. W	Lieut., A. C. S.....	10th Inf ..	Apr. 5	Apr. 4	Crawford, Fort, Colo..
1	Lacy jr., F. E	Lieut	10th Inf ..	Apr. 1	Apr. 4	...do
3	Mills, A. L.....	Lieut., A. C. S.....	1st Cav ..	May 14	May 3	Custer, Fort, Mont. .
1	Hyde, J. McE.....	Capt., A. C. S.....	Asst. Q. M	Dec. 1	May 12	David's Island, N. Y ..
4	Partello, J. M.....	Lieut., A. C. S.....	5th Inf ..	May 19	Mar. 7	Davis, Fort, Tex
3	Geary, W	Lieut., A. C. S.....	19th Inf ..	Aug. 31	Feb. 28	Del Rio, Camp, Tex ...
1	Lassiter, Wm	Lieut., A. C. S.....	16th Inf ..	Sept. 30	Dec. 3	Douglas, Fort, Utah ...
2	Chandler, Elias	Lieut., A. C. S.....	16th Inf ..	Dec. 31	June 21	...do
1	Anderson, T. J.....	Lieut., A. C. S.....	16th Inf ..	May 9	Oct. 7	Duchesne, Fort, Utah .
1	Ballou, C. C.....	Lieut., A. C. S.....	16th Inf ..	Dec. 31	Mar. 12	...do
3	Beach, W. D	Lieut., A. C. S.....	3d Cav ...	Aug. 1	Mar. 13	Eagle Pass, Camp, Tex.
3	O'Brien, M. J	Lieut., A. C. S.....	13th Inf ..	Feb. 16	Apr. 2	Elliott, Fort, Tex
2	Baker, Frank	Capt., A. C. S.....	Ordnance	Apr. 13	Jan. 7	Frankford Arsenal, Pa.
1	Carrington, F. de L ..	Lieut., A. C. S.....	1st Inf ..	May 19	Sept. 2	Gaston, Fort, Cal
2	Wever, B. S.....	Lieut., A. C. S.....	1st Inf...	Nov. 1	May 24	...do
2	Anderson, John	Lieut., A. C. S.....	18th Inf ..	Feb. 16	Nov. 16	Gibson, Fort, Ind. T...
2	Atkinson, B. W	Lieut., A. C. S.....	6th Inf ..	Nov. 16	Apr. 2	...do
2	James, W. H. W	Lieut., A. C. S.....	24th Inf ..	July 31	Feb. 2	Grant, Fort, Ariz.....
1	Bigelow, John.....	Lieut., A. C. S.....	10th Cav..	Feb. 3	July 3	...do
3	Peshine, J. H. H	Lieut., A. C. S.....	13th Inf ..	Apr. 20	Apr. 2	Guthrie, camp at, Ind. T
3	Logan, T. H.....	Capt., A. C. S.....	5th Inf ..	Aug. 1	Dec. 31	Hancock, Fort, Tex ...
1	Perkins, Fred'k.....	Lieut., A. C. S.....	5th Inf ..	Jan. 1	Mar. 6	...do
1	Hinton, C. B	Lieut., A. C. S.....	18th Inf ..	Apr. 14	July 2	Hays, Fort, Kans
2	Stevens, R. R	Lieut., A. C. S.....	6th Inf...	Sept. 30	Apr. 13	Hot Springs, Ark.
3	McClure, N. F	Lieut., A. C. S.....	4th Cav ..	Aug. 1	June 30	Huachuca, Ariz.....
1	Rexford, W. H	Capt., A. C. S.....	O. S. K...	May 14	Sept. 17	Indianapolis Arsenal, Ind.
1	Comly, Clifton	Major, A. C. S.....	Ordnanco	Dec. 4	Feb. 10	...do
1	Forsythe, L. C	Major, A. C. S.....	Q. M.....	Apr. 22	Sept. 13	Jefferson Bks., Mo....
1	Wilson, J. L	Lieut., A. C. S.....	4th Art ..	Oct. 1	Dec. 9	Jackson Bks., La.....
2	Michaelis, O. E.....	Major, A. C. S.....	Ordnance	July 1	Feb. 26	Kennebec Arsenal, Me.

during the year ending June 30, 1890—Continued.

DEPARTMENT—Continued.

Balance last report.	Received since.	Total.	Expended and transferred.	Balance.	How distributed.		
					Subtreasuries.	National banks.	Cash on hand.
.....	\$2,581.28	\$2,581.28	\$1,807.33	\$773.95	.....	\$772.52	\$1.43
\$316.84	2,863.83	3,180.67	3,185.59	45.08	.....	25.00	20.08
503.27	1,719.67	2,222.94	2,009.10	213.84	.....	.....	213.84
.....	1,997.89	1,997.89	1,624.99	372.90	.....	.....	372.90
.....	1,018.13	1,018.13	154.58	863.55	.....	.....	863.55
185.28	7,341.47	7,526.75	7,115.21	411.54	.....	383.78	27.76
287.04	2,247.34	2,534.38	2,130.59	403.79	.....	.....	403.79
.....	2,370.60	2,370.60	1,746.98	623.62	.....	.....	623.62
178.32	7,124.77	7,303.09	6,856.36	446.73	.....	.....	446.73
.....	770.24	770.24	621.96	148.28	.....	100.00	48.28
1,181.94	3,498.71	4,680.65	3,286.69	1,393.96	.....	708.55	685.41
.....	4,876.16	4,876.16	3,689.45	1,186.71	.....	759.06	427.65
772.57	14,824.97	15,597.54	12,763.58	2,833.96	.....	2,588.92	245.04
.....	3,533.86	3,533.86	3,533.86	.....	.....	.....	.....
.....	188.87	188.87	.....	188.87	.....	.....	188.87
.....	14,666.44	14,666.44	12,028.98	1,677.46	.....	.....	1,677.46
.....	13,097.81	13,097.81	11,897.90	1,199.91	\$1,031.73	.....	168.18
1,595.99	5,729.86	7,325.85	5,618.22	1,707.63	.....	1,300.52	407.11
.....	374.58	374.58	253.38	421.20	.....	404.93	16.27
.....	2,491.25	2,491.25	2,421.36	69.89	.....	59.34	10.55
.....	6,800.43	6,800.43	5,901.94	898.49	.....	881.62	16.87
568.84	6,134.99	6,703.83	6,023.64	680.19	.....	.....	680.19
.....	2,977.19	2,977.19	1,879.70	1,097.49	.....	.....	1,097.49
.....	1,304.96	1,304.96	1,207.57	97.39	.....	.....	97.39
858.91	9,866.34	10,725.25	9,874.78	850.47	.....	.....	850.47
187.35	1,044.40	1,231.75	1,132.13	99.62	99.62	.....	.....
.....	748.60	748.60	550.89	197.71	110.00	.....	87.71
.....	1,565.61	1,565.61	1,271.33	294.28	248.87	.....	45.41
40.48	2,266.67	2,307.15	2,307.15	.....	.....	.....	.....
.....	941.71	941.71	796.38	145.33	.....	.....	145.33
.....	8,290.03	8,290.03	8,061.34	228.69	.....	.....	228.69
.....	7,381.89	7,381.89	7,286.32	95.57	.....	.....	95.57
.....	2,596.30	2,596.30	2,441.48	154.82	.....	154.82	.....
.....	1,309.42	1,309.42	1,309.42	.....	.....	.....	.....
.....	607.39	607.39	596.73	10.66	.....	.....	10.66
73.35	1,420.67	1,494.02	1,489.13	4.89	.....	.....	4.89
181.20	200.00	381.20	247.00	134.20	100.00	.....	34.20
.....	11,293.42	11,293.42	11,293.42	.....	.....	.....	.....
153.95	270.47	424.42	319.30	105.12	77.88	27.24	.....
.....	256.70	256.70	118.34	138.36	108.89	29.47	.....
2,100.11	8,964.05	11,064.16	9,216.92	1,847.24	1,836.03	.....	11.21
.....	293.80	293.80	263.54	30.26	28.26	.....	2.00
.....	755.60	755.60	536.89	218.71	.....	210.00	8.71

Abstract of inspections of money accounts made

COMMISSARY-GENERAL'S

Times inspected.	Disbursing officer.	Rank or grade.	Corps.	Period inspected.		Station.
				From—	To—	
1	Varney, A. L	Capt., A. C. S	Ordnance	1890. May 1	1890. June 12	Kennebec Arsenal, Me.
1	Webster, J. MoA	Lieut., A. C. S	22d Inf ..	1889. Mar. 4	1889. July 31	Keogh, Fort, Mont....
2	Getty, R. N	Lieut., A. C. S	22d Inf ..	1890. Aug. 1	1889. Mar. 24	do
1	McIver, G. W	Lieut., A. C. S	7th Inf ..	June 24	Dec. 2	Laramie, Fort, Wyo...
1	Taylor, Frank	Lieut., A. C. S	14th Inf ..	Mar. 22	July 26	Leavenworth, Fort, Kans.
2	Reed, H. A	Lieut., A. C. S	2d Art...	Nov. 30	1890. Apr. 5	do
1	Willcox, E. F	Lieut., A. C. S	6th Cav...	Feb. 18	1889. July 8	Lewis, Fort, Colo
1	Torry, Z. W	Lieut., A. C. S	6th Inf ..	Nov. 1	1889. Dec. 17	do
1	Williamson, G. M	Lieut., A. C. S	6th Cav...	1890. Jan. 31	1890. Apr. 5	do
2	Clark, W. O	Lieut., A. C. S	12th Inf ..	1880. Jan. 10	Feb. 26	Lincoln, A., Fort, N. Dak.
3	Buck, Wm. L	Lieut., A. C. S	13th Inf ..	July 3	Apr. 2	Little Rock Bks., Ark.
1	Frederick, D. A	Lieut., A. C. S	7th Inf ..	June 1	1889. July 6	Logan, Fort, Colo
2	Greene, L. D	Lieut., A. C. S	7th Inf ..	Nov. 30	1890. Apr. 23	do
2	Smith, A. L	Lieut., A. C. S	4th Cav...	June 15	1890. Jan. 11	Lowell, Fort, Ariz
1	Overton, Clough	Lieut., A. C. S	4th Cav...	June 1	1889. June 28	do
1	Warwick, O. B	Lieut., A. C. S	18th Inf ..	Feb. 18	1889. July 5	Lyon, Fort, Colo
1	Reynolds, Alfred	Lieut., A. C. S	20th Inf ..	Apr. 30	1890. Aug. 31	Maginnis, Fort, Mont.
2	Cronin, M. D	Lieut., A. C. S	20th Inf ..	Sept. 30	1889. Mar. 31	do
1	Plummer, E. H	Lieut., A. C. S	10th Inf ..	May 28	1890. Oct. 18	Marcy, Fort, N. M
1	Seyburn, S. Y	Lieut., A. C. S	10th Inf ..	Dec. 1	1890. Mar. 13	do
1	Plummer, E. H	Lieut., A. C. S	10th Inf ..	1890. Apr. 1	1889. June 21	do
1	Wilson, E. T	Lieut., A. C. S	1st Art ..	Oct. 1	1890. Dec. 20	Mason, Fort, Cal.
2	Baldwin, J. A	Lieut., A. C. S	9th Inf ..	June 17	1890. Jan. 6	McDowell, Fort, Ariz.
1	Campbell, W. A	Lieut., A. C. S	9th Inf ..	Apr. 30	1889. June 20	do
2	Woodward, C. G	Lieut., A. C. S	3d Art...	June 30	1889. Apr. 12	McHenry, Fort, Md. ...
2	Hunter, G. K	Lieut., A. C. S	3d Cav...	Aug. 1	1890. Dec. 12	McIntosh, Fort, Tex..
1	Johnson, F. O	Lieut., A. C. S	3d Cav...	Apr. 1	1890. Apr. 4	do
3	Benton, J. W	Lieut., A. C. S	9th Cav...	Sept. 30	June 21	McKinney, Fort, Wyo.
2	Jones, S. R	Lieut., A. C. S	4th Art...	June 30	June 28	McPherson, Fort, Ga..
2	Williams, A	Lieut., A. C. S	3d Inf ..	Aug. 1	Feb. 25	Meade, Fort, S. Dak ..
4	Mason, C. W	Lieut., A. C. S	4th Inf ..	June 8	June 30	Military Prison, Fort Leavenworth, Kans.
2	Devol, C. A	Lieut., A. C. S	25th Inf ..	June 29	Mar. 7	Missoula, Fort, Mont..
3	Hersey, M. L	Lieut., A. C. S	9th Inf ..	June 22	June 30	Mojave, Fort, Ariz ..
1	Foster, A. B	Lieut., A. C. S	10th Inf ..	Aug. 1	Mar. 15	Mount Vernon Bar- racks, Ala.
1	West, B. K	Lieut., A. C. S	6th Cav...	June 30	Apr. 6	Myer, Fort, Va.
3	Clifford, J. C	Capt., A. C. S	Ordnance	June 10	1889. June 5	National Armory, Mass
1	Robinson, A. G	Major, A. C. S	Q. M.	Oct. 1	Oct. 3	New Orleans, La.
1	Turner, R. B	Lieut., A. C. S	6th Inf ..	July 5	Nov. 22	Newport Bks, Ky
2	Hutton, J. A	Lieut., A. C. S	8th Inf ..	Nov. 21	1890. Mar. 10	Niobrara, Fort, Nebr..
1	Mercer, W. A	Lieut., A. C. S	8th Inf ..	Mar. 31	1889. June 23	do
2	Paulding, William	Lieut., A. C. S	10th Inf ..	Apr. 19	1890. Dec. 16	Oklahoma, Camp, Ind. T
2	Wilhelm, W. H	Lieut., A. C. S	10th Inf ..	Sept. 1	Apr. 2	do
3	Clark, S. E	Lieut., A. C. S	2d Inf ..	Oct. 1	June 30	Omaha, Fort, Nebr.
2	Rondiez, L. S	Lieut., A. C. S	15th Inf ..	June 3	Feb. 6	Pembina, Fort, N. Dak.

INSPECTOR-GENERAL.

491

during the year ending June 30, 1890—Continued.

DEPARTMENT—Continued.

Balance last report.	Received since.	Total.	Expended and transferred.	Balance.	How distributed.		
					Subtreasuries.	National banks.	Cash on hand.
	\$215.92	\$215.92	\$3.11	\$212.81		\$200.00	\$12.81
\$148.42	3,351.97	3,499.97	3,499.97				
	6,039.25	6,039.25	5,840.47	198.78			198.78
361.13	2,519.05	2,881.05	2,611.06	269.99			269.99
202.99	6,005.55	6,208.55	6,113.00	95.55			95.55
	7,324.57	7,324.57	5,204.79	2,119.78		2,072.15	47.63
738.59	4,196.79	4,935.38	3,849.43	1,085.95			*1,084.20
	1,480.67	1,480.67	1,240.88	239.79			239.79
	1,723.08	1,723.08	776.47	946.61		718.03	228.58
242.13	2,412.66	2,654.79	2,596.72	58.07			58.07
	1,897.41	1,897.41	1,729.95	167.46		167.46	
	378.76	378.76	364.48	14.28			14.28
	2,822.32	2,822.32	2,676.38	145.94		50.00	95.94
418.90	4,713.32	5,127.22	4,343.84	783.38			783.38
	1,305.33	1,305.33	317.11	988.22			988.22
273.54	2,606.15	2,879.69	2,868.19	11.50			11.50
689.37	1,578.61	2,267.98	1,908.92	359.06			359.06
	4,247.47	4,247.47	3,304.06	943.41			943.41
21,962.95	4,827.64	26,790.59	26,682.94	107.65			107.65
	1,675.04	1,675.04	1,299.42	375.62			†375.62
	1,146.53	1,146.53	1,022.24	124.29			124.29
	579.71	579.71	430.00	149.71	\$128.81		20.90
273.07	2,208.45	2,481.52	2,182.24	299.28			299.28
	850.93	850.93	693.26	157.67			157.67
	3,035.33	3,035.33	2,955.89	79.44	53.37		26.07
	1,710.34	1,710.34	1,390.17	320.17			320.17
	162.47	162.47	30.25	132.22			132.22
	5,784.70	5,784.70	5,376.70	408.00			408.00
	5,252.00	5,252.00	4,899.34	352.66	235.47		117.19
	8,868.91	8,868.91	7,134.26	1,734.65		1,734.65	
18.33	14,290.79	14,309.12	14,309.12				
855.06	5,213.32	6,068.38	5,574.58	493.80			493.80
	2,970.46	2,970.46	2,970.46				
	5,888.72	5,888.72	5,787.41	101.31	34.27		67.04
	3,612.04	3,612.04	3,488.80	123.24		96.59	26.65
53.01	843.95	896.96	859.47	37.49			
	4,566.32	4,566.32		4,566.32	4,566.32		
	2,054.79	2,054.79	1,799.91	254.88	251.88		3.00
	3,020.36	3,020.36	2,754.53	265.83			265.83
	3,585.57	3,585.57	3,301.65	283.92			283.92
	218.99	218.99	218.99				
	1,123.55	1,123.55	1,067.82	55.73			55.73
	12,554.23	12,554.23	12,554.23				
190.90	1,010.14	1,201.04	1,151.08	49.96			49.96

* \$1.75 due by Quartermaster's Department.

† \$234.65 in transit.

Abstract of inspections of money accounts made

COMMISSARY-GENERALS'

Times inspected.	Disbursing officer.	Rank or grade.	Corps.	Period inspected.		Station.
				From—	To—	
1	Barnum, M. H.	Lient., A. C. S.	3d Cav. ...	1889. May 20	1889. Sept. 17	Pena Colorado, Camp, Tex.
2	Rivers, T. R.	Lient., A. C. S.	3d Cav. ...	Oct. 31	1890. Mar. 9	do
3	Cochran, C. H.	Lient., A. C. S.	7th Inf. ..	June 10	June 23	Pilot Butte, Camp, Wyo.
2	Dent, J. C.	Lient., A. C. S. ...	20th Inf. ..	June 21	Mar. 1	Poplar River, Camp, Mont.
1	Pendleton, E. P.	Lient., A. C. S.	23d Inf. ...	July 1	1889. Sept. 4	Porter, Fort, N. Y.
2	Oyster, J. S.	Lient., A. C. S.	1st Art. ...	July 5	1890. Feb. 28	Presidio of San Francisco, Cal.
2	Hare, L. R.	Lient., A. C. S.	7th Cav. ...	Feb. 10	1889. Dec. 12	Riley, Fort, Kans.
2	Pond, George E.	Capt., A. C. S.	A. Q. M. ...	June 1	1890. Dec. 13	do
1	Bell, J. F.	Lient., A. C. S.	7th Cav. ...	Feb. 28	1890. Apr. 5	do
3	Borden, George P. ...	Lient., A. C. S.	5th Inf. ..	Apr. 26	1889. Apr. 7	Ringgold, Fort, Tex. ...
1	Cartet, J. McI.	Lient., A. C. S.	3d Cav. ..	Dec. 1	1889. Dec. 13	do
3	Day, M. W.	Lient., A. C. S.	9th Cav. ...	June 20	1890. June 20	Robinson, Fort, Nebr. .
1	McGuinness, J. R. ...	Major, A. C. S.	Ordnance	June 18	1889. Sept. 9	Rock Island Arsenal, Ill.
1	Grealish, M. J.	Capt., A. C. S.	Ordnance	Dec. 3	1890. Jan. 28	do
3	Muir, C. H.	Lient., A. C. S.	17th Inf. .	Oct. 15	June 23	Russell, D. A., Fort, Wyo.
3	London, R.	Lient., A. C. S.	5th Cav. ...	May 1	Apr. 6	Reno, Fort, Ind. T. ...
2	Blow, William N.	Lient., A. C. S.	15th Inf. .	July 16	Mar. 14	Randall, Fort, S. Dak. .
1	Evans, W. P.	Lient., A. C. S.	19th Inf. .	Apr. 12	1889. Sept. 3	San Antonio, Tex.
2	Weeks, E. B.	Lient., A. C. S.	5th Inf. ..	Dec. 7	1890. Apr. 9	do
2	Kirby, Henry.	Lient., A. C. S.	10th Inf. .	June 18	1889. Jan. 24	San Carlos, Ariz.
1	Tayman, C. E.	Lient., A. C. S.	24th Inf. .	Mar. 11	1889. July 7	do
3	Robertson, E. B.	Lient., A. C. S.	9th Inf. ..	June 19	June 29	San Diego Bks., Cal. ..
3	Farnsworth, C. S. ...	Lient., A. C. S.	25th Inf. .	May 31	Apr. 17	Shaw, Fort, Mont.
3	Edwards, F. A.	Lient., A. C. S.	1st Cav. ...	June 1	May 31	Sheridan, Camp, Wyo. .
3	Townsend, T. G.	Lient., A. C. S.	6th Inf. ..	Feb. 16	Apr. 3	Sheridan, Fort, Ill.
3	Brown, R. P.	Lient., A. C. S.	4th Inf. ..	Apr. 27	May 17	Shorman, Fort, Idaho. .
2	Parke, J. S.	Lient., A. C. S.	21st Inf. .	Sept. 30	1890. Feb. 11	Sidney, Fort, Nebr.
1	Parmerter, A. L.	Lient., A. C. S.	21st Inf. .	Feb. 28	1889. June 18	do
1	Sickel, jr., H. G. ...	Lient., A. C. S.	7th Cav. ...	Feb. 28	1889. June 30	Sill, Fort, Ind. T.
1	Hall, Charles S.	Lient., A. C. S.	13th Inf. .	Dec. 15	1890. Dec. 21	do
1	Waite, H. De H.	Lient., A. C. S.	5th Cav. ...	Mar. 1	1889. Apr. 5	do
2	Gerlach, William ...	Lient., A. C. S.	3d Inf. ...	July 15	Mar. 24	Snelling, Fort, Minn. ..
3	Browne, E. H.	Lient., A. C. S.	4th Inf. ...	June 6	June 7	Spokane, Fort, Wash. .
3	Scott, G. L.	Lient., A. C. S.	6th Cav. ...	June 19	June 23	Stanton, Fort, N. Mex. .
1	Deems, C.	Lient., A. C. S.	4th Art. ...	July 31	Mar. 25	St. Francis Bks., Fla. .
1	Rockwell, A. F.	Major, A. C. S.	Q. M.	Mar. 7	1890. May 10	St. Paul, Minn.
3	Anglim, D. F.	Lient., A. C. S.	12th Inf. .	Apr. 27	1889. Apr. 14	Sully, Fort, S. Dak. ...
1	Cornish, L. W.	Lient., A. C. S.	5th Cav. ...	May 1	1890. July 3	Supply, Fort, Ind. T. .
2	Saffold, M. B.	Lient., A. C. S.	13th Inf. .	Nov. 6	Apr. 3	do
3	Augur, A. A.	Lient., A. C. S.	24th Inf. .	Oct. 1	June 30	Thomas, Fort, Ariz. ...
3	Mosher, Theodore ..	Lient., A. C. S.	22d Inf. ..	Mar. 27	Mar. 24	Totten, Fort, N. Dak. .
1	Reynolds, W. B.	Lient., A. C. S.	14th Inf. .	Mar. 26	1889. July 31	Townsend, Fort, Wash. .
1	Patterson, G. T. T. ..	Lient., A. C. S.	14th Inf. .	Aug. 1	1890. Sept. 15	do
1	Sample, W. R.	Lient., A. C. S.	14th Inf. .	Sept. 15	1890. May 17	do

during the year ending June 30, 1890—Continued.

DEPARTMENT—Continued.

Balance last report.	Received since.	Total.	Expended and transferred.	Balance.	How distributed.		
					Subtreasuries.	National banks.	Cash on hand.
\$949.52	\$1,145.86	\$2,095.38	\$1,756.34	\$339.04		\$220.80	\$118.24
200.19	1,676.08 2,292.62	1,676.08 2,492.81	398.48 2,328.39	1,277.60 164.42		797.20	480.40 164.42
100.18	3,099.15	3,199.33	2,911.10	288.23			288.23
	733.17	733.17	405.80	327.37	\$291.70		35.67
	7,829.63	7,829.63	7,766.64	62.99	30.00		32.99
3.02	8,998.72 1,629.45	9,001.74 1,629.45	8,728.46 1,629.45	273.28			273.28
	2,181.60	2,181.60	1,640.14	541.46		484.85	56.61
	5,137.08	5,137.08	4,308.69	828.39			*828.39
	469.93	469.93	408.18	66.75			66.75
670.51	14,022.90	14,693.41	13,935.56	757.85			757.85
	714.47	714.47	634.00	80.47		80.47	
	597.41 8,816.25	597.41 8,816.25	293.01 8,297.12	304.40 519.13	187.22	117.18 321.82	197.81
260.12	13,716.98 3,649.55	13,716.98 3,909.67	13,086.29 3,604.02	630.69 305.65		542.20	88.46 305.65
2,456.82	8,800.53	11,257.35	9,834.45	1,422.90		1,422.90	
385.15	10,217.46 4,843.13	10,217.46 5,228.28	7,450.06 4,919.06	2,767.40 309.28		2,767.40	309.28
	3,896.20	3,896.20	3,842.45	53.75			53.75
151.97 621.05	1,710.33 5,938.72	1,862.30 6,559.77	1,677.23 6,447.52	185.07 112.25			185.07 112.25
	3,925.90	3,925.90	3,298.75	627.15			627.15
	3,429.66	3,429.66	3,267.51	162.15	162.15		
876.00	9,444.81 2,967.99	10,320.81 2,967.99	10,020.57 2,693.54	300.24 274.45		118.23 200.00	182.01 74.45
	1,799.03	1,799.03	1,509.45	289.58		100.00	189.58
	4,838.27 508.70	4,838.27 508.70	4,838.27	508.70			508.70
	2,100.64	2,100.64	1,867.76	732.88			732.88
60.00 1,081.20 864.99	5,918.90 8,195.86 9,545.96 1,502.66	5,978.90 9,277.06 10,410.95 1,502.66	5,833.90 8,797.17 10,162.44 1,392.12	145.00 479.89 248.51 110.54		434.71	145.00 45.18 248.51 110.54
	15,974.10	15,974.10	15,974.10				
335.01	4,333.15	4,668.16	4,393.12	275.04			275.04
	2,075.43	2,075.43	936.56	1,138.87			†1,138.87
	4,226.94	4,226.94	3,883.42	343.46			343.46
	4,589.96	4,589.96	4,325.56	264.40			264.40
397.16	3,406.29	3,803.45	3,337.94	465.51			465.51
133.89	930.61 271.56	1,064.50 271.56	1,064.50 271.56				
	1,738.59	1,738.59	1,610.54	128.05		88.88	39.17

* \$732.79 in transit.

† 1,061.26 in transit.

Abstract of inspections of money accounts made

COMMISSARY-GENERAL'S

Times inspected.	Disbursing officer.	Rank or grade.	Corps.	Period inspected.		Station.
				From—	To—	
3	Zalinski, M. G.	Lieut., A. C. S.	2d Art. ..	1889. June 30	1890. June 26	Trumbull, Fort, Conn.
2	Wooley, F.	Lieut., A. C. S.	10th Inf..	Sept. 30 1890.	Mar. 8	Union, Fort, N. Mex. .
1	Shollenberger, J. H.	Lieut., A. C. S.	10th Inf..	Apr. 12 1889.	July 3 1889.	...do
2	Goodwin, W. P.	Lieut., A. C. S.	14th Inf..	Apr. 30 1890.	Dec. 30 1890.	Vancouver Bks., Wash
1	Johnson, C. A.	Lieut., A. C. S.	14th Inf..	Mar. 31 1889.	May 15	...do
3	Ramsey, F. de W ...	Lieut., A. C. S.	9th Inf..	June 17 1889.	June 25 1889.	Verde, Fort, Ariz.
1	Buffington, A. P.	Lieut., A. C. S.	7th Inf..	Oct. 1 1890.	Dec. 2 1890.	Washakie, Fort, Wyo
2	Lasseigne, A. I.	Lieut., A. C. S.	7th Inf..	Mar. 1 1889.	June 21	...do
2	Kingsbury, F. W. ...	Lieut., A. C. S.	2d Cav ...	July 5	Apr. 12	Walla Walla, Wash. .
1	Chase, C.	Lieut., A. C. S.	3d Art ...	May 14	Apr. 9	Washington Bks., D. C
3	Varney, A. L.	Capt., A. C. S.	Ord. Dep.	July 12	June 16	Watertown Ars., Mass
2	Heath, Frank	Capt., A. C. S.	Ord. Dep.	June 8	Feb. 24	Watervliet Ars., N. Y.
2	Spurgin, William F	Capt., A. C. S.	21st Inf..	Sept. 2	Feb. 20	West Point, N. Y.
3	Palmer, George	Lieut., A. C. S.	9th Inf..	June 17 1889.	June 21 1889.	Whipple Bks., Ariz. .
1	Zinn, George A	Lieut., A. C. S.	Engineers	May 31 1890.	Nov. 13 1890.	Willet's Point, N. Y. .
1	Dravo, E. E.	Lieut., A. C. S.	6th Cav ..	June 16 1889.	Nov. 9 1890.	Wingate, Fort, N. Mex
2	Stotsenburg, J. M..	Lieut., A. C. S.	6th Cav ..	Feb. 1 1889.	June 30	...do
3	Ayer, W. E.	Lieut., A. C. S.	12th Inf..	Aug. 1	Apr. 5	Yates, Fort, N. Dak. .
297.	Total .....	.....	.....	.....	.....	.....
	Total Commissary-General's Department.....	.....	.....	.....	.....	.....

SURGEON-GENERAL'S

3	Irwin, B. J. D.	Lt. Col.	Asst., M. Purv. Surgeon	1889. May 10	1890. June 9	San Francisco, Cal. ...
3	Smart, Ch.	Major	Surgeon	May 11	June 28	Washington, D. C.
2	Stevens, E. R.	Lt. and D. O.	6th Inf..	Sept. 30	Apr. 13	Hot Springs, Ark.
2	Vollum, E. P.	Col	Surgeon	June 5	May 6	New York, N. Y.
10	Total .....	.....	.....	.....	.....	.....

PAYMASTER-GENERAL'S

3	Arthur, William ...	Major	Paymast'r	1889. Apr. 13	1890. Apr. 4	San Antonio, Tex.
3	Baird, G. W.	Major .....	...do....	Mar. 9	June 17	Boston, Mass
3	Baker, J. P.	Major .....	...do....	June 18	June 24	Omaha, Nebr.
3	Bash, D. N.	Major .....	...do....	May 3	Apr. 30	Denver, Colo.
3	Bates, A. E.	Major .....	...do....	Apr. 17	Apr. 26	St. Paul, Minn.
3	Canby, J. R.	Major .....	...do....	Apr. 9	Mar. 22	Portland, Oregon
3	Candee, G. W.	Major .....	...do....	June 6	Apr. 18	Helena, Mont.
2	Carey, A. B.	Major .....	...do....	May 16	June 21	New York, N. Y.
2	Comegys, W. H.	Major .....	...do....	May 31	Mar. 26	Atlanta, Ga.
3	Coxe, F. M.	Major .....	...do....	May 2	June 9	San Francisco, Cal. .
3	Creary, W. E.	Major .....	...do....	May 29 1889.	June 20 1889.	Salt Lake City, Utah. .
1	Dodge, F. S.	Major .....	...do....	May 29 1890.	Dec. 12 1890.	New York, N. Y.
3	Eekels, W. H.	Major .....	...do....	Apr. 16	Apr. 26	St. Paul, Minn.
2	Gibson, W. R.	Lt. Col.	D. P. M. Gen.	Apr. 17 1890.	Apr. 18	San Antonio, Tex.
1	...do	Lt. Col. ....	...do....	Apr. 18 1889.	June 26 1889.	Washington, D. C.
1	Glenn, G. E.	Major	Paymas-ter.	June 12 1889.	Oct. 16 1890.	Los Angeles, Cal.
2	Keefer, J. B.	Major .....	...do....	July 20	Mar. 22	Walla Walla, Wash. .

during the year ending June 30, 1890—Continued.

DEPARTMENT—Continued.

Balance last report.	Received since.	Total.	Expended and transferred.	Balance.	How distributed.		
					Subtreasuries.	National banks.	Cash on hand.
----- \$133.16	\$3,766.10 2,240.45	\$3,766.10 2,373.61	\$3,627.92 2,214.70	\$138.18 158.91	\$127.66 -----	----- -----	\$10.52 158.91
-----	1,680.80	1,680.80	1,581.74	99.06	-----	\$99.06	-----
1,071.76	9,014.60	10,086.36	9,523.91	562.45	-----	350.00	212.45
-----	1,234.97	1,234.97	930.39	304.58	-----	-----	304.58
441.92	6,364.87	6,806.79	6,624.63	182.16	-----	-----	182.16
-----	922.20	922.20	452.00	470.20	-----	-----	470.20
-----	1,544.10	1,544.10	1,456.06	88.04	-----	-----	88.04
11.90	5,948.39	5,960.29	5,673.41	286.88	-----	-----	286.88
428.21	7,178.93	7,607.14	7,454.29	152.85	-----	-----	152.85
-----	1,892.20	1,892.20	1,733.99	158.21	158.21	-----	-----
322.16	1,416.57	1,738.73	1,506.48	232.25	-----	232.25	-----
-----	6,555.87	6,555.87	5,295.23	1,260.64	1,100.00	-----	160.64
525.04	10,056.78	10,581.82	10,370.91	210.91	-----	-----	210.91
46.81	5,639.84	5,686.65	4,979.23	707.42	654.11	-----	53.31
317.51	5,957.53	6,275.04	5,907.71	367.33	-----	-----	367.33
-----	7,224.54	7,224.54	7,224.54	-----	-----	-----	-----
-----	7,814.63	7,814.63	6,863.84	950.79	-----	-----	950.79
51,238.92	685,176.74	730,415.66	663,893.45	72,522.21	14,964.38	21,813.10	35,742.98
235,057.63	2,585,935.64	2,820,993.27	2,377,626.58	443,366.69	218,612.20	188,291.92	36,460.82

DEPARTMENT.

4,468.07	23,759.69	28,227.76	17,976.26	10,251.50	10,251.50	-----	-----
34,478.36	288,207.27	322,685.60	300,939.41	21,746.19	21,746.19	-----	-----
-----	5,446.06	5,446.06	3,586.52	1,860.14	-----	1,860.14	-----
28,892.07	95,761.63	124,653.70	94,425.58	30,228.12	30,228.12	-----	-----
67,838.47	413,175.25	481,013.72	416,927.77	64,085.95	62,225.81	1,860.14	-----

DEPARTMENT.

4,817.40	359,586.34	364,353.83	359,154.22	5,199.61	4,424.21	775.40	-----
13,447.88	496,520.54	509,968.40	494,787.53	15,180.87	15,180.87	-----	-----
3,667.36	520,758.10	524,425.46	517,937.25	6,488.21	386.96	6,101.26	-----
-----	389,223.16	389,223.16	329,663.79	59,554.37	10,792.13	48,762.24	-----
20,926.10	482,971.16	503,897.26	457,528.36	46,368.90	44,067.70	2,301.20	-----
34,635.27	238,764.29	273,369.56	240,189.46	33,200.10	15,289.15	17,910.95	-----
15,000.00	356,795.18	371,795.18	354,679.22	17,115.96	10,589.36	6,526.60	-----
-----	906,597.84	906,597.84	884,081.12	22,516.72	22,516.72	-----	-----
21,503.47	257,138.30	278,641.77	253,993.71	24,648.06	5,847.45	18,800.61	-----
15,078.42	784,517.03	799,595.45	772,328.23	27,267.22	27,267.22	-----	-----
38,131.27	321,706.55	359,837.82	349,857.28	9,980.54	3,143.03	6,837.51	-----
16,427.19	449,844.33	466,271.52	434,094.90	32,176.62	32,176.62	-----	-----
11,132.33	381,509.25	392,701.58	379,386.48	13,315.10	11,791.73	1,523.37	-----
57,907.12	556,336.37	614,243.49	560,778.78	53,464.71	38,442.98	15,021.73	-----
53,464.71	77,519.41	130,984.12	130,984.12	-----	-----	-----	-----
29,963.76	281,599.16	311,562.92	282,474.06	29,088.86	11,497.34	17,591.52	-----
25,267.59	150,416.39	175,683.98	174,622.08	1,061.90	798.75	263.15	-----

Abstract of inspections of money accounts made

PAYMASTER-GENERAL'S

Times inspected.	Disbursing officer.	Rank or grade.	Corps.	Period inspected.		Station.
				From—	To—	
3	Larned, D. R.	Major.	Paymaster	1889.	1890.	Washington, D. C.
	McClore, Charles	Major.	do.	Apr. 30	June 26	
2	Maynadier, W. M.	Major.	do.	July 6	Apr. 18	Helena, Mont.
3	Muhlenberg, J. C.	Major.	do.	Mar. 15	June 21	Albuquerque, N. Mex.
	.....	Major.	do.	Apr. 13	Mar. 21	
3	Poole, D. C.	Major.	do.	Apr. 12	Apr. 18	San Antonio, Tex.
	Roche, J. R.	Major.	do.	June 4	Apr. 22	
3	Robinson, G. F.	Major.	do.	May 6	June 7	San Francisco, Cal.
3	Rucker, W. A.	Col.	A. P. M. Gen'l.	Aug. 9	Apr. 7	Leavenworth, Fort, Kans.
2	Smith, G. R.	Major.	Paymaster	Aug. 12	Apr. 13	Leavenworth, Kans.
	Smith, Rodney	Col.	A. P. M. Gen'l.	May 29	June 25	
1	Smith, W.	Lt. Col.	D. P. M. Gen'l.	May 28	Dec. 21	St. Paul, Minn.
1	Sniffin, C. C.	Major.	Paymaster	May 29	Mar. 15	Washington, D. C.
	Stanton, T. H.	Lt. Col.	D. P. M. Gen'l.	June 10	Apr. 22	
3	.....	Lt. Col.	do.	1890.	Apr. 22	Chicago, Ill.
1	.....	Lt. Col.	do.	May 27	June 23	Omaha, Nebr.
	.....	Lt. Col.	do.	1889.	.....
2	Terrell, C. M.	Lt. Col.	do.	June 17	Jan. 28	do.
3	Towar, A. S.	Major.	Paymaster	June 17	June 16	Tucson, Ariz.
3	Tucker, W. F.	Major.	do.	Apr. 20	June 23	Washington, D. C.
3	Wham, J. W.	Major.	do.	June 17	June 16	Tucson, Ariz.
3	Whipple, C. H.	Major.	do.	June 24	June 23	Cheyenne, Wyo.
1	Willard, J. P.	Major.	do.	Apr. 30	Aug. 31	Washington, D. C.
2	.....	Major.	do.	Nov. 16	June 11	Los Angeles, Cal.
	.....	Major.	do.	Apr. 19	Feb. 11	
1	Wilson, C. J.	Major.	do.	1889.	.....	St. Louis, Mo.
2	Witcher, J. S.	Major.	do.	June 17	Nov. 25	Pittsburgh, Pa.
93	Total .....	.....	.....	.....	.....	.....

ENGINEER

2	Abbot, F. V.	Capt.	Engineers	1889.	1890.	Charleston, S. C.
	Adams, M. B.	Major.	do.	May 25	Feb. 18	
2	Allen, C. J.	Major.	do.	June 12	June 10	Burlington, Vt.
2	Barlow, J. W.	Lt. Col.	do.	Nov. 20	Apr. 21	Galveston, Tex.
3	Benyard, W. H. H.	Lt. Col.	do.	June 1	Jan. 21	Nashville, Tenn.
	.....	Lt. Col.	do.	May 15	June 10	
1	Bingham, T. A.	Capt.	do.	1889.	.....	San Francisco, Cal.
2	Bixby, W. H.	Capt.	do.	Apr. 20	Sept. 12	St. Louis, Mo.
	Black, W. M.	Capt.	do.	1890.	.....
2	Black, W. M.	Capt.	do.	May 25	Feb. 17	Wilmington, N. C.
2	Carter, O. M.	Lieut.	do.	May 31	Feb. 20	St. Augustine, Fla.
2	Casey, T. L.	Capt.	do.	May 25	Feb. 19	Savannah, Ga.
2	.....	.....	.....	June 6	May 5	New York, N. Y.
	.....	.....	.....	1888.	.....
3	Chittenden, H. M.	Lieut.	do.	Oct. 25	June 24	Omaha, Nebr.
3	Craighill, W. P.	Col.	do.	1889.	.....	Baltimore, Md.
	Damrell, A. N.	Major.	do.	Mar. 27	Apr. 10	
2	Davis, C. E. L. B.	Major.	do.	May 30	Jan. 18	Mobile, Ala.
3	Elliott, G. H.	Lt. Col.	do.	May 4	Jan. 31	Milwaukee, Wis.
3	Ernst, O. H.	Col.	do.	July 17	June 24	Washington, D. C.
	.....	Col.	do.	Mar. 31	June 26	
2	Fieberger, G. J.	Lieut.	do.	1888.	.....	Galveston, Tex.
	.....	Lieut.	do.	Nov. 22	Apr. 3	
2	Fisk, W. S.	Capt.	do.	1889.	.....	Washington, D. C.
2	Gillespie, G. L.	Lt. Col.	do.	Nov. 22	Apr. 3	Norfolk, Va.
3	Harris, P. C.	Lt. Col.	do.	May 28	Jan. 16	New Orleans, La.
3	Handbury, T. H.	Major.	do.	June 5	May 5	New York, N. Y.
3	Heuer, W. H.	Major.	do.	May 7	June 24	Washington, D. C.
2	Houston, D. C.	Col.	do.	Apr. 10	Mar. 25	Portland, Oregon
	.....	Col.	do.	May 6	June 9	
1	Jones, Wm. A.	Major.	do.	Mar. 15	May 5	San Francisco, Cal.
	.....	Major.	do.	Apr. 10	Aug. 22	

during the year ending June 30, 1890—Continued.

DEPARTMENT—Continued.

Balance last report.	Received since.	Total.	Expended and transferred.	Balance.	How distributed.		
					Subtreasuries.	National banks.	Cash on hand.
\$92,480.66	\$930,859.81	\$1,073,340.47	\$842,433.73	\$230,906.74	\$230,906.74		
19,802.47	264,565.87	284,368.34	274,270.41	10,097.93	2,673.55	\$7,424.38	
37,835.77	593,704.40	630,740.17	614,835.48	15,904.69	8,739.40	7,165.29	
12,858.75	240,366.86	262,225.61	249,399.88	12,825.73	12,215.32	393.37	\$216.44
5,810.92	113,473.07	119,289.99	115,874.17	3,415.82	1,430.66	1,985.16	
	139,784.88	139,784.88	123,831.97	15,952.91	14,152.36	1,800.55	
1,762.91	281,433.01	283,195.92	279,723.80	3,472.12	3,472.12		
28,581.94	711,767.80	740,349.74	705,272.15	35,077.59	19,999.22	15,078.37	
19,509.80	503,728.07	523,237.87	500,834.80	22,403.07	7,827.12	14,575.95	
72,864.02	3,176,064.54	3,248,929.16	3,178,582.77	70,346.39	70,346.39		
96,006.43	576,751.37	672,848.40	614,604.62	58,243.78	34,712.81	23,530.97	
53,543.11	330,004.52	383,547.63	350,452.45	33,095.18	33,095.18		
27,408.44	435,369.61	462,778.05	*462,775.05				
	63,297.27	63,297.27	39,270.26	24,027.01	7,288.70	16,738.31	
37,476.39	827,091.50	865,167.89	792,576.25	72,591.64	11,551.61	61,040.03	
12,762.52	481,790.29	494,561.81	493,187.64	1,364.17	75.77	599.98	688.42
91,108.03	1,627,044.86	1,718,752.69	1,642,686.35	76,066.34	76,066.34		
35,407.20	220,113.87	261,520.87	220,688.88	40,831.99	12,047.73	143.33	295.83
9,275.94	298,145.70	307,421.64	300,909.31	6,512.33	1,144.80	5,346.84	20.59
4,882.82	89,173.76	94,056.58	64,655.73	29,400.85	29,400.85		
	367,687.24	367,687.24	330,628.51	37,058.73	8,690.16	28,368.57	
14,250.08	419,042.91	437,292.99	419,959.45	13,333.54	13,333.54		
17,718.43	178,149.70	195,868.13	167,948.49	27,919.64	13,644.21	14,275.43	
1,052,013.17	19,947,433.51	20,999,446.68	19,761,965.74	1,237,475.94	867,027.49	340,618.92	1,484.43

DEPARTMENT.

\$15,436.51	\$124,933.65	\$140,420.16	\$111,327.21	\$29,092.95	\$26,448.19	\$2,644.76	
13,653.91	121,200.15	134,854.06	88,192.77	46,661.29	13,889.10	32,672.18	
	143,158.87	143,158.87	106,424.10	36,734.77	36,734.77		
24,645.03	120,027.70	144,672.73	126,169.20	18,503.53	3,154.79	9,091.23	\$6,257.51
74,805.09	42,241.44	117,046.53	104,110.76	12,935.77	12,935.77		
11,046.91	24,364.37	35,411.28	29,419.78	5,991.50	5,791.50		200.00
43,123.21	227,297.00	270,420.21	206,222.95	64,197.26	64,197.26		
23,044.67	207,378.00	230,422.67	146,584.34	83,838.33	83,838.33		
75,747.17	174,489.23	250,236.40	234,748.63	15,487.77	13,240.68	2,247.09	
3,276.71	107,907.76	111,184.47	100,288.34	10,901.13	10,901.13		
	48,630.84	48,630.84	45,795.37	2,835.47		2,835.47	
60,811.88	402,787.96	463,099.84	426,362.96	36,736.88	36,736.88		
79,941.14	173,373.00	253,314.14	190,493.03	62,822.11	62,822.11		
53,128.43	210,914.57	270,043.00	230,848.20	39,194.80		39,194.80	
	475,305.52	475,305.52	452,328.45	22,977.07	22,977.07		
117,087.99	344,239.78	461,327.77	449,298.11	12,029.66	12,021.54		8.12
	200,032.14	200,032.14	190,170.58	9,861.56	9,861.56		
44,834.31	155,458.18	200,292.49	181,538.11	18,754.38	18,754.38		
16,685.73	862,862.16	879,547.89	771,875.89	107,672.00	107,672.00		
49,912.98	392,870.00	442,782.98	407,274.70	35,508.28	35,508.28		
114,507.59	385,797.79	500,305.38	455,829.17	44,476.21	13,753.91	30,322.30	400.00
20,634.12	176,955.09	206,619.21	153,076.33	53,542.88	53,542.88		
13,177.42	364,760.10	377,937.52	353,841.63	24,095.89	24,095.89		
\$ 214.85	27,905.00	34,119.85	22,536.88	11,583.47		11,583.47	

* Discrepancy of \$5 explained on inspection report.

† \$28,345.10 in hands of robbers.

Abstract of inspections of money accounts made

ENGINEER DEPART

Times inspected.	Disbursing officer.	Rank or grade.	Corps.	Period inspected.		Station.
				From—	To—	
2	Jones, Wm. A	Major.	Engineers	1889. Nov. 13	1890. May 13	St. Paul, Minn
1	King, W. R.	Lt.Col.	do	1889. May 31	1890. Nov. 13	Willet's Point, N. Y. .
2	Kingman, D. C.	Capt.	do	May 28	Jan. 15	New Orleans, La.
2	Leach, S. S.	Capt.	do	May 16	Jan. 13	Memphis, Tenn
2	Livermore, W. R.	Major.	do	Mar. 7	June 17	Newport, R. I.
1	Lockwood, D. W.	Major.	do	June 15	Dec. 23	Cincinnati, Ohio
2	Ludlow, Wm	Major	do	1888. Dec. 18	1890. Nov. 21	Detroit, Mich
2	Mackenzie, A.	Major.	do	1889. Apr. 16	1890. Jan. 29	Rock Island, Ill.
2	Mahan, F. A.	Capt.	do	Feb. 28	Feb. 22	Buffalo, N. Y.
3	Mansfield, S. M	Lt.Col.	do	Mar. 8	June 17	Boston, Mass
3	Marshall, W. L.	Capt.	do	June 6	Apr. 30	Chicago, Ill
3	Mendell, G. H.	Col	do	1888. Nov. 30	1889. June 10	San Francisco, Cal.
1	Merrill, W. E.	Lt.Col.	do	1889. June 15	Dec. 21	Cincinnati, Ohio
2	Miller, A. M.	Major.	do	Apr. 18	Feb. 11	St. Louis, Mo
1	Overman, L. C.	Major.	do	Mar. 1	Aug. 22	Cleveland, Ohio
1	do	Major.	do	Aug. 23	Nov. 18	do
2	Palfrey, C. F.	Capt.	do	Feb. 27	Feb. 21	Oawego, N. Y.
2	Poe, O. M.	Col	do	1889. Feb. 28	1890. Nov. 21	Detroit, Mich
2	Powell, C. F.	Capt.	do	Apr. 20	Feb. 12	St. Louis, Mo
2	Price, P. M.	Capt.	do	May 30	Jan. 18	Montgomery, Ala.
2	Quinn, J. B.	Major.	do	June 6	May 13	Duluth, Minn.
2	Robert, H. M.	Lt.Col.	do	Apr. 13	Dec. 31	Philadelphia, Pa
1	Rossell, Wm. T.	Capt.	do	May 16	Oct. 5	Memphis, Tenn
2	Ruffner, E. H.	Major.	do	Apr. 16	Jan. 29	Quincy, Ill
3	Smith, J. A.	Lt.Col.	do	June 14	June 12	Portland, Me
2	Stickney, A.	Major.	do	May 16	Dec. 18	Louisville, Ky
2	Suter, C. R.	Lt.Col.	do	1890. Apr. 20	1890. Feb. 12	St. Louis, Mo
1	Symons, T. W.	Capt.	do	Dec. 4	Mar. 25	Portland, Oregon
2	Taber, H. S.	Capt.	do	May 13	Apr. 12	Little Rock, Ark
2	Willard, J. H.	Capt.	do	May 27	Jan. 14	Vicksburg, Miss
1	Wilson, S. M.	Col	do	1889. Apr. 25	1889. Aug. 31	Washington, D. C.
2	Young, W.	Capt.	do	Apr. 10	Dec. 5	Portland, Oregon
1	do	Capt.	do	1890. Dec. 21	1890. Jan. 13	Memphis, Tenn
116	Total					

ORDNANCE

1	Arnold, I.	Major.	Ordnance	1889. June 21	1889. Nov. 27	Monroe, Fort, Va
1	do	Major.	do	1890. Dec. 1	1890. Jan. 21	Columbia, Tenn
1	Ayres, J. C.	Capt.	do	June 16	June 25	Omaha, Nebr
3	Babbitt, L. S.	Major.	do	1889. Apr. 30	1889. Mar. 31	San Antonio Arsenal, Tex.
2	Bryant, C.	Capt.	do	1889. Apr. 13	1889. Dec. 31	Frankfort Arsenal, Pa
2	Butler, J. G.	Capt.	do	1890. Mar. 22	1890. Feb. 12	St. Louis Powder Da- pot, Mo.

during the year ending June 30, 1890—Continued.

MENT—Continued.

Balance last report.	Received since.	Total.	Expended and transferred.	Balance.	How distributed.		
					Subtreasuries.	National banks.	Cash on hand.
-----	\$22,057.52	\$22,057.52	\$14,489.69	\$7,567.83	-----	\$7,567.83	-----
\$9,488.50	53,741.80	63,228.30	58,614.19	6,614.11	\$6,614.11	-----	-----
32,375.85	205,000.00	237,375.85	215,805.60	21,570.25	20,430.28	-----	\$1,139.97
55,276.78	449,185.89	504,462.67	485,542.48	18,920.19	4,818.40	8,986.52	5,115.27
14,047.64	229,031.44	243,079.08	230,178.20	12,900.88	12,690.34	210.54	-----
57,117.20	465,944.76	523,061.96	436,960.60	86,101.36	85,091.09	-----	1,010.27
-----	303,436.06	304,436.06	227,890.58	75,545.48	75,545.48	-----	-----
14,233.26	613,279.27	627,512.53	595,643.33	31,869.20	28,053.47	3,515.73	300.00
19,403.90	383,565.87	402,969.77	353,553.68	49,416.09	18,205.11	31,210.98	-----
23,182.52	234,005.00	257,187.52	236,035.14	21,152.38	21,152.38	-----	-----
41,468.07	330,500.00	371,968.07	360,779.30	11,188.77	11,188.77	-----	-----
3,793.63	254,832.94	258,626.57	201,417.18	57,209.39	57,209.39	-----	-----
38,320.18	437,170.92	475,491.10	397,281.30	78,209.80	63,424.68	11,756.08	3,029.04
44,447.56	220,707.23	265,154.79	238,762.36	26,392.43	26,242.43	-----	150.00
9,066.32	164,150.00	173,216.32	120,281.13	52,965.19	52,935.19	-----	-----
52,908.71	98,842.00	151,750.71	116,424.74	35,325.97	35,325.97	-----	-----
2,903.01	150,872.44	153,775.45	111,580.72	42,194.73	8,723.52	33,471.21	-----
60,987.59	571,047.71	632,035.30	496,692.63	135,342.67	116,681.95	18,660.72	-----
31,869.15	163,832.02	195,701.17	183,937.61	11,763.56	11,763.56	-----	-----
17,592.84	105,348.21	122,941.05	104,803.47	18,637.58	17,979.37	-----	658.21
25,101.96	254,725.75	279,827.71	268,116.15	11,801.56	371.16	11,427.40	-----
47,065.63	329,014.33	376,079.96	229,536.65	46,543.31	46,543.31	-----	-----
83,927.54	197,206.25	281,127.79	184,857.11	96,770.68	45,181.26	36,001.06	15,568.36
20,694.03	100,012.00	120,706.03	123,956.57	5,749.46	293.11	5,466.35	-----
44,543.44	235,523.80	280,067.24	234,842.69	45,724.47	42,661.05	3,063.42	-----
38,885.65	196,875.72	235,761.37	201,126.43	34,634.94	9,308.58	25,326.36	-----
52,967.73	439,475.20	492,442.93	464,785.86	27,657.07	27,657.07	-----	-----
-----	30,620.46	30,620.46	22,058.94	8,561.52	3,513.61	5,047.91	-----
14,317.23	95,563.10	109,880.33	93,810.69	16,069.64	7,227.22	8,842.42	-----
27,651.42	74,263.20	101,914.62	90,884.28	11,080.34	9,990.99	-----	1,179.35
49,113.34	123,815.72	172,929.06	149,488.48	23,440.58	23,440.58	-----	-----
17,500.94	115,501.73	133,002.67	133,002.67	-----	-----	-----	-----
-----	59,666.29	59,666.29	14,711.18	44,955.11	12,650.61	31,159.77	1,114.73
1,829,555.27	13,129,778.93	14,959,334.20	12,979,052.62	*1,980,281.50	1,571,705.06	372,335.61	36,150.83

*Discrepancy of .08.

DEPARTMENT.

\$5,987.89	\$2,993.53	\$8,981.42	\$8,981.42	-----	-----	-----
-----	4,853.09	4,853.09	4,754.52	\$98.52	\$98.52	-----
-----	280.20	280.20	-----	280.20	280.20	-----
2,407.00	16,749.99	19,151.99	17,576.76	1,580.23	1,580.23	-----
5,393.95	178,653.32	184,047.27	151,967.40	32,079.87	\$32,079.87	-----
333.33	6,247.58	6,580.91	4,927.38	1,653.53	1,653.53	-----

Abstract of inspections of money accounts made

ORDNANCE DEPART

Times inspected.	Disbursing officer.	Rank or grade.	Corps.	Period inspected.		Station.
				From—	To—	
3	Clark, C. H	Lieut. Col.....	Ordnance ..	1880. May 14	1890. Mar. 19	Vancouver Bks., Ord. Depot, Wash.
1	Clifford, J. C	Captain	do.....	June 20	1889. Oct. 12	National Armory, Mass.
1	Comly, C	Major	do.....	May 31	1890. Sept. 30	Columbia, Tenn.....
1	do	Major	do.....	Dec. 4	1889. Feb. 10	Indianapolis Arsenal, Ind.
2	Greer, J. E	Captain	do.....	May 28	1889. May 2	New York Arsenal, N. Y.
1	Grealish, M. J	Captain	O. S. K	May 25	1889. Nov. 23	Augusta Arsenal, Ga.
1	do	Captain	do.....	Sept. 9	1890. Jan. 28	Rock Island Arsenal, Ill.
2	Heath, Frank	Captain	Ordnance ..	June 8	1889. Feb. 24	Watervliet Arsenal, N. Y.
2	Kress, J. A	Major	do.....	May 10	1889. June 18	Benicia Arsenal, Cal..
2	Lyon, M. N	Captain	do.....	June 24	1889. Jan. 25	Cheyenne, Wyo.....
1	McGinness, J. R	Major	do.....	May 24	1889. Sept. 9	Rock Island Arsenal, Ill.
2	do	Major	do.....	Dec. 18	1890. Apr. 2	Monroe, Fort, Va.....
3	McNatty, V	Captain	O. S. K	Apr. 26	1889. June 27	Washington, D. C.....
1	McNutt, Ira	Captain	Ordnance ..	Mar. 8	1889. June 30	Watertown Arsenal, Mass.
2	Michaelis, O. E.....	Major	do.....	July 1	1890. Feb. 26	Kennebec Arsenal, Me.
1	Morgan, A. S. M	Captain	O. S. K	June 20	1889. Nov. 25	Allegheny Arsenal, Pa.
2	Phipps, F. H	Major	Ordnance ..	June 1	1890. May 14	U. S. powderdepot, N. J.
3	Pitman, J	Captain	do.....	Feb. 23	1889. May 13	{A. Lincoln, Fort, N. D.}
1	Reilly, J. W	Major	do.....	Nov. 30	1889. Feb. 25	{Snelling, Fort, Minn. }
1	Rexford, W. H	Major	O. S. K	May 14	1889. Sept. 17	Indianapolis Arsenal, Ind.
2	do	Major	do.....	Dec. 31	1890. June 5	Nat'l Armory, Mass...
3	Varney, A. L	Captain	Ordnance ..	July 1	1889. June 17	Watertown Arsenal, Mass.
1	do	Captain	do.....	1890. May 20	1889. June 12	Kennebec Arsenal, Me.
2	Whipple, C. W	Captain	do.....	1889. Aug. 8	1889. Apr. 7	Leavenworth, Fort, Kans.
51	Total					

MISCEL

2	Coppinger, J. J	Lt. Col. and S. R. S.	18th Inf.....	1889. June 5	1890. May 3	New York, N. Y
3	Craig, Robert	Capt. and D. O. S. S.	A. Q. M	Apr. 30	June 24	Washington, D. C.....
3	Greene, Frank	Lieutenant ...	Sig. Corps...	Aug. 1	June 21	Prescott, Ariz. (U. S. M. telegraph).
3	do	Lieutenant	do.....	Aug. 1	June 21	Prescott, Ariz. (Com. telegraph).
4	Pope, J. W	Captain and Comdt.	A. Q. M	June 8	June 30	U. S. Mil. Prison, Kans.
2	Williams, C. W	Captain and D. O. M. A.	do.....	June 6	Feb. 20	West Point, N. Y
17	Total					

during the year ending June 30, 1890—Continued.

MENT—Continued.

Balance last report.	Received since.	Total.	Expended and transferred.	Balance.	How distributed.		
					Subtreasuries.	National banks.	Cash on hand.
-----	\$1,378.85	\$1,378.85	\$1,224.15	\$154.70	-----	\$154.70	-----
\$109,961.65	111,835.97	221,797.62	183,641.30	38,156.32	\$37,464.57	-----	\$691.75
2,214.05	3,124.35	5,338.40	3,393.86	1,944.54	-----	1,944.54	-----
-----	1,634.42	1,634.42	764.47	869.95	-----	869.95	-----
18,933.70	73,774.82	92,708.52	70,880.69	21,827.83	21,837.83	-----	-----
5,123.75	14,773.18	19,896.93	9,663.28	10,233.65	10,233.65	-----	-----
16,695.68	161,980.55	178,676.23	159,406.17	19,270.06	2,191.07	17,078.99	-----
27,818.33	451,649.22	479,467.55	389,455.52	90,012.03	69,078.54	20,933.49	-----
16,043.88	47,997.08	64,040.96	60,442.72	3,598.24	3,591.74	-----	6.50
12.00	1,161.50	1,173.50	1,160.00	13.50	-----	13.50	-----
56,323.88	65,406.78	121,730.66	105,034.98	16,695.65	7,643.18	9,047.50	-----
-----	3,974.04	3,974.04	3,495.71	478.33	478.33	-----	-----
1,458.66	19,928.05	21,386.71	20,082.27	-1,304.44	1,303.91	-----	.53
15,445.07	31,415.27	46,860.34	46,860.34	-----	-----	-----	-----
-----	234.43	2,684.78	2,919.21	2,012.47	906.74	531.74	375.00
1,292.50	3,000.00	4,292.50	3,609.37	683.13	-----	683.13	-----
3,276.72	37,991.79	41,268.51	21,843.91	19,424.60	19,424.60	-----	-----
196.70	1,560.68	1,757.28	1,556.18	201.10	-----	201.10	-----
-----	16,197.26	16,197.26	5,597.74	10,599.52	10,599.52	-----	-----
963.31	1,998.00	2,966.31	2,348.25	618.06	-----	618.06	-----
-----	326,182.65	326,182.65	231,223.43	94,959.22	94,959.22	-----	-----
-----	193,360.64	193,360.64	166,601.77	26,758.87	26,660.57	-----	98.30
-----	1,744.38	1,744.38	260.42	1,483.96	-----	1,483.96	-----
-----	154.28	154.28	154.28	-----	-----	-----	-----
290,121.48	1,784,686.15	2,074,807.63	1,678,920.81	395,886.82	339,195.13	55,519.61	1,172.08

LANEOUS.

\$2,063.36	\$90,871.98	\$92,935.34	\$90,144.01	\$2,791.33	\$2,791.33	-----	-----
47,751.77	585,386.55	633,138.32	561,920.14	71,218.18	71,218.18	-----	-----
-----	1,024.75	1,024.75	834.50	190.25	-----	-----	*\$190.25
-----	2,445.21	2,445.21	1,851.72	593.49	-----	-----	593.49
7,018.60	97,227.88	104,246.48	97,922.72	6,323.76	-----	\$6,323.76	-----
27,467.72	68,581.96	96,049.68	71,806.26	24,243.42	24,234.32	-----	9.10
84,301.45	645,538.33	929,839.78	824,479.35	105,360.43	98,243.83	6,323.76	792.84

* In transit.

Abstract of inspections of money accounts made

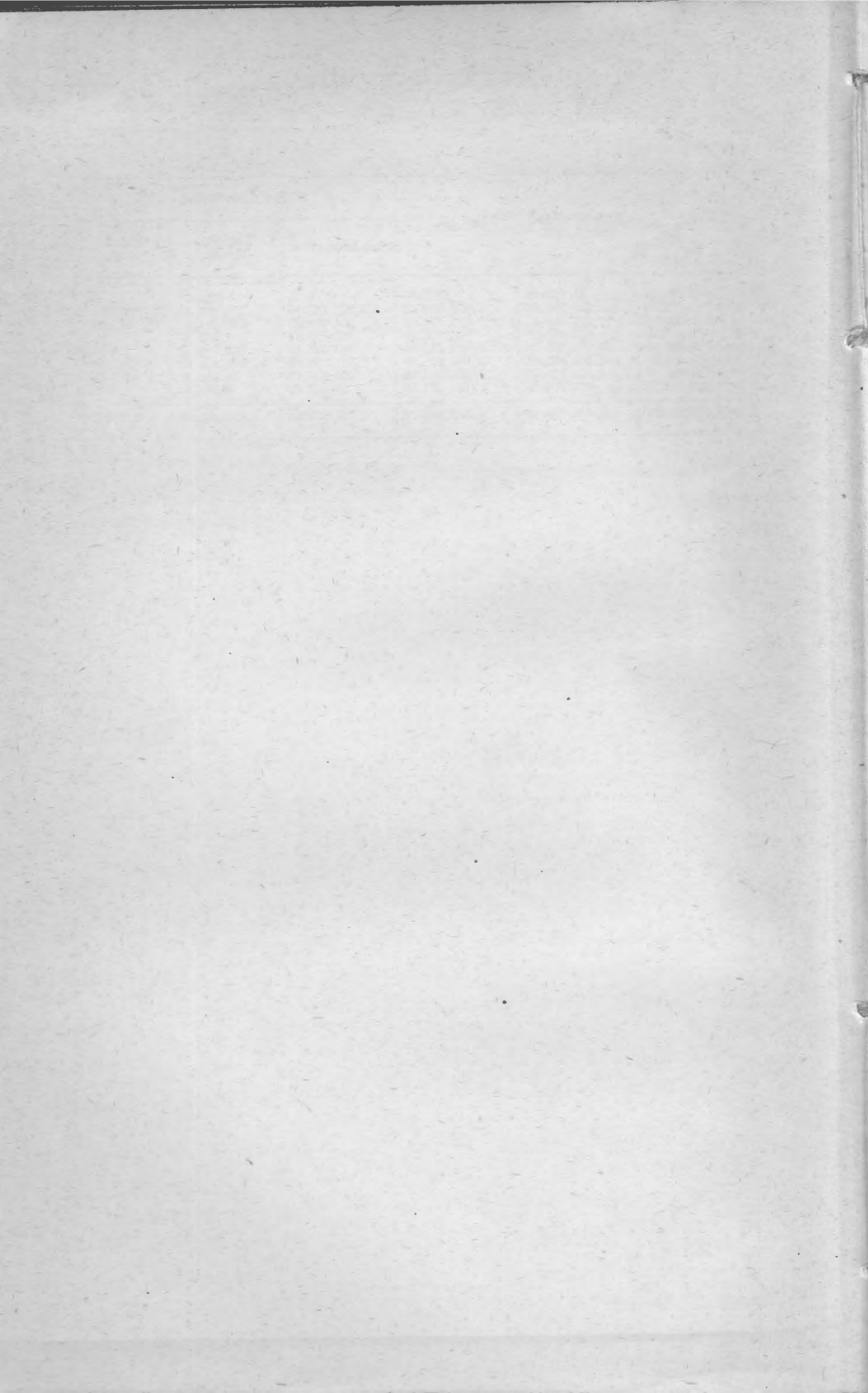
RECAPIT

Departments.	Number of inspections.	Balance last report.	Received since.
Adjutant-General's	24	\$628. 13	\$1, 751. 30
Quartermaster-General's.....	426	1, 488, 567. 05	13, 903, 248. 50
Commissary-General's	351	235, 057. 63	2, 585, 985. 64
Surgeon-General's	10	67, 838. 47	413, 175. 25
Paymaster-General's.....	93	1, 052, 013. 17	19, 947, 433. 51
Engineer.....	116	1, 829, 555. 27	13, 129, 778. 93
Ordnance.....	51	290, 121. 48	1, 784, 686. 15
Miscellaneous.....	17	84, 301. 45	845, 538. 33
Total.....	1, 088	5, 048, 082. 65	52, 611, 548. 61

during the year ending June 30, 1890—Continued.

ULATION.

Total.	Expended and transferred.	Balance.	How distributed.		
			Sub-treasuries.	National banks.	Cash on hand.
\$2,379.43	\$1,804.62	\$574.81	\$119.21	\$455.60	-----
15,391,815.55	13,759,840.95	1,631,974.57	1,251,432.53	374,755.80	\$5,786.24
2,820,993.27	2,377,626.58	443,366.69	218,612.20	188,291.92	36,460.82
481,013.72	416,927.77	64,085.95	62,225.81	1,860.14	-----
29,999,446.68	19,761,965.74	1,137,475.94	867,027.49	340,618.92	1,484.43
14,959,334.20	12,979,052.62	1,980,281.50	1,571,795.06	372,335.61	36,150.83
2,074,807.63	1,078,920.81	395,886.82	339,195.13	55,519.61	1,172.08
929,839.78	824,479.35	105,360.43	98,243.83	6,323.76	792.84
57,659,630.26	51,800,618.44	5,859,006.71	4,408,651.26	1,340,161.36	81,847.24



REPORT OF THE ACTING JUDGE-ADVOCATE-GENERAL.



R E P O R T

OF

THE ACTING JUDGE-ADVOCATE-GENERAL.

WAR DEPARTMENT,
 JUDGE-ADVOCATE-GENERAL'S OFFICE,
 Washington, D. C., October 20, 1890.

Hon. REDFIELD PROCTOR,
Secretary of War.

SIR: I have the honor to submit my report for the year ending September 30, 1890.

Commissioned officers tried by general courts-martial:		
Records reported upon and submitted to the Secretary of War for action of the President		
Records received, revised, and recorded not requiring the action of the President (convicted, 5; acquitted, 2).....	7	
Cadets of the United States Military Academy tried by general court-martial:		
Records reported upon and submitted to the Secretary of War.....		3
Records received, revised, and recorded not requiring further action (convicted, 5)		5
Enlisted men tried by general courts-martial.....		1,748
Military convicts tried by general courts-martial (convicted, 12; acquitted, 1).....		13
Total tried by general courts-martial		1,762

Statement of the number of trials by general courts-martial for the last eleven years.

Year ending September 30—	Strength of the Army June 30.	Trials by general courts-martial.	Year ending September 30—	Strength of the Army June 30.	Trials by general courts-martial.
1880	26,474	1,543	1886	26,254	1,983
1881	25,737	1,792	1887	26,540	1,640
1882	25,647	1,850	1888	26,881	1,730
1883	25,562	1,985	1889	27,519	1,999
1884	26,424	2,280	1890	27,105	1,782
1885	26,898	2,328			

Showing a decrease this year as compared with last year of two hundred and seventeen cases.

Records of courts of inquiry received, etc.....	2
Reports made upon proceedings of courts-martial	118
Reports made upon petitions for clemency	1,218
Reports made upon cases of excessive sentence	100
Reports made upon cases referred by the record and pension division.....	185
Reports made upon miscellaneous subjects	305
Legal papers examined and reported upon	173
Legal papers prepared	234
Miscellaneous letters and indorsements written.....	1,100

Official applications from the War and Treasury Departments and Pension Office for abstracts of proceedings of trials answered	518
Copies of records of proceedings of general courts-martial furnished	216
Of these, 188 copies, containing 4,992 pages, were furnished to the parties tried, and 28 copies, containing 832 pages, were furnished to the Pension Office and other executive offices and departments; total pages	5,824

Number of convictions of various offences taken from the records of general courts-martial received at this office during the past year:

Absence without leave	380
Allowing prisoner to escape	15
Assault and battery	146
Assault with intent to kill	3
Breach of arrest	17
Desertion	346
Disobedience of orders	112
Disrespect to superior officer	48
Drunkenness	223
Drunkenness on duty	200
Embezzlement, etc	27
Failure to attend drill, roll-call, etc	127
False swearing	5
Forgery	2
Larceny	77
Malingering	3
Manslaughter	1
Mayhem	2
Mutiny and mutinous conduct	1
Neglect of duty	67
Offering violence to superior officer	3
Quitting guard or post as sentinel	110
Selling, losing, or wasting Government property	108
Sleeping on post	47
Conduct unbecoming an officer and a gentleman (not included under previous heads)	7
Disorders, etc., charged as "conduct to the prejudice of good order and military discipline" (not included under previous heads)	890
Miscellaneous offences (not included under any previous head)	14

The number of records of garrison and regimental courts-martial which have been received and filed in the divisions and departments in which the courts were held is as follows:

Division of the Atlantic	1,768
Division of the Missouri	6
Department of the Missouri	1,633
Department of the Platte	1,677
Department of Dakota	1,305
Department of Texas	1,054
Department of California	755
Department of Arizona	1,535
Department of the Columbia	797
Courts-martial convened by commanders of corps under the eighty-first article of war	1,044
Total	11,574

Total cases tried by general and inferior courts-martial during the year ending September 30, 1890	13,356
Cases tried last year	13,580

Decrease as compared with last year:

Cases tried by general courts	217
Cases tried by inferior courts	7

Total decrease

224

The number of trials by the inferior courts-martial resulting in acquittal were 302, while 8,094 represents the number of different enlisted men tried, many having been tried more than once.

Upon an examination of the records of the proceedings of general courts-martial received at this office during the twelve months ending September 30, 1890, I find that in 221 cases of desertion (of the 346 tried and resulting in conviction) the prisoners, either in the evidence for the defence or their statements, assigned reasons for their desertion. They are as follows:

Drink (often accompanied by the statement that the absentee was afraid to return or was not responsible for his actions)	83
Drink and influenced by others	9
Drink and other causes (such as domestic trouble, inexperience, depression, fear of the civil authorities, sickness, labor, dissatisfaction, debts, and trouble with non-commissioned officers)	4
Persuaded by others	9
Unable to support wife, mother, etc.	7
Sick wife or mother	4
Other domestic affairs	4
Ill-treatment by the first sergeant	10
Abuse by non-commissioned officers	8
Ill-treatment by officers	4
Persecution in the company	3
Trouble with soldiers or civilians	6
Absent without leave and afraid to return	3
Detained over pass by the civil authorities and afraid to return	1
Fear of court-martial or arrest by civil authorities	6
Discontent	15
Alleged pledges broken	1
Improperly cooked or insufficient food	1
Sickness of the soldier	15
Mental disorder	4
Inability to do duty through incapacity, ignorance, or unfamiliarity with English	5
Hard work	8
Escape from guard-house	3
Miscellaneous	8
Total	221

The reforms which have this year been effected in the military administration mark it as one of the most memorable in the history of the Army. Perhaps at no time before have the interests of the enlisted man been so closely studied. The legislative and executive departments of the Government have zealously worked together to improve his condition and promote his welfare. The measures which have been adopted toward this end are many and of great importance, yet when hereafter we shall come to weigh and estimate the value of their results I feel sure that the act of Congress recently passed, which provides for the limitation of military punishment, will be found to be one of the most beneficial. This act gives to the President the power to fix the maximum limit of punishment wherever under the Articles of War the punishment is now left to the discretion of the court-martial.

For the lack of such legislation we have for some time been working under what in truth has been only a make-shift policy. From year to year it has become more and more apparent that reform in the system of military punishment is necessary. The disparity of punishment as administered in different military geographical departments and by different courts-martial in the same department, and the excessive severity which characterized much of it, attracted attention, and finally led to the adoption of what has grown to be an actual system—the equalization and adaptation of military punishment to offences by means of the pardoning power. From one point of view this is an abuse of that power, and the system is defensible, I think, only on the ground of its necessity. That it has had good results is manifest to me. I plainly see the evidence of it in the milder measure of punishment which has been,

slowly, indeed, but surely, gaining ground in the Army. Satisfactory as this is, it is, however, not sufficient. A more radical change is necessary—one not based on the misuse of the pardoning power, but upon the essential quality of military punishment—*certainly*. I refer to this because there are indications of its being lost sight of, while undue weight is given to the reformation of the offender. It is of course desirable that what can be done towards reforming the military criminal shall be done, but the true theory of military punishment is to be found in its exemplary and not its reformatory character. The discipline of the Army is pre-eminently its object; the reformation of the individual convict is, as far as the interests of the Army are concerned, a matter at best of secondary importance. And in order that military punishment shall be fully effective for its legitimate purpose it must be *certain*. Under the system which has been in force this has not been possible, but it will be under the new legislation. The needed relief has come, and I feel sure that in the near future will be found proof of the wisdom of the measure which Congress has authorized.

One other measure which has made notable the legislation respecting the Army of the session of Congress just closed is that which prescribes the limit within which prosecution for desertion must be brought.

Legislation was necessary because of the conflicting views of the law on the subject, and of the very strong feeling which had grown up that if the one hundred and third article of war did not fix a limit for such trials it should be amended so that a man who had once erred might not during his whole life have a criminal responsibility hanging over him. The War Department had twice expressly so construed the article of war that the deserter was practically not benefited by it, but the correctness of this construction was vehemently disputed. This uncertainty has now been removed and with it the quite prevalent feeling that in adhering to the old construction injustice was being done.

So far as the modification of the military penal code is concerned we have now all the legislation that is necessary, but there are still some of the articles of war which need amendment. I have in previous reports alluded to these and shall here refer to but two of them and that briefly.

The ninety-first article of war requires that depositions which are to be used in evidence before courts-martial shall be "duly authenticated," implying that they shall be sworn to before some person competent to administer oaths for such purpose. But the Articles of War do not designate the classes of officers before whom the oath may be taken. It is important that this should be done, because there can be no perjury where the oath, in regard to which the perjury is charged, is taken before an officer not having such authority, and it is very necessary that testimony before courts-martial should be given under the sanction of liability to punishment for false swearing. The civil officers who may now administer oaths for this purpose are often beyond reach, and it would both facilitate the administration of military justice and save unnecessary expense were a certain class of military officers thus empowered. It would be a sufficient and simple remedy if the judge-advocates of all courts-martial were authorized to administer oaths in the taking of depositions to be used before *any* military court.

The only other amendment of the Articles of War which I wish here to suggest is one discussed in my report for 1887, from which the following extract is taken:

"In the present condition of the law, to procure the testimony of a civilian before a court-martial may sometimes be impossible. In an opinion of this office dated

August 27, 1885, it was held that, in the absence of legislation to that effect, a court-martial had no power to punish for contempt a civilian, who, having been summoned as a witness, and having appeared, refused to testify. An opinion to the same effect was afterwards given by the Department of Justice, and the War Department has accepted these opinions as correct. This, however, leaves the court-martial in a very helpless condition, one which is likely sometimes to lead to an entire failure of justice.

Article 126 of the British army act provides as follows:

'126. (1) Where any person who is not subject to military law commits any of the following offenses, that is to say:

'(a) On being duly summoned as a witness before a court-martial, and after payment or tender of the reasonable expenses of his attendance, makes default in attending; or

'(b) Being in attendance as a witness—

'(i) Refuses to take an oath legally required by a court-martial to be taken; or

'(ii) Refuses to produce any document in his power or control legally required by a court-martial to be produced by him; or

'(iii) Refuses to answer any question to which a court-martial may legally require an answer,

'The president of the court-martial may certify the offence of such person under his hand to any court of law in the part of Her Majesty's dominions where the offence is committed which has power to punish witnesses, if guilty of like offences in that court, and that court may thereupon inquire into such alleged offence, and after examination of any witnesses that may be produced against or for the person so accused; and after hearing any statement that may be offered in defence, if it seem just, punish such witness in like manner as if he had committed such offence in a proceeding in that court.'

In this country there is no appeal from a military to a civil court, and no such proceeding as carrying a contempt of the orders of the former before the latter for punishment. If there were, it would probably not accomplish its object, as our courts-martial often sit at too great distances from any civil courts to make this a practical solution of the difficulty. It would, in my opinion, therefore, be best to intrust this power to the court-martial itself.

In the articles for the government of the Navy, this is provided for, Article 42 of that code being as follows:

'ART. 42. Whenever any person refuses to give his evidence, or to give it in the manner provided by these articles, or prevaricates, or behaves with contempt to the court, it shall be lawful for the court to imprison him for any time not exceeding two months.'

There is one other matter affecting the administration of military justice to which I beg to invite attention. By statute relating exclusively to the military convicts imprisoned at the Leavenworth Military Prison these convicts are made liable to trial by court-martial for offences committed by them in violation of the Articles of War. At Alcatraz Island, California, we have also a large number of military convicts, who, however, because of their discharge from the military service and the absence of a law rendering them amenable to military justice, can not be so tried. There seems to me to be just as much reason why the latter should be subject to trial as the former, and it is, therefore, in my opinion, desirable to extend to all convicts the provision of law now applying only to the convicts confined in the Leavenworth Military Prison.

The appearance of professional lawyers as counsel for the accused in court-martial trials is now not of uncommon occurrence. This, taken in connection with the fact that many important cases are stenographically reported, has thrown an amount of responsibility upon the judge-advocate of the court-martial for which it is out of the question that he should be prepared without a training in law. Unless so fitted for his work he can not properly protect the interests of the United States, and it is very likely that there will be a failure of justice. It is therefore of the greatest importance that there should be in all the military departments officers thus qualified. It is a qualification which we certainly should have the right to expect of the judge-advocate of the department, who is placed at the headquarters of the department in order

that he may, by his knowledge of law, assist the commander of the department in taking care of the various interests of the United States.

Under the act of Congress of July 5, 1884, reorganizing the Judge-Advocate-General's Department, the Secretary of War is authorized to detail such number of officers of the line as he may deem necessary to serve as acting judge-advocates of departments, and, the Judge-Advocate-General's Department not being able to supply a sufficient number of officers, six line officers have been detailed for this purpose. But, these are details only, and temporary in their character, and it would be unreasonable to require from officers occupying such positions the same interest in, and devotion to, their temporary duty that we would expect to find in those to whom such duty is their profession. And yet, without such interest and zeal there can not be that preparation which is necessary to fit the officer for the care of the public business intrusted to him. So that these places should not be filled by detail at all, but the Judge-Advocate-General's Department should be sufficiently enlarged to admit of the assignment to the headquarters of each department of an officer of the corps. Qualification for this office is necessary, and it is a qualification which can only be acquired by many years of experience and faithful study, and the value of the officer who has attained it would not, in my opinion, be overestimated were he given the rank of major. Nevertheless, it is of such great importance that the corps should be enlarged that the question of rank—whether newly created offices should have that of major or that of captain—should not be allowed to stand in the way. One thing is, however, absolutely necessary, and that is that in the event of any new legislation affecting the Judge-Advocate-General's Department it should be protected against the transfer to it, from other corps, of officers who are not qualified as judge-advocates. The Judge-Advocate-General's Department is a small corps and such a measure would be ruinous to it.

We need efficient judge-advocates at the headquarters of departments, and we ought to supply them with the necessary tools of their trade—books. I believe that public law libraries are not regularly accessible to these headquarters, and under any circumstances the judge-advocate needs his own working law library. As yet very little has been done toward giving him one, and that little in no systematic way. It is absolutely necessary, however, that he should have at hand a good selection of these able assistants, and I hope that a way may be found of furnishing them. One consideration alone would justify a reasonable expenditure for this purpose, and that is that the advice of the judge-advocate is to a considerable extent relied on in matters affecting property interests of the United States, and it is surely no extravagance to give him in this the assistance of a small collection of reliable works of law. But, upon his advice also are determined questions relating to rights of personal liberty, and justice demands that he shall have constantly with him some of the well-recognized guides to the doing of justice.

Owing to the insufficient clerical force of this office some of its work is much in arrear. In order to meet the most urgent demands upon it, I have been compelled entirely to discontinue all record of its work except such as is contained in the letter-press book. Transcribing from this book to the cards now used is with the present force impossible. I, however, only mention this to show that no time is lost in recording. So pressing have been the demands on the time of the few clerks of this office that, much as it is needed, there has not yet been

found the occasion when a single clerk could be spared from the work on which he was engaged in order to complete a much-needed index. But, notwithstanding every exertion, there is certain work which the law requires to be done, but which can not be done without serious and, to the persons intended to be benefited, grievous delays. To remedy this embarrassing condition of affairs I last year asked for two new clerks. Congress granted an increase of one; but this, although a great help, will not be sufficient, and I earnestly hope that Congress may at its next session see fit to provide for the one additional clerk asked for in estimates recently submitted.

Very respectfully, your obedient servant,

G. NORMAN LIEBER,
Acting Judge-Advocate-General.

Extract from report of Maj. Edward Hunter, judge-advocate, U. S. Army, judge-advocate Department of California.

* * * * *

I recommend that the provisions of paragraph 1018, Army Regulations, be limited to the previous trials and convictions by general courts-martial. The uses of the permission, as it now stands, are in some cases to forfeit the manhood and service and make a convict of a soldier upon a simple charge like that of "absence without leave," supported by a few previous convictions of petty offenses by garrison courts-martial.

Military law is a means requisite to an end, and in time of peace that end may generally be attained by a mild and temperate exercise of its powers and penalties, and I am not willing to believe that the true purpose of the regulation referred to is simply to furnish a means of ridding the service of undesirable men.

In respect to imprisonment for the crime of desertion the limit of confinement should be fixed by law and not left to the discretion of the court-martial.

With this provision, the occasions for the exercise of clemency after the punishment had been properly confirmed would be rarer than they now are, and the quiet of the prisoners promoted, who, under the variable system now in vogue, as soon as they are at Alcatraz, commence to petition for some exercise in their favor of the power of pardon. "Certainty," says a great authority, "is the mother and nurse of repose and quietness."

I earnestly recommend that each judge-advocate serving at military headquarters be provided with a civilian clerk.

Extract from report of Capt. S. W. Groesbeck, acting judge-advocate, Department of Dakota.

* * * * *

The following table affords comparisons as to average enlisted strength of the department and number and percentage of trials for the years stated:

Year ending September 30—	Average enlisted strength.	Trials by court-martial.		Percentage of trials.	
		General.	Garrison.	General.	Garrison.
1887.....	3,926	209	1,805	5.32	45.97
1888.....	3,697	178	2,132	4.84	57.69
1889.....	4,087	212	1,892	5.18	46.19
1890.....	3,962	211	1,305	5.32	32.93

The marked and very gratifying falling of in the percentage of trials by garrison courts-martial is believed to be almost wholly due to the better regulation of the use of stimulants and the more attractive home life provided by the post canteen, which is now quite generally in operation in this department.

DESERTIONS.

The number of desertions for the year ending June 30, 1890, and percentage of loss from this cause with comparisons with three previous years are given below :

Table A.

Year.	Average enlisted strength.	Number of desertions.	Percentage of loss.	Percentage of increase.
1887.....	3,968	339	8.54	-----
1888.....	3,704	364	9.82	1.53
1889.....	4,062	475	11.69	1.87
1890.....	4,094	478	11.67	*.02

* Decrease.

Regarding the much-discussed cause of increase of desertion recently, the reports of this office for the past three years show conclusively that it has been almost wholly due to the extension of the railway system throughout the West. A new illustration of this fact is found this year in the percentage of desertions from Fort Custer, which is only 3.17, as against 22.60 at Fort Assiniboine, and 19 at Fort Keogh. Of the desertions from Fort Assiniboine but two were apprehended, and from Fort Keogh but one, while from Fort Custer, 33 miles distant from the railroad, four, or nearly one-third of the deserters from this post, were apprehended in the act. It needs no prophet to foretell that as soon as the railroad runs as conveniently near Fort Custer as it does to Forts Assiniboine and Keogh, that the desertions from the former post will increase very quickly to 13 or 18 per cent. In 1887 the percentage of loss from desertions at Fort Assiniboine, then without a railroad, was 3.72. The following year the railroad reached that post and the percentage jumped to 17.74. The effect of the extension of the railroads to the near vicinity of all the posts in this department has been given in former reports from this office, and from the facts observed, the following forecast was ventured in last year's report: "It is probable the maximum rate of desertion has been reached." The accuracy of this forecast is shown by the foregoing table. The desertions for the year ending June 30, 1889, reached 11.69 per cent., and for the year ending June 30, 1890, 11.67 per cent., showing a slight decrease, the first for many years.

For this department, at least, the cause of increase of desertion has, it is confidently believed, been traced to its true source.

The effect of recent legislation and of the more attractive social life afforded by the canteen will, it is believed, reduce somewhat the ratio of desertions for the current year. In this department the number of desertions occurring between the third and fourth years of enlistment during the year ending June 30, 1890, was but thirteen or not quite 2.72 per cent. of the whole number, while for the same period two hundred and seventy-seven deserted during the first year of service, or 57.53 per cent. It would seem, therefore, that the right to purchase a discharge under the present rule of three years' service will not operate to materially decrease desertion. The three-year rule applies to men who rarely desert, and none of whom do so for trifling causes.

Why do men desert? Chiefly because the ratio of apprehensions to desertions (less than 4 per cent. in this department) is so insignificant that but little more inconvenience attends the act than is to be apprehended from quitting one good "job" to go in search of a better. No effort, practically speaking, is made to apprehend them and the impression deepens that even the authorities do not regard desertion as serious offense. The way is invitingly open, why then should not the young soldier indulge their love of change and the pursuit of fortune the same as the communit from which they are enlisted?

THE REMEDY.

First, in importance, is to make earnest sustained efforts to apprehend deserters. To this end post commanders should be authorized to send officers in instant pursuit; their orders should carry mileage and they should be required to seek the assistants by telegraph of civil officers at all probable points of capture.

Second, some method of identification of deserters and dishonorably discharged men should be devised so as to make it practicable for recruiting officers to detect them. Is there really insuperable objection to making a simple and honorable mark by tattooing them, a condition of enlistment? Let this be done, and tattoo in like manner all the enlisted men now in service who will volunteer to accept this badg

of the service, and a marked falling off in the ratio of desertion will begin to be apparent.

The officers of the Army can be relied upon to lead the way by willing and cheerful example. The idea that men must be coddled and coaxed to stay in the service will not make soldiers worth the having. In the service "offence must needs come," and when it does, the soldier should be so taught to respect the law, and to apprehend punishment for its violation, that desertion will not at once occur to him: as a safe and justifiable remedy for every ill.

Extract from report of Capt. William E. Birkhimer, acting judge-advocate, Department of the Columbia.

The administration of justice by courts-martial has been satisfactory. Of necessity it has dealt largely with enlisted soldiers. And, as they have no representative on the courts, it is conducive to contentment that they have deeply impressed upon their minds the fact that every effort is made to fairly mete out justice. By becoming soldiers, they have not ceased to be men with a proper sense of right and wrong implanted in their breasts.

With this object in view, the practice has been uniformly adhered to of appointing general courts-martial with the full number of members, thirteen, allowed by law. This, under the firm conviction that not only does it conform to the law in spirit, but also that it is in the interests of good order and military discipline. Thus, so far as practicable is the impartiality of courts-martial trials raised above suspicion; and not only that, but those subject thereto can see for themselves that they are so. Whatever the result, all parties concerned have the satisfaction of knowing that no means provided by law have been spared to secure a righteous verdict. In any judicial system, these are weighty considerations. In the Army they lead to mutual confidence between the commander and the commanded—the firmest foundation of cheerful subordination and unvarying discipline.

A learned commentator has truthfully remarked, that trial by jury has ever been the glory of the English law; and he observes that it is the most transcendent privilege which any subject can enjoy or wish for; that, except through the instrumentality of a jury, he can not be affected in either his property, his liberty, or his person. This deserved eulogium is equally true of the Army system of judicature, built upon the common law jury system, and inherited by the United States Army from its prototype, the army of Great Britain. Originally courts-martial in our service could not be composed of less than thirteen members. The first inroad upon this principle with us sprang from inexorable necessity. It was during the government under the Confederation, when the Army of the Revolution had been disbanded, and our few troops were thinly distributed over vast Indian frontiers, that the resolve of Congress of May 31, 1786, authorized the assembling of general courts-martial, composed of members varying in number from five to thirteen inclusively. It has been decided, indeed, that the officer convening general courts-martial has, within the limitations provided by law, discretionary authority as to the number of members which shall compose them. Yet, considering the circumstances which gave rise to the practice of assembling courts of thirteen numbers, and also those which deprived soldiers of the right of trial by such courts, it would seem that this privilege should be granted them on every occasion, unless the interests of the service would be manifestly prejudiced thereby. Believing that these views are in consonance with correct principles, the practice of this department has been in accordance therewith.

Taken in connection with what precedes, it is believed that the practice of prompt trials is of great importance. Let the interval between the commission of the offence and the trial of the offender, be the briefest compatible with other public interests. It has been well said, that "oppression does not always result from the ill-nature, but sometimes from the mere inattention of government." But the truth of the observation should not find illustration in the military service. That justice is capable of being so much more summarily dealt out by military courts, is the grand distinctive feature which distinguishes the military from the civil system of jurisprudence. In the Army facilities for prompt judicial action are furnished, and are considered a necessity. There, more than elsewhere, it is attended by most salutary results; it is in truth essential to a proper state of discipline. It does not suffice that justice be administered; the object of it should be able to appreciate the fact that it is administered. Unnecessary delay in bringing offenders to trial is oppression; it adds in a questionable manner to the punishment of the guilty, and imposes injustice upon those who are found to be innocent.

Being temporarily on duty in the judge-advocate's department, I have felt a delicacy in giving expression to views long entertained that its present organization is not that which best comports with public interests. As, however, the Acting Judge-

Advocate-General in his last annual report called attention to the matter, I no longer hesitate to speak. The views that officer therein expressed, regarding inequality of rank of officers in that department, compared with others, and for which no good reason can be assigned, and the desirability of placing judge-advocates on an equal footing with the chiefs of other staff bureaus at various headquarters, have been present to my mind ever since I have become acquainted with the facts bearing upon the merits of the case. The Engineer and Ordnance Departments are not properly staff corps, but special arms of service. It is the policy of those departments to give their ranking officers responsible special works or duties in their respective branches of service, and this leaves, as a rule, only officers of lower grades for duty at the various military headquarters. With staff corps proper, however, of which the judge-advocate is one, this policy is not pursued. There is no room for it. These latter corps have no duties, properly speaking, except at military headquarters, including the War Department. That is what they are organized for; and there is where their personnel is to be found. And it is a fact that, omitting the Ordnance and Engineers, which for reasons just given belong in another category, at all the headquarters is there to-day assigned but one officer below the rank of major as chief of a staff bureau, except the judge-advocate's, in which, at six of the military geographical departments, they have the rank of captain. There is nothing in the character of the duties, attainments, and responsibilities of judge-advocates, as compared with those of other staff officers, to justify this discrimination.

It has been said by a distinguished commander in our service that court-martial duty is the most important which officers are called upon to perform. Granting this, no reasonable effort should be spared to have that duty well performed. And nothing would so certainly assure this as a properly organized and thoroughly trained corps of judge-advocates, whose members, to be fit for the duties, must be both soldiers and lawyers. Soldiers, because in the language of the Supreme Court of the United States, "Of questions not depending upon the construction of the statutes, but upon unwritten military law or usage, within the jurisdiction of courts-martial military officers, from their training and experience in the service, are more competent judges than the courts of common law;" and lawyers, because it is necessary that judge-advocates understand how, amidst the multifarious exigencies of service, to adapt the law of the land to the military system. Certainly no candid person familiar with the facts will fail to acknowledge the great influence for good upon the discipline and welfare otherwise of an army of such a corps of officers.

A department whose officers so nearly and constantly deal with disciplinary matters, and legal questions affecting the army as does the judge-advocate's can not be too carefully organized, its personnel too carefully selected with a view to a creditable discharge of their important duties. There is no other department which, more than this, will be detrimental to the service if these considerations be not attended to; and none which, if they receive the attention they deserve, will prove of greater utility to, or reflect more honor on, the military service.

It is believed that a change could beneficially be made in the principle upon which clerks are secured officers of the judge-advocate's department. At present they are assigned to that duty from the general service. The officers to whom they are assigned have not always a choice regarding who their clerks shall be. This of itself may prove to be very objectionable. Moreover, when a clerk has become really efficient, and a valuable assistant to the judge-advocate, he may be taken away without warning or the officer being consulted, and another and perhaps undesirable person assigned in his stead. It is submitted that this is all wrong. Some of the staff departments, notably the quartermaster's, the commissary's, and the paymaster's, appreciate this fact; and as a result, every officer in those departments has his clerk, and does not depend in this important particular upon the favor, or perhaps disfavor, of him whose function it is now to detail men for the purpose indicated. Of one thing certainty can be predicated, namely, that as a rule, the person, whoever he be, whose duty it is to assign clerks and take them away again, will sedulously guard the interests and convenience of his own department. That is human nature. To expect otherwise would be idle speculation leading to disappointment. Now there is no reason why the judge-advocate's department should occupy this position. On the contrary, there is every reason why it should be rendered independent of officials of other departments, in this as well as other respects. If to make an acceptable judge-advocate requires much in the way of attainments of various kinds, so to make a good clerk in that department equally demands corresponding attainments. A mere copyist does not suffice. To be really efficient he must use his brains as well as his pen. He should be a man with a taste for legal matters; one who is willing to study, think, and so be a helpmate to his chief. To fill acceptably that position demands a course of preparation as painstaking as to become an electrician, chemist, successful experimenter in philosophy, or other practical scientist.

This may seem strong language, but it is believed to be absolutely true; confirmed by observation, reflection, experience. And the reason appears from a slight consider-

ation of the facts. Are his duties merely routine? By no means. The questions he must help to deal with are those affecting the legal status, rights and duties of members of the military community; and often the relation of these to the civil community. The results may be important and far-reaching. Therefore, all who are in any way connected with determining them should be well fitted for their duties. Let a mistake be made, who can tell how grave the consequences may be. This, because the questions dealt with are legal; the effects of errors made are prejudicial to discipline, deleterious to the service in many ways, and often impracticable to remedy without infinite trouble, if indeed they can be at all. Therefore, it is that a clerk in an office where such questions are acted on should be a person well qualified for dealing with them; and this can only be secured through natural aptitude, careful study, attention for a reasonable time to the duties devolving upon him, and permanency in his position. It is not meant that he shall relieve the judge-advocate of his duties; only that he shall be a competent assistant; for, how careful soever the officer may be, let him scan everything, yet small but important matters will escape him. Two pairs of eyes in such cases are twice as good as one. To hold otherwise would be to claim infallibility for the officer, to which it is likely he approaches the least who has the most confidence. For these reasons and many others which might be mentioned, it is believed that a clerk should be secured by law to every judge-advocate or acting judge-advocate; that his tenure of office should be permanent, only that it be dissolvable at the option of the officer himself.

Experience shows that there should be a good working law library in the office of a department judge-advocate. Nothing elaborate is necessary, but it should be extensive enough to furnish proper references when demanded. It should embrace works or treatises on both the civil and military law. If judge-advocates can acceptably transact their law business without law books and works of reference, they probably form the only class, dealing with legal questions, of whom this can truthfully be said. But in fact they are no exception to the general rule. They are bound to have books, and if the Government does not furnish, they must borrow them. The latter alternative is always objectionable, and frequently impracticable. The only rational, proper course is for the Government to allow sufficient money to meet these necessities. The reverse policy is certainly short-sighted. It is true that law books are expensive; but, as they are indispensable, we must make up our minds to bear the expense. And, to make this an easy task, a small original outlay should be incurred to procure proper books in the first instance, and then a smaller annual sum would suffice to keep the libraries at a proper standard. It is believed that the best way to accomplish all this is through a small specific appropriation every year for the purpose. If procured, it must be deposited somewhere. It is believed that the proper place is in the hands of the Judge-Advocate-General of the Army, who will see that it is wisely and economically expended. These views have been expressed year after year in reports from this office. They have been concurred in by the department commander and other superior authorities. The importance of the subject does not diminish with time, but increases rather.

As this report is being written authority has been received to make estimates for supplying the most pressing demands. This is truly acceptable, and will prove beneficial. But, the opinion is ventured that the only permanent and certain remedy for deficiencies in law-book-fund supply will be found, as before mentioned, in a small and regular appropriation for that specific purpose.

* * * * *

The records show that the percentage of men tried by courts-martial and those who desert in this department has perceptibly diminished during the past six years, and this year compares favorably with previous ones in this regard. The following table will clearly show this:

Number of cases tried by courts-martial and the number of desertions, each year, Department of the Columbia; during the past six years.

Year.	Number of troops in department.	Cases tried by—				By garrison courts— (different men tried).		Desertion.	
		General courts.		Garrison courts.		No.	Per ct.	No.	Per ct.
		No.	Per ct.	No.	Per ct.				
1885.....	1,694	176	10	1096	65	.....	.....	165	9.7
1886.....	1,502	97	6	967	64	.....	.....	91	6.1
1887.....	1,534	74	4.4	951	62	508	33.1	127	8.3
1888.....	1,467	69	3.9	810	55	432	29.4	99	6.7
1889.....	1,419	71	4.6	761	54	421	29.2	109	7.7
1890.....	1,423	56	3.5	797	56	478	33.0	91	6.4

It will thus be seen that, from 1855 to 1890, inclusive, the percentage of general court-martial cases has decreased from 10 to 3.5, of garrison court cases from 65 to 56 per cent. of enlisted strength, and of desertions from 9.7 to 6.4 per cent. It is further seen that the number of different men tried is slightly over half the number of garrison court-martial cases. From this it appears that it is the repeated trials of old offenders which so swells the garrison court list. If we examine the number of cases tried, only, it would appear that upwards of half the command were each year tried by garrison courts; whereas, looking at the list of different men so tried, we see that the offenders embrace but little over one-fourth the enlisted strength.

In twenty of the fifty-six cases brought before general courts-martial this year, records of previous trials and convictions have been introduced pursuant to the provisions of paragraph 1018, Army Regulations. In this manner some of those whose records have so increased the garrison court records have, happily for their immediate commands, been ousted from the service. In my judgment, the practice of placing the records of previous trials and convictions of this class of persons before the courts which try them, has proved and will continue to prove beneficial to discipline. It shows the court just what kind of a person is being tried, so far as previous convictions can show it. It is the common practice in the civil courts to consider whether or no the criminal is an old offender; and the practice is based on reason; for there is a clear distinction between the cases of the hardened criminal and the mere novice in crime, which the court can take notice of. There is, however, this point which courts-martial should remember in this connection, namely, that if such men are discharged the service without any confinement they may, in many cases, go straight to some other point and re-enlist. All the safeguards yet created can not but imperfectly prevent this species of fraud. In many cases nothing could please the person so discharged better than this. Therefore, it is believed that courts-martial might well consider, in sentencing such persons to be discharged on their records, whether the interests of discipline would not be served by invariably imposing a term of confinement at hard labor as part of the sentences.

For eight years the practice has been maintained in our service of investigating, by a board of survey, the circumstances attending desertions. It was hoped that information would thereby be obtained leading to measures which would abate this crying evil. There was cause for solicitation; during each of the past six years, 7.5 per cent. of the enlisted strength have, on an average, deserted; and, as the Army costs \$24,000,000 per year, the annual pecuniary loss to the Government, due to this cause, can be estimated by the millions. This takes no account of the resulting demoralization consequent upon this species of defection, and which it would be impossible to estimate pecuniarily. At these headquarters, the duty of digesting all information elicited on this subject devolves upon this office. In the performance of this duty some interesting, and it is hoped not unuseful, data have been collected. For this year the results are set forth in Appendix C, and they are, in substance, the same with what has been elicited in previous years. Certain of the facts thus developed will arrest attention. They throw some light on a subject heretofore seen but darkly. For instance, nothing is more natural or common than to relegate without investigation every deserter to the ranks of irreclaimable rascals; yet how is this reconcilable with some truths set forth in the tables of Appendix C: First, that over 50 per cent. of the deserters during all these years were given good characters by the boards of survey; and, second, that over 50 per cent. of them had never been tried by court-martial?

Another striking fact is that nearly 50 per cent. deserted during the first, and but very few during the last two years of their terms. It seems to be a fair effort to endeavor to make some practically useful deductions from these facts. First, it can not be asserted of any class of soldiers one-half of whom have good characters, and have not been tried by courts-martial, that they are necessarily hardened criminals. Second, bearing in mind the preceding deduction, and also the fact that so large a proportion desert during the first year's service, and so few in the last two, the conclusion seems reasonable that these men may be discouraged in many instances at the long term yet before them, and leave before they know enough about army life to appreciate it or know whether or not they will like it. In previous reports two propositions were suggested, based on these deductions: First, that the first enlistment should be for three instead of five years; second, that men be permitted to purchase their discharge on such terms as to secure the Government against pecuniary loss. Both, it was believed, would lead to contentment, and consequently diminish desertions. If the first were adopted, the recruit would be relieved from that discouragement resulting from so long a term yet before him before knowing what the service was like, and would choose, in many cases at least, to remain true to his engagement rather than run the risks of desertion; the second would furnish an honorable exit, which some who wished to leave the Army would probably avail themselves of rather than desert with the stigma and other disagreeable consequences attaching thereto. Reasoning from the same premises, other officials came to the same conclusions, and

advocated the same measures. Recently both these propositions have, in effect, been enacted into law. It now remains to be seen whether the results will be as anticipated. Retaining \$4 per month of the recruit's pay for the first year of service, as recently authorized by law, was intended to be a move in the same general direction. From all these different measures, the happiest results can rationally be anticipated.

Unless soldiers as a class are not amenable to those considerations of self-interest which affect the generality of mankind, and it is not believed that they are wholly exempt from such influences, the ultimate effect of the laws just referred to, must be to sensibly diminish defections from the ranks. On the other hand, the effect of the recent amendment of the one hundred and third Article of War, giving as it does an immunity to desertion which did not before exist, may be expected to be of an opposite nature. So that, taking recent legislative enactments on this subject altogether, time alone will show whether or not the line of wisdom has been passed in efforts to head off this evil.

In nearly every instance, conviction followed trial by court-martial, and in few cases were the sentences disapproved. This shows that, in accordance with existing orders, becoming care has been exercised in investigating the circumstances attending their alleged offences, before bringing men to trial; and also, that commanders and their courts are in general accord in regard to the methods of maintaining discipline through this potent instrumentality. In a word, the administration of justice by this means in the department during the past year has been eminently satisfactory.

Extract from report of Capt. H. K. Bailey, acting judge-advocate, Department of Arizona.

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While there has been a marked decrease in the number of trials by general courts-martial during the year, it will be observed that trials by inferior courts have increased. The nature of the offences tried by garrison courts-martial preclude the possibility of supposing the number of trials by the former had been reduced at the expense of the latter; the causes for the increase must therefore be sought elsewhere. It is, however, quite apparent, that discipline at the three posts in the department where more than half the trials have taken place, has not been increased by an almost total disregard by garrison courts-martial of the provisions of General Orders No. 63, series 1889, Adjutant-General's Office, and measures for a more rigid execution of its intent might well be taken with beneficial results to both the service and the enlisted men tried.

The increase in the number of *different men* tried is probably due to the change of regiments (Second and Fourth Cavalry) and to the tendency noticed at several posts of bringing cases to trial where a reprimand would answer every purpose of discipline. The establishment of canteens will, it is thought, materially decrease drunkenness and its attendant breaches of discipline.

Whatever good effects may be derived from monthly payments it is not thought to be conducive to discipline, nor does it aid in reducing the number of trials by courts-martial. The varying sentences imposed by courts-martial for identical offences calls for some action, in common justice to all. It is believed a practical penal code would obviate this defect, reduce the number of trials, increase discipline, and give to each convicted man a fair and impartial sentence regardless of his station, regiment or corps.

The jurisdiction of State and Territorial courts, and the powers of civil officers on military reservations in apprehending, arresting, or summoning enlisted men, should be more clearly established and defined, and published for the information of all concerned.

There were one hundred and fifty-four desertions in the department during the year; a decrease of sixty-three from the number reported for the preceding year. It is therefore evident that recent legislation and a strict compliance with General Orders No. 77, series 1889, Adjutant-General's Office, will eventually bring the number charged with this crime to a minimum, and materially increase the *morale* and discipline of the Army.

The assignment of a clerk for duty in the judge-advocate's office at division and department headquarters, should be of a permanent character, and subject only to the orders of the judge-advocate and commanding general. The duties required are often of a confidential character and specific nature, and require ability only secured by experience and study, which is entirely wasted if he is subject to details for work pertaining to other offices. It is recommended that steps be taken to secure such a result.

Extract from report of Capt. H. C. Carbaugh, acting judge-advocate, Department of Texas.

* * * * *

An examination of the records shows 168 trials and convictions by general courts-martial, an increase of 35 over the previous year, and 1,029 trials and convictions by garrison courts-martial, an increase of 312 over the previous year. This is a total increase of only 9 per cent. in trials and convictions as there was an average of over 500 more men serving in the department during this year. This increased per cent. is undoubtedly due to a more strict conformity to punishment by the methods prescribed by regulations, and an absence of summary punishment by company commanders. Many of the sentences adjudged by garrison courts-martial are very light notwithstanding the fact that the offender in many cases was an old one.

I recommend that the necessary data be put before inferior courts to enable them to use discretion in sentencing, with the object of checking repetition of trivial offences. It is very conclusive from the cases filed, that garrison courts-martial are most numerous at posts where small punishments are habitually inflicted.

There is a tendency to use the records of previous convictions to justify sentences of dishonorable discharge, when their greatest use should be to justify disciplinary punishment.

Post commanders invariably certify on the charges forwarded to department headquarters, that they have either investigated them or had them investigated, and believe them capable of proof. Notwithstanding this precaution a few cases of acquittal in whole or in part, have occurred. Sometimes this arises from a failure on the part of the court to make proper exceptions and substitutions in order to properly describe the offence, and sometimes from a discrepancy between the testimony of witnesses and their former statements.

It is recommended that no change take place in the present system of administering justice by courts-martial, unless it be that the latitude of company and post commanders be extended to summary punishment for such offences as absence from roll-calls and others of a like nature.

It is also recommended that courts-martial shall be given statutory powers to punish, by confinement, witnesses who refuse to testify.

REPORT OF THE QUARTERMASTER-GENERAL.

REPORT

OF

THE QUARTERMASTER-GENERAL.

QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., October 9, 1890.

SIR: I have the honor to submit the annual report of the Quartermaster's Department for the fiscal year ending June 30, 1890.

By acts of March 2, 1889, there was appropriated for the service of the Quartermaster's Department for the fiscal year 1889-'90, the sum of .. \$8,238,660.00
 During the year there was deposited to the credit of said appropriations amounts received from sales, amounts standing to credit of disbursing officers at time of their death, amounts remitted to officers and found not to be required, etc., aggregating..... 445,696.13

Making a total of..... 8,684,356.13
 Of this amount there was remitted to disbursing officers \$8,572,770.50
 There was paid out on account of settlements made at Treasury of claims and accounts, etc..... 28,945.98
8,601,716.48

Leaving a balance available for payment of outstanding obligations incurred or fulfillment of contracts properly entered into within the fiscal year of..... 82,639.65

On the 1st of July, 1889, there was on hand of the appropriations made for former fiscal years, and of appropriations made for specific purposes, and denominated indefinite or special, a balance of..... 1,406,452.91
 For specific purposes there was appropriated the sum of..... 1,340,260.62
 During the year there was deposited and transferred to credit of the appropriations other than those for 1889-'90 (shown above) the sum of..... 349,528.68

Making a total of..... 3,096,242.21
 Of said amount there was remitted to disbursing officers the sum of..... \$1,349,095.07
 There was paid out on account of Treasury settlements, and transferred, the sum of..... 413,783.88
 There was carried to the surplus fund the sum of..... 343,465.88
2,106,344.83

Leaving a balance on hand of..... 989,897.38

The items of appropriations, remittances, deposits, etc., will be found in full detail in the accompanying report of the officer in charge of the finance branch.

The business of the year has been conducted under the able and efficient management of my predecessor, General S. B. Holabird, the report of which is herewith submitted in the full and detailed statements

of the officers in charge of the several branches in the Quartermaster-General's Office. Referring to these I have the honor to invite special attention to the following:

The appropriation for barracks and quarters for the year ending June 30, 1890, was \$620,000. Of this amount the sum of \$241,873.90 has been expended in the construction of barracks, officers' quarters, store-houses, offices, schools, chapel and library buildings, guard-houses, bake-houses, sheds, sentry-boxes, and corrals at military posts, recruiting stations, depots, etc. The balance, or nearly two-thirds of the appropriation, has been expended in the repair and alterations of buildings of every character, and for rents, etc. The experience of years has shown that the amount appropriated for this branch of the service is insufficient. The buildings at many of the posts are the outgrowth of temporary quarters established to meet some sudden emergency. They are poorly constructed and wholly inadequate for present use. From time to time they have been altered and enlarged to satisfy the demands for better accommodations for the troops, but always with unsatisfactory results. They require constant repairs and the expenditure of large sums every year to make them habitable. This annual drain upon the appropriation leaves but a small part of the appropriation for the erection of new buildings. In the interest of economy, therefore, a more liberal appropriation is recommended, that a larger sum may be available for the construction of suitable buildings to supersede these old structures which long ago should have been abandoned.

The amount appropriated for transportation of the Army for the fiscal year ending June 30, 1890, was \$2,700,000. This amount was inadequate to meet the expenses incurred. The deficiency, as shown by the records of this office and by reports of outstanding accounts in the hands of the disbursing officers of this Department, is \$430,487.91, of which the sum of \$193,439.21 is for transportation over the non-aided line of the Southern Pacific Company.

This deficiency has been caused by the increased cost of summer marches and encampments, and by the unusually large transfer of troops during the year, including that of the Second Cavalry from the departments of Columbia and California to the departments of Arizona and Missouri; the Fourth Cavalry from the department of Arizona to the departments of Columbia and California; the Sixth Cavalry (2 troops) from the department of Missouri to Arizona, and one troop from the department of Arizona to the department of Missouri; the First Artillery from the departments of California and Columbia to the departments of the East and of the Platte; the Fifth Artillery from the departments of the East and Platte to the departments of California and Columbia; Seventh Infantry from the Department of the Platte to department of the Missouri; Fifteenth Infantry from the Department of Dakota to department of the East; Eighteenth Infantry from the department of Missouri to department of Texas; Nineteenth Infantry from the department of Texas to department of the East; Twenty-third Infantry from the department of the East to Department of Texas. The sum of \$40,208.45 was expended during the year for summer encampments, practice marches, maneuvers, and field instructions, and \$133,243.93 for transfer of troops.

The deficiency has been further increased by the decisions of the Second Comptroller of the Treasury, relative to the settlement of the accounts of the Oregon Railway and Navigation Company, the Oregon Short Line and Utah Northern Railway Company, and the Southern Pacific Railroads of California, Arizona, and New Mexico, which, by

these decisions, are for the first time made payable in cash out of the appropriation for transportation of the Army. In addition the last Army appropriation bill provided that the accounts of land-grant railroads which heretofore have been paid from a special appropriation should hereafter be paid from the appropriation for the transportation of the Army. It is estimated that \$318,439.21 have been paid from this appropriation on account of the foregoing changes, as follows :

Oregon railway and Navigation Company	\$35,000.00
Oregon Short Line and Utah Northern Railroads	40,000.00
Southern Pacific Railroads of California, Arizona, and New Mexico (actual)	193,439.21
Land-grant railroads.....	50,000.00
	318,439.21
Total	318,439.21

The sum of \$276,235.70 has been expended for water, sewerage, etc., \$204,363.89 for roads and bridges, \$38,917.31 for wharves, and \$103,573.91 for the care and maintenance of the steam vessels belonging to this Department. The estimate for transportation for the fiscal year ending June 30, 1892, calls for \$2,950,000, all of which will be required.

The appropriation for the last fiscal year for clothing and equipage was \$1,150,000; the sum of \$162,663.28 was received on account of issues to the militia of the several States, and the amount of \$78,680.17 was credited from sales to officers and enlisted men, making a total of \$1,391,343.45. Of this amount there was expended a total of \$1,391,072.24, leaving a balance in the Treasury on June 30, 1890, of \$217.21: For several years past the appropriation has been insufficient to meet the expenditures, and it has been necessary to draw upon the supplies at the general depots until they have become so reduced that it is impossible to fill requisitions and the orders from the several States for their militia within a reasonable time. Such drafts upon the general stock are detrimental to the service, and they soon left the Department in no condition to meet an unexpected call for supplies arising out of some sudden emergency. It is imperative that the depots be at once restocked. The reduction in stock on hand during the last four years is not less than \$250,000.

The following items were diverted during the last year and represent a total loss to the clothing appropriation :

Militia, District of Columbia.....	\$18,132.08
Indian prisoners of war.....	7,358.10
Prisoners' clothing, Alcatraz.....	2,078.74
Transfer to United States marines	330.00
	27,898.92

The estimates for the present year call for \$1,300,000. It is earnestly hoped that the increase asked for in the appropriation will be granted.

At present there are 82 national cemeteries in charge of 74 superintendents. During the year 5,221 headstones have been provided to mark the graves of soldiers, sailors, and marines buried in national, post, city, village, and private cemeteries. Headstones have also been placed at the graves of the officers and soldiers removed to the Custer Battlefield National Cemetery from the abandoned cemetery at Fort Phil Kearney, Wyo. The remains of officers and soldiers buried at the post cemetery at Fort Sisseton, S. Dak., have been removed to the Custer Battlefield Cemetery, and their graves will be marked with headstones. The Custer Battlefield Cemetery, while classed as a national cemetery, has no superintendent, and no provision is made for its care and maintenance.

The monument erected there to the memory of General Custer and those of his command who fell at the battle of the Little Big Horn is without protection. An item is included in the estimate submitted for the improvements and maintenance of this cemetery.

I earnestly recommend that an appropriation of \$25,000 be made for the construction of roadways to the national cemetery at the Presidio of San Francisco, Cal., and for the improvement of the reservation. The small sums already expended there have produced most gratifying results. The reclamation of the sand dunes and marshes of the reservation is a necessity, while the planting of trees, the erection of permanent fences and walls, the building of roadways to the cemetery, and the development and perfection of the water supply should be continued. These improvements will contribute to the beauty of the surroundings and to the comfort and safety of the garrison.

Under the several acts of Congress purchases have been completed for certain land adjoining the reservation at Fort Meade, S. Dak., for the Kinsley tract at West Point, and for sites for the new posts at Fort Omaha, Nebr., Fort Brady, Mich., and Fort Elliott, Tex. The following reservations have been transferred to the Interior Department under the acts of July 31, 1882, and July 5, 1884: Fort McDermit, Nev., Fort Hays, Kans., Fort Lyon, Colo., Fort Selden, N. Mex., and Fort Laramie, Wyo.

The amount appropriated in the sundry civil bill for the construction of buildings at such military posts as in the judgment of the Secretary of War may be necessary, was \$400,000. This sum was allotted as follows :

Fort McPherson	\$85,975.89
Fort Logan	109,285.66
Fort Snelling.....	61,000.00
Fort Leavenworth.....	67,816.10
San Antonio	51,109.32
Fort Wadsworth.....	18,914.60
Fort Hamilton.....	6,564.00

It is important that the buildings necessary at these posts be completed at the earliest moment. The more expeditiously the work progresses, the sooner can the troops be concentrated and the department dispense with the quarters at old posts now demanding continued expenditures to keep them in condition for occupancy.

The enlargement of the present quarters and the erection of new buildings at the Presidio at San Francisco, Cal., at Madison Barracks, Sacket's Harbor, N. Y., and at Fort Warren, Mass., are recommended.

Estimates for military posts for the coming year have been made and the interests of the service require a liberal appropriation.

Respectfully submitted.

R. N. BATCHELDER,
Quartermaster-General, U. S. Army.

Hon. REDFIELD PROCTOR,
Secretary of War.

List of papers accompanying the annual report of the Quartermaster-General for the fiscal year ending June 30, 1890.

1. Report of Lieut. Col. M. I. Ludington, deputy quartermaster-general, U. S. Army, of the operations of the inspection branch of the Quartermaster-General's Office during the fiscal year ending June 30, 1890.

2. Report of Lieut. Col. M. I. Ludington, deputy quartermaster-general, U. S. Army, of the operations of the finance branch of the Quartermaster-General's Office, during the fiscal year ending June 30, 1890.

3. Report of Lieut. Col. M. I. Ludington, deputy quartermaster-general, U. S. Army, of the operations of the money and property accounts branch of the Quartermaster-General's Office, during the fiscal year ending June 30, 1890.

A.—Statement showing number of money accounts and returns quartermaster's stores received and disposed of during fiscal year ending June 30, 1890.

B.—Statement showing the amount received from sales of quartermaster's stores to officers and soldiers during the fiscal year ending June 30, 1890.

C.—Statement showing in detail the amounts expended under the various appropriations for the fiscal year ending June 30, 1890, and supplement pertaining to fiscal year ending June 30, 1889.

D.—Abstract of payments during the fiscal year ending June 30, 1890, to railroads and express companies on account of appropriation for transportation of the Army, and supplement pertaining to fiscal year ending June 30, 1889.

E.—Abstract of payments during the fiscal year ending June 30, 1890, for water transportation, and supplement pertaining to fiscal year ending June 30, 1889.

F.—Abstract of payments during the fiscal year ending June 30, 1890, for wagon transportation, and supplement pertaining to fiscal year ending June 30, 1889.

G.—Abstract of payments during fiscal year ending June 30, 1890, for stage transportation, and supplement pertaining to fiscal year ending June 30, 1889.

H.—Statement showing number of civilian employes employed by the month, as reported by officers of the Quartermaster's Department on their report of persons for June, 1890.

I.—Statement of amounts expended by each officer serving in the Quartermaster's Department during the fiscal year ending June 30, 1890.

4.—Report of Lieut. Col. M. I. Ludington, Deputy Quartermaster-General, U. S. Army, of the operations of the clothing and equipage returns branch of the Quartermaster-General's Office during the fiscal year ending June 30, 1890.

5.—Report of Lieut. Col. M. I. Ludington, Deputy Quartermaster-General, U. S. Army, of the operations of the barracks and quarters branch of the Quartermaster-General's Office during the fiscal year ending June 30, 1890.

A.—Statement compiled from reports thus far received, showing expenditures actually made on account of repair and construction of public buildings at various posts during the fiscal year ending June 30, 1890.

B.—Statement showing property rented by the Quartermaster's Department during fiscal year ending June 30, 1890.

6.—Report of Lieut. Col. M. I. Ludington, Deputy Quartermaster-General, U. S. Army, of the affairs relating to the care and maintenance of the national cemeteries during the fiscal year ending June 30, 1890.

A.—Statement showing names and classification of national cemeteries, number of interments in each, also names, dates of original appointment, and dates of present assignment of superintendents.

B.—Statement of disbursements of appropriation for national cemeteries during the fiscal year ending June 30, 1890.

7.—Report of Maj. James Gilliss, quartermaster, U. S. Army, of the operations of the transportation, regular supplies, miscellaneous claims, and claims under act July 4, 1864, branches of the Quartermaster-General's office during the fiscal year ending June 30, 1890.

A.—Statement of all troops and property transported under the direction of the Quartermaster's Department during the fiscal year ending June 30, 1890.

B.—Table showing the principal movements of troops during the fiscal year ending June 30, 1890.

C.—Statement of vessels owned or purchased by the Government and employed in the Quartermaster's Department during the fiscal year ending June 30, 1890.

D.—Statement of vessels chartered, impressed, or employed by the Quartermaster's Department during the fiscal year ending June 30, 1890.

E.—Abstract of contracts for wagon and water transportation entered into by the Quartermaster's Department received at the office of the Quartermaster-General during the fiscal year ending June 30, 1890.

8.—Report of Capt. John F. Rodgers, military store-keeper, U. S. Army, of the operations of the clothing supply branch of the Quartermaster-General's Office, during the fiscal year ending June 30, 1890.

A.—Statement showing articles of clothing, equipage, and material on hand at the issuing depots of the Quartermaster's Department, June 30, 1889, the quantities purchased, manufactured, received from posts and depots, taken up, sold, transferred to general depots, expended, issued to the Army and militia, and the quantities remaining in depot June 30, 1890.

B.—Detailed statement of the articles of clothing, equipage, and materials pur-

chased by the Quartermaster's Department and paid for from the appropriation for clothing and equipage during the fiscal year ending June 30, 1890, at Philadelphia, Pa.

C.—Statement of amounts received and remitted by the Quartermaster's Department on account of clothing and equipage during the fiscal year ending June 30, 1890.

D.—Statement showing remittances on account of clothing and equipage during the fiscal year ending June 30, 1890.

E.—Statement showing articles of clothing, equipage, and materials issued to the militia of the States and Territories under act of Congress amending section 1661, Revised Statutes, during the fiscal year ending June 30, 1890, and money value of the same.

F.—Statement showing articles of clothing and equipage issued gratuitously to the militia of the District of Columbia, under act of Congress of March 1, 1889, during fiscal year ending June 30, 1890, also money value of the property.

G.—Statement showing articles and value of quartermaster's stores, fuel, forage, straw, etc., issued gratuitously to the militia of the District of Columbia, under act of Congress of March 1, 1889, during fiscal year ending June 30, 1890.

H.—Statement showing articles of clothing and equipage issued to Indian prisoners during fiscal year ending June 30, 1890.

I.—Statement showing articles of clothing and equipage manufactured at the military prison at Fort Leavenworth, Kans., for the Quartermaster's Department, during fiscal year ending June 30, 1890, also cost of materials, labor, etc.

K.—Statement showing articles of clothing and equipage, and money value of the same, issued to the military prison at Fort Leavenworth, Kans., during the fiscal year ending June 30, 1890.

L.—Statement showing number and cost of articles of prisoners' clothing manufactured at the United States military prison, Fort Leavenworth, Kans., during the fiscal year ending June 30, 1890.

M.—Statement showing the number and cost of tents purchased under act of Congress approved March 31, 1890, for use of flood sufferers in the States of Arkansas, Mississippi, and Louisiana, also the disposition of the tents and expenses attending their issue, during the fiscal year ending June 30, 1890.

9. Report of Capt. W. S. Patten, assistant quartermaster, U. S. Army, of the operations of the reservation branch during the fiscal year ending June 30, 1890.

A.—Statement of expenditures authorized for water, sewerage, plumbing, etc., chargeable to appropriation for Army transportation for fiscal year ending June 30, 1890.

B.—Statement of expenditures authorized for lighting, heating, etc., chargeable to appropriation for regular supplies for fiscal year ending June 30, 1890.

C.—Statement as to military reservations showing location, size, how occupied, etc., on June 30, 1890.

1.—*Report of Lieut. Col. M. I. Ludington, deputy quartermaster-general, U. S. Army, of the operations of the inspection branch of the Quartermaster-General's Office, during the fiscal year ending June 30, 1890.*

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 10, 1890.

GENERAL: I have the honor to submit report of the operations of the inspection branch of this office during the fiscal year ending June 30, 1890.

The principal duties of the inspection branch relate to the personnel of the officers of the Quartermaster's Department, such as their assignment to stations, furnishing bonds, etc., and to matters pertaining individually to clerks and employes in the office of the Quartermaster-General, and of the Quartermaster's Department at large.

The biennial and annual reports, monthly roster, return of officers of the Quartermaster's Department, monthly and semi-monthly payrolls of clerks and employes of the office of the Quartermaster-General are prepared in this branch, and all orders, circulars, and other printed matter for use of the department are distributed therefrom. It also takes cognizance of matters relating to the application, examination, appointment, and assignment to duty of post quartermaster-ser-

geants, U. S. Army. The eighty post quartermaster-sergeants authorized by law have performed satisfactory service during the fiscal year just closed.

Letters received during past fiscal year:	
Recorded	4,581
Not recorded.....	3,606
Total received	8,187

Letters sent during past fiscal year:	
Recorded	1,119
Not recorded.....	405
Total sent	1,524
Orders, circulars, books, etc., distributed during past fiscal year.....	87,851

The officers of the Quartermaster's Department regular establishment are as follows: One Quartermaster-General, 4 assistant quartermasters-general, 8 deputy quartermasters-general, 14 quartermasters, 30 assistant quartermasters, 3 military store-keepers.

Very respectfully,

M. I. LUDINGTON,
Deputy Quartermaster-General, U. S. Army.

The QUARTERMASTER-GENERAL, U. S. ARMY.

2.—*Report of Lieut. Col. M. I. Ludington, deputy quartermaster-general, U. S. Army, of the operations of the finance branch for the fiscal year ending June 30, 1890.*

This branch has charge of matters relating to the procurement and distribution of funds, the compilation and preparation for Congress of the annual estimates of funds for the service of the Quartermaster's Department, and for funds required for the Quartermaster-General's office; the examination of estimates of funds received from disbursing officers, and the issue of requisitions in favor of such disbursing officers; the action upon settlements made at Treasury of claims and accounts pertaining to the Quartermaster's Department; the abstracting of weekly and monthly statements of funds for comparison with the Treasury records, and the conducting of the necessary correspondence, and the keeping of the prescribed records and necessary memorandum books connected with the foregoing.

From the balance books upon which all debits and credits are recorded, the following statement has been prepared:

Operations of the finance branch for the fiscal year ending June 30, 1890.

Appropriations.	Balance in Treasury undrawn July 1, 1889.	Appropriated.		Placed to credit of appropriations during the year, being the proceeds of sales to officers, etc.	Placed to credit of appropriations by Treasury transfer warrants.	Total to be accounted for.	Remitted to disbursing officers.	Requisitions issued on settlements made at Treasury of claims and accounts.	Amounts charged against appropriations by Treasury transfer warrants.	Amounts carried to surplus fund, act June 20, 1874.	Balance in Treasury undrawn June 30, 1890, available for outstanding obligations.	Total accounted for.
		Amount.	Date of act.									
<i>Transfer account, 1871 and prior years.</i>												
Transportation of officers and their baggage.....				\$21.54		\$21.54			\$21.54			\$21.54
1884-'85.												
Transportation of the Army and its supplies.....	\$163.45					163.45				\$163.45		163.45
1885-'86.												
Transportation of the Army and its supplies.....	16,398.21					16,398.21		\$292.05		16,106.16		16,398.21
1887 and prior years.												
Regular supplies.....				2,734.96		2,734.96				2,734.96		2,734.96
Incidental expenses.....				45.32		45.32				45.32		45.32
Barracks and quarters.....				.09		.09				.09		.09
Transportation of the Army and its supplies.....				92,717.65		92,717.65				92,717.65		92,717.65
Clothing, camp and garrison equipage.....				232.64		232.64				232.64		232.64
Construction and repair of hospitals.....				.16		.16				.16		.16
Total.....				95,730.82		95,730.82				95,730.82		95,730.82
<i>Transfer account, 1887 and prior years.</i>												
Regular supplies.....				895.91	\$88.49	984.40		984.40				984.40
Incidental expenses.....				85.90	60.70	146.60		146.60				146.60
Barracks and quarters.....					182.65	182.65		182.65				182.65

Transportation of the Army and its supplies.....			2.44	1,000.38	1,002.82		1,002.82			1,002.82
Clothing, camp and garrison equipage.....			14.70		14.70			14.70		14.70
Total.....			998.95	1,332.22	2,331.17		2,316.47	14.70		2,331.17
1887-'88.										
Regular supplies.....	17,016.09		392.61		17,408.70		415.98		16,992.72	17,408.70
Incidental expenses.....	19,110.45		1,001.87		20,112.32		838.85		19,273.47	20,112.32
Horses for cavalry and artillery.....	3,283.91				3,283.91				3,283.91	3,283.91
Barracks and quarters.....	8,247.18		1,038.26		9,285.44				9,285.44	9,285.44
Transportation of the Army and its supplies.....	69,752.18		1,021.57		70,773.75		70,770.76		2.99	70,773.75
Clothing, camp and garrison equipage.....	45,897.61		476.81		46,374.42		104.65		46,269.77	46,374.42
Construction and repair of hospitals.....	1,619.43		39.90		1,659.33				1,659.33	1,659.33
National cemeteries.....	1,276.16		456.22		1,732.38	\$30.00	42.40		1,659.98	1,732.38
Pay of superintendents of national cemeteries.....	78.99		36.51		115.50				115.50	115.50
Shooting galleries and ranges.....	152.06				152.06		2.32		149.74	152.06
Quarters for hospital stewards.....	576.70		21.76		598.46				598.46	598.46
Total.....	167,010.76		4,485.51		171,496.27	30.00	72,174.96		99,291.31	171,496.27
1888-'89.										
Regular supplies.....	8,100.81		79,806.59		87,907.40	395.00	527.23		\$86,985.17	87,907.40
Incidental expenses.....	22,405.80		6,825.63		29,231.43	20,826.17	8,051.24		354.02	29,231.43
Horses for cavalry and artillery.....			1,416.59		1,416.59	24.50	101.75		1,290.34	1,416.59
Barracks and quarters.....	36,833.24		4,542.21		41,375.45	37,606.94	1,452.59		2,315.92	41,375.45
Transportation of the Army and its supplies.....	91,906.69		29,679.13		121,585.82	81,619.29	34,944.32		5,022.21	121,585.82
Clothing, camp and garrison equipage.....	624.65		102,346.98		102,971.63	61,989.84	471.84		40,509.95	102,971.63
Construction and repair of hospitals.....	166.67		2,139.82		2,306.49	915.57	591.57		799.35	2,306.49
National cemeteries.....	564.76		1,635.23		2,199.99	170.00	535.43		1,494.56	2,199.99
Pay of superintendents of national cemeteries.....	333.51		72.17		405.68				405.68	405.68
Shooting galleries and ranges.....	60.63		508.35		568.98		98.53		475.45	568.98
Quarters for hospital stewards.....	3.63		420.23		423.86		21.76		402.10	423.86
Total.....	161,000.39		329,392.93		390,393.32	203,547.31	46,791.26		140,054.75	390,393.32

Operations of the finance branch for the fiscal year ending June 30, 1890—Continued.

Appropriations.	Balance in Treasury undrawn July 1, 1880.	Appropriated.		Placed to credit of appropriations during the year, being the proceeds of sales to officers, etc.	Placed to credit of appropriations by Treasury transfer warrants.	Total to be accounted for.	Remitted to disbursing officers.	Requisitions issued on settlements made at Treasury of claims and accounts.	Amounts charged against appropriations by Treasury transfer warrants.	Amounts carried to surplus fund, act June 20, 1874.	Balance in Treasury undrawn June 30, 1890, available for outstanding obligations.	Total accounted for.
		Amount.	Date of act.									
1889-'90.												
Regular supplies		\$2, 678, 000. 00	Mar. 2, 1889	\$124, 907. 44		\$2, 802, 907. 44	\$2, 749, 238. 37	\$784. 13			\$52, 884. 94	\$2, 802, 907. 44
Incidental expenses		675, 000. 00	do	5, 410. 11		680, 410. 11	656, 141. 16	540. 89			23, 728. 06	680, 410. 11
Horses for cavalry and artillery		132, 000. 00	do	2, 237. 61		134, 237. 61	134, 237. 61					134, 237. 61
Barracks and quarters		620, 000. 00	do	40, 578. 20		660, 578. 20	656, 702. 68	47. 00			3, 828. 52	660, 578. 20
Transportation of the Army and its supplies		2, 700, 000. 00	do	27, 554. 35		2, 727, 554. 35	2, 699, 966. 41	27, 129. 09			458. 85	2, 727, 554. 35
Clothing, camp and garrison equipage		1, 150, 000. 00	do	241, 343. 45		1, 391, 343. 45	1, 391, 071. 32	. 92			271. 21	1, 391, 343. 45
Construction and repair of hospitals		100, 000. 00	do	2, 357. 41		102, 357. 41	102, 043. 05				314. 76	102, 357. 41
National cemeteries		100, 000. 00	do			100, 000. 00	98, 836. 23	443. 95			719. 82	100, 000. 00
Pay of superintendents of national cemeteries		61, 160. 00	do			61, 160. 00	60, 991. 51				168. 49	61, 160. 00
Shooting galleries and ranges		10, 000. 00	do	1. 25		10, 001. 25	9, 839. 66				161. 59	10, 001. 25
Quarters for hospital stewards		12, 500. 00	do	1, 306. 31		13, 806. 31	13, 702. 50				103. 81	13, 806. 31
Total		8, 238, 660. 00		445, 696. 13		8, 684, 356. 13	8, 572, 770. 50	28, 945. 98			82, 639. 65	8, 684, 356. 13
Certified claims.												
Regular supplies	\$243. 75					243. 75		243. 75				243. 75
Transportation of the Army and its supplies	1, 011. 82					1, 011. 82					1, 011. 82	1, 011. 82
Total	1, 255. 57					1, 255. 57		243. 75			1, 011. 82	1, 255. 57

Indefinite or special.

Academic building, Military Academy	62,513.20				62,513.20			62,513.20	62,513.20
Army and Navy Hospital, Hot Springs, Ark	8,490.00				8,490.00	8,490.00			8,490.00
Army depot building, St. Paul, Minn.	.16				.16		.16		.16
Approaches to the national cemetery, near Danville, Va.	5,000.00	Mar. 2, 1889			5,000.00	5,000.00			5,000.00
Building for cavalry and artillery school, Fort Riley, Kans.	100,000.00	do			100,000.00	100,000.00			100,000.00
Building for military quarters, Fort Apache, Ariz.	.70				.70		.70		.70
Burial of indigent soldiers, Carson City cemetery, Nev.	512.50	Mar. 2, 1889			1,000.00	1,000.00			1,000.00
Cemetery fence, Fort Winnebago, Wis.	95.59				512.50		512.50		512.50
Confederate cemetery, near Columbus, Ohio.	75.46				95.59		95.59		95.59
Fort Gratiot cemetery, Mich.	110.75				75.46			75.46	75.46
Fort Brady military post, Mich.	119,697.60				110.75		110.75		110.75
Fort Meade military reservation, Dak.	3,000.00				119,697.60	12,000.00		107,697.60	119,697.60
Gymnasium, Military Academy	33,851.27				3,000.00	3,000.00			3,000.00
Headstones for graves of soldiers.	37,410.89	60,000.00	Mar. 2, 1889	3.69	33,851.27		33,851.27		33,851.27
Improvement of National Park, Mackinac, Mich.	973.98				37,410.89	24,552.78	2,483.00	70,378.80	97,414.58
Military posts	51,639.22	400,000.00	Mar. 2, 1889	321.78	973.98			973.98	973.98
Military post for the protection of the Rio Grande frontier	.67				451,961.11	370,419.21	302.21	81,239.69	451,961.11
Military post at Fort McKinney, Wyo.	206.00				.67		.67		.67
Military post near the northern boundary of Montana.	.25				206.00		206.00		206.00
Military post near Newport, Ky., site	12,481.55				.25		.25		.25
Military post near Newport, Ky., buildings.	1,214.74				12,481.55	495.75	18.75	11,972.98	12,481.55
Military post at Fort Omaha, Nebr.	199,922.47				1,214.74	1,244.74		97.00	1,342.37
Military post near Chicago, Ill.	294,902.10				199,922.47	76,589.18		123,333.24	199,922.47
					294,902.10	204,806.23		90,095.89	294,902.10

QUARTERMASTER-GENERAL.

Operations of the finance branch for the fiscal year ending June 30, 1890—Continued.

Appropriations.	Balance in Treasury undrawn July 1, 1889.	Appropriated.		Placed to credit of appropriations during the year, being the proceeds of sales to officers, etc.	Placed to credit of appropriations by Treasury transfer warrants.	Total to be accounted for.	Remitted to disbursing officers.	Requisitions issued on settlements made at Treasury of claims and accounts.	Amounts charged against appropriations by Treasury transfer warrants.	Amounts carried to surplus fund, act June 20, 1874.	Balance in Treasury undrawn June 30, 1890, available for outstanding obligations.	Total accounted for.
		Amount.	Date of act.									
<i>Indefinite or special—Cont'd.</i>												
Military post, Fort Bliss, Tex.		\$150,000.00	Mar. 1, 1890			\$150,000.00					\$150,000.00	\$150,000.00
Military post at Fort D. A. Russell, Wyo.				\$11.70		11.70		\$11.70				11.70
Monuments or tablets at Gettysburgh, Pa.				13,907.60		13,907.60	\$13,907.60					13,907.60
Officers' quarters, military post at Columbus, Ohio.		20,000.00	Mar. 2, 1889			20,000.00	19,981.90				18.10	20,000.00
Purchase of site for Fort Brown, Tex.	\$25,000.00					25,000.00				\$25,000.00		25,000.00
Purchase of Fort Brown reservation, Tex.	160,000.00					160,000.00					160,000.00	160,000.00
Purchase of drill ground near San Antonio, Tex.	345.00					345.00				345.00		345.00
Purchase of land adjoining military reservation, West Point, N. Y.		150,000.00	Mar. 2, 1889			150,000.00	150,000.00					150,000.00
Purchase of land adjoining military post at Madison Barracks, N. Y.		7,000.00	do			7,000.00					7,000.00	7,000.00
Purchase of site for Fort Elliott, Tex.		17,000.00	do			17,000.00	17,000.00					17,000.00
Quartermaster's depot, Philadelphia, Pa.				2,386.77		2,386.77				2,386.77		2,386.77
Road from Chattanooga to the national cemetery, Tenn.	54.14					54.14				54.14		54.14
Road from Fort Scott to the national cemetery, Kans.	941.97					941.97				941.97		941.97
Road from Springfield to the national cemetery, Mo.	.09					.09				.09		.09

Road from Baton Rouge to the national cemetery, La	6,000.00				6,000.00			6,000.00	6,000.00	
Road to the national cemetery, Baton Rouge, La			5.78		5.78			5.78	5.78	
Road from Marietta to the national cemetery, Ga			10.90		10.90			10.90	10.90	
Road from Natchez to the national cemetery, Miss	6,106.29				6,106.29	6,000.00		106.29	6,106.29	
Road to the national cemetery at Chalmette, La	95.60				95.60			95.60	95.60	
Road to the national cemetery, Knoxville, Tenn	29.33				29.33			29.33	29.33	
Road from Vicksburg to the national cemetery, Miss .....	.57				.57			.57	.57
Road to the national cemetery, Presidio of San Francisco, Cal		38,000.00	Mar. 2, 1889		38,000.00	21,196.59		16,890.41	38,000.00	
Road from New Berne to the national cemetery, N. C	4,500.00				4,500.00	4,500.00			4,500.00	
Road from Antietam to the national cemetery, Md	14,500.00				14,500.00	14,500.00			14,500.00	
Road from Florence to the national cemetery, S. C	15,000.00				15,000.00	15,000.00			15,000.00	
Road through military reservation at Plattsburgh, N. Y	10,000.00		Mar. 2, 1889		10,000.00	10,000.00			10,000.00	
Road to the national cemetery at Hampton, Va	2,000.00		do		2,000.00			2,000.00	2,000.00	
Road to the national cemetery near Beverly, N. J	2,306.70		do		2,306.70	2,306.70			2,306.70	
Road from Staunton to the national cemetery, Va	11,000.00		Apr. 9, 1890		11,000.00	5,000.00		6,000.00	11,000.00	
Road to the national cemetery, Port Hudson, La	13,500.00		May 14, 1890		13,500.00			13,500.00	13,500.00	
Repairing roads to national cemeteries	952.33	15,000.00	Mar. 2, 1889	613.39	16,565.72	12,009.97		4,655.75	16,565.72	
Relief of St. Joseph Commercial College, St. Joseph, Mo		7,500.00	Mar. 2, 1889		7,500.00		7,500.00		7,500.00	
Soldiers' monument at Mound City, Kans				12.95	12.95			12.95	12.95	
Tents for sufferers from floods in Arkansas, Mississippi, and Louisiana	25,000.00		Mar. 31, 1890		25,000.00	25,000.00			25,000.00	
Water supply, Fort D. A. Russell, Wyo	24,500.00		Mar. 2, 1889		24,500.00	21,604.17		2,895.83	24,500.00	
Total indefinite	1,060,624.53	1,058,806.70		17,402.14	2,136,833.37	1,145,517.76	10,810.66	132,174.14	848,830.81	2,136,833.37

QUARTERMASTER-GENERAL.

535

Operations of the finance branch for the fiscal year ending June 30, 1890—Continued.

Appropriations.	Balance in Treasury undrawn July 1, 1889.	Appropriated.		Placed to credit of appropriations during the year, being the proceeds of sales to officers, etc.	Placed to credit of appropriations by Treasury transfer warrants.	Total to be accounted for.	Remitted to disbursing officers.	Requisitions issued on settlements made at Treasury of claims and accounts.	Amounts charged against appropriations by Treasury transfer warrants.	Amounts carried to surplus fund act June 20, 1874.	Balance in Treasury undrawn June 30, 1890, available for outstanding obligations.	Total accounted for.
		Amount.	Date of act.									
<i>Army transportation, Pacific railroads.</i>												
1887 and prior years.....		\$3, 674. 43	June 30, 1890			\$3, 674. 43		\$3, 674. 43				\$3, 674. 43
1888.....		142, 169. 02	do	\$66. 36		142, 235. 38		142, 235. 38				142, 235. 38
1889.....		121, 584. 80	do	98. 21		121, 683. 01		121, 683. 01				121, 683. 01
1890.....		14, 025. 67	do			14, 025. 67		14, 025. 67				14, 025. 67
Total.....		281, 453. 92		164. 57		281, 618. 49		281, 618. 49				281, 618. 49
Grand total.....	\$1,406,452.91	9, 578, 920. 62		793, 892. 59	\$1, 332. 22	11, 780, 598. 34	\$9, 921, 865. 57	442, 693. 62	\$36. 24	\$343, 465. 88	\$1, 072, 537. 03	11, 780, 598. 34

NOTE.—The books of this office show that the entire sum of \$14,912.72, appropriated for "claims for quartermaster's stores and commissary supplies" by act of May 17 1890, has been paid out on settlements made at Treasury.
Of the sum of \$118,706.51, appropriated by act of April 4, 1890, for "horses and other property lost in the military service" (certified claims), the books of this office show the remittance to disbursing officers of \$116,836.31.

The following tables, made up from estimates of funds received from disbursing officers of the Quartermaster's Department, show the amounts asked by them and the amounts supplied from the regular appropriations for the fiscal year 1889-90, as well as from the indefinite or special appropriations disbursed by the Quartermaster's Department.

Amounts estimated for from the regular appropriations.

Divisions, departments, etc.	Regular supplies.	Incidental expenses.	Cavalry and artillery horses.	Barracks and quarters.	Transportation of the Army and its supplies.	Clothing, camp and garrison equipage.	Construction and repair of hospitals.	National cemeteries.	Pay of superintendents of national cemeteries.	Shooting galleries and ranges.	Quarters for hospital stewards.	Total.
Division of the Atlantic.....	\$297,521.32	\$76,346.94	\$400	\$142,363.29	\$312,095.25	\$354.00	\$35,360.44	\$145.00	-----	\$2,431.11	\$2,814.96	\$869,832.31
Headquarters Division of the Missouri.....	10,643.09	27,468.13	-----	26,481.48	76,920.02	-----	33.90	15.00	-----	-----	-----	141,561.62
Department of Missouri.....	308,549.64	58,294.85	41,437.50	53,819.85	353,836.98	243.96	27,685.30	-----	389.20	803.00	-----	845,060.28
Department of Texas.....	169,820.90	40,600.87	4,336.36	55,374.62	155,901.93	35.00	8,864.85	-----	238.65	725.00	-----	455,898.78
Department of Plate.....	303,752.20	61,998.27	4,427.27	94,750.25	194,829.30	85.20	3,685.13	-----	1,050.45	1,415.00	-----	665,983.07
Department of Dakota.....	396,404.73	66,999.97	11,710.65	60,188.73	320,229.54	1,974.90	7,646.59	-----	1,079.00	1,359.84	-----	867,592.01
Total division of the Missouri	1,189,170.56	255,362.09	61,911.78	290,612.93	1,101,717.77	2,339.06	47,915.77	15.00	-----	2,757.36	4,303.44	2,956,105.76
Department of California.....	98,970.40	39,000.41	5,216.94	41,594.20	114,745.60	-----	5,982.40	-----	764.31	950.00	-----	307,324.26
Department of Columbia.....	138,741.39	29,995.56	10,304.55	34,625.31	146,512.09	-----	2,335.00	-----	171.37	1,105.50	-----	363,780.77
Department of Arizona.....	455,429.30	50,780.49	31,741.21	79,859.99	214,985.47	1.00	8,741.00	-----	307.68	2,925.00	-----	844,771.14
Total division of the Pacific	693,141.09	119,776.46	47,362.70	156,079.50	476,243.16	1.00	17,058.40	-----	-----	1,243.36	4,980.50	1,515,886.17
Depot at New York.....	87,998.35	37,627.94	1,250.00	6,590.47	141,510.64	50.00	-----	4,707.10	\$900.00	-----	-----	280,624.50
Depot at Philadelphia.....	60,254.73	24,691.55	-----	6,800.50	43,010.10	918,881.33	-----	3,958.65	2,280.00	-----	-----	1,059,883.86
Depot at Washington.....	30,749.38	26,095.33	-----	6,495.83	42,480.21	-----	51.70	41,510.81	21,140.00	-----	-----	168,523.28
Depot at Jeffersonville.....	151,676.64	27,560.22	-----	749.11	109,487.63	-----	-----	1,946.92	3,840.00	-----	-----	417,039.71
Depot at St. Louis.....	11,305.23	19,069.62	24,019.53	15,449.90	98,427.35	3,878.00	-----	10,452.13	10,620.00	-----	-----	198,221.76
Depot at San Francisco.....	33,248.90	22,844.30	-----	13,091.63	49,610.21	221,590.68	-----	588.50	720.00	-----	-----	341,604.22
Columbus Barracks, Ohio.....	15,782.37	4,571.61	-----	23,605.48	28,085.28	-----	1.00	-----	-----	-----	175.00	72,223.74
Jefferson Barracks, Missouri.....	29,855.54	5,845.00	-----	8,227.00	6,949.80	-----	525.00	-----	-----	-----	120.00	53,132.34
West Point, N. Y.....	24,843.50	10,604.33	-----	9.00	4,376.83	3.00	2,160.00	-----	-----	-----	-----	41,996.66
Willetts Point, New York Harbor.....	2,937.86	2,029.41	-----	4,078.08	4,885.30	30.00	90.00	-----	-----	-----	-----	14,060.65
David's Island, New York Harbor.....	12,127.17	4,420.30	-----	38,923.80	49,203.95	-----	150.00	-----	-----	-----	129.90	104,855.12
Springfield Armory.....	1,849.21	327.50	-----	-----	11.00	-----	-----	-----	-----	-----	-----	2,187.71
Military prison Fort Leavenworth, Kansas.....	9,989.28	5,239.22	-----	-----	3,072.82	88,646.20	-----	-----	43.06	-----	-----	106,900.58
Hot Springs, Ark.....	6,035.99	2,257.24	-----	18.30	1,476.35	-----	1,335.67	-----	-----	-----	-----	11,123.55

Amounts estimated for from the regular appropriations—Continued.

Divisions, departments, etc	Regular supplies.	Incidental expenses.	Cavalry and artillery horses.	Barracks and quarters.	Transportation of the Army and its supplies.	Clothing, camp and garrison equipage.	Construction and repair of hospitals.	National cemeteries.	Pay of superintendents of national cemeteries.	Shooting galleries and ranges.	Quarters for hospital stewards.	Total.
Atlanta, Ga. (cemeterial)	\$773.42	\$3,630.33	.....	\$300.00	\$448.80	.....	.....	\$35,560.47	\$21,491.51	.....	.....	\$62,204.53
Atlanta, Ga. (military post).....	12,420.18	819.50	.....	1,880.00	39,827.45	.....	.....	.....	.....	.....	\$1,199.50	56,146.63
Fort Riley, Kans.	44,952.85	7,670.28	.....	241.54	101,927.06	.....	.....	.....	.....	.....	.....	154,691.73
Fort Sheridan, Ill.	28,460.09	1,344.66	.....	240.00	94,464.34	.....	.....	.....	.....	\$3,500.00	.....	128,054.31
Powder Depot, Dover, N. J.	185.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	185.00
Alleghany Arsenal, Pennsylvania .	888.56	15.00	.....	18.35	118.00	.....	.....	.....	.....	.....	.....	1,039.91
Augusta Arsenal, Georgia	1,140.24	375.00	.....	.....	90.90	.....	.....	.....	.....	.....	.....	1,606.14
Benicia Arsenal, California	3,016.83	43.50	.....	.....	564.04	.....	.....	.....	.....	.....	.....	3,624.37
Frankford Arsenal, Pennsylvania .	27.00	.....	.....	.....	1,021.56	.....	.....	.....	.....	.....	.....	1,048.56
Indianapolis Arsenal, Indiana	352.27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	352.27
Kennebec Arsenal, Maine	1,534.28	55.00	.....	.....	145.00	.....	.....	.....	.....	.....	.....	1,734.28
Rock Island Arsenal, Illinois	1,187.74	150.95	.....	.....	1,259.63	.....	.....	.....	.....	.....	.....	2,598.32
Watertown Arsenal, Massachusetts	2,344.89	128.75	.....	.....	100.00	.....	.....	.....	.....	.....	.....	2,573.64
Watervliet Arsenal, New York	2,681.62	353.45	.....	.....	618.00	.....	.....	.....	.....	.....	.....	3,653.07
Total depots, posts, etc	578,229.12	207,669.99	\$25,269.53	126,714.99	825,175.25	\$1,389,858.40	4,358.59	98,725.58	60,991.51	3,543.06	1,624.40	3,322,160.42
Grand total	2,758,062.09	659,155.48	134,944.01	715,770.71	2,715,231.43	1,392,552.46	104,693.20	98,865.58	60,991.51	9,974.89	13,723.30	8,663,984.66

Amounts remitted from the regular appropriations.

Divisions, departments, etc.	Regular supplies.	Incidental expenses.	Cavalry and artillery horses.	Barracks and quarters.	Transportation of the Army and its supplies.	Clothing, camp and garrison equipage.	Construction and repair of hospitals.	National cemeteries.	Pay of superintendents of national cemeteries.	Shooting galleries and ranges.	Quarters for hospital stewards.	Total.
Division of the Atlantic	\$296,434.29	\$74,752.61	\$400.00	\$130,938.35	\$310,905.13	\$354.00	\$34,071.45	\$125.00	-----	\$2,314.11	\$2,814.96	\$853,109.90
Headquarters Division of the Missouri	9,244.08	26,787.54	-----	19,918.00	76,801.80	-----	33.90	15.00	-----	-----	-----	132,799.82
Department of the Missouri	808,326.98	58,130.89	40,731.10	45,228.64	353,868.89	243.96	27,323.25	-----	-----	379.47	803.00	834,536.18
Department of Texas	169,441.67	40,497.78	4,336.36	49,631.33	155,090.93	35.00	8,682.48	-----	-----	235.29	704.80	423,655.64
Department of Platte	303,079.80	61,998.27	4,427.27	72,877.60	193,656.10	85.20	3,568.13	-----	-----	1,045.31	1,415.00	642,152.68
Department of Dakota	396,110.03	66,999.97	11,710.65	58,901.86	319,922.15	1,974.90	7,564.95	-----	-----	1,079.06	1,359.84	865,623.41
Total Division of the Missouri	1,186,202.56	254,414.45	61,205.38	240,557.43	1,098,839.37	2,339.06	47,172.71	15.00	-----	2,739.13	4,282.64	2,903,767.73
Department of California	98,969.69	39,000.41	5,316.94	40,954.82	113,375.29	-----	5,936.30	-----	-----	764.31	950.00	305,267.76
Department of Columbia	138,548.28	29,967.65	10,304.55	34,445.13	145,152.20	-----	2,330.00	-----	-----	171.37	1,105.50	362,024.68
Department of Arizona	455,119.75	50,704.89	31,741.21	79,759.99	214,858.74	1.00	8,174.00	-----	-----	307.68	2,925.00	843,592.26
Total Division of the Pacific	692,637.72	119,672.95	47,362.70	155,159.94	473,366.23	1.00	16,440.30	-----	-----	1,243.36	4,980.50	1,510,884.70
Depot at New York	87,967.66	37,572.09	1,250.00	6,452.74	141,310.45	50.00	-----	4,707.10	\$900.00	-----	-----	280,210.04
Depot at Philadelphia	60,254.73	24,633.45	-----	6,657.45	43,010.10	918,881.23	-----	3,929.90	2,280.00	-----	-----	1,059,646.96
Depot at Washington	30,480.71	26,095.38	-----	6,145.92	42,108.94	-----	61.70	41,510.81	21,140.00	-----	-----	167,533.41
Depot at Jeffersonville	151,676.64	27,406.43	-----	749.11	109,187.88	151,779.19	-----	1,946.92	3,840.00	-----	-----	446,586.17
Depot at St. Louis	11,305.23	19,069.62	24,019.53	15,341.60	98,308.58	8,878.00	-----	10,452.13	10,620.00	-----	-----	197,994.69
Depot at San Francisco	32,184.93	22,824.30	-----	13,091.63	49,301.69	220,109.54	-----	588.50	720.00	-----	-----	338,820.59
Columbus Barracks, Ohio	15,782.37	4,571.61	-----	23,203.25	28,088.28	-----	1.00	-----	-----	-----	175.00	71,821.51
Jefferson Barracks, Missouri	29,465.54	5,764.00	-----	8,227.00	8,819.20	-----	525.00	-----	-----	-----	120.00	52,920.74
West Point, N. Y.	24,843.50	10,604.33	-----	9.00	4,376.83	5.00	2,160.00	-----	-----	-----	-----	41,998.66
Willetts Point, New York Harbor	2,783.51	2,029.41	-----	4,078.08	4,885.30	30.00	90.00	-----	-----	-----	-----	13,896.30
David's Island, New York Harbor	12,127.17	4,420.30	-----	37,392.99	48,150.36	-----	150.00	-----	-----	-----	129.90	102,370.72
Springfield Armory	1,849.21	327.50	-----	-----	11.00	-----	-----	-----	-----	-----	-----	2,187.71
Military Prison, Fort Leavenworth, Kans	9,989.28	5,239.22	-----	-----	3,072.82	88,646.20	-----	-----	-----	43.06	-----	106,990.58
Hot Springs, Ark.	6,035.99	2,257.24	-----	18.30	1,476.35	-----	1,335.67	-----	-----	-----	-----	11,123.55
Atlanta, Ga. (cemeterial)	773.42	3,630.23	-----	300.00	448.80	-----	-----	35,560.87	21,491.51	-----	-----	62,204.83
Atlanta, Ga. (military post)	12,420.18	819.50	-----	1,880.00	36,788.31	-----	-----	-----	-----	-----	1,199.50	53,107.49
Fort Riley, Kans	43,866.51	7,570.28	-----	241.54	101,927.06	-----	-----	-----	-----	-----	-----	153,605.39
Fort Sheridan, Ill.	26,788.79	1,344.66	-----	240.00	91,646.60	-----	45.22	-----	-----	3,500.00	-----	123,575.27
Powder depot, Dover, N. J.	185.00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	185.00

Amounts remitted from the regular appropriations—Continued.

Divisions, departments, etc.	Regular supplies.	Incidental expenses.	Cavalry and artillery horses.	Barracks and quarters.	Transportation of the Army and its supplies.	Clothing, camp and garrison equipage.	Construction and repair of hospitals.	National cemeteries.	Pay of superintendents of national cemeteries.	Shooting galleries and ranges.	Quarters for hospital stewards.	Total.
Alleghany Arsenal, Pennsylvania.....	\$888.56	\$15.00	.....	\$18.35	\$118.00	.....	.....	.....	.....	.....	.....	\$1,039.91
Augusta Arsenal, Georgia.....	1,140.24	375.00	.....	.....	90.90	.....	.....	.....	.....	.....	.....	1,606.14
Benicia Arsenal, California.....	3,016.83	43.50	.....	.....	564.04	.....	.....	.....	.....	.....	.....	3,624.37
Frankford Arsenal, Pennsylvania.....	27.00	.....	.....	.....	1,021.56	.....	.....	.....	.....	.....	.....	1,048.56
Indianapolis Arsenal, Indiana.....	352.27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	352.27
Kennebec Arsenal, Maine.....	1,534.28	55.00	.....	.....	145.00	.....	.....	.....	.....	.....	.....	1,734.28
Rock Island Arsenal, Illinois.....	1,187.74	150.95	.....	.....	1,259.63	.....	.....	.....	.....	.....	.....	2,598.32
Watertown Arsenal, Massachusetts.....	2,344.89	128.75	.....	.....	100.00	.....	.....	.....	.....	.....	.....	2,573.64
Watervliet Arsenal, New York.....	2,681.62	353.45	.....	.....	618.00	.....	.....	.....	.....	.....	.....	3,653.07
Total depots, posts, etc.....	573,963.80	207,301.15	\$25,269.53	124,046.96	816,835.68	\$1,988,377.26	\$4,358.59	\$98,696.23	\$60,991.51	\$3,543.06	\$1,624.40	3,305,008.17
Grand total.....	2,749,238.37	656,141.16	134,237.61	656,702.68	2,699,966.41	1,391,071.32	102,043.05	98,836.23	60,991.51	9,839.66	13,702.50	8,572,770.50

Amounts estimated for and supplied from indefinite or special appropriations.

	Division of the Atlantic.	Division of the Missouri.				Total.
		Department of Missouri.	Department of Texas.	Department of Platte.	Department of Dakota.	
Military post near Newport, Ky. (buildings)	\$1,081.41					
Military post near Newport, Ky. (site)	495.75					
Military posts	76,459.48	\$176,884.98	\$51,109.32		\$61,000.00	\$288,994.80
Road through military reservation, Plattsburgh, N. Y.	10,000.00					
Water supply, Fort D. A. Russell, Wyo				\$21,604.17		21,604.17
Military post at Fort Omaha, Nebr				10,000.00		10,000.00
Total	88,086.64	176,884.98	51,109.32	31,604.17	61,000.00	320,598.47

QUARTERMASTER-GENERAL.

Amounts estimated for and supplied from indefinite or special appropriations—Continued.

	Depots, posts, etc.												Grand total.	
	Fort Riley.	Fort Sheridan.	New York depot.	Philadelphia depot.	Washington depot.	Jeffersonville depot.	St. Louis depot.	San Francisco depot.	Columbus Barracks.	Hot Springs, Ark.	Atlanta, Ga. (military post.)	Atlanta, Ga. (cemetery).		Total.
Military post near Newport, Ky. (buildings)					\$163.33								\$163.33	\$1,244.74
Military post near Newport, Ky. (site)														495.75
Military posts											\$4,965.43		4,965.43	370,419.21
Road through military reservation, Plattsburgh, N. Y.														10,000.00
Buildings for Cavalry and Artillery School, Fort Riley, Kans. .	\$99,379.27					\$820.73							100,000.00	100,000.00
Military post near Chicago, Ill. .		\$204,806.22											204,806.22	204,806.22
Water supply, Fort D. A. Russell, Wyo.														21,604.17
Military post at Fort Omaha, Nebr.					66,589.13								66,589.13	76,589.13
Headstones for graves of soldiers. Road to national cemetery near Beverly, N. J.			\$24,519.78			15.00						\$18.00	24,552.78	24,552.78
Burial of indigent soldiers				\$2,306.70									2,306.70	2,306.70
Horses and other property lost in the military service					1,000.00								1,000.00	1,000.00
Road from Staunton to the national cemetery, Virginia					116,836.31								116,836.31	116,836.31
Fort Brady military post, Mich. .					5,000.00								5,000.00	5,000.00
Repairing roads to national cemeteries					12,000.00								12,000.00	12,000.00
Road from Antietam to the national cemetery, Maryland					7,180.00		\$135.00					4,004.97	12,009.97	12,009.97
Road from New Berne to the national cemetery, North Carolina. .					14,500.00								14,500.00	14,500.00
Monuments or tablets at Gettysburgh					4,500.00								4,500.00	4,500.00
Approaches to the national cemetery near Danville, Va.					13,907.60								13,907.60	13,907.60
Purchase of land adjoining military reservation at West Point, N. Y.					5,000.00								5,000.00	5,000.00
					150,000.00								150,000.00	150,000.00

Fort Meade military reservation, Dakota					3,000.00									3,000.00	3,000.00
Purchase of site for Fort Elliott, Tex.					17,000.00									17,000.00	17,000.00
Tents for sufferers from floods in Arkansas, Mississippi, and Louisiana					25,000.00									25,000.00	25,000.00
Road to the national cemetery, Presidio of San Francisco, Cal.								\$21,109.59						21,109.59	21,109.59
Officers' quarters, military post at Columbus, Ohio								\$19,981.90						19,981.90	19,981.90
Army and Navy Hospital at Hot Springs, Ark.									\$8,490.00					8,490.00	8,490.00
Road from Florence to the na- tional cemetery, South Carolina.												15,000.00		15,000.00	15,000.00
Road from Natchez to the na- tional cemetery, Mississippi												6,000.00		6,000.00	6,000.00
Total	99,379.27	204,806.22	24,519.78	2,306.70	441,676.37	635.73	135.00	21,109.59	19,981.90	8,490.00	4,965.43	25,712.97	853,718.96	1,262,354.07	

Respectfully submitted.

M. I. LUDINGTON,
Deputy Quartermaster-General, U. S. Army.

QUARTERMASTER-GENERAL'S OFFICE, September 1, 1890.

3.—*Report of Lieut. Col. M. I. Ludington, deputy quartermaster-general, U. S. Army, of the operations of the money and property accounts branch for the fiscal year ending June 30, 1890.*

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 19, 1890.

GENERAL: I have the honor to submit a report of the operations of the money and property branch of this office during the fiscal year 1890.

The duties of this branch are the administrative examination of the money accounts and returns of quartermaster's stores rendered by officers serving in the Quartermaster's Department before their transmission to the accounting officers for final action.

It also takes action on certificates of deposits of funds pertaining to the appropriations for the Quartermaster's Department received from sales to officers and soldiers, sales at auction, and other sources, and upon boards of survey and inventory and inspection reports of quartermaster's stores no longer fit for issue or use.

The accompanying statements exhibit in detail the work of the branch, and are marked:

A.—A statement showing number of accounts and returns examined, etc.

B.—A statement showing the amounts received from sales of quartermaster's stores to officers and soldiers.

C.—A statement showing in detail the amounts expended under the various heads of appropriations for the fiscal year 1890, and supplement pertaining to fiscal year ended June 30, 1889.

D.—Abstract of payments during the year to railroad and express companies on account of appropriation for transportation of the Army upon accounts settled by disbursing officers of the Quartermaster's Department.

E.—Abstract of payments during the year for water transportation upon accounts settled by disbursing officers of the Quartermaster's Department.

F.—Abstract of payments during the year for wagon transportation upon accounts settled by disbursing officers of the Quartermaster's Department.

G.—Abstract of payments during the year for stage transportation upon accounts settled by disbursing officers of the Quartermaster's Department.

H.—A statement showing the number of civilians employed by the month, etc.

I.—A statement of amounts expended by each officer serving in the Quartermaster's Department.

Very respectfully,

M. I. LUDINGTON,
Deputy Quartermaster-General, U. S. Army.

The QUARTERMASTER-GENERAL, U. S. ARMY.

A.—Statement showing the number of money accounts and returns of quartermaster's stores received and disposed of during the fiscal year ending June 30, 1890.

MONEY ACCOUNTS.

On hand July 1, 1889.....	1, 059
Received during the year.....	2, 924
Total	3, 983
Examined and sent to Auditor.....	2, 728
Remaining on hand July 1, 1890	1, 255

PROPERTY RETURNS.

On hand July 1, 1889.....	1, 257
Received during the year.....	3, 482
Total	4, 739
Examined and sent to Auditor.....	3, 185
Remaining on hand July 1, 1890	1, 554

B.—Statement showing the amount received from sales of quartermaster's stores to officers and soldiers of the Army during the fiscal year ending June 30, 1890.

From returns made to this date there has been received from such sales. \$156,934.32

This amount has been credited to appropriations as follows:

Regular supplies, Quartermaster's Department.....	122, 596. 48
Incidental expenses, Quartermaster's Department.....	3. 00
Horses for cavalry and artillery.....	1, 646. 12
Transportation of the Army and its supplies.....	314. 72
Clothing, camp, and garrison equipage.....	32, 374. 00
Total	156, 934. 32

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department for the fiscal year 1890, in the divisions, departments, independent posts, and general depots of the Army, as shown by the accounts of officers, from July 1, 1889, to July 1, 1890, so far as accounts have been received in this office.

546

Division and post.	REGULAR SUPPLIES.									
	Forage.					Fuel.		Stoves.		
	Hay.	Oats.	Corn.	Bran.	Barley.	Straw.	Wood.	Coal.	Heating.	Cook.
<i>Division of the Atlantic and Department of the East.</i>										
Headquarters, Governor's Island, N. Y. H.	\$3,572.54	\$3,724.20	\$474.40	\$358.19		\$866.10	\$1,184.69	\$21,656.74	\$1,057.45	
Boston, Mass	8,701.54	5,088.60	217.72	257.60		669.02	2,958.18	14,076.99	804.44	
Baltimore, Md	1,434.24	1,571.58	14.10	9.84		305.61	3,162.38	4,428.34	404.21	
New Orleans, La.	3,423.84	3,190.66	87.88	19.01		1,259.30	6,361.67	7,867.59	47.88	\$9.71
Buffalo, N. Y.	2,005.77	2,655.20	120.44	83.21		421.81	2,907.50	21,139.35	392.38	213.53
Washington Barracks, D. C.							3.50		455.57	773.00
Fort Monroe, Va	968.00	1,103.68	145.22			245.99	631.90	5,120.55	219.40	55.00
Newport Barracks, Ky.							35.00		19,511.04	
Jackson Barracks, La.									196.50	
Fort Preble, Me.									180.00	
Fort Trumbull, Conn							192.50		15.85	
Fort Myer, Va	168.87	203.19					28.50			
Fort Hamilton, N. Y.									276.82	
Fort McHenry, Md									483.25	
Fort Wadsworth, N. Y.									2,156.50	410.00
Fort Wayne, Mich									118.95	191.32
Fort Brady, Mich										27.00
Fort Porter, N. Y.									349.95	19.00
Madison Barracks, N. Y.							75.00		11,347.04	
Fort Ontario, N. Y.							397.96		76.57	
Fort Warren, Mass.									7.35	
Fort McPherson, Ga.									159.32	
Fort Schuyler, N. Y.									158.30	
Fort Niagara, N. Y.									12.50	
In the field	1,229.89	1,327.17				125.00	44.70	1.25		
Total	16,504.69	18,864.28	1,068.26	727.85		3,892.83	17,983.48	74,290.81	38,431.27	1,698.56
<i>Division of the Missouri.</i>										
Headquarters, Chicago, Ill	651.54	696.22				106.09		3,280.22	429.91	142.50

REPORT OF THE SECRETARY OF WAR.

Fort Sheridan, Ill									14,977.60	
Total	651.54	696.22			106.09		3,280.22		15,407.51	142.50
<i>Department of the Missouri.</i>										
Headquarters and depot, Fort Leavenworth, Kans., and St. Louis, Mo.	42,461.67	35,641.39	30,071.16	7,754.77		3,082.01	48,239.61	49,458.92	8,446.48	
Denver, Colo	138.10	129.60	91.45	10.00		24.30	23.50	5,041.46	12,090.25	780.99
Fort Crawford, Colo	35.02	3.46	65.80					322.00		
Fort Lewis, Colo	20.16							26.00		
Fort Riley, Kans.			6.10	48.68				9.00	444.00	
Fort Reno, Ind. T	998.34	376.94	314.31					983.26		
Fort Lyon, Colo	10.11	12.25						14.90		
Fort Supply, Ind. T	33.70							4.75		
Fort Sheridan, Ill									.50	
Fort Sill, Ind. T		65.55	140.87					263.13		
Oklahoma City, Ind. T	265.12	4.35						1,086.87		
Guthrie, Ind. T	340.77	42.62	39.69					410.96	595.80	
Little Rock Barracks, Ark	321.78								28.56	
In the field	349.72	546.09	38.42					439.12		
Total	44,874.49	36,812.25	30,767.80	7,813.45		3,106.31	51,475.10	55,444.18	21,009.79	780.99
<i>Department of the Platte.</i>										
Headquarters and depot, Omaha, Nebr.	37,232.87	53,770.17	11,277.61	2,241.13		5,335.53	51,700.17	78,702.14	1,306.72	1,190.60
Cheyenne depot, Wyo	7.56	10.36								
Ogden, Utah	2,317.08	2,687.92	17.86			2.00	529.06	106.15		
Fort McKinney, Wyo	1,153.66	1,058.34					322.44			
Fort Robinson, Nebr	631.37	81.38	1.44				85.58			
Fort Washakie, Wyo	226.19	26.71					120.89			
Fort Omaha, Nebr	111.00	12.96					12.00			
Fort Laramie, Wyo	239.03	206.31					168.75			
Fort Du Chesne, Utah	253.32	67.50					4.50			3.75
Fort Sidney, Nebr	73.65						396.00			
Fort D. A. Russell, Wyo	397.06									
Camp Pilot Butte, Wyo	3.50									
In the field	5.46	9.11	7.09				64.06			
Total	42,601.75	57,910.76	11,904.00	2,241.13		5,337.53	53,403.45	78,808.29	1,306.72	1,194.35
<i>Department of Dakota.</i>										
Headquarters, St. Paul, Minn	55,358.07	56,984.54	13,592.63	2,318.93		1,304.62	29,825.75	72,221.19	4,273.75	
Helena, Mont	4,764.64	11,677.34	683.32	546.86		114.00	9,332.06			
Fort Custer, Mont	397.53	125.75					165.40			
Fort Meade, S. Dak	74.62	38.26	11.16				35.00	74.18		
Fort Missoula, Mont						7.50				
Fort Keogh, Mont	157.69						18.00			
Fort Buford, N. Dak	129.44						5.00			
Fort Yates, N. Dak	9.66						7.26			

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	REGULAR SUPPLIES.									
	Forage.					Fuel.		Stoves.		
	Hay.	Oats.	Corn.	Bran.	Barley.	Straw.	Wood.	Coal.	Heating.	Cook.
<i>Department of Dakota—Continued.</i>										
Fort Maginnis, Mont.	\$461.23						\$130.15			
Fort Snelling, Minn.	98.22	\$16.53					55.00		\$15.00	\$95.00
Fort Randall, S. Dak.	15.93									
Fort A. Lincoln, N. Dak.									33.00	
Fort Sully, S. Dak.							5.50	\$294.58		
Camp Sheridan, Wyo.	22.33						3.00			
Total	61,426.36	68,842.42	\$14,287.11	\$2,865.79		\$1,426.12	99,580.12	72,589.95	4,322.65	95.00
<i>Department of Texas.</i>										
Headquarters and depot, San Antonio, Tex.	36,850.64	34,176.20	22,955.13	5,106.79			37,936.18	8,019.95		1,372.75
Fort Bliss, Tex.										3.00
Fort Clark, Tex.	4.00									
Fort Brown, Tex.	19.50									
Camp at Eagle Pass, Tex.								40.00		
In the field	32.90	31.17	1.40				13.25			
Total	36,907.04	34,207.37	22,956.53	5,106.79			37,949.43	8,059.95		1,375.75
<i>Department of California.</i>										
Headquarters and depot, San Francisco, Cal.	17,726.95	7,653.85		1,217.35	\$12,030.27	8.74	5,255.94	22,975.22		
Fort Mason, Cal.									19.50	
Fort Gaston, Cal.	314.16	204.72								
Fort McDermitt, Cal.							30.00			
Fort Bidwell, Cal.	111.47				19.68					
Angel Island, Cal.	781.05	68.91			881.89	23.50	751.28			
In the field	938.12	76.43			1,261.97	68.00	563.75			
Total	19,871.75	8,003.91		1,217.35	14,193.81	100.24	6,600.97	22,975.22	19.50	

<i>Department of Arizona.</i>										
Headquarters, Los Angeles, Cal.	30,054.33	1,940.60	9,118.87	3,859.03	23,264.89	437.39	23,761.80	3,646.35	2.40	206.43
Tucson, Ariz.	47,539.49	4,246.81	7,941.88	4,320.60	45,536.77	3,897.42	42,337.84			3.50
Santa Fé, N. Mex.	34,961.06	16,466.87	23,889.84	3,485.89	3,717.16	5,248.97	26,148.76	7,932.50		
Fort Stanton, N. Mex.								34.00		
Fort Apache, Ariz.					138.60					
San Diego Barracks, Cal.	3.16				5.34					12.00
In the field	16.56	9.60								
Total	112,574.60	23,263.28	40,950.69	11,665.52	72,660.26	9,583.78	92,238.40	11,612.85	2.40	221.93
<i>Department of the Columbia.</i>										
Headquarters and depot, Vancouver Barracks, Wash.	3,446.06	4,065.74		249.06		387.59	16,350.36		291.50	55.75
Portland, Oregon	18,494.96	24,400.78	206.66	1,239.45		1,178.66	27,903.80	1,177.22	1,442.54	700.14
Fort Walla Walla, Wash.	24.09	21.36								
Boise Barracks, Idaho								52.00		
Fort Sherman, Idaho	18.60	13.41								
Fort Klamath, Oregon	77.53	41.45			4.45					
Fort Spokane, Wash.	199.70	138.67								
Fort Canby, Wash.								231.44		
In the field	462.40	660.82						286.75		
Total	22,723.34	29,342.23	206.66	1,488.51	4.45	1,566.25	44,772.35	1,229.22	1,734.04	755.89
<i>Independent posts.</i>										
Powder depot, Dover, N. J.									143.82	
Augusta Arsenal, Ga.	172.02	198.64				28.76	598.24	117.06		
Benicia Arsenal, Cal.	165.76	217.12			69.76		370.88	2,073.25		
Kennebec Arsenal, Me.	69.55	88.36				12.16	137.25	1,009.18	7.84	
Watervliet Arsenal, N. Y.	129.86	151.49				17.95	170.94	2,052.64		
Allegheny Arsenal, Pa.	220.84	265.37				39.52		285.92		
Indianapolis Arsenal, Ind.	83.81	86.65				26.40		30.88		
Rock Island Arsenal, Ill.	49.49	156.06				4.80		943.51		
Watertown Arsenal, N. Y.	219.57	262.62				51.60		1,790.47		
Frankford Arsenal, Pa.	93.04	105.26				20.58		1,079.32		
National Armory, Springfield, Mass.	275.45	293.73				62.12		1,209.95		
Atlanta, Ga.	2,940.62	2,134.70	113.13	.85		28.40	96.50	620.14	1,453.48	
West Point, N. Y.	5,692.87	7,400.80	840.00	532.97		1,463.52	1,373.35	6,327.03	450.05	441.60
Columbus Barracks, Ohio	551.98	670.45				62.11		4,067.24	3,006.90	186.10
Hot Springs, Ark.	421.89	517.83				66.00	1,068.76	877.29	31.80	63.75
David's Island, N. Y.								4.88	3,452.03	137.00
Willetts Point, N. Y.									312.19	47.13
Jefferson Barracks, Mo.	4,790.57	4,726.28	646.61	188.42		456.48	3,853.24	3,118.13	376.36	6,947.00
U. S. legations at Vienna, Austria, and Paris, France.	64.40	55.20				14.40	38.44	24.00		
Total	15,936.72	17,330.56	1,499.74	722.24	69.76	2,355.10	7,707.60	25,778.71	9,290.65	7,822.58

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	REGULAR SUPPLIES.									
	Forage.						Fuel.		Stoves.	
	Hay.	Oats.	Corn.	Bran.	Barley.	Straw.	Wood.	Coal.	Heating.	Cook.
<i>General depots.</i>										
New York N. Y	\$1,900.57	\$2,260.73	\$50.19	\$61.12		\$442.36	\$646.29	\$23,439.09	\$3,081.37	\$704.30
Philadelphia, Pa	561.33	668.44				125.97	33.89	1,698.96	113.00	10.93
Washington, D. C.	15,266.08	19,284.19	326.79	285.45		3,402.62	2,123.76	20,263.50	67.00	
Jeffersonville, Ind	714.36	748.22	3.00	6.50		76.40		3,599.25	17,059.34	20,485.47
San Francisco, Cal	554.05	896.45		8.00		18.27	246.22	6,048.29	7,189.82	1,389.45
St. Louis, Mo	1,229.94	1,869.70				171.47	302.29	1,140.47	5.40	1,390.95
Military prison, Fort Leavenworth, Kans										3,712.77
Total	20,226.33	25,227.73	380.58	361.07		4,236.09	3,352.45	56,189.56	27,515.93	27,693.87

C. - Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	REGULAR SUPPLIES.										
	Lights.			Stationery.	Advertis- ing.	Printing.	Paulins.	Lawn- mowers.	Engineers.	Firemen.	Watchmen.
	Lamps and lanterns.	Mineral oil.	Light.								
<i>Division of the Atlantic and Depart- ment of the East.</i>											
Headquarters, Governor's Island, N. Y. H.			\$72.40	\$273.11	\$291.17	\$3,560.64		\$103.89			\$360.00
Boston, Mass	\$6.56	\$97.87	18.46	6.50		24.00		21.95			
Baltimore, Md	53.70		39.46	132.29				43.73			
New Orleans, La	4.96			27.63				112.15			
Buffalo, N. Y.	40.33			50.15							
Washington Barracks, D. C.			2,443.43	191.43				25.43	\$900.00		
Fort Monroe, Va	18.00		12.50	138.92				40.62			
Newport Barracks, Ky	40.00		139.73	50.43	120.33	59.13		9.50			
Fort Barrancas, Fla			11.70								
Jackson Barracks, La	24.00		3.10								
Fort Preble, Me			22.75								
Fort Trumbull, Conn			4.35					1.75			
Fort Adams, R. I.			22.50								
Fort Myer, Va.			8.40					1.30			
Fort Hamilton, N. Y.			12.96								
Fort Wood, N. Y. H.			1.50								
Fort McHenry, Md.			6.50								
Fort Wadsworth, N. Y.			305.25	.75				7.75			
Fort Wayne, Mich.	30.30		9.45								
Fort Brady, Mich.			7.11								
Fort Mackinac, Mich.			2.10								
Fort Porter, N. Y.	18.20		587.96					32.32	498.00		
Madison Barracks, N. Y.			14.22	89.16	35.15					\$480.00	
Fort Ontario, N. Y.			2.36								
St. Augustine, or St. Francis Barracks, Fla			3.15								
Plattsburgh Barracks, N. Y.			4.34								
Fort Warren, Mass			18.81								
Fort McPherson, Ga			16.80		8.60			225.00			
Fort Schuyler, N. Y.			11.84								
Mt. Vernon Barracks, Ala			10.41								
Fort Niagara, N. Y.			4.20								
Total	236.05	97.87	3,917.74	960.37	455.25	3,643.77		625.39	1,898.00	480.00	360.00

Fort Du Cheene, Utah.....	3.00		16.10							
Fort Sidney, Nebr.....			19.50							
Fort D. A. Russell, Wyo.....			40.00							
Fort Bridger, Wyo.....			10.00							
Fort Niobrara, Nebr.....			17.75							
Camp Pilot Butte, Wyo.....			4.10							
Total.....	80.70	7,200.00	228.14	1,467.45	311.75	3,403.78		75.85		1,555.00
<i>Department of Dakota.</i>										
Headquarters, St. Paul, Minn.....	40.57	10,694.98	391.62	2,684.31	130.91	2,257.35	\$214.04	144.26	1,200.00	765.00
Fort Custer, Mont.....			22.18							
Fort Meade, S. Dak.....			55.00							
Fort Missoula, Mont.....			7.30							
Fort Keogh, Mont.....			24.85							
Fort Buford, N. Dak.....			18.54							
Fort Yates, N. Dak.....			30.00							
Fort Assiniboine, Mont.....			10.00							
Fort Maginnis, Mont.....			7.65							
Fort Snelling, Minn.....			17.25						900.00	
Fort Randall, S. Dak.....			10.00							
Fort A. Lincoln, N. Dak.....			12.07							
Fort Shaw, Mont.....			11.24							
Fort Totten, N. Dak.....			17.17							
Fort Pembina, N. Dak.....			7.85							
Fort Sully, S. Dak.....			10.00							
Camp Poplar River, Mont.....			11.24							
Camp Sheridan, Wyo.....			4.40							
Total.....	40.57	10,694.98	667.86	2,684.31	130.91	2,257.35	214.04	144.26	2,100.00	765.00
<i>Department of Texas.</i>										
Headquarters and depot, San Antonio, Tex.....	98.98		37.32	567.31	16.20	2,336.47		143.15	1,020.00	420.00
Fort Davis, Tex.....			15.75							
Fort Hancock, Tex.....			4.48							
Fort McIntosh, Tex.....			8.55							
Fort Bliss, Tex.....			11.48	3.00						
Fort Ringgold, Tex.....			9.53							
Fort Clark, Tex.....			18.00							
Fort Brown, Tex.....			21.00							
Camp at Eagle Pass, Tex.....			4.20							
Camp Peña Colorado, Tex.....			6.30							
Total.....	98.98		137.51	570.31	16.20	2,336.47		143.15	1,020.00	420.00
<i>Department of California.</i>										
Headquarters and depot, San Francisco, Cal.....			244.80	40.00	86.84	3,832.03				

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	REGULAR SUPPLIES.										
	Lights.			Stationery.	Advertis- ing.	Printing.	Paulins.	Lawn- mowers.	Engineers.	Firemen.	Watchmen.
	Lamps and lanterns.	Mineral oil.	Light.								
<i>Department of California—Continued.</i>											
Fort Mason, Cal.			\$8. 12								
Presidio of San Francisco, Cal.			32. 31								\$440. 00
Fort Gaston, Cal.			2. 19								
Fort Bidwell, Cal.			5. 84								
Benicia Barracks, Cal.			4. 78					\$13. 90			
Alcatraz Island, Cal.			15. 41								
Angel Island, Cal.			20. 99								
Total			334. 44	\$40. 00	\$86. 84	\$3, 832. 03		13. 90			440. 00
<i>Department of Arizona.</i>											
Headquarters, Los Angeles, Cal.	\$100. 92		603. 14	2, 317. 29	144. 30	2, 964. 24					
Tucson, Ariz.			30. 16								
Santa Fé, N. Mex.	19. 50		16. 83	5. 30	33. 62						
Whipple Barracks, Ariz.			21. 60								
Fort Huachuca, Ariz.			36. 56								
Fort Wingate, N. Mex.			23. 13								
Fort Bayard, N. Mex.			15. 78								
Fort Selden, N. Mex.			2. 10								
Fort Stanton, N. Mex.			36. 57								
Fort Union, N. Mex.			13. 14								
Fort Apache, Ariz.			19. 62								
Fort Lowell, Ariz.			8. 78								
Fort McDowell, Ariz.			13. 60								
Fort Grant, Ariz.			11. 76								
Fort Bowie, Ariz.			6. 31								
Fort Verde, Ariz.			13. 54								
Fort Mojave, Ariz.			4. 14								
San Carlos, Ariz.			12. 40								
San Diego Barracks, Cal.			12. 59	4. 52							
Fort Thomas, Ariz.			4. 75								
Total	120. 42		900. 50	2, 327. 11	177. 92	2, 964. 24					

Department of the Columbia.

Headquarters and depot, Vancouver Barracks, Wash.....	4.30		63.06	1,337.28	155.12	1,567.39				
Portland, Oregon.....	120.05	\$20.65	4.00	566.55			70.00			
Fort Walla Walla, Wash.....			8.37					\$15.00		
Boise Barracks, Idaho.....			8.40					825.53		
Fort Sherman, Idaho.....			19.83							
Fort Klamath, Oregon.....			5.25							
Fort Spokane, Wash.....			11.23					335.00		
Fort Townsend, Wash.....			9.79					428.00		
Fort Canby, Wash.....			6.26					120.00		
Total.....	124.35	20.65	136.19	1,903.87	155.12	1,567.39	70.00	1,723.53		
<i>Independent posts.</i>										
Augusta Arsenal, Ga.....			1.19							
Benicia Arsenal, Cal.....	60.50		4.09		29.00	9.25				
Kennebec Arsenal, Me.....			.85		3.80					
Watervliet Arsenal, N. Y.....			2.10		13.18					
Allegheny Arsenal, Pa.....			56.07		17.78					
Indianapolis Arsenal, Ind.....			107.67		5.65	1.25				
Fort A. Lincoln, N. Dak.....			1.50							
Rock Island Arsenal, Ill.....			8.24		25.64					
Watertown Arsenal, N. Y.....			2.50		18.13					
Frankford Arsenal, Pa.....	90.00									
National Armory, Springfield, Mass.....					7.96					
Atlanta, Ga.....				125.09	60.08	17.65				
West Point, N. Y.....			8.68							
Columbus Barracks, Ohio.....			2,390.45	14.90	14.81		103.50	900.00	\$665.00	
Hot Springs, Ark.....			1,596.38		10.56					
David's Island, N. Y.....	96.66		1,289.47	97.07			113.00	300.00		
Willet's Point, N. Y.....			15.80				8.30			
Jefferson Barracks, Mo.....	12.00	103.18	1,233.70	56.45	45.05	7.00		75.00		
U. S. legations at Vienna, Austria, and Paris, France.....			23.76	6.75						
Total.....	108.66	253.68	6,737.45	390.26	251.14	35.15	219.80	1,275.00	665.00	
<i>General depots.</i>										
New York, N. Y.....	16,480.10	10,902.28	734.38	15,491.03	544.00	172.20	371.88	800.00		
Philadelphia, Pa.....	31.76	3.70	638.62	536.22	205.30	9.90	\$6.13			
Washington, D. C.....		739.80	155.80	1,690.44						
Jeffersonville, Ind.....	9.06	48,669.30	800.74	21,955.07	569.56	28.30		1,800.00		
San Francisco, Cal.....	283.84	48.40	655.80	7,260.80	41.02	22.50	126.00	48.43		
St. Louis, Mo.....	13.80		179.50	421.14				174.10		
Military prison, Fort Leavenworth, Kans.....			2.10	3.90						
Total.....	16,818.56	60,363.48	3,166.94	47,350.60	1,359.88	232.90	132.13	594.41	2,600.00	

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	REGULAR SUPPLIES.							INCIDENTAL EXPENSES.				
	Labor.	Other employés.	Rubber stamps.	Forage masters and agents.	Scales.	Type-writers.	All expenses not otherwise enumerated.	Total amounts.	Postage.	Printing.	Advertising.	Extra duty.
<i>Division of the Atlantic and Department of the East.</i>												
Headquarters, Governor's Island, N. Y. H.	\$35.00						\$155.35	\$37,745.87	\$40.00			\$963.25
Boston, Mass.	10.70						268.47	28,228.60				
Baltimore, Md.							191.27	11,790.85	2.00			
New Orleans, La.			\$3.00				176.54	22,591.32				
Buffalo, N. Y.							448.53	30,487.20				
Washington Barracks, D. C.							116.80	4,909.16				946.80
Fort Monroe, Va.		\$75.00		\$875.00			1,249.35	10,699.13				1,260.50
Newport Barracks, Ky.		780.00	.50				2,267.35	23,013.01		\$2.50		523.10
Fort Barrancas, Fla.								11.70				615.10
Jackson Barracks, La.		119.50					632.05	975.15				420.80
Fort Preble, Me.							187.34	390.09				467.40
Fort Trumbull, Conn.							112.70	327.15				303.85
Fort Adams, R. I.							575.75	598.25				913.75
Fort Myer, Va.							128.53	538.79				621.67
Fort Hamilton, N. Y.							528.83	818.61				867.25
Fort Wood, N. Y. H.							335.00	336.50				280.40
Fort McHenry, Md.							331.25	821.00				640.58
Fort Wadsworth, N. Y.							188.20	3,068.45				759.60
Fort Wayne, Mich.							370.15	720.17				936.10
Fort Brady, Mich.								34.11				600.00
Fort Mackinac, Mich.							57.76	59.86				595.64
Fort Porter, N. Y.							95.45	1,600.84				564.20
Madison Barracks, N. Y.							1,832.59	13,893.16				1,201.58
Fort Ontario, N. Y.							256.71	733.60				470.75
St. Augustine, or St. Francis Barracks, Fla.							44.00	47.15				469.80
Plattsburgh Barracks, N. Y.							91.00	95.34				480.00
Fort Warren, Mass.								26.16				679.15
Fort McPherson, Ga.							135.80	545.52				999.70
Fort Schuyler, N. Y.							2,500.00	2,670.14			\$53.10	525.60
Mt. Vernon Barracks, Ala.							3.75	14.16				511.05
Fort Niagara, N. Y.							50.00	66.70				597.30

In the field								2,728.01				
Total	45.70	974.50	3.50	675.00			13,350.52	200,585.79	42.00	2.50	53.10	18,254.92
<i>Division of the Missouri</i>												
Headquarters, Chicago, Ill			23.78		\$312.50	\$135.55	270.24	9,690.67				
Fort Sheridan, Ill	968.23						97.52	16,074.20				
Total	968.23		23.78		312.50	135.55	367.76	25,764.87				
<i>Department of the Missouri</i>												
Headquarters and depot, Fort Leavenworth, Kans., and St. Louis, Mo	435.00	1,173.00	41.65			395.93	2,462.46	239,427.69	11.00			2,312.95
Denver, Colo	74.50	132.00	5.30				7,481.25	26,170.30				534.60
Fort Hays, Kans								439.93	5.00			230.10
Fort Crawford, Colo								201.70	4.00			942.90
Fort Lewis, Kans								3,800.52				1,734.59
Fort Riley, Kans	85.00	965.00	9.10	768.50	118.75	262.51	989.10	3,580.15	8.00			1,225.40
Fort Reno, Ind. T				900.00				42.51				213.85
Fort Lyon, Colo							6.90	140.13				741.92
Fort Logan, Colo				124.83				920.95	3.00			1,053.82
Fort Supply, Ind. T				862.50				168.28				546.00
Fort Sheridan, Ill		6.00						119.31				1,249.24
Fort Sill, Ind. T				900.00				1,637.27				520.65
Fort Elliott, Tex				900.00				912.60				738.95
Fort Gibson, Ind. T								9.45				520.65
Oklahoma City, Ind. T								1,437.65				431.90
Guthrie, Ind. T								1,314.38				47.60
Little Rock Barracks, Ark								132.30				401.70
In the field								1,373.35				
Total	594.50	2,267.00	56.05	4,455.83	118.75	658.44	11,393.02	281,838.20	31.00			12,926.17
<i>Department of the Platte</i>												
Headquarters and depot, Omaha, Nebr.	4,016.82	703.33	.71	4,910.00	18.55	351.95	5,024.45	270,452.10				
Cheyenne depot, Wyo	488.00	334.00		210.00			1,840.00	3,313.01				
Ogden, Utah								5,640.07				
Fort McKinney, Wyo								12.00				867.60
Fort Robinson, Nebr				1,166.66				2,073.01				2,249.99
Fort Washakie, Wyo				374.00				11.58				529.65
Fort Omaha, Nebr					38.00			758.63	1.00			2,826.65
Fort Douglas, Utah								93.96	6.00			2,826.65
Fort Laramie, Wyo								20.39				1,670.20
Fort Du Chesne, Utah								614.09				407.50
Fort Sidney, Nebr								348.17				3,344.70
Fort D. A. Russell, Wyo		213.00						489.15				1,151.00
Fort Bridger, Wyo								860.06				1,642.70
Fort Niobrara, Nebr								10.00				969.40
Camp Pilot Butte, Wyo					437.50			455.05				2,075.50
								7.60				517.80

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	REGULAR SUPPLIES.							INCIDENTAL EXPENSES.				
	Labor.	Other employés.	Rubber stamps.	Forage masters and agents.	Scales.	Type-writers.	All expenses not otherwise enumerated.	Total amounts.	Postage.	Printing.	Advertising.	Extra duty.
<i>Department of the Platte—Continued.</i>												
In the field								\$85.72				
Bellevue rifle range.....												\$71.05
Total	\$4,504.82	\$1,250.33	\$0.71	\$6,660.66	\$489.05	\$351.95	\$7,098.03	287,786.20	\$7.00			18,324.04
<i>Department of Dakota.</i>												
Headquarters, St. Paul, Minn	21.39		23.81			286.20	3,373.15	318,104.07	45.00			
Helena, Mont	13.65						16.55	27,148.42				
Fort Custer, Mont				600.00			2,100.00	3,348.86				2,047.15
Fort Meade, S. Dak				825.00				1,113.22				2,306.60
Fort Missoula, Mont								14.80				1,039.75
Fort Keogh, Mont				825.00				1,025.54				1,837.25
Fort Buford, N. Dak				720.00				872.98				1,642.60
Fort Yates, N. Dak								46.92				1,663.35
Fort Assiniboine, Mont.....				687.50				697.50				1,622.00
Fort Maginnis, Mont.....				750.00				1,349.03				885.65
Fort Snelling, Minn.....		108.33		900.00				2,218.73				1,436.70
Fort Randall, S. Dak								25.93				1,142.95
Fort A. Lincoln, N. Dak.....								45.07				864.18
Fort Bennett, S. Dak												295.60
Fort Shaw, Mont								11.24	3.00			615.55
Fort Totten, N. Dak								17.17	2.00			1,060.40
Fort Pembina, N. Dak								7.35	2.00			657.10
Fort Sully, S. Dak		189.75						499.83				1,018.60
Camp Poplar River, Mont.....								11.24				764.60
Camp Sheridan, Wyo								14.00				314.60
Total	35.04	298.08	23.81	5,307.50		286.20	5,516.20	356,601.63	52.00			21,214.63
<i>Department of Texas.</i>												
Headquarters and depot, San Antonio, Tex.....	120.00	880.00	46.00	720.00	15.75	132.00	947.67	154,038.49	22.00			1,251.33
Fort Davis, Tex				480.00				495.75				1,045.67

Fort Hancock, Tex								4.48			559.08
Fort McIntosh, Tex			90.00					99.45			1,058.55
Fort Bliss, Tex								17.48			639.35
Fort Ringgold, Tex			660.00					669.53			829.90
Fort Clark, Tex			900.00					922.00			1,687.20
Fort Brown, Tex								40.50	5.00		837.40
Camp at Eagle Pass, Tex								44.20			468.10
Camp Del Rio, Tex											837.55
Camp Peña Colorado, Tex								6.30			476.40
In the field								78.72			
Total	120.00	880.00	46.00	2,850.00	15.75	132.00	947.67	156,416.90	27.00		9,190.83
<i>Department of California.</i>											
Headquarters and depot, San Francisco, Cal			7.00	1,199.47			5.00	72,283.46	7.50		
Fort Mason, Cal		600.00					40.00	667.62			1,473.30
Presidio of San Francisco, Cal		550.00		916.63			25.00	1,963.94			2,335.00
Fort Gaston, Cal		22.50						543.57	2.00		484.70
Fort McDermitt, Cal								30.00			9.10
Fort Bidwell, Cal							9.00	145.99			752.55
Benicia Barracks, Cal								18.68	1.00		506.07
Alcatraz Island, Cal								15.41			816.75
Angel Island, Cal							202.41	2,730.03			1,334.05
In the field								2,908.27			48.65
Total		1,172.50	7.00	2,116.10			281.41	81,306.97	10.50		7,760.17
<i>Department of Arizona.</i>											
Headquarters, Los Angeles, Cal		14.00	59.50	720.00	1.25	362.10	4,811.94	108,379.67	40.00		
Tucson, Ariz						150.00	156.00	156,760.57	4.50		
Santa Fé, N. Mex				725.00			2,420.18	124,880.85	15.00	\$4.50	759.98
Whipple Barracks, Ariz				660.00			2,473.34	3,154.94	8.00		1,409.50
Fort Huachuca, Ariz				648.00			558.44	1,243.00	4.50		1,174.40
Fort Wingate, N. Mex				660.00			6,852.94	7,536.07	20.00		1,123.00
Fort Bayard, N. Mex				660.00				675.78	5.00		1,262.05
Fort Selden, N. Mex							.45	2.55			319.55
Fort Stanton, N. Mex				660.00			2,540.87	3,271.44	42.50		630.90
Fort Union, N. Mex				576.00				589.14			690.90
Fort Apache, Ariz		220.00		675.00				1,047.22			888.55
Fort Lowell, Ariz				656.00				664.78	5.00		568.50
Fort McDowell, Ariz				660.00				673.60	2.50		657.75
Fort Grant, Ariz				660.00			180.00	851.76	6.00		954.33
Fort Bowie, Ariz		151.50		660.00			101.20	919.01	2.00		617.50
Fort Verde, Ariz				660.00				673.54	9.00		454.50
Fort Mojave, Ariz								4.14			416.25
San Carlos, Ariz				660.00				672.40			723.00
San Diego Barracks, Cal		5.25					294.11	334.97			298.00
Fort Thomas, Ariz				660.00				664.75			518.17

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	REGULAR SUPPLIES.							INCIDENTAL EXPENSES.				
	Labor.	Other employes.	Rubber stamps.	Forage masters and agents.	Scales.	Type-writers.	All expenses not otherwise enumerated.	Total amounts.	Postage.	Printing.	Advertising.	Extra duty.
<i>Department of Arizona—Continued.</i>												
In the field								\$26.16				
Total		\$390.75	\$59.50	\$10,600.00	\$1.25	\$512.10	\$20,389.47	413,026.34	\$164.00		\$4.50	\$13,416.83
<i>Department of the Columbia.</i>												
Headquarters and depot, Vancouver												
Barracks, Wash		4,846.50	20.35	901.37		94.35	4,644.27	38,480.05	30.00			3,595.71
Portland, Oregon			2.50		6.50	97.50	1,428.22	79,060.18				
Fort Walla Walla, Wash		114.00		620.00			536.98	1,530.43				1,092.95
Boise Barracks, Idaho							639.58	1,525.51				565.05
Fort Sherman, Idaho							976.48	1,028.32	2.50			1,199.85
Fort Klamath, Oregon								128.68				263.70
Fort Spokane, Wash		1,050.00					75.00	1,809.60				1,083.90
Fort Townsend, Wash								437.79				479.55
Fort Canby, Wash							8.75	386.45				624.10
In the field								1,409.97				
Total		6,010.50	22.85	1,521.37	6.50	191.85	8,309.25	125,776.98	32.50			8,904.81
<i>Independent posts.</i>												
Powder depot, Dover, N. J								143.82				
Augusta Arsenal, Ga								1,115.91			10.30	
Benicia Arsenal, Cal. ....							.50	2,999.11	8.00			
Kennebec Arsenal, Me.							1.00	1,319.49				
Watervliet Arsenal, N. Y							13.50	2,651.66				107.45
Allegheny Arsenal, Pa							2.50	888.30				
Indianapolis Arsenal, Ind .....							.75	348.06				
Fort A. Lincoln, N. Dak.								1.50	2.00			
Rock Island Arsenal, Ill								1,187.74	9.06			106.40
Wartown Arsenal, N. Y								2,344.89				127.75
Frankford Arsenal, Pa								1,388.20				
National Armory, Springfield, Mass								1,849.21	27.50			
Atlanta, Ga		74.77	1.50				1,124.73	8,791.64				

West Point, N. Y.							222.38	24,753.25				7,476.15
Columbus Barracks, Ohio							524.39	13,157.83				1,428.85
Hot Springs, Ark.	\$466.88	80.00					597.70	5,798.84				
David's Island, N. Y.			7.00			80.00	1,282.64	7,000.25	2.00			2,070.46
Willetts Point, N. Y.		144.67					460.09	985.18				1,935.56
Jefferson Barracks, Mo.		10.00		825.00		103.00	1,788.21	29,261.68	7.50			2,112.49
U. S. legations at Vienna, Austria, and Paris, France								226.95	19.98			
Total	466.88	311.44	8.50	825.00	80.00	243.50	6,018.39	106,213.51	76.04		10.30	15,365.10
<i>General depots.</i>												
New York, N. Y.	117.33	3,129.92	16.60		6.50	207.83	5,825.67	87,385.74	132.00		242.40	45.50
Philadelphia, Pa.		10.00			153.00	134.96	40,664.51	45,606.62	27.00		38.82	
Washington, D. C.	726.00	240.00		1,200.00		236.75	546.13	66,554.31	20.00			
Jeffersonville, Ind.			3.50				8,219.14	124,746.81	.75			
San Francisco, Cal.			32.35		58.00		2,201.66	27,129.35				
St. Louis, Mo.	20.99		8.75			32.50	3,155.31	9,616.31	25.00			
Military prison, Fort Leavenworth, Kans.				2,100.00			2,450.07	8,268.84				127.75
Total	864.32	3,379.92	61.20	3,300.00	217.50	612.04	63,062.49	369,307.98	204.75		281.22	173.25

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	INCIDENTAL EXPENSES.											
	Civilian employés.							Horse and mule—		Interments—		
	Clerks.	Messengers and janitors.	Draughtsmen.	Laborers.	Storekeepers.	Watchmen.	Spies, guides, etc.	Wagon and forage masters.	Shoes and shoe nails.	Recovery of.	Of officers.	Of enlisted men.
<i>Division of the Atlantic and Department of the East.</i>												
Headquarters, Governor's Island, N. Y. H.	\$16,866.50	\$2,700.00		\$1,005.00		\$180.00						
Boston, Mass.	2,900.00	825.00				495.00			\$2.13		\$75.00	
Baltimore, Md.	3,289.42	800.00							4.50			
New Orleans, La.	4,399.92	540.00			\$900.00							
Buffalo, N. Y.	3,000.00	720.00										
Washington Barracks, D. C.												\$20.00
Fort Monroe, Va.	2,799.96				456.00			\$202.80				
Newport Barracks, Ky.	266.66	90.00										
Fort Barrancas, Fla.				24.00								28.40
Jackson Barracks, La.											75.00	15.00
Fort Myer, Va.												10.00
Fort Wayne, Mich.									12.80			
Fort Porter, N. Y.	200.00											
Mt. Vernon Barracks, Ala.							\$1,100.00					
Total	33,722.46	5,475.00		1,029.00	1,356.00	675.00	1,100.00	202.80	19.43		150.00	73.40
<i>Division of the Missouri.</i>												
Headquarters, Chicago, Ill.	19,999.92	1,904.50		168.38		1,093.67					325.84	
Fort Sheridan, Ill.	150.58	40.00		6.50								
Total	20,150.50	1,944.50		174.88		1,093.67					325.84	
<i>Department of the Missouri.</i>												
Headquarters and depot, Fort Leavenworth, Kans., and St. Louis, Mo.	15,066.54	1,417.50		727.00	1,100.00	1,401.00						
Denver, Colo.	1,800.00	510.00				150.00						
Fort Riley, Kans.	1,529.16			81.00			202.80					
Fort Reno, Ind. T.							1,200.00					15.00
Fort Logan, Colo.												20.00

Fort Supply, Ind. T							1 200.00							
Fort Sill, Ind. T							1,200.00			\$20.00				4.00
Fort Elliott, Tex										15.00				
Oklahoma City, Ind. T														10.00
Little Rock Barracks, Ark														2.60
Total	18,395.70	1,927.50		808.00	1,100.00	1,401.00	3,750.00	202.80		35.00				51.60
<i>Department of the Platte.</i>														
Headquarters and depot, Omaha, Nebr.	17,540.29	2,270.00	\$2,408.26	1,390.00	1,200.00	1,010.00	452.75			6.30	125.00	75.00		
Cheyenne depot, Wyo	3,300.03	460.00			900.00	315.00								
Fort McKinney, Wyo							1,300.00							9.10
Fort Robinson, Nebr							720.00							
Fort Washakie, Wyo							720.00							
Fort Omaha, Nebr														40.00
Fort Du Chesne, Utah							180.00				11.75			
Fort Sidney, Nebr														25.00
Fort D. A. Russell, Wyo	155.56	60.00				105.00								25.00
Fort Niobrara, Nebr														
Camp Pilot Butte, Wyo												75.00		
Total	20,995.88	2,770.00	2,408.26	1,390.00	2,100.00	1,430.00	3,872.75			6.30	136.75	150.00		99.10
<i>Department of Dakota.</i>														
Headquarters, St. Paul, Minn	18,306.60	1,410.00		547.10			240.00			60.53				
Helena, Mont	1,800.00	600.00												
Fort Custer, Mont	1,100.00						2,083.65	202.80			60.00			
Fort Meade, S. Dak							94.00				20.00			
Fort Missoula, Mont	999.96						30.00							
Fort Keogh, Mont	1,100.00						630.00							
Fort Buford, N. Dak												38.00		
Fort Yates, N. Dak							600.00				25.00			
Fort Assiniboine, Mont	999.96						720.00							
Fort Snelling, Minn	2,539.92					420.00								
Fort Shaw, Mont	999.95						720.00							
Fort Sully, S. Dak				8.40										
Camp Sheridan, Wyo							900.00							
Total	27,906.40	2,010.00		555.50		420.00	6,022.65	202.80		60.53	143.00			
<i>Department of Texas.</i>														
Headquarters and depot, San Antonio, Tex	12,378.35	1,745.00	1,795.00	4,445.10	1,200.00	2,508.72	10.50			29.50	20.00	150.00		50.00
Fort Clark, Tex	533.33													
Total	12,911.68	1,745.00	1,795.00	4,445.10	1,200.00	2,508.72	10.50			29.50	20.00	150.00		50.00

Benicia Arsenal, Cal.....												15.00
Allegheny Arsenal, Pa.....												15.00
Rock Island Arsenal, Ill.....												10.00
National Armory, Springfield, Mass	300.00											
Atlanta, Ga.....	3,150.00	623.33										
West Point, N. Y.....	2,784.42							3.50		68.33		
Columbus Barracks, Ohio.....	1,589.96											20.00
Hot Springs, Ark.....	1,461.13	720.00										15.00
David's Island, N. Y.....	1,599.97									75.00		
Jefferson Barracks, Mo.....	1,725.00											
U. S. legations at Vienna, Austria, and Paris, France.....	42.98											
Total.....	12,993.46	1,343.33						3.50		143.33		85.00
<i>General depots.</i>												
New York, N. Y.....	15,261.45	1,443.89		743.99		1,335.00	150.00		1,192.83		75.00	
Philadelphia, Pa.....	13,905.87	3,388.00		180.75			8.60					
Washington, D. C.....	16,499.88	830.00		2,895.00			28.00				67.50	15.00
Jeffersonville, Ind.....	13,013.59	940.00		485.00	1,400.04	2,920.00			6,304.09			
San Francisco, Cal.....	8,824.92	1,511.80		2,587.00	2,466.59				5,800.64			89.40
St. Louis, Mo.....	10,017.59	1,080.00	70.00	551.50			638.75	2,157.50	43.15			
Military prison, Fort Leavenworth, Kans.....	1,800.00	120.00										
Total.....	84,328.30	9,313.69	70.00	6,943.09	3,866.63	4,893.75	2,344.10		13,340.71		142.50	104.40

QUARTERMASTER-GENERAL.

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	INCIDENTAL EXPENSES.										
	Telegraph and telephone operators.	Telegrams.	Hire of telephones.	Subscription to newspapers.	Affidavits.	Shoeing.	Office furniture.	Other employes.	Deserters.	All expenses not otherwise enumerated.	Total amounts.
<i>Division of the Atlantic and Department of the East.</i>											
Headquarters, Governor's Island; N. Y. H.	\$1,080.00	\$30.14	\$2.00	\$6.00	\$64.00		\$179.53		\$780.00	\$54.28	\$23,950.70
Boston, Mass.				5.50		\$8.80	164.79		150.00	125.74	4,751.96
Baltimore, Md.			100.00	5.00	1.75				180.00	13.78	4,196.43
New Orleans, La.					1.00	24.00				88.27	6,036.34
Buffalo, N. Y.							88.32		210.00	25.19	4,043.51
Washington Barracks, D. C.					.50	181.75				130.65	1,319.70
Fort Monroe, Va.			30.00					\$450.00		107.00	5,306.26
Newport Barracks, Ky.					1.00	80.55	3.00			14.00	980.81
Fort Barrancas, Fla.						2.00	10.00				679.50
Jackson Barracks, La.			132.00			48.75	107.00		30.00	55.25	383.80
Fort Preble, Me.			35.00			56.87					559.27
Fort Trumbull, Conn.					.75	50.93				3.00	358.53
Fort Adams, R. I.										200.00	1,113.75
Fort Myer, Va.			150.00		.75	2.25				14.00	798.07
Fort Hamilton, N. Y.					.50			120.00		263.70	1,251.45
Fort Wood, N. Y. H.											280.40
Fort McHenry, Md.					.35	77.40					312.75
Fort Wadsworth, N. Y.						73.08				84.00	1,031.08
Fort Wayne, Mich.					4.00	123.00	7.00		90.00		1,172.90
Fort Brady, Mich.						84.60					684.00
Fort Mackinac, Mich.					3.50	125.00	2.00				726.14
Fort Porter, N. Y.					2.50	48.30					815.00
Madison Barracks, N. Y.											1,201.58
Fort Ontario, N. Y.						57.00			30.00	210.52	768.27
St. Augustine, or St. Francis Barracks, Fla.						77.52				141.00	688.32
Plattsburgh Barracks, N. Y.						37.22	3.00		30.00		550.22
Fort Warren, Mass.						20.00			240.00	5.00	944.15
Fort McPherson, Ga.			145.50				249.65		60.00	82.00	1,536.85
Fort Schuyler, N. Y.						172.18	5.00				755.88
Mt. Vernon Barracks, Ala.						10.80				12.85	1,634.70
Fort Niagara, N. Y.						120.00					717.30
Total.....	1,080.00	30.14	594.50	16.50	80.60	1,481.98	902.44	570.00	1,800.00	1,942.96	70,654.73

<i>Division of the Missouri.</i>										
Headquarters, Chicago, Ill.....		510.00	5.00	.75	501.74	608.54	712.75	390.00	155.25	26,376.34
Fort Sheridan, Ill.....						30.00	270.83		197.10	695.01
Total.....		510.00	5.00	.75	501.74	638.54	983.58	390.00	352.35	27,071.35
<i>Department of the Missouri.</i>										
Headquarters and depot, Fort Leavenworth, Kans., and St. Louis, Mo.....	1,235.00	272.50		8.25	35.80	1,482.27	2,712.50	510.00	834.14	29,126.45
Denver, Colo.....		52.95		4.50	71.60	79.00	496.50	240.00	111.85	3,516.40
Fort Hays, Kans.....				1.00						231.10
Fort Crawford, Colo.....				3.50				30.00		578.10
Fort Lewis, Colo.....				19.00					19.00	984.90
Fort Riley, Kans.....		149.50		48.50		42.60		150.00	145.15	4,083.30
Fort Reno, Ind. T.....				44.25	81.63			90.00	484.00	3,148.28
Fort Lyon, Colo.....	20.00	63.65							66.70	364.20
Fort Logan, Colo.....				9.00	244.45	1.50				1,016.87
Fort Supply, Ind. T.....				12.25				60.00		2,329.07
Fort Sheridan, Ill.....					94.60				4.20	644.80
Fort Sill, Ind. T.....				37.50	63.00			150.00		2,723.74
Fort Elliott, Tex.....								30.00		783.95
Fort Gibson, Ind. T.....		40.00								560.65
Oklahoma City, Ind. T.....					51.98			95.00		588.88
Guthrie, Ind. T.....					19.20					66.80
Little Rock Barracks, Ark.....		28.00		3.50	55.13	5.50		90.00	7.00	593.43
Total.....	1,255.00	606.60		191.25	717.39	1,610.87	3,209.00	1,445.00	1,672.04	51,335.92
<i>Department of the Platte.</i>										
Headquarters and depot, Omaha, Nebr.....		401.08	10.00	54.15		1,110.62	774.60	1,050.00	1,367.87	31,235.92
Cheyenne depot, Wyo.....		108.00		9.00						5,082.03
Ogden, Utah.....		102.00			131.25					102.00
Fort McKinney, Wyo.....									70.00	2,877.95
Fort Robinson, Nebr.....				23.25		5.00			190.00	3,193.24
Fort Washakie, Wyo.....				14.50	33.90				5.20	1,304.25
Fort Omaha, Nebr.....		144.00								3,016.65
Fort Douglas, Utah.....		168.00						39.00		1,877.20
Fort Laramie, Wyo.....				23.75						431.55
Fort Du Chesse, Utah.....				36.50	53.75			9.00	.75	3,636.45
Fort Sidney, Nebr.....				6.95				30.00	1.50	1,214.45
Fort D. A. Russell, Wyo.....		160.00		39.00		4.00				2,156.26
Fort Bridger, Wyo.....										969.40
Fort Niobrara, Nebr.....	120.00			24.25						2,244.75
Camp Pilot Butte, Wyo.....					60.00	6.25				659.05
In the field.....					5.00					5.00
Bellevue rifle range.....										71.05
Total.....	120.00	1,083.08	10.00	236.35	283.90	1,125.87	813.60	1,089.00	1,625.32	60,077.20

Division and post.	INCIDENTAL EXPENSES.										
	Telegraph and telephone operators.	Telegrams.	Hire of telephones.	Subscription to newspapers.	Affidavits.	Shoeing.	Office furniture.	Other employes.	Deserters.	All expenses not otherwise enumerated.	Total amounts.
<i>Department of Dakota.</i>											
Headquarters, St. Paul, Minn		\$26.14	\$279.35	\$18.00	\$39.75	\$105.80	\$745.06	\$971.33	\$60.00	\$1,061.61	\$23,931.27
Helena, Mont.					5.50				60.00		2,465.50
Fort Custer, Mont.			40.00		57.00	2.00			30.00		5,627.60
Fort Meade, S. Dak.			225.00		12.25				60.00	28.00	2,745.85
Fort Missoula, Mont.			20.00						60.00		2,149.71
Fort Keogh, Mont.					138.00						3,705.25
Fort Buford, N. Dak.					22.75						1,708.35
Fort Yates, N. Dak.					14.00					3.00	2,305.35
Fort Assiniboine, Mont.					45.00	1.50			30.00		3,418.46
Fort Maginnis, Mont.					20.00	9.00				10.00	924.65
Fort Snelling, Minn.			200.00				50.00	25.00	398.00	72.00	5,193.62
Fort Randall, S. Dak.					7.50				101.00		1,251.45
Fort A. Lincoln, N. Dak.			24.00						30.00		918.18
Fort Bennett, S. Dak.											295.60
Fort Shaw, Mont.											2,338.51
Fort Totten, N. Dak.											1,062.40
Fort Pembina, N. Dak. . . . .					.25					1.50	660.85
Fort Sully, S. Dak.									30.00		1,057.00
Camp Poplar River, Mont.					8.00						772.60
Camp Sheridan, Wyo.							3.00		30.00		1,247.60
Total.		26.14	788.35	18.00	370.00	118.80	798.06	996.33	881.00	1,196.11	68,774.80
<i>Department of Texas.</i>											
Headquarters and depot, San Antonio, Tex.		25.91	264.00		3.75	5.50	58.90	1,950.00	870.00	890.79	29,674.35
Fort Davis, Tex.					28.00						1,073.67
Fort Hancock, Tex.										2.00	559.08
Fort McIntosh, Tex.			60.00								1,120.85
Fort Bliss, Tex.			72.00				128.25		30.00		869.60
Fort Ringgold, Tex.									30.00		859.90
Fort Clark, Tex.							1.25			3.00	2,224.78
Fort Brown, Tex.					33.50					4.50	880.40
Camp at Eagle Pass, Tex.						79.75				166.50	714.35

Camp Del Rio, Tex.....						94.00						491.55
Camp Peña Colorado, Tex.....												476.40
Total.....		25.91	396.00		65.25	307.50	60.15	1,950.00	930.00	1,066.79		38,884.93
<i>Department of California.</i>												
Headquarters and depot, San Francisco, Cal.....	\$60.00	19.20	237.26				161.75	1,618.46	840.00	15.00		23,732.82
Fort Mason, Cal.....						189.00		15.00		199.65		1,876.95
Presidio of San Francisco, Cal.....			10.00					770.00				4,488.37
Fort Gaston, Cal.....												486.70
Fort McDermitt, Cal.....												9.10
Fort Bidwell, Cal.....						56.75			60.00			894.30
Benicia Barracks, Cal.....			55.00			143.43				2.50		708.00
Alcatraz Island, Cal.....			60.00			20.00						886.75
Angel Island, Cal.....						2.00		80.00	60.00			1,476.05
In the field.....							80.00					128.65
Total.....	60.00	19.20	352.26			411.18	241.75	2,483.46	960.00	217.15		34,697.69
<i>Department of Arizona.</i>												
Headquarters, Los Angeles, Cal.....			284.95	8.00	128.50	159.00	428.75	833.50	150.00	663.22		17,281.17
Tucson, Ariz.....	80.00		5.00		370.75		21.75	120.00	120.00	26.50		4,246.83
Santa Fé, N. Mex.....		4.55			17.50	8.00	103.00	5.00	90.00	22.00		4,809.57
Whipple Barracks, Ariz.....									2.60			1,420.10
Fort Huachuca, Ariz.....												1,178.90
Fort Wingate, N. Mex.....			75.00									1,973.00
Fort Bayard, N. Mex.....												1,267.05
Fort Selden, N. Mex.....						37.00	7.50			2.00		366.05
Fort Stanton, N. Mex.....					24.50							697.90
Fort Union, N. Mex.....												690.90
Fort Apache, Ariz.....			18.75			14.75						1,697.05
Fort Lowell, Ariz.....						32.00						605.50
Fort McDowell, Ariz.....												660.25
Fort Grant, Ariz.....										2.50		962.83
Fort Bowie, Ariz.....												619.50
Fort Verde, Ariz.....								30.00		50.00		543.50
Fort Mojave, Ariz.....										17.50		543.75
San Carlos, Ariz.....												1,548.00
San Diego Barracks, Cal.....			44.00		4.00	150.00		27.50		65.35		588.85
Fort Thomas, Ariz.....										45.00		563.17
Total.....	80.00	4.55	427.70	8.00	545.25	400.75	561.00	1,016.00	362.60	894.07		42,263.87
<i>Department of the Columbia.</i>												
Headquarters and depot, Vancouver Barracks, Wash.....	999.96	30.34	474.44	10.50	4.00	.50	786.62	46.00		1,259.47		16,400.34
Portland, Oregon.....			94.75				800.25		360.00	401.18		6,306.22
Fort Walla Walla, Wash.....			125.84		8.00	138.14	2.00					1,373.43

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	INCIDENTAL EXPENSES.										
	Telegraph and telephone operators.	Telegrams.	Hire of telephones.	Subscription to newspapers.	Affidavits.	Shoeing.	Office furniture.	Other employes.	Deserters.	All expenses not otherwise enumerated.	Total amounts.
<i>Department of the Columbia—Cont'd.</i>											
Boise Barracks, Idaho.....			\$60.00		\$1.50	\$51.30				\$79.85	\$757.70
Fort Sherman, Idaho.....										65.00	1,292.35
Fort Klamath, Oregon.....						1.50					288.20
Fort Spokane, Wash.....											1,087.40
Fort Townsend, Wash.....			79.80			234.43				24.00	817.78
Fort Canby, Wash.....						62.50					686.60
In the field.....						19.25					19.25
Total.....	\$999.96	\$30.34	894.83	\$10.50	8.50	507.62	\$1,088.87	\$40.00	\$390.00	1,829.50	29,029.27
<i>Independent posts.</i>											
Augusta, Ga.....					2.00						372.30
Benicia Arsenal, Cal.....					.50						43.50
Kennebec Arsenal, Me.....					3.25	20.00					3.25
Watervliet Arsenal, N. Y.....					16.00			180.00			303.45
Allegheny Arsenal, Pa.....											15.00
Fort A. Lincoln, N. Dak.....											2.00
Rock Island Arsenal, Ill.....		2.99			22.50						150.95
Watertown Arsenal, N. Y.....					1.00						128.75
Frankford Arsenal, Pa.....					.50						.50
National Armory, Springfield, Mass.....				6.25	25.00						327.50
Atlanta, Ga.....					2.75	9.00	15.65	45.00			3,874.23
West Point, N. Y.....			72.00		11.50		130.46		30.00	37.06	10,512.67
Columbus Barracks, Ohio.....							60.00	642.00	420.00	36.00	4,190.31
Hot Springs, Ark.....							60.85				2,256.98
David's Island, N. Y.....		1.85	55.00								4,360.84
Willetts Point, N. Y.....				2.75	39.00	11.00	129.76		30.00	398.31	1,999.06
Jefferson Barracks, Mo.....							2.00	1,440.00		379.75	5,719.49
U. S. legations at Vienna, Austria, and Paris, France.....							70.75			2.70	136.41
Total.....		4.84	127.00	9.00	152.50	100.85	408.62	2,027.00	660.00	887.32	34,397.19

General depots.

New York, N. Y.....		1.25	585.55	4,767.51	24.00	140.00	1,105.76	184.00	390.00	2,179.04	29,999.17
Philadelphia, Pa.....		6.86	396.00		29.25	209.21	123.36	225.00	510.00	89.75	24,138.47
Washington, D. C.....			345.00	6.00		1,113.70	357.00	1,333.33	60.00	345.25	23,915.66
Jeffersonville, Ind.....			105.36	9.00	3.50	150.00	237.42	650.00		1,499.49	27,248.09
San Francisco, Cal.....	900.00		78.35	5.00	15.00	543.00	785.69	54.50		729.14	24,371.03
St. Louis, Mo.....		.45	175.00	35.00	10.50	115.60	2,436.17	640.50	510.00	2,853.01	21,359.72
Military prison, Fort Leavenworth, Kans.....		12.50	37.50		5.2					2,303.17	4,406.17
Total.....	900.00	21.06	1,722.76	4,822.50	92.50	2,271.51	5,045.40	3,087.33	1,470.00	9,998.85	155,438.31

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	BARRACKS AND QUARTERS.													All expenses not otherwise enumerated.	Total amounts.
	Purchase of tools.	Rent of—			Advertising.	Carpenters.	Masons.	Plasterers.	Painters.	Other employes.	Construction and repairs.				
		Quarters—	Offices.	Storehouses.								Stables and grounds.			
	For officers.	For enlisted men.													
<i>Division of the Atlantic and Department of the East.</i>															
Headquarters, Governor's Island, N. Y. H.					\$47.20	\$1,426.00			\$720.00	\$3,750.00	\$3,508.33	\$42.07	\$9,493.60		
Boston, Mass.	\$126.38		\$1,266.64	\$150.00		8.00							1,551.02		
Baltimore, Md.	75.00	\$96.00	956.67	250.00				5.00			6.25		1,888.92		
New Orleans, La.		80.00	1,380.00	1,800.00							3,558.18		6,818.18		
Buffalo, N. Y.			750.00								401.97		1,151.97		
Washington Barracks, D. C.						\$15.00					1,355.32		1,370.32		
Fort Monroe, Va.	79.20	60.00	96.00		14.03						13,855.38		14,134.61		
Newport Barracks, Ky.									24.50		119.82		144.32		
Fort Barracks, Fla.								\$87.00	125.00		1,745.26	56.60	1,745.26		
Jackson Barracks, La.											1,410.23		1,637.83		
Fort Preble, Me.											1,000.00		1,000.00		
Fort Trumbull, Conn.											384.31		384.31		
Fort Adams, R. I.						100.00					2,710.00		2,710.00		
Fort Myer, Va.									10.00	63.85	4,446.24		4,620.09		
Fort Hamilton, N. Y.	\$32.40										9,247.68		9,280.08		
Fort M'Henry, Md.											1,574.50		1,574.50		
Fort Wadsworth, N. Y.		337.50	68.00	131.00							7,045.97		7,582.47		
Fort Wayne, Mich.											7,494.35		7,544.34		
Fort Brady, Mich.	37.50				12.40						126.48		126.48		
Fort Mackinac, Mich.											199.90		199.90		
Fort Porter, N. Y.											231.74		231.74		
Madison Barracks, N. Y.		303.08	100.67		34.28	18.00				9.00	21,597.92	10.00	22,148.85		
Fort Ontario, N. Y.											867.04		867.04		
St. Augustine, or St. Francis Barracks, Fla.											2,063.67		2,063.67		
Plattsburgh Barracks, N. Y.									30.00		622.00		652.00		
Fort Warren, Mass.											627.84		627.84		
Fort M'Pherson, Ga.											87.49		752.39		
Fort Schnyler, N. Y.	12.90	432.00	220.00								2,095.28		2,095.28		

Mt. Vernon Barracks, Ala.												865.55		865.55	
Fort Niagara, N. Y.		56.00				7.05				182.00		3,032.26		3,277.31	
In the field				274.60										274.50	
Total	82.89	1,410.00	524.00	4,680.98	2,474.50	190.00	114.96	1,452.00	87.00	1,072.00	3,847.35	92,310.96	67.67	108,314.37	
<i>Division of the Missouri.</i>															
Headquarters, Chicago, Ill.	6.57			16,302.00	1,800.00	1,800.00						296.63	314.60	20,519.80	
Fort Sheridan, Ill.				240.00										240.00	
Total	6.57			16,542.00	1,800.00	1,800.00						296.63	314.60	20,759.80	
<i>Department of the Missouri.</i>															
Headquarters and depot, Fort Leavenworth, Kans., and St. Louis, Mo.	82.14	78.00		1,433.00		204.80	126.00	848.25		17.35	350.00	103.70	5,997.37	479.00	9,719.61
Denver Colo.	18.25			1,700.00									43.52	28.35	1,790.12
Fort Crawford, Colo.								147.50					6.72		154.22
Fort Lewis, Colo.													41.40		41.40
Fort Riley, Kans.								107.50		20.00			759.09		866.59
Fort Reno, Ind. T.		30.50		40.00	10.00			353.39	\$21.75		56.25		1,620.48		2,132.37
Fort Supply, Ind. T.												60.00	65.55		125.55
Fort Sheridan, Ill.	1.48	660.00	126.00	60.00	144.00								20.57		1,012.05
Fort Sill, Ind. T.								605.00		174.00		375.00	2,390.81		3,544.81
Fort Gibson, Ind. T.													600.21		600.21
Oklahoma City, Ind. T.		358.00	54.67										1,318.30		1,730.97
Guthrie, Ind. T.		389.07											645.51		1,034.58
Little Rock Barracks, Ark.		111.50	10.00	38.00	30.00								946.84	2.15	948.99
In the field													579.14		766.64
Total	101.87	1,627.07	190.67	3,269.00	184.00	204.30	126.00	2,061.64	21.75	211.35	406.25	538.70	15,035.51	509.50	24,488.11
<i>Department of the Platte.</i>															
Headquarters and depot, Omaha, Nebr.	240.08			9,465.00	797.50	500.04	131.35	38.00					37,770.56	59.40	48,991.93
Cheyenne depot, Wyo.				360.00									3,876.00		4,236.00
Ogden, Utah				250.00	45.00										295.00
Fort McKinney, Wyo.													2,128.11		2,128.11
Fort Robinson, Nebr.													927.55	600.00	1,527.55
Fort Washakie, Wyo.													1,800.04		1,800.04
Fort Omaha, Nebr.													40.00		40.00
Fort Douglas, Utah				360.00					27.50				1,392.89		1,780.39
Fort Du Chesne, Utah											1,125.00		2,910.00		4,035.00
Fort D. A. Russell, Wyo.				120.00										218.50	338.50
Fort Niobrara, Nebr.					54.00										54.00
In the field						75.00									75.00
Total	240.08			10,555.00	896.50	575.04	131.35	38.00	27.50		1,125.00	50,845.15	867.90	65,201.52	

* Repairs.

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	BARRACKS AND QUARTERS.													
	Purchase of tools.	Rent of—				Adver- tising.	Carpen- ters.	Masons.	Plaster- ers.	Painters.	Other em- ployés.	Construc- tion and repairs.	All ex- penses not other- wise enumer- ated.	Total amounts.
		Quarters—		Offices.	Store- houses.										Stables and grounds.
For officers.	For enlisted men.													
<i>Department of Dakota</i>														
Headquarters, St. Paul, Minn.	\$430.29	\$21.00		\$70.00										
Helena, Mont				812.50										
Fort Custer, Mont.														
Fort Meade, S. Dak						\$5.00								
Fort Missoula, Mont														
Fort Keogh, Mont														
Fort Buford, N. Dak														
Fort Yates, N. Dak														
Fort Assiniboine, Mont														
Fort Maginnis, Mont														
Fort Snelling, Minn.					\$100.00									
Fort Randall, S. Dak														
Fort Bennett, S. Dak														
Fort Shaw, Mont														
Fort Totten, N. Dak														
Fort Pembina, N. Dak														
Fort Sully, S. Dak		110.00	72.00											
Camp Sheridan, Wyo														
In the field														
Total	430.29	131.00	119.67	882.50	100.00	5.00								
<i>Department of Texas.</i>														
Headquarters and depot, San Antonio, Tex.	17.58		725.50	913.00	1,400.00	3,120.37	\$105.30	1,816.50		79.50	80.00		14,453.55	20.53
Fort Davis, Tex.						3.30								49.60
Fort Hancock, Tex.														46.50
Fort McIntosh, Tex.														123.74
Fort Bliss, Tex.								462.00		62.72			2,089.82	2,614.54
Fort Ringgold, Tex.			30.00		135.00			501.50	43.00				238.21	238.21
													609.50	1,319.00

Fort Clark, Tex.....									173.00					50.20	223.20
Fort Brown, Tex.....												43.48			43.48
Total.....	17.58		755.50	913.00	1,535.00	3,132.67	105.30	2,780.00	216.00	142.22	80.00		17,434.56	240.97	27,352.50
<i>Department of California.</i>															
Headquarters and depot, San Francisco, Cal.....				9,159.00	1,080.00	40.00					22.00				10,279.00
Fort Mason, Cal.....												770.76			792.76
Presidio of San Francisco, Cal.....								191.75				16,908.91	27.00		17,127.66
Fort Gaston, Cal.....								516.00		108.00					624.00
Fort Bidwell, Cal.....												543.00			543.00
Benicia Barracks, Cal.....												1,849.69			1,849.69
Alcatraz Island, Cal.....	12.00											19.35			1,405.53
Angel Island, Cal.....								105.00							1,526.88
In the field.....								170.00	1,125.00						4,468.00
Total.....	12.00			9,159.00	1,080.00	315.00		1,832.75		108.00	22.00	19.35	24,805.89	27.00	37,380.90
<i>Department of Arizona.</i>															
Headquarters, Los Angeles, Cal.....	103.80	50.00	5.50	7,260.00	165.00	330.00							8,001.91	115.40	16,031.61
Tucson, Ariz.....				1,576.50	100.00	150.00							154.00		1,982.50
Santa Fe, N. Mex.....		30.00	1,115.00	1,235.00	120.00		12.50						1,187.50		3,700.00
Whipple Barracks, Ariz.....	13.67												2,069.15		2,082.82
Fort Huachuca, Ariz.....										28.15					26.15
Fort Wingate, N. Mex.....	394.88							1,545.34	543.90	291.25	472.25	3,540.66	7,045.38	504.70	14,338.36
Fort Bayard, N. Mex.....								337.50					1,408.65		1,746.15
Fort Selden, N. Mex.....													175.00		175.00
Fort Stanton, N. Mex.....	47.40												182.50		13,235.55
Fort Apache, Ariz.....													4,656.78		4,656.78
Fort Lowell, Ariz.....								94.50	88.00	75.00	42.00		190.80		490.30
Fort Grant, Ariz.....								627.50					22.75	12.75	663.00
Fort Bowie, Ariz.....								405.86	177.00				554.38		1,137.24
Fort Verde, Ariz.....													635.64		685.64
San Carlos, Ariz.....													842.14		842.14
San Diego Barracks, Cal.....	1,255.20			292.00				197.50	40.00			14.00	748.50	550.00	3,097.20
Fort Thomas, Ariz.....													284.56		284.56
Total.....	559.75	1,335.20	1,120.50	10,363.50	385.00	480.00	12.50	3,208.20	848.90	392.40	514.25	3,737.16	41,034.79	1,182.85	65,175.00
<i>Department of the Columbia.</i>															
Headquarters and depot, Vancouver Barracks, Wash.....								37.00	25.00				7,024.04		7,086.04
Portland, Oregon.....	81.46			980.00	540.00								10,761.21	125.04	12,487.71
Fort Walla Walla, Wash.....				220.00									2,443.93	7.00	2,675.93
Boise Barracks, Idaho.....													737.93		737.93
Fort Sherman, Idaho.....		52.00						261.37	102.00					42.50	457.87

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	BARRACKS AND QUARTERS.													
	Purchase of tools.	Rent of—				Advertis- ing.	Carpen- ters.	Masons.	Plaster- ers.	Painters.	Other em- ployés.	Construc- tion and repairs.	All ex- penses not other- wise anu- merated.	Total amounts.
		Quarters—		Offices.	Store- houses.										Stables and grounds.
For officers.	For enlisted men.													
<i>Department of the Columbia—</i>														
<i>Continued.</i>														
Fort Spokane, Wash												\$1,547.74		\$1,547.74
Fort Townsend, Wash												1,540.16		1,540.16
Fort Canby, Wash												968.75		968.75
In the field					\$32.00									32.00
Total	\$81.46	\$52.00		\$1,200.00	\$540.00	32.00		\$298.37	\$127.00			23,028.76	\$174.54	27,534.13
<i>Independent posts.</i>														
Allegheny Arsenal, Pa												14.43		14.43
Fort A. Lincoln, N. Dak							176.00	185.50			\$132.11			492.61
Atlanta, Ga			300.00				405.20	29.80			113.00	1,006.91		1,854.91
West Point, N. Y.												8.70		8.70
Columbus Barracks, Ohio							171.00				20.25	3,350.00	6.00	3,547.25
Hot Springs, Ark												18.30		18.30
David's Island, N. Y.	5.10					\$48.50					305.00	25,618.24	35.70	26,012.54
Willetts Point, N. Y.	371.41											3,702.46		4,073.87
Jefferson Barracks, Mo	8.17					29.40	79.50		\$356.79			7,722.38	30.76	8,227.00
U. S. legations at Vienna, Aus- tria, and Paris, France			288.00											288.00
Total	384.68		588.00			77.90	830.70	215.30		356.79	570.36	41,441.42	72.46	44,537.61
<i>General depots.</i>														
New York, N. Y.	136.69	\$458.00		1,779.11	779.20		875.00			564.50	66.50	2,787.47	87.67	7,534.14
Philadelphia, Pa			2,276.04						\$10.00		522.00	2,826.06		5,634.10
Washington, D. C.		246.45			1,598.63							2,413.00	33.00	4,291.08
Jeffersonville, Ind.	2.60											603.47	62.70	668.77
San Francisco, Cal.			9,999.96	1,563.38			1,080.00					1,581.38	359.12	14,533.84
St. Louis, Mo	28.70		8,325.00	600.00	900.00	18.90				22.50		6,915.60	11.95	16,822.65
Total	167.99	704.45	20,601.00	3,942.49	3,277.83	18.90	1,955.00		10.00	587.00	588.50	17,126.98	554.44	49,534.18

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

MAR 90—VOL I—37

Division and post.	CAVALRY AND ARTILLERY HORSES.				HOSPITALS.							Total amounts.
	Purchase of cavalry and artillery.	Advertis- ing.	All ex- penses not otherwise enumer- ated.	Total amounts.	Extra duty.	Adver- tising.	Masons.	Laborers.	Other employés.	Construc- tion and repairs.	All ex- penses not otherwise enumer- ated.	
<i>Division of the Atlantic and Depart- ment of the East.</i>												
New Orleans, La.....										\$1,612.95		\$1,612.95
Washington Barracks, D. C.....											\$80.00	60.00
Fort Monroe, Va.....										756.30		756.30
Newport Barracks, Ky.....										109.85		109.85
Fort Barrancas, Fla.....										234.90		234.90
Jackson Barracks, La.....										350.00		350.00
Fort Preble, Me.....										154.30		154.30
Fort Trumbull, Conn.....						\$5.50				597.00		602.50
Fort Adams, E. I.....										690.00		690.00
Fort Meyer, Va.....										1,441.00		1,441.00
Fort Hamilton, N. Y.....										450.00		450.00
Fort McHenry, Md.....										335.00		335.00
Fort Wadsworth, N. Y.....										575.00		575.00
Fort Wayne, Mich.....										935.59	30.28	965.87
Fort Brady, Mich.....										275.00		275.00
Fort Mackinac, Mich.....										25.00		25.00
Fort Porter, N. Y.....										641.90		641.90
Madison Barracks, N. Y.....					\$27.00				\$506.00	607.00		1,140.00
Fort Ontario, N. Y.....										87.52	2.48	90.00
St. Augustine, or St. Francis Bar- racks, Fla.....										108.00		108.00
Plattsburgh Barracks, N. Y.....										66.00	6.00	72.00
Fort Warren, Mass.....										149.00		149.00
Fort McPherson, Ga.....										292.07		292.07
Fort Schuyler, N. Y.....										700.00		700.00
Mt. Vernon Barracks, Ala.....										105.00		120.00
Fort Niagara, N. Y.....						6.68				4,121.92		4,128.60
Total.....					27.00	12.18			521.00	15,420.30	98.76	16,079.34
<i>Division of the Missouri.</i>												
Headquarters, Chicago, Ill.....										199.00		199.00
Fort Sheridan, Ill.....										32.22		32.22
Total.....										32.22		231.22

QUARTERMASTER-GENERAL.

577

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	CAVALRY AND ARTILLERY HORSES.				HOSPITALS.							Total amounts.
	Purchase of cavalry and artillery.	Advertising.	All expenses not otherwise enumerated.	Total amounts.	Extra duty.	Advertising.	Masons.	Laborers.	Other employes.	Construction and repairs.	All expenses not otherwise enumerated.	
<i>Department of the Missouri.</i>												
Headquarters and depot, Fort Leavenworth, Kans., and St. Louis, Mo.....	\$3,250.00	\$128.91	\$390.00	\$3,768.91						\$3,395.00		\$3,395.00
Denver, Colo.....											\$7.50	7.50
Fort Crawford, Colo.....										225.00		225.00
Fort Riley, Kans.....										100.40		100.40
Fort Reno, Ind. T.....										306.47		306.47
Fort Supply, Ind. T.....					\$28.12				\$16.00			44.12
Fort Sheridan, Ill.....										46.30		46.30
Fort Sill, Ind. T.....					129.06					219.97	\$90.00	439.03
Fort Elliott, Tex.....					6.50						5.00	11.50
Fort Gibson, Ind. T.....							\$65.00			25.37		90.37
Oklahoma City, Ind. T.....										194.65		194.65
Guthrie, Ind. T.....										125.00		125.00
Little Rock Barracks, Ark.....										525.00		525.00
Total.....	3,250.00	128.91	390.00	3,768.91	163.68		65.00		16.00	5,163.16	102.50	5,510.84
<i>Department of the Platte.</i>												
Headquarters and depot, Omaha, Nebr.....	4,125.87	295.04		4,420.91						255.17		255.17
Fort McKinney, Wyo.....										450.00		450.00
Fort Washakie, Wyo.....										632.93		632.93
Fort Omaha, Nebr.....										57.40		57.40
Fort Douglas, Utah.....									36.00	138.10		174.10
Fort Laramie, Wyo.....											6.90	6.90
Fort Sidney, Nebr.....										372.00		372.00
Fort Niobrara, Nebr.....										470.00		470.00
Total.....	4,125.87	295.04		4,420.91					36.00	2,375.60	6.90	2,418.50
<i>Department of Dakota.</i>												
Headquarters, St. Paul, Minn.....	11,804.00	67.63	110.00	11,981.63						3,310.75	59.30	3,370.05
Fort Custer, Mont.....					5.00					77.90		82.90
Fort Meade, S. Dak.....										74.60	223.41	298.01
Fort Missoula, Mont.....										492.88		492.88

Fort Keogh, Mont									404.65		404.65	
Fort Buford, N. Dak						91.50		354.00			445.50	
Fort Yates, N. Dak								597.50			597.50	
Fort Assiniboine, Mont				28.00				44.00			189.00	
Fort Maginnis, Mont								20.00			20.00	
Fort Randall, S. Dak								181.66			181.66	
Fort Shaw, Mont								38.00			38.00	
Fort Pembina, N. Dak								72.00	22.00		94.00	
Fort Sully, S. Dak								62.25			62.25	
In the field								\$4.00	171.34		175.34	
Total	11,304.00	67.63	110.00	11,481.63	33.00	91.50	4.00	1,569.61	4,695.31	59.30	6,452.72	
<i>Department of Texas.</i>												
Headquarters and depot, San Antonio, Tex	4,185.00	54.35		4,239.35		\$22.50	122.50	68.00	239.00	2,460.11	80.00	2,992.11
Fort Davis, Tex						55.00						55.00
Fort Hancock, Tex						53.00						53.00
Fort McIntosh, Tex										407.70		407.70
Fort Bliss, Tex										550.00		550.00
Fort Ringgold, Tex										994.00		994.00
Fort Clark, Tex						19.50				19.50		39.00
Camp at Eagle Pass, Tex										5.50		5.50
Camp Del Rio, Tex						16.50						16.50
Total	4,185.00	54.35		4,239.35	144.00	22.50	122.50	68.00	239.00	4,438.81	80.00	5,112.81
<i>Department of California.</i>												
Headquarters and depot, San Francisco, Cal	3,635.00	105.85	90.00	3,830.85								
Fort Mason, Cal										341.23		341.23
Presidio of San Francisco, Cal						16.10			618.00			634.10
Fort Gaston, Cal									108.00	82.40		190.40
Fort Bidwell, Cal										11.70		11.70
Benicia Barracks, Cal										145.00		145.00
Alcatraz Island, Cal						6.00	24.57			3,454.19		3,484.76
Angel Island, Cal	189.00			189.00						313.20		313.20
Total	3,824.00	105.85	90.00	4,019.85	6.00	40.67			108.00	4,965.72		5,120.89
<i>Department of Arizona.</i>												
Headquarters, Los Angeles, Cal		23.15		23.15						1,070.99		1,070.99
Santa Fé, N. Mex										100.00		100.00
Whipple Barracks, Ariz										255.50		255.50
Fort Huachuca, Ariz									69.00	191.04		260.04
Fort Wingate, N. Mex										454.00		454.00
Fort Bayard, N. Mex										70.00		70.00
Fort Selden, N. Mex						7.50					72.38	79.88
Fort Stanton, N. Mex										550.00		550.00

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	CAVALRY AND ARTILLERY HORSES.				HOSPITALS.							
	Purchase of cavalry and artillery.	Advertising.	All expenses not otherwise enumerated.	Total amounts.	Extra duty.	Advertising.	Masons.	Laborers.	Other employés.	Construction and repairs.	All expenses not otherwise enumerated.	Total amounts.
<i>Department of Arizona.—Continued.</i>												
Fort Apache, Ariz.....										\$75.50		\$75.50
Fort Lowell, Ariz.....							\$13.50		\$124.13	4.80		142.43
Fort Grant, Ariz.....									159.38			159.38
Fort Verde, Ariz.....										8.00		8.00
Total.....		\$23.15		\$23.15	\$7.50		13.50		352.51	2,779.83	\$72.38	3,225.72
<i>Department of the Columbia.</i>												
Headquarters and depot, Vancouver Barracks, Wash.....	\$10,230.00	72.65		10,302.65						471.37		471.37
Portland, Oregon.....										754.51	10.00	764.51
Fort Walla Walla, Wash.....										502.18	26.00	528.18
Boise Barracks, Idaho.....										34.35		34.35
Fort Spokane, Wash.....										91.83		91.83
Fort Townsend, Wash.....										190.00		190.00
Fort Canby, Wash.....										130.40		130.40
Total.....	10,230.00	72.65		10,302.65						2,174.64	36.00	2,210.64
<i>Independent posts.</i>												
Atlanta, Ga.....										143.00		143.00
West Point, N. Y.....						31.50	\$26.00	817.85	1,093.85			1,969.20
Hot Springs, Ark.....						21.75	21.00	166.50	1,126.42			1,335.67
David's Island, N. Y.....									149.88			149.88
Willetts Point, N. Y.....									89.37			89.37
Jefferson Barracks, Mo.....					53.50				7.06	456.60		517.06
Total.....					53.50		53.23	47.00	991.41	3,059.02		4,204.18
<i>General depots.</i>												
New York, N. Y.....	1,192.00			1,192.00								
St. Louis, Mo.....	78,850.35	200.46	\$1,630.00	80,680.81						142.37	.84	143.21
Total.....	80,042.35	200.46	1,630.00	81,872.81						142.37	.84	143.21

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	CLOTHING.							Shooting galleries and ranges.	Hospital stewards' quarters.	TRANSPORTATION OF THE ARMY.		
	Purchase of material.	Manufacture.	Advertising.	Clerks.	Inspectors.	Packers.	Other employes.			Total amounts.	Rail.	
											Passengers.	Freight.
<i>Division of the Atlantic and Department of the East.</i>												
Headquarters, Governor's Island, N. Y. H		\$8.00						\$8.85				
Boston, Mass										\$308.50	\$3,870.99	
Baltimore, Md										6,365.75	6,504.56	
New Orleans, La										2,942.47	8,547.79	
Buffalo, N. Y.										1,468.36	869.71	
Washington Barracks, D. C.							\$18.00	18.00	500.00	\$38.50		
Fort Monroe, Va							123.00	123.00		9.00		
Fort Barrancas, Fla									25.00			
Jackson Barracks, La.									80.87			
Fort Preble, Me.									20.00			
Fort Trumbull, Conn							2.00	2.00	509.77			
Fort Adams, R. I.							31.00	31.00	77.15	801.66		
Fort Myer, Va									61.89	75.00		
Fort Hamilton, N. Y.							3.00	3.00	3.45	190.00		
Fort McHenry, Md							1.00	1.00	3.45	225.00		
Fort Wadsworth, N. Y.							22.00	22.00				
Fort Wayne, Mich									50.00	14.40		
Fort Brady, Mich							13.00	13.00				
Fort Mackinac, Mich									24.82			
Madison Barracks, N. Y.							15.00	15.00	8.55	145.00		
Fort Ontario, N. Y.									1.36			
St. Augustine, or St. Francis Barracks, Fla.							8.00	8.00				
Plattsburgh Barracks, N. Y.									52.68			
Fort Warren, Mass									2.96			
Fort McPherson, Ga							19.00	19.00				
Fort Schuyler, N. Y.							7.00	7.00				
Mt. Vernon Barracks, Ala									22.75			
Fort Niagara, N. Y.									293.09			
Total		8.00					262.00	270.00	1,746.44	1,498.56	11,085.08	19,793.05

* Repairs.

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	CLOTHING.								Shooting galleries and ranges.	Hospital stewards' quarters.	TRANSPORTATION OF THE ARMY.	
	Purchase of material.	Manufacture.	Advertising.	Clerks.	Inspectors.	Packers.	Other employes.	Total amounts.			Rail.	
											Passengers.	Freight.
<i>Division of the Missouri.</i>												
Headquarters, Chicago, Ill											\$20,999.85	\$34,937.47
Fort Sheridan, Ill								\$3,500.00				
Total								3,500.00			20,999.85	34,937.47
<i>Department of the Missouri.</i>												
Headquarters and depot, Fort Leavenworth, Kans., and St. Louis, Mo	\$199.96							\$199.96	34.17	\$242.85	855.00	32.40
Denver, Colo									4.61		36,828.97	102,225.22
Fort Crawford, Colo								49.94				
Fort Riley, Kans.							\$38.00	38.00	7.50	58.65		
Fort Reno, Ind. T									2.45			
Fort Lyon, Colo									42.76			
Fort Log 'n, Colo									4.06	10.40		
Fort Supply, Ind. T									2.19			
Fort Sheridan, Ill									32.10			
Fort Sill, Ind. T									8.05	19.00		
Fort Elliott, Tex									8.69			
Little Rock Barracks, Ark												
Total	199.96						38.00	237.96	191.52	330.40	37,683.97	102,257.62
<i>Department of the Platte.</i>												
Headquarters and depot, Omaha, Nebr.	14.60							14.60	521.61	48.97	411.34	1,015.12
Ogden, Utah									63.60		321.75	295.83
Fort McKinney, Wyo									52.38			
Fort Robinson, Nebr									30.13	244.05		
Fort Washakie, Wyo									50.09			
Fort Omaha, Nebr									7.35			
Fort Douglas, Utah								*\$27.00	27.00			
Fort Du Chesne, Utah									7.50			
Fort Sidney, Nebr					4.00			4.00	6.52			

Fort D. A. Russell, Wyo			35.60			35.60	134.39	190.00		
Fort Bridger, Wyo							5.88			
Fort Niobrara, Nebr							9.60	90.00		
Camp Pilot Butte, Wyo							2.40			
Total	14.60		66.60			81.20	891.55	573.02	733.09	1,310.95
<i>Department of Dakota.</i>										
Headquarters, St. Paul, Minn				† \$138.90		138.90	758.05	445.70	44,460.52	64,735.59
Helena, Mont									193.52	459.02
Fort Custer, Mont				38.50		38.50	50.00	9.94		
Fort Meade, S. Dak			*188.40			188.40	10.50	241.88		
Fort Missoula, Mont			127.00			127.00	4.70			
Fort Keogh, Mont			50.00			50.00	10.46			
Fort Buford, N. Dak			234.20			234.20	5.60			
Fort Yates, N. Dak			120.00			120.00	6.30	109.00		
Fort Assiniboine, Mont							10.00			
Fort Maginnis, Mont			36.25			36.25				
Fort Snelling, Minn			175.00		465.50	640.50	18.32			
Fort Randall, S. Dak								6.32		
Fort A. Lincoln, N. Dak			96.00			96.00				
Fort Bennett, S. Dak					12.00	12.00	12.27			
Fort Shaw, Mont			75.00			75.00				
Fort Totten, N. Dak							2.09			
Fort Pembina, N. Dak			51.00			51.00	2.70			
Fort Sully, S. Dak			71.22			71.22	19.15			
Camp Poplar River, Mont							2.96			
Total			1,224.07	177.40	477.50	1,878.97	912.50	812.84	44,654.04	65,194.61
<i>Department of Texas.</i>										
Headquarters and depot, San Antonio, Tex			*26.50			26.50	42.14	281.31	9,722.77	26,125.06
Fort Davis, Tex							2.25			
Fort Hancock, Tex							14.56	57.25		
Fort Ringgold, Tex							103.29			
Fort Clarke, Tex							10.96	302.30		
Fort Brown, Tex							40.00			
Camp Peña Colorado, Tex							1.37			
Total			26.50			26.50	214.57	640.86	9,722.77	26,125.06
<i>Department of California.</i>										
Fort Mason, Cal							1.01			
Presidio of San Francisco, Cal							522.59	63.00		
Fort Bidwell, Cal							3.00			

* Repairs.

† Not otherwise.

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	CLOTHING.								Shooting galleries and ranges.	Hospital stewards' quarters.	TRANSPORTATION OF THE ARMY.		
	Purchase of material.	Manufacture.	Advertising.	Clerks.	Inspectors.	Packers.	Other employés.	Total amounts.			Rail.		
											Passengers.	Freight.	
<i>Department of California—Continued.</i>													
Benicia Barracks, Cal									\$2.12	\$800.00			
Angel Island, Cal									4.23				
Total									592.86	863.00			
<i>Department of Arizona.</i>													
Headquarters, Los Angeles, Cal									116.34	417.94	\$919.90	\$4,316.11	
Tucson, Ariz											215.00	561.87	
Santa Fé, N. Mex									60.83	800.00	32.50	138.62	
Whipple Barracks, Ariz									3.70				
Fort Huachuca, Ariz									5.00				
Fort Wingate, N. Mex										799.93			
Fort Bayard, N. Mex										35.00			
Fort Selden, N. Mex								\$0.28	\$0.28	19.65			
Fort Stanton, N. Mex									8.12	225.00			
Fort Union, N. Mex									2.82				
Fort Apache, Ariz								1.06	1.06	39.00			
Fort Lowell, Ariz										472.55			
Fort McDowell, Ariz									1.98				
Fort Grant, Ariz								1.00	1.00	4.13			
Fort Bowie, Ariz									22.43				
Fort Verde, Ariz									1.98				
Fort Mojave, Ariz									2.47				
San Carlos, Ariz									5.61				
San Diego Barracks, Cal									48.33				
Fort Thomas, Ariz									1.98	27.52			
Total								2.24	2.24	284.66	2,836.59	1,107.40	5,016.40
<i>Department of the Columbia.</i>													
Headquarters and depot, Vancouver Barracks, Wash									102.67	40.50	46.00		
Portland, Oregon										530.09	5,944.64	8,455.71	
Fort Walla Walla, Wash									29.65				

Boise Barracks, Idaho										25.00	385.85		
Fort Sherman, Idaho										5.70			
Fort Spokane, Wash										6.00			
Fort Townsend, Wash										1.00			
Fort Canby, Wash										83.30			
Total										253.32	956.44	5,990.64	8,455.71
<i>Independent posts.</i>													
Atlanta, Ga													10.25
Columbus Barracks, Ohio											174.29	13,022.42	209.24
David's Island, N. Y										48.00	81.69		
Willets Points, N. Y								*22.00	22.00				
Jefferson Barracks, Mo											119.35		
Total								22.00	22.00	48.00	375.33	13,022.42	219.49
<i>General depots.</i>													
New York, N. Y	\$5.33									5.33		21,383.43	3,769.11
Philadelphia, Pa	790,818.22	\$98,587.86	\$2,427.76	\$4,708.21	\$6,833.33	\$6,345.10	21,246.79	930,967.27				833.90	2,175.18
Washington, D. C												2,140.19	1,829.70
Jeffersonville, Ind	100,695.92	31,871.64	200.65	7,600.02	2,813.97	2,732.33	4,093.33	150,007.86				4,976.81	14,034.81
San Francisco, Cal	158,641.47	15,645.48	332.83	3,677.46	3,200.04	3,943.00	7,769.72	193,210.00				1,214.35	3,623.86
St. Louis, Mo	25.15	24.00	54.89	3,800.02		2,514.88	2,423.25	8,842.19			33.54	22,651.43	15,280.60
Military prison, Fort Leavenworth, Kans	84,402.05	956.33	34.36		2,599.92	†453.74	2,400.00	90,846.40		43.05			
Total	1,134,588.14	147,085.31	3,050.49	19,785.71	15,447.26	15,989.05	37,933.09	1,373,879.05		43.05	33.54	53,200.11	45,723.36

* Repairs.

† Not otherwise.

QUARTERMASTER-GENERAL.

585

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	TRANSPORTATION OF THE ARMY.									
	Water.		Express- age.	Wagon.	Stage.	Transportation employes.		Vessels.		
	Passengers.	Freight.		Freight.	Passengers.	Civilians.	Enlisted men on extra duty.	For purchas- ing, operat- ing, and main- taining.	For charter- ing from private par- ties.	For repairing.
<i>Division of the Atlantic and Depart- ment of the East.</i>										
Headquarters, Governor's Island, N. Y. H.....						\$14,660.87	\$144.50	\$2,896.13		\$1,629.45
Boston, Mass.....	\$32.92	\$1,226.45	\$5.10	\$446.15	\$4.00	3,496.33		4,444.15	\$1,365.00	1,726.36
Baltimore, Md.....	469.40	546.01	2.40	1,488.20	52.00					
New Orleans, La.....	6.00	1,496.44		1,087.60		900.00		328.90		14.76
Buffalo, N. Y.....	248.25	345.48		764.11	5.00			593.64		
Washington Barracks, D. C.....						388.00	537.00			
Fort Monroe, Va.....				444.04		7,735.00	856.95	4,126.28		92.00
Newport Barracks, Ky.....						1,017.50	138.25	1.40		20.25
Fort Barrancas, Fla.....				324.53			379.85		1,368.33	
Jackson Barracks, La.....						890.00	231.00			
Fort Preble, Me.....						840.00	254.10			
Fort Trumbull, Conn.....		200.68		272.50			321.64			21.35
Fort Adams, R. I.....				1,496.08		2,420.00	868.85	75.00	446.00	2,263.92
Fort Myer, Va.....				2,240.00		1,695.02	686.17			
Fort Hamilton, N. Y.....				10.00		1,153.00	482.85			
Fort McHenry, Md.....							485.48			
Fort Wadsworth, N. Y.....				174.00		720.00	525.60			
Fort Wayne, Mich.....				243.54		900.00	378.00			
Fort Brady, Mich.....							250.25			
Fort Mackinac, Mich.....						120.00	385.78			
Fort Porter, N. Y.....				480.00			396.25			
Madison Barracks, N. Y.....						1,225.00	661.87			
Fort Ontario, N. Y.....				75.00			127.75			
St. Augustine, or St. Francis Barracks, Fla.....				71.52			317.35			125.00
Plattsburgh Barracks, N. Y.....							268.50			
Fort Warren, Mass.....							369.95			
Fort McPherson, Ga.....				4.00		1,945.00	606.60			
Fort Schuyler, N. Y.....						550.00	327.95			
Mt. Vernon Barracks, Ala.....						217.40	688.80			
Fort Niagara, N. Y.....						781.50	383.25			
Total.....	756.57	3,815.06	7.50	9,621.27	61.00	41,654.62	11,068.29	12,465.50	3,178.33	5,893.09

<i>Division of the Missouri.</i>							
Headquarters, Chicago, Ill	14.00	191.24	50.93	1,573.74	62.21	6,672.33	
Fort Sheridan, Ill				42.24		6,431.55	
Total	14.00	191.24	50.93	1,615.98	62.21	13,103.88	
<i>Department of the Missouri.</i>							
Headquarters and depot, Fort Leavenworth, Kans., and St. Louis, Mo			165.27	23,731.36	625.05	24,575.07	258.20
Denver, Colo			413.59	1,505.55	53.00	7,887.95	
Fort Hays, Kans				49.42		340.00	55.50
Fort Crawford, Colo						2,303.50	380.85
Fort Lewis, Colo				1,844.06		6,121.24	1,211.75
Fort Riley, Kans		3.30		1,157.36		9,742.47	692.45
Fort Reno, Ind. T					4.00	8,531.00	1,689.25
Fort Lyon, Colo				498.15		1,128.50	64.85
Fort Logan, Colo						1,420.65	234.85
Fort Supply, Ind. T						6,768.00	613.35
Fort Sheridan, Ill						361.50	399.65
Fort Sill, Ind. T				973.80	558.00	5,128.00	1,491.85
Fort Elliott, Tex						3,937.00	751.90
Fort Gibson, Ind. T				112.08		1,623.15	100.45
Oklahoma City, Ind. T						1,395.00	
Guthrie, Ind. T				246.45		200.00	70.35
Little Rock Barracks, Ark			7.05				240.10
In the field						775.00	28.35
Total			589.21	30,118.23	1,240.05	62,235.03	8,283.70
<i>Department of the Platte.</i>							
Headquarters and depot, Omaha, Nebr			773.58	33,206.14	890.54	24,169.89	
Cheyenne depot, Wyo				7,905.19	858.35	17,249.91	
Ogden, Utah			23.91	6.40		2,599.92	
Fort McKinney, Wyo						4,169.13	773.15
Fort Robinson, Nebr						6,417.32	1,996.05
Fort Washakie, Wyo						3,197.46	750.55
Fort Omaha, Nebr				9.00		2,464.96	1,762.20
Fort Douglas, Utah				630.90		2,220.00	1,527.00
Fort Laramie, Wyo						2,273.31	504.35
Fort Du Chesne, Utah						5,212.16	3,762.80
Fort Sidney, Nebr				470.27		1,842.00	482.65
Fort D. A. Russell, Wyo				14.57		4,849.43	1,208.85
Fort Bridger, Wyo						3,193.17	597.70
Fort Niobrara, Nebr				943.90		4,523.62	1,551.15
Camp Pilot Butte, Wyo							255.50
In the field				19.25			
Total			797.49	43,205.62	1,748.89	84,382.29	15,171.95

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	TRANSPORTATION OF THE ARMY.									
	Water.		Express- age.	Wagon.	Stage.	Transportation employes.		Vessels.		
	Passengers.	Freight.		Freight.	Passengers.	Civilians.	Enlisted men on extra duty.	For purchas- ing, operat- ing, and main- taining.	For charter- ing from private par- ties.	For repairing.
<i>Department of Dakota.</i>										
Headquarters, St. Paul, Minn	\$24. 00	\$459. 48	\$488. 06	\$17, 664. 16	\$1, 832. 50	\$14, 613. 34		\$522. 21		
Helena, Mont		114. 19	300. 87	1, 904. 91	409. 00	128. 00				
Fort Custer, Mont				146. 00		9, 481. 76	\$681. 45			
Fort Meade, S. Dak				1, 414. 95		7, 563. 78	1, 127. 40			
Fort Missoula, Mont						6, 764. 74	780. 05			
Fort Keogh, Mont				722. 86		6, 404. 26	884. 40			
Fort Buford, N. Dak						8, 720. 61	357. 35			
Fort Yates, N. Dak						6, 405. 62	788. 25			
Fort Assiniboine, Mont						9, 032. 00	1, 155. 45			
Fort Maginnis, Mont						8, 083. 83	225. 40			
Fort Snelling, Minn				5, 416. 56		8, 474. 80	1, 340. 43			
Fort Randall, S. Dak						3, 875. 96	373. 45			
Fort A. Lincoln, N. Dak	50. 00					3, 730. 00	374. 40			
Fort Bennett, S. Dak				197. 75		1, 430. 00	348. 25			
Fort Shaw, Mont						5, 152. 64	816. 50			
Fort Totten, N. Dak						2, 160. 00	243. 96			
Fort Pembina, N. Dak						3, 506. 48	263. 75			
Fort Sully, S. Dak				372. 65		3, 180. 54	469. 15			
Camp Poplar River, Mont						2, 568. 33	254. 80			
Camp Sheridan, Wyo						3, 143. 15	32. 20			
Total	74. 00	573. 67	788. 93	27, 839. 84	2, 241. 50	109, 619. 84	10, 536. 64	522. 21		
<i>Department of Texas.</i>										
Headquarters and depot, San Antonio, Tex	426. 00	481. 81	229. 37	7, 385. 88	1, 061. 16	23, 355. 04	2, 574. 25			
Fort Davis, Tex						3, 539. 00	895. 10			
Fort Hancock, Tex						1, 092. 50	1, 162. 23			
Fort McIntosh, Tex						2, 201. 00	1, 234. 80			
Fort Bliss, Tex						1, 638. 65	689. 50			
Fort Ringgold, Tex						2, 364. 50	1, 446. 15			
Fort Clark, Tex					1. 00	2, 977. 00	2, 105. 60			

Fort Brown, Tex.....		45.00		26.84		3,416.00	1,151.61		
Camp at Eagle Pass, Tex.....							407.50		
Camp Del Rio, Tex.....						360.00	128.75		
Camp Peña Colorado, Tex.....						720.00	923.50		
Total	426.00	526.81	229.57	7,412.72	1,062.16	41,663.69	12,718.99		
<i>Department of California.</i>									
Headquarters and depot, San Francisco, Cal.....			6.80	6,504.61		19,930.51	5,843.52	\$1,650.00	\$3,416.70
Fort Mason, Cal.....						141.00	526.05		
Presidio of San Francisco, Cal.....						13,466.29	1,003.50		
Fort Gaston, Cal.....						1,438.00	323.40		
Fort Bidwell, Cal.....						935.00	448.80		
Benicia Barracks, Cal.....				24.00			397.30		
Alcatraz Island, Cal.....							325.70		
Angel Island, Cal.....						1,733.31	763.75		
In the field.....						600.00	20.15		
Total			6.80	6,528.61		38,244.11	3,808.65	5,843.52	1,650.00
<i>Department of Arizona.</i>									
Headquarters, Los Angeles, Cal.....	3.00	1,348.20		24,368.22	1,065.64	27,157.80			
Tucson, Ariz.....				15,076.51	1,767.93	2,445.00			
Santa Fé, N. Mex.....			419.29	14,360.98	675.82	3,840.00	1,144.95		
Whipple Barracks, Ariz.....						2,860.00	1,344.30		
Fort Huachuca, Ariz.....						4,197.32	773.25		
Fort Wingate, N. Mex.....						4,919.00	2,752.45		
Fort Bayard, N. Mex.....						2,990.00	1,576.75		
Fort Selden, N. Mex.....						12.00	331.45		
Fort Stanton, N. Mex.....						2,805.00	820.00		
Fort Union, N. Mex.....						2,145.00	781.80		
Fort Apache, Ariz.....				1,308.13		6,171.60	1,699.60		
Fort Lowell, Ariz.....						3,536.00	750.65		
Fort McDowell, Ariz.....						2,460.00	714.80		
Fort Grant, Ariz.....						3,189.40	1,012.24		
Fort Bowie, Ariz.....						4,061.37	653.25		
Fort Verde, Ariz.....			1.00			1,540.00	566.60		
Fort Mojave, Ariz.....			1.15			996.67	513.10		
San Carlos, Ariz.....						1,799.01	1,129.30		
San Diego Barracks, Cal.....							370.95		
Fort Thomas, Ariz.....						2,602.66	550.50		
Total	3.00	1,348.20	421.44	55,113.84	3,509.99	79,734.28	17,485.94		
<i>Department of the Columbia.</i>									
Headquarters and depot, Vancouver Barracks, Wash.....				254.88		17,212.31	2,372.65	100.00	
Portland, Oregon.....	35.25	4,012.54	43.43	6,874.20	263.25	1,901.46		2,671.00	

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	TRANSPORTATION OF THE ARMY.									
	Water.		Express- age.	Wagon.	Stage.	Transportation employes.		Vessels.		
	Passengers.	Freight.		Freight.	Passengers.	Civilians.	Enlisted men on extra duty.	For purchas- ing, operat- ing, and main- taining.	For charter- ing from private par- ties.	For repairing.
<i>Department of the Columbia—Cont'd.</i>										
Fort Walla Walla, Wash				\$135.55		\$6,445.83	\$1,142.30			
Boise Barracks, Idaho						2,442.84	318.80			
Fort Sherman, Idaho					\$6.00	7,207.02	1,897.20			
Fort Klamath, Oregon						566.50	136.70			
Fort Spokane, Wash						4,455.00	1,980.42			
Fort Townsend, Wash				399.27		406.34	799.55			
Fort Canby, Wash						772.69	366.55			
In the field							4.55			
Total	\$35.25	\$4,612.54	\$43.43	7,663.90	269.25	41,409.99	9,018.72		\$2,771.00	
<i>Independent posts.</i>										
Angusta Arsenal, Ga				65.72						
Benicia Arsenal, Cal				4.04						
Kennebec Arsenal, Me				53.60		540.00				
Watervliet Arsenal, N. Y				526.90						
Allegheny Arsenal, Pa				118.00						
Fort A. Lincoln, N. Dak						384.49				
Rock Island Arsenal, Ill				1,258.09						
Watertown Arsenal, N. Y							65.00			
Frankford Arsenal, Pa				237.10		999.96				
Atlanta, Ga				112.50		17,675.90				
West Point, N. Y			9.20			188.00	3,484.43			
Columbus Barracks, Ohio							1,071.10			
Hot Springs, Ark				64.80		522.00				
David's Island, N. Y						5,627.34	1,281.75	\$112.50	1,600.00	\$215.15
Willetts Point, N. Y							1,808.89			
Jefferson Barracks, Mo						1,692.50	1,587.06			
Total			9.20	2,440.75		27,030.19	9,298.23	112.50	1,600.00	215.15

General depots.

New York, N. Y	2,878.01	6,701.72	75.05	4,176.03	2.50	13,620.82	18,336.27	3,391.50	15,220.80
Philadelphia, Pa.		193.96	238.26	1,051.05		22,462.04			
Washington, D. C.	358.50	596.67	104.24	1,513.32		23,449.39			
Jeffersonville, Ind.	9.00	77.87	22.87	1,374.59		21,544.80			
San Francisco, Cal.	488.00	1,268.88	1,592.95	2,729.23	2,816.00	11,769.77	536.94		44.50
St. Louis, Mo.		437.43	362.79	2,570.57		12,041.54			
Military prison, Fort Leavenworth, Kans						1,100.00			
Total	3,733.51	9,296.53	2,456.16	13,414.79	2,818.50	105,988.86	18,923.21	3,391.50	15,265.30

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	TRANSPORTATION OF THE ARMY.									
	Means of transportation— wagons, carts, drays, ambulances, etc.		Draft horses and mules.		Stabling, watering, at- tending, etc., public ani- mals.	Harness.		Water supply and sewerage.		
	For pur- chases (in- cluding ve- hicles and parts of ve- hicles).	For repair- ing (includ- ing services and miscel- laneous pur- chases).	Number purchased.	Payments.		For purchas- ing and manufactur- ing harness and harness material.	For repair- ing.	For water rents and taxes.	For material purchased.	For con- structing and repairing and for digging wells.
<i>Division of the Atlantic and Depart- ment of the East.</i>										
Headquarters, Governor's Island, N. Y. H.							\$125.00	\$2,425.15	\$404.14	\$463.03
Boston, Mass	\$69.05	\$60.00				\$34.50		540.00	489.80	993.55
Baltimore, Md	12.26	58.40	4	\$710.00		11.05	5.18		125.50	
New Orleans, La	161.54	9.82							1,213.74	
Buffalo, N. Y.	322.77					4.00			1,469.60	
Washington Barracks, D. C.		350.65							70.72	
Fort Monroe, Va	305.00	14.35					25.00		5,174.97	5,016.83
Newport Barracks, Ky		76.00	2	400.00	\$15.00	45.00		164.93	81.75	22,590.98
Fort Barranca, Fla		1.00							210.00	60.00
Jackson Barracks, La	180.80	34.50							160.00	696.28
Fort Preble, Me		12.00						89.46	2,297.80	1,649.20
Fort Trumbull, Conn		15.65						300.00	47.73	76.60
Fort Adams, R. I.		30.25						62.50	268.90	108.60
Fort Myer, Va	4.82								92.27	110.60
Fort Hamilton, N. Y.		47.50						331.66	219.75	238.60
Fort McHenry, Md		169.50						180.00	100.50	98.56
Fort Wadsworth, N. Y.	13.50	73.75							60.00	4,065.45
Fort Wayne, Mich	1.10	15.00	1	170.00				450.00	141.12	3,638.30
Fort Brady, Mich							16.00	75.00		
Fort Mackinac, Mich										3.00
Fort Porter, N. Y.	369.00	44.65						300.00		15.00
Madison Barracks, N. Y.			2	340.00					45.06	
Fort Ontario, N. Y.		26.88						400.00	10.00	27.88
St. Augustine, or St. Francis Barracks, Fla									14.27	801.10
Plattsburgh Barracks, N. Y.								399.96		
Fort Warren, Mass									605.25	248.80

Fort McPherson, Ga.....	320.00	17.50						18.50	529.22
Fort Schuyler, N. Y.....									115.00
Mt. Vernon Barracks, Ala.....		45.50						6.50	
Fort Niagara, N. Y.....			1	200.00				1,389.58	155.00
In the field.....		9.00							
Total.....	1,758.54	1,141.90	10	1,820.00	15.00	94.55	171.15	5,718.66	41,701.56
<i>Division of the Missouri.</i>									
Headquarters, Chicago, Ill.....	1,041.12	330.60	3	600.00		117.58	197.45	220.82	2,956.66
Fort Sheridan, Ill.....		18.75					4.10		105.07
Total.....	1,041.12	349.35	3	600.00		117.58	201.55	220.82	3,061.73
<i>Department of the Missouri.</i>									
Headquarters and depot, Fort Leavenworth, Kans., and St. Louis, Mo.....	7,638.99	256.91				96.94	3.75	6,000.00	6,388.47
Denver, Colo.....								187.50	2,604.89
Fort Hays, Kans.....		4.00				7.75			
Fort Lewis, Co o.....						15.62			
Fort Riley, Kans.....	282.60	320.50				2.02		12.15	850.26
Fort Reno, Ind. T.....		32.62				7.20			34.55
Fort Lyon, Colo.....								27.50	23.60
Fort Logan, Colo.....		288.65							
Fort Sheridan, Ill.....		120.50						41.00	301.04
Fort Elliott, Tex.....	34.25	115.25							
Fort Gibson, Ind. T.....									
Oklahoma City, Ind. T.....		31.00							
Guthrie, Ind. T.....		14.65							17.20
Little Rock Barracks, Ark.....	150.00					15.00	17.40	720.00	
In the field.....		5.30				104.81			
Total.....	8,105.84	1,189.38			134.88	113.96	89.65	6,919.65	10,220.01
<i>Department of the Platte.</i>									
Headquarters and depot, Omaha, Nebr.....	2,925.88	40.27				1.83	329.06	116.96	279.69
Cheyenne depot, Wyo.....									
Ogden, Utah.....						3.75			
Fort McKinney, Wyo.....		83.75				202.50			
Fort Washakie, Wyo.....		4.25							343.02
Fort Omaha, Nebr.....		4.00						3,605.00	
Fort Douglas, Utah.....									
Fort Du Chesne, Utah.....		20.10				379.44			
Fort Niobrara, Nebr.....									
Camp Pilot Butte, Wyo.....		43.20							
In the field.....		1.50				25.00			
Total.....	2,925.88	197.07			612.52	329.06	116.96	3,884.69	5,112.65

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	TRANSPORTATION OF THE ARMY.									
	Means of transportation— wagons, carts, drays, ambulances, etc.		Draft horses and mules.		Stabling, watering, at- tending, etc., public animals.	Harness.		Water supply and sewerage.		
	For pur- chases (in- cluding ve- hicles).	For repair- ing (includ- ing services and miscel- laneous pur- chases).	Number purchased.	Payments.		For purchas- ing and manufac- turing harness and harness material.	For repair- ing.	For water rents and taxes.	For material purchased.	For con- structing and repairing and for digging wells.
<i>Department of Dakota.</i>										
Headquarters, St. Paul, Minn	\$2,885.80	\$127.70	3	\$700.00	\$7.50	\$440.96	\$7.75	\$152.29	\$26,486.27	\$6,396.25
Helena, Mont	119.60				100.00					
Fort Custer, Mont					297.50					
Fort Meade, S. Dak					13.00				20.00	
Fort Missoula, Mont					7.50					
Fort Keogh, Mont										3,699.41
Fort Buford, N. Dak										203.50
Fort Yates, N. Dak					377.75					
Fort Assiniboine, Mont					6.50					
Fort Maginnis, Mont					347.36					
Fort Snelling, Minn							8.25		12.00	
Fort Randall, S. Dak					305.75					
Fort A. Lincoln, N. Dak					252.25					
Fort Bennett, S. Dak					11.15					
Fort Shaw, Mont					89.50					
Fort Totten, N. Dak					9.00					
Fort Sully, S. Dak					511.81					
Camp Sheridan, Wyo										36.39
Total	3,005.40	127.70	3	700.00	2,337.17	440.96	16.00	152.29	26,518.27	10,335.55
<i>Department of Texas.</i>										
Headquarters and depot, San Antonio, Tex	3,088.46	1.50			278.13	357.54	.65	6,141.90	4,827.01	900.00
Fort Bliss, Tex		163.80				12.00		1,500.00		30.00
Fort Ringgold, Tex					40.20				345.50	223.00
Fort Brown, Tex									152.20	195.00
Camp at Eagle Pass, Tex								198.60		

Camp Del Rio, Tex		6.10								
Total	3,088.46	171.40			318.33	369.54	.65	7,840.50	5,324.71	1,348.00
<i>Department of California.</i>										
Headquarters and depot, San Francisco, Cal	748.53	217.00	9	1,960.50			5.00	2,186.95	13.75	
Fort Mason, Cal	2.00	68.50								
Fort Bidwell, Cal	287.50									18.00
Benicia Barracks, Cal		124.25						490.89	38.23	
Alcatraz Island, Cal									31.55	
Angel Island, Cal	12.00	29.50					20.00	15.00	9.40	3.00
In the field		63.20					5.00			
Total	1,050.03	500.45	9	1,960.50			30.00	2,692.84	92.93	21.00
<i>Department of Arizona.</i>										
Headquarters, Los Angeles, Cal	1,770.76	580.81			114.70	355.13	77.00	165.00	3,329.14	276.68
Tucson, Ariz	799.96	15.00			1,057.25					
Santa Fé, N. Mex	1,203.25	7.50			318.40		33.00	2,400.00	70.50	126.84
Fort Wingate, N. Mex									4,114.07	4,939.06
Fort Selden, N. Mex									8.50	
Fort Stanton, N. Mex									1,346.46	437.32
Fort Apache, Ariz	307.23	12.75							525.00	
Fort McDowell, Ariz										211.25
Fort Verde, Ariz									593.96	110.29
San Diego Barracks, Cal		39.50							60.00	
Fort Thomas, Ariz										
Total	4,081.20	655.56			1,490.35	355.13	110.00	3,158.96	9,500.26	6,101.44
<i>Department of the Columbia.</i>										
Headquarters and depot, Vancouver Barracks, Wash	614.73	2,161.42			89.70		180.80	806.00	5,791.04	5,518.70
Portland, Oregon	2,513.61				59.00	204.62			14,274.78	708.49
Fort Walla Walla, Wash		78.40						506.33	21.00	1,477.10
Boise Barracks, Idaho		849.25					46.50	144.00	158.23	4,703.15
Fort Sherman, Idaho					12.00					
Fort Klamath, Oregon	4.50	12.00								
Fort Townsend, Wash	16.59	111.61								848.00
Fort Canby, Wash	70.20									109.17
In the field		69.20								
Total	3,219.63	3,281.88			151.70	204.62	683.63	1,219.00	20,245.05	13,364.61
<i>Independent posts.</i>										
Atlanta, Ga	796.37	476.95	42	5,880.00	110.30	34.20	14.10		1,588.60	5,179.25

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	TRANSPORTATION OF THE ARMY.									
	Means of transportation— wagons, carts, drays, ambulances, etc.		Draft horses and mules.		Stabling, watering, at- tending, etc., public ani- mals.	Harness.		Water supply and sewerage.		
	For pur- chases (in- cluding ve- hicles and parts of ve- hicles).	For repair- ing (includ- ing services and miscel- laneous pur- chases).	Number purchased.	Payments.		For purchas- ing and manufactur- ing harness and harness material.	For repair- ing.	For water rents and taxes.	For material purchased.	For con- structing and repairing and for digging wells.
<i>Independent posts—Continued.</i>										
West Point, N. Y.	\$308.88						\$16.12			
Columbus Barracks, Ohio	128.25	\$6.75						\$1,497.57	\$1,117.63	\$1,287.66
Hot Springs, Ark.	6.00	21.00					2.25	556.11	5.60	56.80
David's Island, N. Y.	190.99	1,903.45						472.59	8,208.67	4,392.05
Wilets Point, N. Y.	48.13								900.64	1,064.65
Jefferson Barracks, Mo.	119.22	35.23							670.08	229.87
Total	1,598.84	2,443.88	42	\$5,880.00	\$110.30	\$34.20	32.47	6,197.07	12,491.52	12,210.28
<i>General depots</i>										
New York, N. Y.	3,053.80	21.65	10	2,228.00		304.26	47.81	1,238.91	3,791.19	552.95
Philadelphia, Pa.	289.59	235.30						181.00	286.10	5.80
Washington, D. C.	698.00	223.40	10	1,875.00				150.00	347.37	917.19
Jeffersonville, Ind.	30,695.05	191.64	2	425.00		4,616.42	7.25		4,452.97	13.15
San Francisco, Cal.	11,443.30	131.26	2	422.00		8,798.44	25.00	419.40	8,460.75	53.20
St. Louis, Mo.	1,248.60	196.50	222	34,148.50	1.50	784.90	4.25	288.50	8,473.00	255.00
Military prison, Fort Leavenworth, Kans.	1,587.22					12.00				
Total	49,015.56	999.75	248	39,098.50	1.50	14,924.02	234.31	2,127.81	25,811.38	1,797.29

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	TRANSPORTATION OF THE ARMY.									
	Wharves and bridges.		Roads, harbors, and rivers.	Tolls on turnpikes, ferries, and bridges.	Advertisements, publications, and printing.	For re-imbursements of traveling expenses and payments from private funds for public purposes.	Boxes, canvas, and other articles for packing and protecting freight.	All expenses not otherwise enumerated.	Lumber, rope, and purchases of miscellaneous articles.	Total amounts.
	For constructing and repairing.	For rent of wharves and wharfage.	For constructing roads and for repairs and removal of obstructions.							
<i>Division of the Atlantic and Department of the East.</i>										
Headquarters, Governor's Island, N. Y. H.	\$283.00			\$100.00	\$39.00				\$549.03	\$23,719.30
Boston, Mass		\$400.00			5.00				70.07	19,696.92
Baltimore, Md				57.80	37.94	\$1.25			142.01	16,589.71
New Orleans, La							\$27.00		1,301.76	18,037.82
Buffalo, N. Y.				12.50	7.80	1.50			39.84	6,152.50
Washington Barracks, D. C.			\$3,019.75	100.00	28.51				2,245.50	6,770.13
Fort Monroe, Va	106.56		600.00						1,203.96	25,700.94
Newport Barracks, Ky	31.76	111.53	8,413.24	179.75	98.45				3,152.79	36,538.58
Fort Barranca, Fla		398.00							443.85	3,185.36
Jackson Barracks, La			50.00						713.25	2,955.01
Fort Preble, Me				114.32		5.00			227.70	5,489.58
Fort Trumbull, Conn				77.93					47.13	1,381.21
Fort Adams, R. I.		114.62							430.00	8,583.72
Fort Myer, Va				249.61					54.66	5,132.65
Fort Hamilton, N. Y.		220.00	8,988.96	35.00		21.45			2,170.87	13,872.14
Fort Wood, N. Y. H.									75.00	75.00
Fort McHenry, Md			50.00	100.00					366.73	1,428.77
Fort Wadsworth, N. Y.			4,211.30	18.40					1,657.75	11,615.50
Fort Wayne, Mich	825.00		290.00	69.00	19.63				623.00	7,652.44
Fort Brady, Mich			241.50							767.75
Fort Mackinac, Mich									440.27	949.00
Fort Porter, N. Y.				60.00					17.57	1,676.47
Madison Barracks, N. Y.									220.38	2,492.31
Fort Ontario, N. Y.			272.71						4.00	944.22
St. Augustine, or St. Francis Barracks, Fla					2.90				429.30	1,761.44
Plattsburgh Barracks, N. Y.	150.00								278.75	1,097.21

QUARTERMASTER-GENERAL.

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	TRANSPORTATION OF THE ARMY.									
	Wharves and bridges.		Roads, harbors, and rivers.	Tolls on turnpikes, ferries, and bridges.	Advertisements, publications, and printing.	For reimbursements of traveling expenses and payments from private funds for public purposes.	Boxes, canvas, and other articles for packing and protecting freight.	All expenses not otherwise enumerated.	Lumber, rope, and purchases of miscellaneous articles.	Total amounts.
	For constructing and repairing.	For rent of wharves and wharfage.	For constructing roads and for repairs and removal of obstructions.							
<i>Division of the Atlantic and Department of the East—Continued.</i>										
Fort Warren, Mass.....										\$1,224.00
Fort McPherson, Ga.....			\$3,434.70	\$10.00					\$316.00	7,201.52
Fort Schuyler, N. Y.....	\$2,795.00		651.20		\$50.80				153.00	4,642.95
Mt. Vernon Barracks, Ala.....									12.00	970.00
Fort Niagara, N. Y.....					6.38				67.50	2,883.19
In the field.....				250.62						259.62
Total.....	4,191.32	\$1,244.15	30,223.36	1,434.93	296.41	\$29.20	\$27.00		17,462.67	241,447.22
<i>Division of the Missouri.</i>										
Headquarters, Chicago, Ill.....				90.00	6.00	19.25	12.98		2,379.84	73,266.25
Fort Sheridan, Ill.....	7,048.00		11,293.87		41.04				4,978.09	46,629.74
Total.....	7,048.00		11,293.87	90.00	47.04	19.25	12.98		7,357.93	119,895.99
<i>Department of the Missouri.</i>										
Headquarters and depot, Fort Leavenworth, Kans., and St. Louis, Mo.....			3,000.02	14.00	183.60	327.16	470.87		4,140.79	82,205.52
Denver, Colo.....			6,477.15	2,225.29	40.70				299.12	162,150.13
Fort Hays, Kans.....										459.87
Fort Crawford, Colo.....									32.20	2,715.55
Fort Lewis, Colo.....				152.75					41.23	9,386.65
Fort Riley, Kans.....	39.44				9.75				513.46	16,300.64
Fort Reno, Ind. T.....				5.25					499.78	10,994.40
Fort Lyon, Colo.....									35.00	1,887.60
Fort Logan, Colo.....									256.50	2,200.65
Fort Supply, Ind. T.....						36.16			12.00	7,429.51

Fort Sheridan, Ill								447.71	1,806.40
Fort Sill, Ind. T.			120.00		5.25				8,274.90
Fort Elliott, Tex.									4,838.40
Fort Gibson, Ind. T.			37.00					74.00	2,054.68
Oklahoma City, Ind. T.								53.96	1,566.96
Guthrie, Ind. T.								179.01	782.29
Little Rock Barracks, Ark.			4.50					70.30	1,309.35
In the field								8.35	921.31
Total	39.44	9,477.17	2,558.79	234.05	368.57	470.87		6,663.41	317,261.61
<i>Department of the Platte.</i>									
Headquarters and depot, Omaha, Nebr.			152.25	191.01	315.77	201.77		2,476.59	83,253.08
Cheyenne depot, Wyo				67.49	26.50			186.30	36,341.44
Ogden, Utah			58.64					20.00	3,330.20
Fort McKinney, Wyo								2,641.84	8,520.98
Fort Robinson, Nebr.								1.50	8,414.87
Fort Washakie, Wyo									3,952.27
Fort Omaha, Nebr.									7,845.16
Fort Douglas, Utah									4,557.90
Fort Laramie, Wyo									2,777.66
Fort Du Chesne, Utah			9.00					15.12	9,398.62
Fort Sidney, Nebr.									2,794.92
Fort D. A. Russell, Wyo					11.78				6,084.60
Fort Bridger, Wyo									3,790.87
Fort Niobrara, Nebr.									7,278.67
Camp Pilot Butte, Wyo									298.70
In the field								20.00	65.75
Total			219.89	258.50	354.02	201.77		5,361.35	188,705.69
<i>Department of Dakota.</i>									
Headquarters, St. Paul, Minn			105.00	74.60	18.50	80.06		6,526.18	188,808.72
Helena, Mont			27.00					127.45	8,883.56
Fort Custer, Mont			3.00		164.65			3.00	10,777.36
Fort Meade, S. Dak			3.40		14.90			72.00	10,230.03
Fort Missoula, Mont			29.50					1,070.00	8,651.79
Fort Keogh, Mont				48.39	9.10			121.60	12,090.02
Fort Buford, N. Dak			69.00					203.50	9,553.96
Fort Yates, N. Dak	50.00							324.00	7,945.62
Fort Assiniboine, Mont			32.50						10,226.45
Fort Maginnis, Mont			26.00						3,682.59
Fort Snelling, Minn			462.70					229.80	15,944.54
Fort Randall, S. Dak			79.00					4.00	4,638.16
Fort A. Lincoln, N. Dak									4,406.65
Fort Bennett, S. Dak									1,987.15
Fort Shaw, Mont								17.75	6,076.39
Fort Totten, N. Dak									2,430.96
Fort Pembina, N. Dak			97.20						3,887.43
Fort Sully, S. Dak			30.00					96.96	4,661.11

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	TRANSPORTATION OF THE ARMY.								Total amounts.	
	Wharves and bridges.		Roads, harbors, and rivers.	Tolls on turnpikes, ferries, and bridges.	Advertisements, publications, and printing.	For reimbursements of traveling expenses and payments from private funds for public purposes.	Boxes, canvas, and other articles for packing and protecting freight.	All expenses not otherwise enumerated.		Lumber, rope, and purchases of miscellaneous articles.
	For constructing and repairing.	For rent of wharves and wharfage.	For constructing roads and for repairs and removal of obstructions.							
<i>Department of Dakota—Continued.</i>										
Camp Poplar River, Mont				\$22.75					\$2,823.13	
Camp Sheridan, Wyo								\$10.00	3,244.49	
Total	\$50.00		\$462.70	524.35	\$122.99	\$207.15	\$80.06	8,824.24	315,950.11	
<i>Department of Texas.</i>										
Headquarters and depot, San Antonio, Tex			60.00	148.00	63.00	87.20	65.12	12,120.59	99,500.44	
Fort Davis, Tex								45.83	4,479.93	
Fort Hancock, Tex								20.00	2,274.73	
Fort McIntosh, Tex								1,606.00	5,041.80	
Fort Bliss, Tex								36.45	4,070.40	
Fort Ringgold, Tex								360.00	4,779.35	
Fort Clark, Tex								167.67	5,251.27	
Fort Brown, Tex								10.00	4,996.65	
Camp at Eagle Pass, Tex								52.50	658.60	
Camp Del Rio, Tex									494.85	
Camp Peña Colorado, Tex									1,643.50	
Total			60.00	148.00	63.00	87.20	65.12	14,419.04	133,191.52	
<i>Department of California.</i>										
Headquarters and depot, San Francisco, Cal	3,100.00	\$1,440.00		100.00	99.58	76.00		2,128.39	49,427.84	
Fort Mason, Cal	346.50							442.21	1,524.26	
Presidio of San Francisco, Cal								460.50	14,930.29	
Fort Gaston, Cal									1,781.40	
Fort Bidwell, Cal								193.60	1,882.30	

Benicia Barracks, Cal.....			80.00						1,154.67
Alcatraz Island, Cal.....									367.25
Angel Island, Cal.....								301.51	2,887.47
In the field.....								2.50	690.85
Total.....	3,446.50	1,440.00	80.00	100.00	99.58	76.00		3,528.11	74,616.33
<i>Department of Arizona.</i>									
Headquarters, Los Angeles, Cal.....				809.62		283.65	152.92	1,767.41	68,861.69
Tucson, Ariz.....						4.00	5.00	1,807.21	25,754.53
Santa Fé, N. Mex.....					4.50	16.90		95.98	24,889.03
Whipple Barracks, Ariz.....								360.50	4,564.80
Fort Huachuca, Ariz.....								349.37	5,319.94
Fort Wingate, N. Mex.....			796.00					2,459.10	19,979.68
Fort Bayard, N. Mex.....									4,566.75
Fort Selden, N. Mex.....								506.04	857.99
Fort Stanton, N. Mex.....						3.00		655.00	6,066.78
Fort Union, N. Mex.....									2,926.80
Fort Apache, Ariz.....								4.00	9,503.31
Fort Lowell, Ariz.....								21.92	4,308.57
Fort McDowell, Ariz.....						62.95		51.00	3,813.75
Fort Grant, Ariz.....									4,201.64
Fort Bowie, Ariz.....								187.08	4,901.70
Fort Verde, Ariz.....								661.32	2,980.17
Fort Mojave, Ariz.....									1,510.92
San Carlos, Ariz.....									2,928.31
San Diego Barracks, Cal.....								143.05	1,310.79
Fort Thomas, Ariz.....									3,213.16
Total.....			796.00	809.62	4.50	370.50	157.92	9,068.98	200,460.31
<i>Department of the Columbia.</i>									
Headquarters and depot, Vancouver Barracks, Wash.....			1,968.00	450.00	117.78	377.75	\$691.13	900.36	39,588.25
Portland, Oregon.....			60.00	60.45		15.25	11.45	942.05	49,651.18
Fort Walla Walla, Wash.....				2.00		23.15	467.50	81.89	10,656.05
Boise Barracks, Idaho.....								54.30	8,717.07
Fort Sherman, Idaho.....								297.79	9,420.01
Fort Klamath, Oregon.....								21.50	741.20
Fort Spokane, Wash.....				5.00					6,440.42
Fort Townsend, Wash.....		124.91							2,706.27
Fort Canby, Wash.....	450.00		3.50					38.00	1,810.11
In the field.....				208.00					281.75
Total.....	450.00	124.91	2,031.50	725.45	117.78	416.15	1,170.08	2,335.89	130,012.31
<i>Independent posts.</i>									
Augusta Arsenal, Ga.....									65.72
Benicia Arsenal, Cal.....									544.04

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

Division and post.	Wharves and bridges.		Roads, harbors, and rivers.	Tolls on turnpikes, ferries, and bridges.	Advertisements, publications, and printing.	For re-imbursments of traveling expenses and payments from private funds for public purposes.	Boxes, canvas, and other articles for packing and protecting freight.	All expenses not otherwise enumerated.	Lumber, rope, and purchases of miscellaneous articles.	Total amounts.
	For constructing and repairing.	For rent of wharves and wharfage.	For constructing roads and for repairs and removal of obstructions.							
<i>Independent posts.—Continued.</i>										
Kennebec Arsenal, Me								\$0.50	\$1.00	\$55.10
Watervliet Arsenal, N. Y					\$13.19					540.09
Allegheny Arsenal, Pa										118.00
Fort A. Lincoln, N. Dak										384.49
Rock Island Arsenal, Ill										1,258.09
Watertown Arsenal, N. Y										65.00
Frankford Arsenal, Pa				\$41.60					5.00	1,283.66
National Armory, Springfield, Mass				11.00						11.00
Atlanta, Ga			\$114.25	25.00	90.45	\$74.31			1,180.50	32,762.93
West Point, N. Y				7.50					290.72	4,304.85
Columbus Barracks, Ohio			5,220.65	64.00					382.07	23,947.14
Hot Springs, Ark									306.30	1,540.86
David's Island, N. Y	\$549.42		696.66	10.00	131.85				215.78	25,907.70
Willetts Point, N. Y									714.20	4,537.81
Jefferson Barracks, Mo			100.00						520.92	8,685.88
U. S. legations at Vienna, Austria, and Paris, France									14.04	14.04
Total		849.42	6,131.56	159.10	234.99	74.31		.50	3,630.53	106,026.40
<i>General depots.</i>										
New York, N. Y	\$380.00	10,333.24		58.99	572.60	217.10	\$277.18	506.08	7,396.85	125,535.85
Philadelphia, Pa	67.93		343.00	200.00	21.60	154.10	9,294.58		4,458.93	42,472.32
Washington, D. C			1,352.92	234.00		906.39	305.25		22.14	37,491.67
Jeffersonville, Ind			52.00	342.50	938.82		74.33		12,422.23	96,272.11
San Francisco, Cal			100.00	180.00	27.32	8.50	3,026.56	171.80	2,974.28	62,391.39
St. Louis, Mo				60.00	29.75	66.25	33.66		1,631.24	100,575.95
Military prison, Fort Leavenworth, Kans									271.99	2,971.21
Total	447.93	10,333.24	1,847.92	1,075.49	1,590.09	1,847.84	13,011.50	677.88	29,157.66	467,710.50

C.—Statement showing in detail the amounts expended from the various appropriations made for the Quartermaster's Department, etc.—Continued.

RECAPITULATION.

Divisions, departments, general depots, independent posts, etc.	Regular sup- plies.	Incidental expenses.	Barracks and quarters.	Cavalry and artillery horses.	Hospitals.	Clothing.	Shooting galleries and ranges.	Hospital stewards' quarters.	Transporta- tion of the Army.	Total.
Division of the Atlantic and Department of the East	\$200,585.79	\$70,654.73	\$108,314.37	-----	\$16,079.24	\$270.00	\$1,746.44	\$1,498.56	\$241,447.22	\$640,596.35
Division of the Missouri	25,764.87	27,071.35	20,759.80	-----	231.22	-----	3,500.00	-----	119,895.99	197,223.23
Department of the Missouri	281,838.20	51,335.92	24,488.11	\$3,768.91	5,510.34	237.96	191.52	330.40	317,261.61	684,862.97
Department of the Platte	297,788.20	60,077.20	65,301.52	4,420.91	2,418.50	81.20	891.55	573.02	188,705.69	610,255.79
Department of Dakota	356,601.63	63,774.80	49,325.40	11,481.63	6,452.72	1,878.97	912.50	812.84	315,950.11	807,190.60
Department of Texas	156,416.90	38,884.93	27,352.80	4,239.35	5,112.81	26.50	214.57	640.86	133,191.52	366,080.24
Department of California	81,306.97	34,697.69	37,380.99	4,019.85	5,120.39	-----	532.86	863.00	74,616.33	238,538.08
Department of Arizona	413,026.34	42,263.87	65,175.00	23.15	3,225.72	2.24	284.06	2,836.69	200,460.31	727,297.28
Department of the Columbia	125,776.98	29,029.27	27,534.13	10,302.65	2,210.64	-----	253.32	956.44	130,012.31	326,075.74
Independent posts, etc.	106,213.51	34,397.19	44,537.61	-----	4,204.18	22.00	45.00	375.33	106,026.40	295,824.22
General depots	369,307.98	155,438.31	49,534.58	80,680.81	143.21	1,373,879.05	43.05	33.54	467,710.50	2,496,771.03
Total	2,404,625.37	607,625.26	519,704.31	118,937.26	50,708.97	1,376,397.92	8,617.87	8,920.58	2,295,277.99	7,390,715.53

C, SUPPLEMENTAL.—Statement showing in detail amounts expended from the various appropriations for the Quartermaster's Department for the fiscal year 1889, in the divisions, departments, independent posts, and general depots of the Army, as shown by the accounts of officers received since preparation of annual report for fiscal year ending June 30, 1889.

Division and post.	REGULAR SUPPLIES.													Stationery.
	Forage.						Fuel.		Stoves.		Lights.			
	Hay.	Oats.	Corn.	Bran.	Barley.	Straw.	Wood.	Coal.	Heating.	Cook.	Lamps and lanterns.	Mineral oil.	Light.	
<i>Division of the Atlantic and Department of the East.</i>														
Headquarters, Governor's Island, N. Y. H.	\$203.80	\$214.37		\$62.00		\$64.46							\$19.12	
Boston, Mass.	16.38	11.47				2.25							.25	
Baltimore, Md.							\$3.75							
New Orleans, La.	56.95	47.44	\$6.40			6.40	720.25							
Fort Monroe, Va.									\$1,470.00					\$499.20
Newport Barracks, Ky.									325.00				178.52	
Mt. Vernon Barracks, Ala.													.27	
Fort Wadsworth, N. Y.									1,396.00				500.00	
Fort Wayne, Mich.									515.90					5.00
Fort Porter, N. Y.									140.00					
Fort Niagara, N. Y.									518.00					
Fort McPherson, Ga.													1.05	
Total	277.13	273.28	6.40	62.00		73.11	724.00		4,364.90				699.21	504.20
<i>Department of the Missouri.</i>														
Headquarters and depot, Fort Leavenworth, Kans.	3,642.70	3,260.51	1,162.80	371.30		461.04	1,539.91		4,703.65	\$698.85	\$55.10		3.80	611.25
Denver, Colo.							5.00	\$41.78		3.25				
Fort Lewis, Colo.	2.24	1.80											1.75	
Fort Riley, Kans.									55,983.00					
Fort Sill, Ind. T.			7.19				18.00							
Total	3,644.94	3,262.31	1,169.99	371.30		461.04	1,562.91	41.78	60,636.65	702.10	55.10		5.55	611.25
<i>Department of the Platte.</i>														
Headquarters and depot, Omaha, Nebr.	464.38	325.37	901.98			343.72	1,605.62	3,520.88					6.82	
Ogden, Utah	143.77	187.43					44.49							

Fort McKinney, Wyo.....	135.80	141.11				65.87															10.00		
Fort Washakie, Wyo.....	27.41	17.64																				6.60	
Fort Sidney, Nebr.....																							
Total.....	771.36	671.55	901.98			343.72	1,715.98	3,520.88														23.42	
<i>Department of Dakota.</i>																							
Headquarters, St. Paul, Minn.....	1,259.67	1,550.12	28.00	137.36		101.78	177.75	3,025.97			75.22	5.50									68.82	19.76	
Helena, Mont.....	17.00	814.80	147.60				45.99																
Fort Custer, Mont.....	191.57						5.50																
Fort Meade, S. Dak.....	24.50	22.73																					
Fort Buford, N. Dak.....	7.00						2.00																
Fort Maginnis, Mont.....	102.45	7.96					22.25																
Total.....	1,601.79	2,395.61	175.60	137.36		101.78	253.40	3,025.97			75.22	5.50									68.82	19.76	
<i>Department of Texas.</i>																							
Headquarters and depot, San Antonio, Tex.....	489.28	1,011.77	1,188.10				229.10	1,068.58			8.43										3.15	591.65	
In the field, Tex.....	13.00						361.50																
Total.....	502.28	1,011.77	1,188.10				590.60	1,068.58			8.43										3.15	591.65	
<i>Department of California.</i>																							
Headquarters and depot, San Francisco, Cal.....	1,639.27	54.37				75.30	433.69															13.20	
Presidio of San Francisco, Cal.....																						5.88	
Fort Gaston, Cal.....	13.60	12.60																					
Fort McDermit, Nev.....	20.58						10.00																
Total.....	1,679.45	66.97				75.30	443.69															19.08	
<i>Department of Arizona.</i>																							
Headquarters, Los Angeles, Cal.....	629.60		9.45	44.79	1,746.97		2.79	232.17			72.00	66.12									23.90		
Tucson, Ariz.....	4,250.08	1,427.39	924.60	341.51	13,828.91		292.86	4,110.08															
Santa Fe, N. Mex.....	6,217.60	2,124.22	2,553.57				783.39	1,032.12	1,792.89														
Fort Stanton, N. Mex.....																						4.20	
Fort Verde, Ariz.....																						.90	
Fort Mojave, Ariz.....																						2.07	
Total.....	11,097.28	3,551.61	3,487.62	386.30	15,575.88	1,076.25	5,144.99	2,025.06			72.00	66.12									31.07		
<i>Department of the Columbia.</i>																							
Headquarters and depot, Vancouver Barracks, Wash.....	293.22																						1,503.15
Portland, Oregon.....	128.10	1,558.85					5.50	33.79															
Fort Klamath, Oregon.....	59.08	57.33			9.12																		

C, SUPPLEMENTAL.—Statement showing in detail amounts expended from the various appropriations for the Quartermaster's Department, etc.—Continued.

Division and post.	REGULAR SUPPLIES.												Total amounts.	
	Advertis- ing.	Print- ing.	Lawn- mowers.	Engi- neers.	Firemen.	Watch- men.	Labor.	Other employés.	Rubber stamps.	Forage masters and agents.	Scales.	Type- writers.		All expenses not otherwise enumer- ated.
<i>Division of the Atlantic and Depart- ment of the East.</i>														
Headquarters, Governor's Island, N. Y. H.	\$325.02													\$325.02
Boston, Mass.														30.10
Baltimore, Md.														4.00
New Orleans, La.														837.44
Washington Barracks, D. C.													\$50.00	50.00
Fort Monroe, Va.													113.74	2,082.94
Newport Barracks, Ky.														503.52
Mt. Vernon Barracks, Ala. . . . .														.27
Fort Hamilton, N. Y.													1,075.00	1,075.00
Fort Wadsworth, N. Y.														1,885.00
Fort Wayne, Mich.	8.49												100.00	628.39
Fort Porter, N. Y.														140.00
Fort Niagara, N. Y.														518.00
Fort McPherson, Ga.														1.05
Total	333.51												1,338.74	8,656.48
<i>Department of the Missouri.</i>														
Headquarters and depot, Fort Leavenworth, Kans.	453.51	\$535.75	\$127.09	\$170.00	\$80.00		\$140.00						1,192.71	19,210.87
Denver, Colo.													250.00	300.03
Fort Lewis, Colo.													586.00	585.79
Fort Riley, Kans.							\$400.00						87.00	56,420.00
Fort Reno, Ind. T.														25.19
Total	453.51	535.75	127.09	170.00	80.00		140.00	400.00					2,109.71	76,541.88
<i>Department of the Platte.</i>														
Headquarters and depot, Omaha, Nebr.	281.40													7,450.17
Ogden, Utah														375.69

QUARTERMASTER-GENERAL.

Fort McDermit, Nev.....												30.58	
Angel Island, Cal.....											25.00	25.00	
Total	133.08	388.49			40.00		141.59		83.33		25.00	3,095.98	
<i>Department of Arizona.</i>													
Headquarters, Los Angeles, Cal.....	855.20						8.50	\$18.50		\$7.00	\$52.00	1,385.36	5,154.35
Tucson, Ariz.....													25,175.43
Santa Fe, N. Mex.....											60.00		14,563.79
Whipple Barracks, Ariz.....											60.00		60.00
Fort Huachuca, Ariz.....											60.00		60.00
Fort Wingate, N. Mex.....											60.00		60.00
Fort Bayard, N. Mex.....											60.00		60.00
Fort Stanton, N. Mex.....											60.00		64.20
Fort Union, N. Mex.....											32.00		32.00
Fort Thomas, Ariz.....											60.00		60.00
Fort Apache, Ariz.....											60.00		60.00
Fort Lowell, Ariz.....											60.00		60.00
Fort McDowell, Ariz.....											60.00		60.00
Fort Grant, Ariz.....											60.00	2,420.35	2,480.35
Fort Bowie, Ariz.....											60.00		60.00
Fort Verde, Ariz.....											60.00		60.90
Fort Mojave, Ariz.....													2.07
Total	855.20						8.50	18.50	812.00	7.00	52.00	3,805.71	48,073.09
<i>Department of the Columbia.</i>													
Headquarters and depot, Vancouver Barracks, Wash.....	92.86		33.65				\$1.25				38.00	1,695.20	3,657.33
Portland, Oregon.....													1,726.24
Boise Barracks, Idaho.....												787.37	787.37
Fort Klamath, Oregon.....													125.53
Fort Spokane, Wash.....							75.00						103.40
In the field.....													39.43
Total	92.86		33.65				1.25	75.00			38.00	2,482.57	6,444.30
<i>Independent posts.</i>													
Benicia Arsenal, Cal.....	9.50												9.50
Allegheny Arsenal, Pa.....							70.00						70.00
Atlanta, Ga.....	26.65	41.70											368.35
Jefferson Barracks, Mo.....													291.68
West Point, N. Y.....											.60		419.41
Columbus Barracks, Ohio.....													104.50
Willetts Point, N. Y.....													16.18
Total	36.15	41.70					70.00				.60	1,299.82	

WAR 90—VOL I—39

QUARTERMASTER-GENERAL.

609

C, SUPPLEMENTAL.—Statement showing in detail amounts expended from the various appropriations for the Quartermaster's Department, etc.— Continued.

Division and post.	REGULAR SUPPLIES.													Total amounts.
	Adver- tising.	Print- ing.	Lawn- mowers.	Engi- neers.	Firemen.	Watch- men.	Labor.	Other employés.	Rubber stamps.	Forage masters and agents.	Scales.	Type- writers.	All expenses not otherwise enumer- ated.	
<i>General depots.</i>														
New York, N. Y.	\$103.65	\$14.50		\$96.00										\$1,588.39
Philadelphia, Pa.	63.04	2.75											\$18.00	125.69
Washington, D. C.	248.91	23.48												286.30
Jeffersonville, Ind.	58.97			150.00								\$15.00	1,007.27	1,617.30
San Francisco, Cal.														36.00
St. Louis, Mo.	16.80								\$1.65				266.90	1,238.61
Military prison, Fort Leavenworth, Kans.					\$100.00					\$75.00				175.00
Total	491.37	40.73		246.00	100.00				1.65	75.00		15.00	1,292.17	5,067.29

C, SUPPLEMENTAL.—Statement showing in detail amounts expended from the various appropriations for the Quartermaster's Department, etc.—Continued.

Division and post.	INCIDENTAL EXPENSES.										
	Postage.	Advertis- ing.	Extra duty.	Civilian employées.						Horse and mule—	
				Clerks.	Messen- gers.	Laborers.	Store- keepers.	Watch- men.	Spies, guides, etc.	Wagon and forage masters.	Shoes and shoe-nails.	Recovery of.
<i>Division of the Atlantic and Depart- ment of the East.</i>											
Headquarters, Governor's Island, N. Y. H				\$1,036.64	\$100.00						
Baltimore, Md				150.00	50.00						
New Orleans, La				366.66	45.00		\$75.00				
Fort Monroe, Va			\$110.55	233.33			38.00			\$67.00	
Jackson Barracks, La			10.50								
St. Augustine, or St. Francis Barracks, Fla			12.50								
Mt. Vernon Barracks, Ala			49.75						\$100.00		
Little Rock Barracks, Ark			38.00								
Fort Hamilton, N. Y			94.55								
Fort Schuyler, N. Y			50.50								
Fort Wayne, Mich			77.75								
Fort Ontario, N. Y			61.50								
Fort McPherson, Ga			72.30								
Total			577.90	1,786.63	195.00		113.00		100.00	67.00	
<i>Department of the Missouri.</i>											
Headquarters and depot, Fort Leaven- worth, Kans			21.70	1,200.00	90.00	\$120.00	200.00	\$296.00			
Fort Hays, Kans			82.10								
Fort Lewis, Colo			102.30								
Total			206.10	1,200.00	90.00	120.00	200.00	296.00			
<i>Department of the Platte.</i>											
Headquarters and depot, Omaha, Nebr.		\$25.00									\$25.00
Fort McKinney, Wyo			97.75						150.00		
Fort Robinson, Nebr.			8.50								
Total		25.00	106.25						150.00		25.00

C, SUPPLEMENTAL.—Statement showing in detail amounts expended from the various appropriations for the Quartermaster's Department, etc.—Continued.

Division and post.	INCIDENTAL EXPENSES.											
	Postage.	Advertis- ing.	Extra duty.	Civilian employes.						Horse and mule— ^s		
				Clerks.	Messen- gers.	Laborers.	Store- keepers.	Watch- men.	Spies, guides, etc.	Wagon and forage masters.	Shoes and shoe-nails.	Recovery of.
<i>Department of Dakota.</i>												
Headquarters, St. Paul, Minn				\$1,400.00	\$100.00	\$45.00						
Helena, Mont				150.00	50.00							
Fort Custer, Mont			\$170.25	100.00					\$185.00	\$67.00		\$25.00
Fort Meade, S. Dak			172.00									
Fort Missoula, Mont			77.30	83.33								
Fort Keogh, Mont			232.85	190.00								
Fort Buford, N. Dak			37.45						50.00			25.00
Fort Yates, N. Dak			143.25						50.00			
Fort Maginnis, Mont			68.00									
Camp Sheridan, Wyo			17.50						78.00			
Total			968.60	1,833.33	150.00	45.00			361.00	67.00		50.00
<i>Department of Texas.</i>												
Headquarters and depot, San Antonio, Tex		\$14.52	149.45	600.00	45.00	360.00	\$100.00	\$260.00				
Fort Ringgold, Tex			66.45									
Fort Clark, Tex			117.60	100.00								
Fort Brown, Tex			74.05									
In the field, Tex												10.00
Total		14.52	407.55	700.00	45.00	360.00	100.00	260.00				10.00
<i>Department of California.</i>												
Headquarters and depot, San Fran- cisco, Cal				1,166.67	122.50	95.00		130.00	96.00			
Presidio of San Francisco, Cal			212.65	116.67								
Fort Bidwell, Cal			91.25									
Fort Gaston, Cal			93.70									
Fort McDermit, Nev			30.88									
Benicia Barracks, Cal			122.80									
Total			551.28	1,283.34	122.50	95.00		130.00	96.00			

<i>Department of Arizona.</i>										
Headquarters, Los Angeles, Cal		11.20				399.00			5.00	\$291.00
Tucson, Ariz.				250.00	50.00					
Santa Fé, N. Mex	\$1.50		76.75	360.00	40.00	60.00	70.00			
Whipple Barracks, Ariz			101.50							
Fort Huachuca, Ariz			128.70							
San Diego Barracks, Cal			26.50							
Fort Wingate, N. Mex			98.00							
Fort Bayard, N. Mex			129.00							
Fort Selden, N. Mex			29.05							
Fort Stanton, N. Mex	3.50		55.00							
Fort Union, N. Mex			81.50							
Fort Thomas, Ariz			56.95							
Fort Apache, Ariz			43.00					75.00		
Fort Lowell, Ariz			93.50							
Fort McDowell, Ariz			42.75							
Fort Grant, Ariz			86.80							
Fort Bowie, Ariz			105.35							
Fort Verde, Ariz			40.65						10.00	
Fort Mojave, Ariz			80.00							
Total	5.00	11.20	1,275.00	610.00	90.00	459.00		70.00	90.00	291.00
<i>Department of the Columbia.</i>										
Portland, Oregon				366.67	60.00					
Fort Klamath, Oregon			46.75							
Fort Spokane, Wash			96.15							
In the field			51.00							
Total			193.90	366.67	60.00					
<i>Independent posts.</i>										
Atlanta, Ga				500.00	100.00					
Jefferson Barracks, Mo	40.38									
West Point, N. Y			507.05	250.00						
Willets Point, N. Y			147.45							
Total	40.38		654.50	750.00	100.00					
<i>General depots.</i>										
New York N. Y		49.50			19.96					
Philadelphia, Pa		126.30		416.66	75.00					
Washington, D. C		24.41				46.00				
Jeffersonville, Ind	.06		1,143.33		60.00		116.67	240.00		
San Francisco, Cal										1,037.00
St. Louis, Mo			665.00		45.00					
Military prison, Fort Leavenworth, Kans			16.50	150.00	40.00					
Total	.06	200.21	10.50	2,374.99	239.96	46.00	116.67	240.00		1,037.00

C, SUPPLEMENTAL.—Statement showing in detail amounts expended from the various appropriations for the Quartermaster's Department, etc.—Continued.

Division and post.	INCIDENTAL EXPENSES.										
	Interments of enlisted men.	Telegraph and telephone operators.	Telegrams.	Hire of telephones.	Affidavits.	Shoeing.	Office furniture.	Other employes.	Deserters.	All expenses not otherwise enumerated.	Total amounts.
<i>Division of the Atlantic and Department of the East.</i>											
Headquarters, Governor's Island, N. Y. H.			\$229.12		\$20.50						\$1,986.26
Baltimore, Md.				\$25.00							225.00
New Orleans, La.											486.66
Buffalo, N. Y.										\$2.40	2.40
Fort Monroe, Va.											448.88
Newport Barracks, Ky.					1.50						1.50
Jackson Barracks, La.				12.00		\$2.98					26.48
St. Augustine, or St. Francis Barracks, Fla.						8.20					20.70
Mt. Vernon Barracks, Ala.						10.80					160.55
Little Rock Barracks, Ark. ....						.50					38.50
Fort Adams, B. I.					1.50						1.50
Fort Hamilton, N. Y.											94.55
Fort Schuyler, N. Y.						15.00					65.50
Fort Wayne, Mich.						14.50					92.25
Fort Ontario, N. Y.						10.00					71.50
Fort McPherson, Ga.										294.00	366.30
Total			229.12	37.00	23.50	61.98				296.40	3,487.63
<i>Division of the Missouri.</i>											
Headquarters, Chicago, Ill.			28.55							1.80	30.35
<i>Department of the Missouri.</i>											
Headquarters and depot, Fort Leavenworth, Kans.		\$210.00	153.28	39.00	27.25		\$378.49	\$140.00		107.43	2,983.15
Denver, Colo.										75.00	75.00
Fort Hays, Kans.											82.10
Fort Lewis, Colo.									\$150.00	3.60	255.90
Total		210.00	153.28	39.00	27.25		378.49	140.00	150.00	186.03	3,896.15

Department of the Platte.

Headquarters and depot, Omaha, Nebr.		18.27						60.00	207.25	335.52
Ogden, Utah			7.50							7.50
Fort McKinney, Wyo									160.61	408.36
Fort Robinson, Nebr										8.50
Fort Washakie, Wyo				1.50					8.60	5.10
Total		18.27	7.50	1.50				60.00	371.46	764.98

Department of Dakota.

Headquarters, St. Paul, Minn.		642.94	57.70	3.00	21.55	9.00	100.00		20.84	2,400.03
Helena, Mont				.50				30.00		230.50
Fort Custer, Mont	20.00			15.00	2.50					584.75
Fort Meade, S. Dak			62.50	5.25			48.00			282.75
Fort Missoula, Mont										160.63
Fort Keogh, Mont				26.00				30.00		488.85
Camp Poplar River, Mont				6.00						6.00
Fort Randall, S. Dak				7.50						7.50
Fort Buford, N. Dak										62.45
Fort Yates, N. Dak								33.00		226.25
Fort Maginnis, Mont				3.00						71.00
Fort Snelling, Minn								30.00		30.00
Camp Sheridan, Wyo									4.00	97.50
Total	20.00	642.94	120.20	66.25	24.05	9.00	143.00	123.00	24.84	4,648.21

Department of Texas.

Headquarters and depot, San Antonio, Tex	\$8.00	86.91	24.00			787.80	80.00	90.00	200.75	2,806.43
Fort Bliss, Tex									3.04	3.04
Fort Ringgold, Tex								60.00		126.45
Fort Clark, Tex										217.60
Fort Brown, Tex										74.05
In the field					3.00					13.00
Total	8.00	86.91	24.00		3.00	787.80	80.00	150.00	203.79	3,240.57

Department of California.

Headquarters and depot, San Francisco, Cal		.90	29.32	29.50			331.66	30.00		2,031.55
Presidio of San Francisco, Cal	10.00					5.00	80.00		35.06	459.38
Fort Bidwell, Cal								8.00		99.25
Fort Gaston, Cal										93.70
Fort McDermitt, Nev							100.00			130.88
Benicia Barracks, Cal			5.00		36.00					163.80
Total	10.00	.90	34.32	29.50	36.00	5.00	511.66	38.00	35.06	2,978.56

Division and post.	INCIDENTAL EXPENSES.										
	Internments of enlisted men.	Telegraph and telephone operators.	Telegrams.	Hire of telephones.	Affidavits.	Shoeing.	Office furniture.	Other employes.	Deserters.	All expenses not otherwise enumerated.	Total amounts.
<i>Department of Arizona.</i>											
Headquarters, Los Angeles, Cal.....			\$586.86	\$23.25	\$26.00		\$2,659.00	\$123.00		\$762.46	\$4,885.77
Tucson, Ariz.....					44.50		44.00				388.50
Santa Fé, N. Mex.....						\$3.50					611.75
Whipple Barracks, Ariz.....											101.50
Fort Huachuca, Ariz.....											128.70
San Diego Barracks, Cal.....		\$4.00			4.80	12.60					47.90
Fort Wingate, N. Mex.....				25.00	20.00						143.00
Fort Bayard, N. Mex.....					16.00						145.00
Fort Selden, N. Mex.....											29.05
Fort Stanton, N. Mex.....					2.50						61.00
Fort Union, N. Mex.....											81.50
Fort Thomas, Ariz.....											56.95
Fort Apache, Ariz.....		30.00						100.00			248.00
Fort Lowell, Ariz.....											93.50
Fort McDowell, Ariz.....											42.75
Fort Grant, Ariz.....											86.80
Fort Bowie, Ariz.....											105.35
Fort Verde, Ariz.....											40.65
Fort Mojave, Ariz.....											90.00
Total.....		34.00	586.86	48.25	113.80	16.10	2,703.00	222.00		762.46	7,387.67
<i>Department of the Columbia.</i>											
Headquarters and depot, Vancouver Barracks, Wash.....			98.23	255.74			1,667.00		\$63.00	104.97	2,185.94
Portland, Oregon.....				30.50							457.17
Fort Walla Walla, Wash.....				11.44							11.44
Fort Klamath, Oregon.....											46.75
Fort Spokane, Wash.....											96.15
In the field.....											51.00
Total.....			98.23	297.68			1,667.00		60.00	104.97	2,848.45

<i>Independent posts.</i>											
Atlanta, Ga.....											600.00
Jefferson Barracks, Mo.....			4.11								44.49
West Point, N. Y.....			11.32		1.25						769.62
Columbus Barracks, Ohio.....			16.02					250.00	30.00		296.02
Willels Point, N. Y.....											147.45
Total.....			31.45		1.25			250.00	30.00		1,857.58
<i>General depots.</i>											
New York, N. Y.....			23.11	25.00	2.50	16.10	229.17		30.00	2,165.10	2,560.44
Philadelphia, Pa.....			8.61	33.00	56.50	9.70				22,661.62	23,387.39
Washington, D. C.....	\$25.00	115.00	503.39	15.00	7.50	104.40			123.09	130.00	1,093.70
Jeffersonville, Ind.....			13.44		3.50	12.50	213.67	50.00		112.70	1,965.87
San Francisco, Cal.....				13.15		51.00	141.21	5.00		625.67	1,873.03
St. Louis, Mo.....			1.57				162.00		120.00	389.96	1,383.53
Military prison, Fort Leavenworth, Kans.....											200.50
Total.....	25.00	115.00	550.12	86.15	70.00	193.70	746.05	55.00	273.00	26,085.05	32,464.46

C, SUPPLEMENTAL.—Statement showing in detail amounts expended from the various appropriations for the Quartermaster's Department, etc.—Continued.

Division and post.	Purchase of tools.	BARRACKS AND QUARTERS.										
		Rent of—					Advertis- ing.	Carpen- ters.	Masons.	Plaster- ers.	Painters.	Other em- ployés.
		Quarters—		Officers.	Store- houses.	Stables and grounds.						
For officers.	For enlisted men.											
<i>Division of the Atlantic and Depart- ment of the East.</i>												
Baltimore, Md			\$8.00	\$250.00								
New Orleans, La				90.00	\$150.00							
Buffalo, N. Y				62.50								
Fort Monroe, Va			5.00	251.20								
Total			13.00	653.70	150.00							
<i>Department of the Missouri.</i>												
Headquarters and depot, Fort Leaven- worth, Kans				100.00		\$212.53	\$240.00					\$150.00
Denver, Colo				120.00								
Total				220.00		212.53	240.00					150.00
<i>Department of the Platte.</i>												
Headquarters and depot, Omaha, Nebr. Ogden, Utah				20.00	5.00			\$13.00				
Total				20.00	5.00			13.00				
<i>Department of Dakota.</i>												
Headquarters, St. Paul, Minn				30.00				75.00				
Helena, Mont				50.00								
Fort Meade, S. Dak							10.34					
Fort Keogh, Mont							376.00	75.00				
Fort Assiniboine, Mont												133.17
Fort Maginnis, Mont												83.33
Total				80.00			386.34	150.00				216.50

<i>Department of Texas.</i>									
Headquarters and depot, San Antonio, Tex.....	\$30.60		24.00	8.00			184.00		\$75.00
Fort Ringgold, Tex.....				186.50					
Total.....	30.60		24.00	8.00	186.50		184.00		75.00
<i>Department of California.</i>									
Headquarters and depot, San Francisco, Cal.....				762.00	\$90.00		16.71		
Presidio of San Francisco, Cal.....									
Total.....				762.00	90.00		16.71		
<i>Department of Arizona.</i>									
Headquarters, Los Angeles, Cal.....	90.54			30.00	90.00				36.00
Tucson, Ariz.....				85.00					
Santa Fé, N. Mex.....				60.00	15.00				
San Diego Barracks, Cal.....		\$96.00				50.00			
Fort Wingate, N. Mex.....	446.26								
Fort Thomas, Ariz.....							63.00		
Fort Grant, Ariz.....	9.50						349.00	62.00	
Fort Bowie, Ariz.....							160.00		
Total.....	546.30	96.00		125.00	105.00		50.00	572.00	62.00
<i>Department of the Columbia.</i>									
Headquarters and depot, Vancouver Barracks, Wash.....							116.50		\$571.50
Portland, Oregon.....	4.50			70.00	35.00				
In the field.....							26.00		70.00
Total.....	4.50			70.00	35.00		142.50		641.50
<i>Independent posts.</i>									
Atlanta, Ga.....				50.00					
<i>General depots.</i>									
New York, N. Y.....							7.80		
Philadelphia, Pa.....							6.71		
Washington, D. C.....		45.15				245.33	35.35		
Jeffersonville, Ind.....								21.25	
San Francisco, Cal.....				833.33	160.68				
St. Louis, Mo.....				543.75	50.00	75.00			
Total.....		45.15	1,377.08	210.68	320.33	40.86		21.25	

C, SUPPLEMENTAL.—Statement showing in detail amounts expended from the various appropriations for the Quartermaster's Department, etc.—Continued

Division and post.	BARRACKS AND QUARTERS.			CAVALRY AND ARTILLERY HORSES.				HOSPITALS.				
	Construction and repairs.	All expenses not otherwise enumerated.	Total amounts.	Purchase of cavalry and artillery.	Advertising.	All expenses not otherwise enumerated.	Total amounts.	Extra duty.	Advertising.	Masons.	Laborers.	Other employés.
<i>Department of Arizona—Continued.</i>												
Fort Bowie, Ariz.	\$10.91		\$170.91									
Total	14,221.45	\$14.00	15,827.75	\$6,434.48	\$368.44	\$185.00	\$6,987.92	\$6.50			\$33.00	\$129.00
<i>Department of the Columbia.</i>												
Headquarters and depot, Vancouver												
Barracks, Wash.	1,403.65		2,091.65									
Portland, Oregon	170.68	12.00	292.18									
In the field			96.00									
Total	1,574.33	12.00	2,479.83									
<i>Independent posts.</i>												
Atlanta, Ga.			50.00									
Jefferson Barracks, Mo.	22,250.00		22,250.00									
West Point, N. Y.		2.10	2.10					47.26	\$155.75	267.55		
Columbus Barracks, Ohio.	19,206.34		19,206.34									
Willetts Point, N. Y.	1,192.43		1,192.43									
Total	42,648.77	2.10	42,700.87					47.26	155.75	267.55		
<i>General depots.</i>												
New York, N. Y.	102.66	120.78	231.24									
Philadelphia, Pa.	2.90		9.61									
Washington, D. C.		6.00	331.83		24.50		24.50		\$3.50			
Jeffersonville, Ind.	5.65	23.50	50.40									
San Francisco, Cal.			994.01									
St. Louis, Mo.	1,899.08	2.00	2,569.83	15,858.00	57.28	196.56	16,111.84					
Total	2,010.29	152.28	4,186.92	15,858.00	81.78	196.56	16,186.34		3.50			

C, SUPPLEMENTAL.—Statement showing in detail amounts expended from the various appropriations for the Quartermaster's Department, etc.—Continued.

Division and post.	HOSPITALS.			CLOTHING.								Shooting galleries and ranges.	Hospital stewards' quarters.
	Construction and repairs.	All expenses not otherwise enumerated.	Total amounts.	Purchase of material.	Manufactures.	Advertising.	Clerks.	Inspectors.	Packers.	Other employes.	Total amounts.		
<i>Division of the Atlantic and Department of the East.</i>													
Headquarters, Governor's Island, N. Y. H.....	\$90.00		\$90.00										
Fort Monroe, Va.....								\$2.00		\$2.00			
Fort Barrancas, Fla.....	40.00		40.00										
Mt. Vernon Barracks, Ala.....	27.50		27.50										
Little Rock Barracks, Ark.....												\$50.00	
Fort Trumbull, Conn.....												82.55	\$155.00
Fort Schuyler, N. Y.....	445.00		445.00					6.00		6.00			
Fort Wayne, Mich.....	5,751.23		5,751.23										
Fort Brady, Mich.....	33.00		33.00										
Fort Mackinac, Mich.....	663.98		663.98										
Plattsburgh Barracks, N. Y.....	2,135.00		2,135.00					4.00		4.00			
Total.....	9,185.76		9,185.76					12.00		12.00		132.55	155.00
<i>Department of the Missouri.</i>													
Headquarters and depot, Fort Leavenworth, Kans.....	12.75		12.75										
Fort Lewis, Colo.....									\$25.00	25.00			468.58
Fort Riley, Kans.....	1,372.00		1,372.00										
Total.....	1,384.75		1,384.75							25.00	25.00		468.58
<i>Department of the Platte.</i>													
Fort McKinney, Wyo.....	9.00		9.00									6.00	800.00
Fort Robinson, Nebr.....	158.57		158.57									5.50	
Fort Du Cheane, Utah.....													435.00
Fort Sidney, Nebr.....	295.00		295.00										
Total.....	462.57		462.57									11.50	1,235.00
<i>Department of Dakota.</i>													
Headquarters, St. Paul, Minn.....	71.93		71.93									165.54	12.70

C, SUPPLEMENTAL.—Statement showing in detail amounts expended from the various appropriations for the Quartermaster's Department, etc.—Continued.

Division and post.	HOSPITALS.			CLOTHING.								Shooting galleries and ranges.	Hospital stewards' quarters.	
	Construction and repairs.	All expenses not otherwise enumerated.	Total amounts.	Purchase of material.	Manufactures.	Advertising.	Clerks.	Inspectors.	Packers.	Other employés.	Total amounts.			
<i>Department of Dakota—Continued.</i>														
Fort Custer, Mont.....											\$38.80	\$38.80		
Fort Meade, S. Dak.....	\$12.16		\$12.16											
Fort Missoula, Mont.....			55.00											
Fort Keogh, Mont.....	117.70		194.50										\$295.19	
Fort Sully, S. Dak.....	1.45		1.45											
Fort Bennett, S. Dak.....		\$1.00	1.00											
Fort Pembina, N. Dak.....														\$33.00
Fort Assiniboine, Mont.....			128.00											
Total.....	203.24	1.00	464.04								38.80	38.80	460.73	45.70
<i>Department of Texas.</i>														
Headquarters and depot, San Antonio, Tex.....	41.49		41.49										2.15	
Fort Ringgold, Tex.....	687.00		687.00											
Fort Clark, Tex.....			35.00											
Total.....	728.49		763.49										2.15	
<i>Department of California.</i>														
Presidio of San Francisco, Cal.....	1,319.00		1,319.00											
Fort Bidwell, Cal.....													50.00	48.00
Angel Island, Cal.....														
Total.....	1,319.00		1,319.00										50.00	48.00
<i>Department of Arizona.</i>														
Headquarters, Los Angeles, Cal.....	255.84	15.00	270.84										148.25	513.22
Santa Fé, N. Mex.....			3.50											
Fort Huachuca, Ariz.....	135.00		135.00										63.75	230.78
Fort Stanton, N. Mex.....			3.00										2.50	
Fort Apache, Ariz.....	82.00	10.00	92.00										62.08	

C, SUPPLEMENTAL.—Statement showing in detail amounts expended from the various appropriations for the Quartermaster's Department, etc.—Continued.

626

REPORT OF THE SECRETARY OF WAR.

Division and post.	TRANSPORTATION OF THE ARMY.									
	Rail.		Water.		Express- age.	Wagon.	Stage.	Transportation employes.		For purchasing, operating, and maintaining ves- sels.
	Passengers.	Freight.	Passen- gers.	Freight.		Freight.	Passengers.	Civilians.	Enlisted men on extra duty.	
<i>Division of the Atlantic and Depart- ment of the East.</i>										
Boston, Mass	\$7.70	\$1,623.04				\$139.70				
Baltimore, Md.	2,752.36	996.96	\$8.95	\$39.32		48.60				
New Orleans, La.	366.97	2,490.10	20.00	75.00		57.00		\$75.00		
Buffalo, N. Y.	35.99	263.63	26.50	27.57		17.75				
Fort Monroe, Va.								610.00	\$65.85	
Jackson Barracks, La.								80.00	10.50	
St. Augustine, or St. Francis Bar- racks, Fla.						1.63			23.00	
Mt. Vernon Barracks, Ala.								20.00	59.00	
Little Rock Barracks, Ark.									21.00	
Fort Hamilton, N. Y.								75.00	44.00	
Fort Schuyler, N. Y.								60.00	31.50	
Fort Wayne, Mich.								75.00	31.50	
Fort Niagara, N. Y.								60.00	31.50	
Fort McPherson, Ga.									31.70	
Total	3,163.02	5,373.73	55.45	141.89		264.73		1,055.00	349.05	
<i>Division of the Missouri.</i>										
Headquarters, Chicago, Ill.	2,757.09	5,022.38						\$6.00		
<i>Department of the Missouri.</i>										
Headquarters and depot, Fort Leaven- worth, Kans.	57.30				\$153.64	1,346.98	477.05	1,895.00		
Denver, Colo.	6,012.13	16,777.06			52.98		1.80	535.27		
Fort Hays, Kans.								90.00	25.00	
Fort Lewis, Colo.						76.73		100.00	109.20	
Fort Sill, Ind. T.								30.00	42.00	
Total	6,069.43	16,777.06			206.62	1,423.71	478.85	2,650.27	176.20	

C, SUPPLEMENTAL.—Statement showing in detail amounts expended from the various appropriations for the Quartermaster's Department, etc.—Continued.

Division and post.	TRANSPORTATION OF THE ARMY.									
	Rail.		Water.		Express- age.	Wagon.	Stage.	Transportation employés.		For purchasing, operating, and maintaining vessels.
	Passengers.	Freight.	Passengers.	Freight.		Freight.	Passengers.	Civilians.	Enlisted men on extra duty.	
<i>Department of Arizona.</i>										
Headquarters, Los Angeles, Cal.	\$330.00	\$829.06	\$8.00	\$767.31		\$4,594.38	\$318.05	\$3,813.00		
Tucson, Ariz.	10.50	35.94				3,308.95	101.00			
Santa Fé, N. Mex.						1,519.03		60.00	\$82.85	
Whipple Barracks, Ariz.								260.00	115.50	
Fort Huachuca, Ariz.								320.00	74.00	
San Diego Barracks, Cal.									17.10	
Fort Wingate, N. Mex.								423.00	201.40	
Fort Bayard, N. Mex.								2-8.00	115.25	
Fort Selden, N. Mex.									31.50	
Fort Stanton, N. Mex.								255.00	69.75	
Fort Union, N. Mex.								195.00	82.25	
Fort Thomas, Ariz.								240.00	54.50	
Fort Apache, Ariz.								528.33	80.85	
Fort Lowell, Ariz.								320.00	82.50	
Fort McDowell, Ariz.								250.00	70.50	
Fort Grant, Ariz.								280.00	44.65	
Fort Bowie, Ariz.								440.00	171.50	
Fort Verde, Ariz.								140.00	58.85	
Fort Mojave, Ariz.								100.00		
Total	340.50	865.00	8.00	767.31		9,422.36	419.05	7,912.33	1,847.95	
<i>Department of the Columbia.</i>										
Headquarters and depot, Vancouver Barracks, Wash.						42.98		874.31		
Portland, Oregon	8,969.85	83.23	117.13	8.80	\$8.00	1,262.67	76.50	133.33		
Boise Barracks, Idaho.								1,219.00		
Fort Klamath, Oregon								146.00	74.10	
Fort Spokane, Wash.								639.68	194.75	
In the field								82.50	24.50	
Total	8,969.85	83.23	117.13	8.80	8.00	1,305.65	76.50	3,074.82	293.35	

<i>Independent posts.</i>									
Atlanta, Ga.						6.50			
West Point, N. Y.								260.42	
Columbus Barracks, Ohio	1,301.04	10.13						143.40	
Willets Point, N. Y.									
Total	1,301.04	10.13				6.50		433.82	
<i>General depots.</i>									
New York, N. Y.	4,398.66	4,063.30	2,467.25	7,819.16	45.51	364.10	1.00		\$467.38
Philadelphia, Pa.	27.59	434.59		6.25	1.60			472.82	
Washington, D. C.	5,201.62	18,384.74	198.14	130.85	115.30	790.04	48.75	102.00	
Jeffersonville, Ind.	3,331.51	8,019.80	1.00	13.67		194.79		1,211.67	
San Francisco, Cal.	227.05	863.95	257.50	486.29	469.99	531.84	602.00		
St. Louis, Mo.	8,273.12	8,682.58		305.41	72.06	189.38	1.58	492.67	
Military prison, Fort Leavenworth, Kans.								100.00	
Total	21,459.55	40,448.96	2,923.89	8,761.63	704.46	2,070.15	653.33	2,378.66	467.38

Division and post.	TRANSPORTATION OF THE ARMY.									
	Means of transportation— wagons, carts, drays, ambulances, etc.		Draft horses and mules.		Stabling, watering, attending, etc., public animals.	Harness.		Water supply and sewerage.		
	For pur- chases (in- cluding vehi- cles and parts of vehicles).	For repairing (including services and miscellaneous purchases).	Number purchased.	Payments.		For pur- chasing and manufactur- ing harness and harness material.	For repairing.	For water rents and taxes.	For material purchased.	For con- structing and repairing and for dig- ging wells.
<i>Division of the Atlantic and Depart- ment of the East.</i>										
Headquarters, Governor's Island, N. Y. H.....								\$624.95		
New Orleans, La.....		\$20.80								
Buffalo, N. Y.....	\$3.00									
Fort Monroe, Va.....								\$32.00	\$2,301.19	
Mt. Vernon Barracks, Ala.....								41.50		
Little Rock Barracks, Ark.....							60.00			
Fort Trumbull, Conn.....		27.00						1.80		
Fort Hamilton, N. Y.....							112.08			
Fort Wadsworth, N. Y.....									1,650.00	
Fort Wayne, Mich.....							112.50	12.33	2,014.00	
Fort Ontario, N. Y.....								39.90		
Total	8.00	47.80						909.53	127.53	5,965.19
<i>Division of the Missouri.</i>										
Fort Sheridan, Ill.....										45,015.85
<i>Department of the Missouri.</i>										
Headquarters and depot, Fort Leaven- worth, Kans.....	80.66							\$1.70	2,410.94	
Denver, Colo.....	289.96								717.40	2,279.48
Fort Riley, Kans.....										1,478.00
Fort Reno, Ind. T.....									16.50	1,419.48
Total	370.62							1.70	3,144.84	5,176.96

<i>Department of the Platte.</i>									
Headquarters and depot, Omaha, Nebr.								67.10	700.00
Fort McKinney, Wyo.	5.50				\$23.83				
Fort Robinson, Nebr.					46.50				112.25
Total	5.50				70.33			67.10	812.25
<i>Department of Dakota.</i>									
Headquarters, St. Paul, Minn.	80.46	526.39				\$1.22	54.99	5,034.29	
Fort Custer, Mont.					68.00				
Fort Meade, S. Dak.								331.50	
Fort Sully, S. Dak.					24.74				
Fort Randall, S. Dak.					20.00				
Fort Yates, N. Dak.					52.00				3,315.97
Fort Maginnis, Mont.					91.75				
Total	80.46	526.39			256.49	1.22	54.99	5,365.79	3,315.97
<i>Department of Texas.</i>									
Headquarters and depot, San Antonio, Tex.	426.22				20.00	33.60	500.00	2,012.72	1,062.44
Fort Ringgold, Tex.					21.30			1,641.75	
In the field		3.50			45.85				
Total	426.22	3.50			87.15	33.60	500.00	3,654.47	1,062.44
<i>Department of California.</i>									
Headquarters and depot, San Francisco, Cal.			5	\$1,121.25		70.00	7.35		
Presidio of San Francisco, Cal.									123.50
Fort Gaston, Cal.								6.10	
Benicia Barracks, Cal.	118.25							769.39	
Total	118.25		5	1,111.25		70.00	7.35	775.49	123.50
<i>Department of Arizona.</i>									
Headquarters, Los Angeles, Cal.	376.88				25.70	178.83	15.00	247.22	140.00
Tucson, Ariz.					87.65				
Santa Fe, N. Mex.					13.45	11.50		27.59	
San Diego Barracks, Cal.							88.95		
Fort Wingate, N. Mex.									.45
Fort Bayard, N. Mex.								20.58	
Fort Stanton, N. Mex.								40.00	
Fort Bowie, Ariz.								270.00	
Total	376.88				126.80	190.33	103.95	605.39	140.45

C, SUPPLEMENTAL.—Statement showing in detail amounts expended from the various appropriations for the Quartermaster's Department, etc.—Continued.

Division and post.	TRANSPORTATION OF THE ARMY.									
	Means of transportation— wagons, carts, drays, ambulances, etc.		Draft horses and mules.		Stabling, watering, attending, etc., public animals.	Harness.		Water supply and sewerage.		
	For pur- chases (in- cluding vehi- cles and parts of vehicles).	For repairing (including services and miscellaneous purchases).	Number purchased.	Payments.		For pur- chasing and manufactur- ing harness and harness material.	For repairing.	For water rent and taxes.	For material purchased.	For con- structing and repairing and for dig- ging wells.
<i>Department of the Columbia.</i>										
Headquarters and depot, Vancouver Barracks, Wash	\$180.40	\$40.35			\$3.00			\$400.00	\$2,242.98	
Portland, Oregon					2.00				3,386.22	
Fort Walla Walla, Wash										\$175.00
Boise Barracks, Idaho										113.00
Fort Sherman, Idaho										325.00
Fort Spokane, Wash									1,303.20	974.80
Total	180.40	40.35			5.00			400.00	6,932.40	1,587.80
<i>Independent posts.</i>										
Atlanta, Ga.	23.40									640.00
Jefferson Barracks, Mo								1,834.00		
West Point, N. Y.	61.20									
Columbus Barracks, Ohio								130.67		
Villets Point, N. Y.										258.79
Total	84.60							1,964.67	898.79	
<i>General depots.</i>										
New York, N. Y.								22.34	110.40	
Washington, D. C.		66.00			2.00					
Jeffersonville, Ind	\$,707.92	195.60				\$34.79			75.11	
San Francisco, Cal								48.30		70.00
St. Louis, Mo.	314.78				9.00	68.75			760.36	
Total	5,022.70	261.60			11.00	103.54		70.64	945.87	70.00

C, SUPPLEMENTAL.—Statement showing in detail amounts expended from the various appropriations for the Quartermaster's Department, etc.—Continued.

Division and post.	TRANSPORTATION OF THE ARMY.								
	Wharves and bridges.		Roads, harbors, and rivers.	Tolls on turnpikes, ferries, and bridges.	Advertisements, publications, and printing.	For re-imbursments for traveling expenses and payments from private funds for public purposes.	Boxes, canvas, and other articles for packing and protecting freight.	Lumber, rope, and purchases of miscellaneous articles.	Total amounts.
	For constructing and repairing.	For rent of wharves and wharfage.	For constructing roads and for repairs and removal of obstructions.						
<i>Division of the Atlantic and Department of the East.</i>									
Headquarters, Governor's Island, N. Y. H.									\$624.95
Boston, Mass.									1,770.44
Baltimore, Md.									3,846.19
New Orleans, La.									3,104.87
Buffalo, N. Y.									379.44
Fort Monroe, Va.							\$52.80		3,061.34
Fort Barrancas, Fla.							176.40		176.40
Jackson Barracks, La.							40.00		130.50
St. Augustine, or St. Francis Barracks, Fla.							35.00		59.68
Mt. Vernon Barracks, Ala.									120.50
Little Rock Barracks, Ark.									81.00
Fort Trumbull, Conn.									28.80
Fort Hamilton, N. Y.		\$20.00							251.08
Fort Schuyler, N. Y.									91.50
Fort Wadsworth, N. Y.									1,050.00
Fort Wayne, Mich.									2,245.33
Fort Ontario, N. Y.									39.90
Fort Niagara, N. Y.									91.62
Fort McPherson, Ga.									31.70
Total		20.00						304.20	17,785.12
<i>Division of the Missouri.</i>									
Headquarters, Chicago, Ill.				\$0.50		\$29.88			7,815.85
Fort Sheridan, Ill.			\$21,179.40				400.00		66,595.25
Total			21,179.40	.50		29.88	400.00		74,411.10

QUARTERMASTER-GENERAL.

633

C, SUPPLEMENTAL.—Statement showing in detail amounts expended from the various appropriations for the Quartermaster's Department, etc.—Continued.

Division and post.	TRANSPORTATION OF THE ARMY.								
	Wharves and bridges.		Roads, harbors, and rivers.	Tolls on turnpikes, ferries, and bridges.	Advertisements, publications, and printing.	For re-imbursments for traveling expenses and payments from private funds for public purposes.	Boxes, canvas, and other articles for packing and protecting freight.	Lumber, rope, and purchases of miscellaneous articles.	Total amounts.
	For constructing and repairing.	For rent of wharves and wharfage.	For constructing roads and for repairs and removal of obstructions.						
<i>Department of Arizona—Continued.</i>									
Fort Verde, Ariz									\$193.85
Fort Mojave, Ariz									100.00
Total				\$78.94	\$749.87	\$59.25	\$104.00	\$307.87	23,926.23
<i>Department of the Columbia.</i>									
Headquarters and depot, Vancouver Barracks, Wash			\$273.48	115.00	13.65	14.00		1,175.06	5,375.21
Portland Oregon				35.00				3.00	14,685.73
Fort Walla Walla, Wash			461.44						636.44
Boise Barracks, Idaho									1,832.00
Fort Sherman, Idaho									325.00
Fort Klamath, Oregon						87.00		14.65	271.75
Fort Spokane, Wash									3,112.43
In the field				45.00					132.00
Total			734.92	195.00	13.65	51.00		1,192.71	25,270.56
<i>Independent posts.</i>									
Atlanta, Ga									676.40
Jefferson Barracks, Mo	\$3,950.00								5,784.00
West Point, N. Y.					38.00				384.62
Columbus Barracks, Ohio									1,441.84
Willetts Point, N. Y.								15.80	417.99
Total	3,950.00				33.00			15.80	8,704.85

General depots.										
New York, N. Y.		\$2,025.00				204.80	40.74		2,771.92	24,801.56
Philadelphia, Pa.						107.30	19.50	835.10		1,904.25
Washington, D. C.			180.00	10.00		387.11	51.55		43.96	25,712.06
Jeffersonville, Ind.						214.19			5.10	18,005.15
San Francisco, Cal.						1.50				3,558.42
St. Louis, Mo.						85.77			190.17	19,395.63
Military prison, Fort Leavenworth, Kans.										100.00
Total		2,025.00	180.00	10.00		950.67	111.79	835.10	3,011.15	93,477.07

RECAPITULATION.

Divisions, departments, independent posts, and general depots.	Regular supplies.	Incidental expenses.	Barracks and quarters.	Cavalry and artillery horses.	Hospitals.	Clothing and equipage.	Shooting galleries and ranges.	Quarters for hospital stewards.	Army transportation.	Total.
Division of the Atlantic and Department of the East	\$3,656.48	\$3,487.53	\$3,375.86		\$9,185.76	\$12.00	\$132.55	\$155.00	\$17,785.12	\$42,790.30
Division and Department of the Missouri.	76,541.88	3,426.50	22,226.78		1,384.75	25.00		468.58	112,889.42	216,962.91
Department of the Platte	8,240.78	764.98	2,472.66		462.57		11.50	1,235.00	8,835.50	22,022.99
Department of Dakota	8,669.52	4,648.21	22,509.71		464.04	38.80	460.73	45.70	52,564.64	89,401.35
Department of Texas	5,929.00	3,240.57	6,369.20		763.49		2.15		25,230.03	41,534.44
Division of the Pacific and Department of California.	3,995.98	2,978.56	3,171.88	\$1,756.10	1,319.00		50.00	48.00	11,924.29	24,343.81
Department of Arizona	48,073.09	7,387.67	15,827.75	6,987.92	1,758.42		286.32	1,167.74	23,926.23	105,415.14
Department of the Columbia	6,444.30	2,848.45	2,479.83		22.14			398.00	25,270.56	37,463.28
Independent posts	1,299.82	1,857.58	42,700.87		3,544.65				8,704.85	58,107.77
General depots	5,067.29	32,464.46	4,186.92	16,136.34	199.00	96,922.03	115.92		93,477.07	248,569.63
Total	172,018.14	63,104.51	125,321.46	24,880.36	19,104.42	96,997.83	1,059.17	3,518.02	380,607.71	886,611.62

QUARTERMASTER-GENERAL.

D.—Abstract of payments during the fiscal year 1890 on account of railroad and express companies.

[The following is an abstract of payments during the year on account of railroad and express companies for military transportation, out of the appropriation "Transportation of the Army," upon accounts settled by disbursing quartermasters stationed throughout the country as far as accounts have been received at this office.]

Name of railroad and express company.	Passenger.	Freight.
Adams Express Co		\$470.22
Allegheny Valley R. R.	\$4.04	
American Express Co		275.28
Arcata and Mad River	46.00	
Arms Palace Horse and Stock Car Co		1,390.50
Atchison, Topeka and Santa Fé R. R.	19,073.20	52,608.36
Atlanta and North Carolina R. R.	9.60	
Atlanta and West Point and Western Alabama Rwy	227.04	185.33
Atlantic and Pacific R. R.	7,381.81	25,343.08
Baltimore and Ohio R. R.	6,371.75	6,378.29
Baltimore and Potomac R. R.	46.79	5.33
Bennington and Rutland R. R.	10.52	
Boston and Albany R. R.	158.21	364.31
Boston and Maine R. R.	100.82	50.83
Bridgeton and Saco River R. R.	4.50	
Burlington, Cedar Rapids and Northern R. R.	297.71	
Burlington and Missouri River R. R.	173.60	1,047.12
Burton Stock Co		32.40
California Central R. R.	244.35	33.50
California Southern R. R.	599.45	2,922.35
Central Railroad and Banking Company of Georgia	525.16	455.57
Central Railroad of New Jersey	81.69	409.12
Central Vermont R. R.	38.56	8.62
Charleston and Savannah R. R.	4.40	
Cheraw and Darlington R. R.	2.60	
Chesapeake and Ohio R. R.	696.93	260.58
Chicago and Alton R. R.	872.14	333.20
Chicago and Atlantic R. R.	6.25	
Chicago, Burlington and Northern R. R.	806.91	947.33
Chicago, Burlington and Quincy R. R.	1,231.52	3,786.96
Chicago and Grand Trunk R. R.		1,109.20
Chicago, Milwaukee and St. Paul R. R.	26.92	2,533.05
Chicago and Northwestern R. R.	1,167.49	3,758.14
Chicago and Rock Island R. R.		5,450.98
Chicago, St. Louis and Pittsburgh R. R.	3,881.85	253.93
Chicago, St. Paul and Kansas City R. R.	21.30	
Chicago, St. Paul and Omaha R. R.	1,248.13	1,167.28
Cincinnati, Hamilton and Dayton R. R.	144.03	16.70
Cincinnati, New Orleans and Texas Pacific R. R.	111.21	30.73
Cincinnati, Sandusky and Cleveland R. R.	2,342.08	3.38
Cincinnati, Washington and Baltimore R. R.	22.06	
Cleveland, Cincinnati, Chicago and St. Louis R. R.	1,182.48	119.96
Columbus and Cincinnati Midland R. R.	1,433.73	12.30
Columbus, Hocking Valley and Toledo R. R.	2,599.13	20.06
Connecticut River R. R.	2.90	111.30
Cornwall and Lebanon R. R.	8.50	2.76
Cumberland Valley R. R.	11.39	
Delaware and Hudson Canal Co. R. R.	179.46	916.22
Delaware, Lackawanna and Western R. R.	4,321.79	108.35
Denver and Rio Grande Express Co		200.16
Denver and Rio Grande R. R.	8,221.16	16,168.68
Denver, Rio Grande and Western R. R.	871.05	631.16
Denver, Texas and Fort Worth R. R.	639.40	81.27
Denver, Utah and Pacific R. R.		291.23
Detroit, Lansing and Northern R. R.	40.50	19.57
Duluth, South Shore and Atlantic R. R.	79.63	428.85
East Tennessee, Virginia and Georgia R. R.	580.75	90.06
Elmira, Cortland and Northern R. R.	3.60	
Empire Line R. R.		414.20
Evansville and Terre Haute R. R.	39.15	6.12
Fitchburg R. R.	70.77	1,287.37
Florida Central and Peninsular R. R.	10.65	13.48
Fort Worth and Denver City R. R.	111.50	
Fremont, Elkhorn and Missouri Valley R. R.	10,681.76	10,214.03
Georgia Rwy	46.17	43.35
Grand Rapids and Indiana R. R.		51.63
Grand Trunk R. R.		57.62
Great Northern Rwy	1,109.24	2,712.35
Gulf, Colorado and Santa Fé R. R.	3,146.12	3,763.20
Hannibal and St. Joseph R. R.	6.81	2,368.08
Harrisburg and Potomac R. R.		5.62
Hot Springs R. R.	129.80	57.07
Houston, East and West Texas Rwy		59.33
Idaho Central R. R.	16.00	156.76
Illinois Central R. R.	697.98	1,149.72

D.—Abstract of payments during the fiscal year 1890, etc.—Continued.

Name of railroad and express company.	Passenger.	Freight.
Indianapolis and St. Louis R. R.	\$29.92	
International and Great Northern R. R.	3,268.58	\$2,983.55
Interstate Despatch R. R.		1,101.78
Jacksonville, St. Augustine and Halifax R. R.	31.23	182.38
Jacksonville and Southeastern R. R.		115.67
Kanawha and Ohio Rwy.		12.27
Kansas City, Fort Scott and Memphis R. R.	41.55	
Kansas City, Memphis and Birmingham R. R.	18.15	
Kansas City and Northwestern R. R.		21.36
Kansas City, St. Joe and Council Bluffs R. R.	237.74	759.71
Kansas City, Wyandotte and Northwestern		62.23
Knoxville, Cumberland Gap and Louisville.	4.90	
Lake Shore and Michigan Southern R. R.	5.00	473.18
Lehigh Valley R. R.	566.00	111.89
Louisville, Evansville and St. Louis R. R.	28.80	1.35
Louisville and Nashville R. R.	2,192.92	2,931.98
Louisville, New Albany and Chicago R. R.		1.80
Louisville, New Orleans and Texas	25.20	2.36
Long Island R. R.	7.45	97
Maine Central R. R.	28.15	52.76
Mallory, C. H. & Co., R. R.	134.50	793.64
Maricopa and Phoenix R. R.	215.00	561.67
Memphis and Charleston R. R.	127.58	22.48
Mexican National R. R.	220.70	826.37
Mexican National Express		9.37
Michigan Central R. R.	989.33	173.21
Minneapolis and St. Louis R. R.	33.33	73.09
Minneapolis, St. Paul and Sault Ste Marie R. R.		107.35
Missouri, Kansas and Texas R. R.	2,998.36	311.00
Missouri Pacific R. R.	6,218.09	2,643.27
Mobile and Birmingham R. R.	198.96	2,755.60
Mobile and Ohio R. R.	828.34	398.74
Monaghan & Murphy Push-Car Line		573.41
Montana Central R. R.	316.22	82.56
Montana Union R. R.	77.40	411.69
Morris County R. R.		33.00
Morris' European and American Express.		18.25
Nashville, Chattanooga and St. Louis R. R.	77.50	107.65
Natchez, Jackson and Columbus R. R.	13.65	
National Express Co.		10.10
Nevada and California R. R.	325.00	698.84
New London and Northern R. R.		23.17
New Mexico and Arizona R. R.	293.20	2,124.63
New Orleans and Northeastern R. R.	27.31	
New Orleans and Gulf R. R.	12.00	182.93
Newport News and Mississippi R. R.	13.60	
Newport and Wickford R. R.	152.72	37.90
New York Central and Hudson River R. R.	2,486.24	1,899.56
New York, Chicago and St. Louis R. R.	1,269.10	115.32
New York, Lake Erie and Western R. R.	7,111.64	119.94
New York and New England R. R.	73.73	235.38
New York, New Haven and Hartford R. R.	150.11	292.74
New York, Ontario and Western R. R.	110.13	43.22
New York, Philadelphia and Norfolk R. R.	172.00	29.81
New York, Providence and Boston R. R.	263.89	30.82
Northern Central Rwy.	52.04	37.69
Northern Pacific Express Co.		506.13
Northern Pacific R. R.	25,786.97	42,669.92
New York and Northern R. R.		78.00
North Eastern R. R.		16.50
Ohio, Indiana and Western Rwy.		59.44
Ohio and Mississippi R. R.	1,885.67	5,867.39
Ohio and North Western R. R.	4.30	
Old Colony R. R.	47.00	240.33
Oregon Rwy. and Navigation Co.	5,691.69	8,075.91
Oregon and Washington Territory R. R.	141.20	179.35
Pacific Express Co.		292.96
Pennsylvania Co.	230.46	319.34
Pennsylvania R. R.	2,851.79	4,206.46
Petersburg R. R.	7.95	6.70
Philadelphia and Reading R. R.	16.00	425.41
Pittsburgh, Cincinnati and St. Louis Rwy.	1,187.28	21.79
Portland and Rochester R. R.		5.86
Portland and Vancouver R. R.	115.25	
Prescott and Arizona Central Rwy.	919.90	3,742.70
Pullman Palace Car Co.	3,985.00	
Philadelphia, Wilmington and Baltimore R. R.		1.78
Richmond and Danville R. R.	181.21	12.25
Richmond, Fredericksburg and Potomac R. R.	3.50	6.39
Richmond and Petersburg R. R.	24.15	50

D.—Abstract of payments during the fiscal year 1890, etc.—Continued.

Name of railroad and express company.	Passenger.	Freight.
Rio Grande R. R.	\$1,711.52	\$1,696.36
Rio Grande Western Rwy.	232.70	4,912.88
Rock Island and Peoria Rwy.	.....	46.41
Rome, Watertown and Ogdensburg R. R.	379.17	720.00
San Antonio and Aransas Pass Ry.	1,085.41	404.55
San Diego, Old Town and Pacific Branch R. R.	.....	11.20
St. Louis, Keokuk and North Western R. R.	1,588.35	296.42
St. Louis and San Francisco Rwy.	1,271.90	2,220.74
St. Paul and Duluth R. R.	1.96	.....
St. Paul, Minneapolis and Manitoba Rwy.	15,253.18	16,859.98
Santa Fé Southern Rwy.	32.50	138.62
Savannah, Florida and Western Rwy.	30.30	4.17
Scioto Valley Rwy.	960.30	.....
Seattle, Lake Shore and Eastern Rwy.	7.25	31.50
Shenandoah Valley R. R.	.....	7.79
Silverton R. R.	2.00	.....
Southern Pacific Co. (Atlantic System).	6,449.31	27,608.61
Southern Express Co.	.....	40.92
Star Union Line.	.....	2,896.32
Staten Island Rapid Transit R. R.	7.30	.....
South Carolina R. R.	.....	4.31
Texas and Pacific Rwy.	1,218.69	385.17
Utah Central Rwy.	321.75	295.83
United States Express Co.	.....	70.29
Vandalia Line R. R.	570.27	4,454.08
Vermont Valley R. R.	.....	4.99
Virginia and Truckee R. R.	2.50	.....
Wabash R. R.	2,940.09	726.64
Wabash, Chester and Western R. R.	166.35	4.12
Wagner Palace Car Co.	272.50	.....
Wells, Fargo & Co. Express Co.	.....	3,508.28
West Shore R. R. (N. Y. Central, lessee).	3,233.28	1,784.22
Western and Atlantic R. R.	39.00	567.17
Western Maryland R. R.	3.35	.....
Wilmington, Columbia and Augusta R. R.	.....	35.47
Wilmington Sea-Coast R. R.	12.66	.....
Wilmington and Weldon R. R.	49.15	8.31
Wisconsin Central R. R.	2,629.60	.....
Total	198,259.37	814,435.68

D, SUPPLEMENTAL.—Railroad transportation for 1888 and 1889.

Name of railroad and express company.	Passenger.	Freight.	Total.
Adams Express Co.	.....	\$123.66	\$123.66
Allegheny Valley R. R.	.....	4.65	4.65
American Express Co.	.....	117.65	117.65
Arcata and Mad River R. R.	\$27.50	.....	27.50
Arms Palace Horse and Stock Car Co.	.....	256.50	256.50
Atchison, Topeka and Santa Fé R. R.	787.01	.....	787.01
Atlanta and West Point R. R.	63.00	37.90	100.90
Atlanta and West Point R. R. and Western Railway of Alabama.	.....	217.62	217.62
Atlantic and Pacific R. R.	3,835.07	10,276.26	14,111.33
Baltimore and Ohio R. R.	3,255.46	1,864.51	5,119.97
Baltimore and Potomac R. R.	.....	13.19	13.19
Boston and Albany R. R.	.....	5.42	5.42
Burlington and Missouri River R. R.	66.25	165.11	231.36
Boston and Maine R. R.	31.70	.....	31.70
Cairo, Vincennes and Chicago R. R.	4.75	.....	4.75
California Southern R. R.	260.05	865.74	1,125.79
Central Railroad of New Jersey.	13.00	76.63	89.63
Central Railroad and Banking Co. of Georgia.	30.00	97.55	127.55
Central Vermont R. R.	2.45	.....	2.45
Cincinnati, Hamilton and Dayton R. R.	.....	.64	.64
Cincinnati, Indianapolis, St. Louis and Chicago R. R.	10.20	19.53	29.73
Cincinnati, Washington and Baltimore R. R.	49.40	1.08	50.48
Chesapeake and Ohio R. R.	94.80	148.70	243.50
Chicago and Alton R. R.	574.94	.....	574.94
Chicago, Burlington and Quincy R. R.	1,178.02	1,304.70	2,482.72
Chicago and Grand Trunk R. R.	.....	409.14	409.14
Chicago, Milwaukee and St. Paul R. R.	38.80	3,353.56	3,392.36
Chicago and Northwestern R. R.	168.54	2,055.57	2,224.11
Chicago, Rock Island and Pacific R. R.	.....	14.43	14.43
Chicago, St. Paul and Kansas City R. R.	12.25	173.25	185.50

QUARTERMASTER-GENERAL.

641

D, SUPPLEMENTAL.—Railroad transportation for 1888 and 1889—Continued.

Name of railroad and express company.	Passenger.	Freight.	Total.
Chicago, St. Paul, Minnesota and Omaha R. R		\$651.84	\$651.84
Chicago, St. Louis and Pittsburg R. R	\$1,309.82	59.33	1,369.15
Chicago, Burlington and Northern R. R	39.33	1,168.36	1,207.69
Cleveland, Cincinnati, Chicago and St. Louis R. R	6.60	8.00	14.60
Cleveland, Columbus, Cincinnati and Indianapolis R. R	53.18	.76	53.94
Columbus and Cincinnati Midland R. R	733.82		733.82
Columbus, Hocking Valley and Toledo R. R	243.35		243.35
Connecticut River R. R		1.64	1.64
Delaware and Hudson Canal Co. R. R	53.48	222.52	276.00
Delaware, Lackawanna and Western R. R	2,233.95	245.80	2,479.75
Denver and Rio Grande Express Co		47.13	47.13
Denver and Rio Grande R. R	676.60	5,707.75	6,384.35
Denver, Rio Grande and Western R. R	435.70	1,793.05	1,228.75
Detroit, Grand Haven and Milwaukee R. R	5.40	1.29	6.69
Detroit, Lansing and Northern R. R	4.70		4.70
Duluth, South Shore and Atlantic R. R	2.85	11.34	14.19
East Tennessee, Virginia and Georgia R. R		6.03	6.03
Empire Line R. R		213.88	213.88
Evansville and Terre Haute R. R		9.78	9.78
Florida Central and Peninsula R. R	10.44	59.83	70.27
Fremont, Elkhorn and Missouri Valley R. R	1,754.58	10,564.96	12,319.54
Georgia Rwy.	5.13	32.87	38.00
Gettysburg and Harrisburg R. R		.26	.26
Grand Rapids and Indiana R. R		36.46	36.46
Grand Trunk R. R		8.55	8.55
Grand Trunk of Canada Rwy		15.55	15.55
Gulf, Colorado and Santa F6 R. R	570.16	2,396.30	2,966.46
Hannibal and St. Joe R. R	25.29	90.70	115.99
Hot Springs R. R	42.90	2.54	45.44
Houston and Texas Central R. R		11.87	11.87
Idaho Central R. R	14.00	83.65	97.65
Illinois Central R. R	3.68	1,024.79	1,028.47
Indianapolis and St. Louis R. R	27.90	6.96	34.86
International and Great Northern R. R	2,712.58	2,651.58	5,364.16
Interstate Despatch R. R		1,623.04	1,623.04
Jacksonville, St. Augustine and Halifax R. R	49.50	89.33	138.83
Jacksonville, Tampa and Key West R. R	1.50	134.77	136.27
Kansas City, St. Joseph and Council Bluffs R. R	692.91	92.85	785.76
Kansas City, Fort Scott and Memphis R. R	57.80		57.80
Kelly's Express Co		1.86	1.86
Lake Shore and Michigan Southern R. R	404.44	266.85	670.79
Lehigh Valley R. R	224.55	1.45	226.00
Long Island Express Co		4.10	4.10
Louisville and Nashville R. R	3,124.48	2,769.71	5,894.19
Louisville, New Orleans and Texas R. R		50.00	50.00
Long Island R. R	1.00		1.00
Mallory & Co. R. R		373.11	373.11
Maricopa and Phenix R. R	10.50	35.94	46.44
Memphis and Charleston R. R	.73	924.51	925.24
Mexican National R. R	94.35	454.59	548.94
Mexican National Express Co		6.25	6.25
Michigan Central R. R	29.52	22.64	52.16
Minneapolis, St. Paul and Sault Ste. Marie R. R	45.55		45.55
Minneapolis and St. Louis R. R	746.87	594.69	1,341.56
Missouri, Kansas and Texas R. R	447.17	1,034.40	1,481.57
Missouri Pacific R. R	2,938.26	2,001.25	4,939.51
Mobile and Birmingham R. R	12.75	753.11	765.86
Mobile and Ohio R. R	11.92	419.57	431.49
Monahan & Murphy Push Car Line		14.68	14.68
Montana Central R. R	28.65	52.35	81.00
Montana Union R. R	49.00	111.66	160.66
Nashville, Chattanooga and St. Louis R. R	31.04	83.18	114.22
Nevada and California R. R	9.75		9.75
New Orleans and Northeastern R. R		6.31	6.31
New Orleans and Texas Pacific R. R		6.52	6.52
New Mexico and Arizona R. R	277.75		277.75
New York, Chicago and St. Louis R. R		220.27	220.27
New York Central and Hudson River R. R	386.85	1,091.87	1,478.22
New York, Lake Erie and Western R. R	225.68	28.48	254.16
New York and New England R. R		4.08	4.08
New York, New Haven and Hartford R. R	24.45	93.66	118.11
New York, Ontario and Western R. R	21.00	14.06	35.06
New York, Philadelphia and Norfolk R. R	8.50		8.50
New York, Providence and Boston R. R	11.18	183.78	194.96
Northern Pacific Express Co		346.39	346.39
Northern Pacific R. R	36.68	6,958.95	6,995.63
New London and Northern R. R		8.45	8.45
Ohio and Mississippi R. R	50.86	1,622.95	1,673.81
Old Colony and Fall River R. R	6.00		6.00
Oregon Rwy. and Navigation Co	8,936.53		8,936.53

D, SUPPLEMENTAL.—*Railroad transportation for 1888 and 1889—Continued.*

Name of railroad and express company.	Passenger.	Freight.	Total.
Oregon and Washington Territory R. R.	\$95.25		\$95.25
Pacific Express Co.		\$56.87	56.87
Pennsylvania Co.	122.47	40.14	162.61
Pennsylvania R. R.	236.99	946.16	1,183.15
Philadelphia and Reading R. R.		31.12	31.12
Pierre and Fort Bennett Stage Express		.49	.49
Pittsburg, Cincinnati and St. Louis R. R.	27.75	6.77	34.52
Portland and Rochester R. R.		36.04	36.04
Portland and Vancouver R. R.	1.00		1.00
Prescott and Arizona R. R.	330.00	814.88	1,144.88
Pullman Palace Car Co.	1,068.10		1,068.10
Queen and Crescent Route	21.66		21.66
Richmond and Danville R. R.	226.48	11.28	237.76
Rio Grande R. R.	19.56	108.45	128.01
Rome, Watertown and Ogdensburg R. R.	97.31	1,035.74	1,133.05
San Antonio and Aransas Pass R. R.	8.30	312.69	320.99
San Diego, Old Town and Pacific Beach R. R.		2.08	2.08
Savannah, Florida and Western R. R.		28.07	28.07
South Carolina R. R.		2.80	2.80
Southern Pacific (Atlantic System)	1,798.32	9,470.93	11,269.25
Star Union Line R. R.		688.80	688.80
St. Louis, Arkansas and Texas R. R.	6.45		6.45
St. Louis and Keokuk R. R.	539.00		539.00
St. Louis and San Francisco R. R.	381.10	556.91	938.01
St. Louis, St. Paul and Minn. R. R.		16.26	16.26
St. Paul, Minneapolis and Manitoba R. R.	2,895.50	18,134.77	21,030.27
Texas and Pacific R. R.	253.44	490.90	744.33
Utah Central R. R.	28.50	74.62	103.12
United States Express Co.		6.85	6.85
Vandalia Line R. R.	79.55	1,066.21	1,145.76
Wabash Rwy.	107.70	485.86	593.56
Wabash Western R. R.	701.50	133.53	835.03
Wagner Palace Car Co.	185.50		185.50
Wells Fargo Express Co.		720.67	720.67
West ern and Atlantic R. R.	27.20	690.08	717.28
West Shore (New York Central and Hudson River R. R., lessee)	825.40	344.46	1,169.86
Western New York and Pennsylvania R. R.		18.13	18.13
Wilmington and Weldon R. R.	8.95		8.95
Wisconsin Central R. R.	99.55		99.55
Total	50,657.88	106,568.67	157,226.55

E.—*Abstract of payments during fiscal year 1890 an account of water transportation.*

[The following is an abstract of payments during the year on account of water transportation, out of the appropriation "Transportation of the Army," upon accounts settled by disbursing quartermasters stationed throughout the country, so far as accounts have been received in this office.]

Name of company, vessel, or individual.	Passenger.	Freight.
Abbott, Charles & Co.		\$35.00
Arnold's Line	\$0.75	
Baltimore Steam Packet Co.	469.40	479.08
Barge Stella		50.00
Baker, I. P.		459.48
Central Vermont Railroad and Steamboat Co.		51.77
Chapman Derrick and Wrecking Co.		715.00
Citizens' Steamboat Line	19.00	337.81
Clyde, W. P. & Co.	50.00	194.09
Connolly, John		35.00
Contee, E.		45.00
Cromwell Line	35.00	90.27
Delta Transportation Co.	14.00	25.80
Detroit and Cleveland Navigation Co.	6.75	222.33
Diamond Jo Line		399.74
De Puy, H. S.		114.19
Fisher Island Steamboat Company	3.50	
Fogarty & Johnson		600.00
Harvey, S. M.		33.00
Herman, E. E.	24.00	
Inland and Seaboard Co.	53.75	63.10
James, H. C.		216.00
Johnson, F. P.		53.90
Kennebec Steamboat Co.	2.00	36.11
Lake Michigan and Lake Superior Transportation Co.		291.24

E.—Abstract of payments during fiscal year 1890 an account of water transportation—Cont'd.

Name of company, vessel, or individual.	Passenger.	Freight.
Lake Superior Transportation Co		\$209.65
Loomis, L. A		3,022.61
Mackinac Transportation Co	\$72.00	24.32
Maine Steamship Co		47.35
Mallory, C.H., & Co	231.00	311.66
Merchants and Miners' Transportation Co		573.23
Metropolis Steamship Co		9.56
Metropolitan Steamship Co		68.00
Moulton, Alfred		12.07
Murray & Birge	50.00	1,191.23
New England and Savannah Steamship Co		65.01
New Haven Steamboat Co		55.36
Newport and Wickford Railroad and Steamboat Co	97.78	69.77
New York and Baltimore Transportation Line		86.06
New York Lighterage Transportation Co		175.00
Norddeutscher, Lloyd and Allen Line steamships		6.02
Norwich and New London Transportation Co		5.15
Norwich, New London, and Watch Hill Steamboat Co	50.00	
Norwich and New York Transportation Co	1,012.55	140.06
Ocean Steamship Co. of Savannah	73.60	1,216.70
Occidental and Oriental Steamship Co		3.00
Old Colony Steamboat Co	660.00	961.22
Old Dominion Steamship Co	504.00	436.13
Oregon Railway and Navigation Co		1,033.70
Philadelphia Transportation and Lighterage Co		115.00
Pacific Coast Steamship Co	342.00	400.33
People's Line Steamers		8.04
Polhamme & Mellon		289.23
Portland Steam Packet Co		22.06
Potomac Steamboat Co	554.75	102.59
Providence Line of Steamers		.75
Providence and Stonington	5.25	3.13
Puget Sound and Alaska Steamship Co	2.50	
Richmond and York River Line		6.34
Rohnwich, John		275.00
Sail Boat Paul Breon	3.00	858.87
St. Louis Anchor Line		1.86
St. Louis and New Orleans Anchor Line		147.50
St. Louis and St. Paul Packet Co		26.83
Scanlon, J. J.		300.00
Schooner A. H. Quimby		375.00
Schooner Harriet		21.08
Schooner Louisa Jane		515.00
Schooner Magnolia		38.86
Slaight & Bailey		100.00
Sloop Enterprise	2.00	54.00
Sloop Hattie	6.00	
Steamer Alvin		160.29
Steamer Andes		10.63
Steamer Bessie	426.00	481.81
Steamer Chas. West		49.39
Steamer Ella		173.01
Steamer Florence	9.00	18.64
Steamer Garland		1.00
Steamer Golden Rule		.90
Steamer Helena	50.00	
Steamer Hudson		11.00
Steamer Humboldt	146.00	564.61
Steamer J. E. Trudeau		13.37
Steamer Jesse K. Bell		3.31
Steamer M. Hoes		17.87
Steamer M. A. White		25.00
Steamer Morley	6.25	
Steamer Ontario	75.00	
Steamer Owen	173.00	
Steamer Scotia		11.40
Steamer T. S. Baxton	.50	13.99
Steamer Telephone	12.00	
Steamer Theresa		320.94
Steamer Thos. Shirlock		1.90
Steamer Traveler		6.56
Steamer W. P. Schenck		5.85
Steamer W. W. Corcoran		.50
Tacoma, Ellensburg, and Conconny Rail and Navigation Co	10.00	142.60
Talbot, Chas		169.43
Tug Skip Jack		10.00
Vancouver Transportation Co	15.00	217.91
Woolsey, D. C		.50
Total	5,042.33	20,364.05

E, SUPPLEMENTAL.—Water transportation for 1888-'89.

Name of contractor, vessel, or individual.	Passenger.	Freight.	Total.
Baltimore Steam Packet Co.....	\$8.95	\$80.40	\$89.35
Cantor, Apolonio.....	45.00	.....	45.00
Central Vermont Railroad and Steamboat Co.....	.....	87.58	87.58
Chapman Derrick and Wrecking Co.....	.....	150.00	150.00
Clyde, W. P. & Co.....	.....	338.92	338.92
Detroit and Cleveland Steam Navigation Co.....	.50	.....	.50
Diamond Joe Line.....	.....	303.42	303.42
Fogarty & Johnson.....	20.00	50.00	70.00
Harvey, S. M.....	.....	3.00	3.00
Homer Ramsdell Transportation Co.....	.....	22.80	22.80
Inland and Seaboard Coasting Co.....	.....	30.02	40.02
Kelley, William.....	10.00	160.00	170.00
Lake Superior Transit Co.....	256.17	.....	256.17
Loumas, L. A.....	6.00	15.61	21.61
Mackinac Transportation Co.....	.....	.25	.25
Maine Steamship Co.....	.50	7.01	7.51
Mallory, C. H.....	.....	15.51	15.51
New England and Savannah Steamship Co.....	11.50	842.30	853.80
New Haven Steamboat Co.....	.....	4,408.19	4,408.19
New York and Baltimore Transportation Line.....	.....	35.53	35.53
New York, Catskill, and Athens Steamboat Co.....	.....	12.12	12.12
Norwich and New York Transportation Co.....	.....	77.66	77.66
Ocean Steamship Company of Savannah.....	71.80	39.49	111.29
Old Colony Steamboat Co.....	988.85	468.38	1,457.23
Old Dominion Steamship Co.....	1,044.00	987.38	2,031.38
Oregon Railway and Transportation Co.....	347.00	271.07	618.07
Pacific Coast Steamship Co.....	112.89	12.22	125.11
People's Line of Steamers.....	247.50	197.25	444.75
Polhamus & Miller.....	.....	.50	.50
Portland Steam Packet Co.....	3.00	288.75	291.75
Potomac Steamboat Co.....	.....	55.15	55.15
Providence and Stonington Steamship Co.....	155.25	1.75	157.00
Rohnwick, John.....	4.00	.50	4.50
Sail Boat Paul Breon.....	.....	25.00	25.00
Schooner Theresa.....	5.00	489.56	494.56
Smith, W. H.....	.....	23.47	23.47
Steamer Howard.....	.....	5.00	5.00
Steamer Humboldt.....	.....	259.75	259.75
Steamer Owen.....	10.00	273.50	283.50
Steamer Telephone.....	39.50	.....	39.50
Steamer T. S. Faxton.....	2.00	.....	2.00
Steamer Willie C.....	.....	11.20	11.20
St. Louis, St. Paul, and Minnesota Packet Co.....	1.00	.....	1.00
Vancouver Transportation Co.....	.....	1.99	1.99
Total.....	15.13	8.80	23.93
Total.....	3,405.64	9,839.63	13,245.27

F.—Abstract of payments during fiscal year 1890 on account of wagon transportation.

[The following is an abstract of payments during the year on account of wagon transportation out of the appropriation "Transportation of the Army," upon accounts settled by disbursing quartermasters stationed throughout the country, so far as accounts have been received in this office.]

Contractors, transportation lines, and individuals.	Amount.	Contractors, transportation lines, and individuals.	Amount.
Ahern, James.....	\$3.76	Chapman & Lord.....	\$4,136.16
Ahern, Thomas.....	630.96	Chownes, H. W.....	314.92
Airth & Commas.....	205.00	Clark, William.....	6.40
Aitchison, Robert.....	190.00	Clute, E. R.....	4,852.47
Arkansas City Transfer Co.....	60	Combs, L.....	1,922.02
Arrington T. J.....	1,844.06	Connolly, John.....	571.08
Barmore, E. H.....	1,062.23	Conry, T. J.....	1,487.20
Barnett, J. P.....	6.00	Corbett, C. W.....	555.00
Beckman, J. W.....	82.25	Cornell, James.....	1,865.93
Bender, J. A.....	118.00	Cox, Emmet.....	472.00
Bernes, Thomas.....	1,043.24	Crawford, W. J.....	1,051.05
Bingham, Alonzo.....	1,365.52	Cutler, E. A.....	11,383.70
Bond, George.....	71.52	Durando, C.....	1.35
Booth, Harry.....	1,219.22	Dalton, Alfred.....	24.00
Bradstone, Thomas.....	171.00	Dalton, William.....	2,176.25
Brown, Johnson B.....	25.97	Davis, E. J.....	6.00
Burgy, W. F.....	807.23	Davis, J. C.....	3,254.39
Carpenter, Henry A.....	1,414.95	Denver Transit & Warehouse Co.....	149.00
Carr, W. H.....	735.46	Du Bois Brothers.....	53.03
Carroll, John.....	224.85	Eaken, E. C.....	1,362.34

F.—Abstract of payments during fiscal year 1890, etc.—Continued.

Contractors, transportation lines, and individuals.	Amount.	Contractors, transportation lines, and individuals.	Amount.
Earl, D. W.	\$2,625.84	Mullen, E. J.	\$49.42
Easton, J. M.	17,684.94	Mullen, P.	1,087.60
Edwards, Dennis	112.50	Nelson, C. P.	330.00
Fitzgerald, Ambrose	892.29	Nerton, George	180.00
Fletcher, A. W.	30.74	Newhall, J. T.	297.91
Florine, O. N.	9.80	O'Brien, M. J.	2,309.77
Frigate & Martin	3,729.16	O'Donnell, James	4.04
Frognitz, Charles	155.35	Oliver, William	30.00
Fulton, John	441.54	Oregon Trans. Co.	2,493.62
Gifford, Abram	272.50	Osterhout, T. B.	498.15
Gilson, W. L. & W. E. Marton	4,361.10	Overacker, D. W.	12.00
Goldman, Leo	1,275.55	Palmer, W. H.	2,240.00
Gorman, M.	174.00	Perry, A. T.	120.00
Gray & Wilkinson	11.50	Peters, R. W. F.	9.83
Green, Lewis A.	372.65	Popper, Max	2,694.23
Hall, A. M.	26.00	Rainsbury Robert	178.39
Hammes, John	5,516.58	Rakestraw, Lucius	65.72
Harriman, G. W.	1,356.55	Ray, E.	1.92
Hart, Robert	23.65	Reinhard, G. F.	1.50
Hastings, L. B.	399.27	Rhelmer, A. J.	1,375.27
Hensiler, F. F.	2,570.57	Rennie, James	7,175.87
Hight, George	1,669.08	Roberts, J. W.	9.00
Hilton, A. H.	10,899.08	Rocheblave, R.	96.00
Hodson & Smith	8.00	Rogers, A. F.	210.27
Howard, W. L.	230.01	Ruckles, James	1,157.36
Hudson, William	112.08	Scully, Thomas	3.50
Hulet, J. R.	19,133.33	Saltmarsh, George	77.50
Hunton, John	4,412.08	Samanilgo, M. G.	757.06
Hunter, Thomas	236.72	Schmidt, Charles	4.26
Huppuch, George J.	480.00	Sender, Joseph	903.22
Hutley, John	187.54	Sheppard, L. B.	4,285.42
Johnson, C. J.	60.11	Sherwood, H.	26.84
Kahn, J.	2,458.56	Showalter, T. J.	86.70
Kenney, James	151.59	Singleton, John	150.00
Kiser, M. C.	64.80	Slack, J. R., & D. W. Thorne	2,734.34
Kugelman, David	228.53	Smith, B. F.	12.00
Kay & Springer	600.85	Smithson, J. D.	707.28
Lambert Brothers	6.75	Sparks, P. E.	2,285.27
Lambert, W. H.	50.00	Spear, B. H. & Co	132.50
Lee, William, & Richardson	526.90	Spencer, A. W.	84.67
Libby, T. & Co.	440.15	Springman, Samuel	1,513.32
Lister, James	3,757.87	Stanton, Daniel	7.50
Little, Robert	4.50	Stanton, F. J.	1,020.00
McCormick, Paul	134.31	Stephinson, James	1,894.35
McDowell, G. H. & C. H. Thompson	1,181.25	Stewart, A., Jr	370.00
McGranahan, W. L.	464.00	Stoae, J. K.	6,420.73
McLennan, E.	50.27	Stout, W. H.	7.36
McMurtry Teaming & Transfer Co.	1,658.66	Sullivan, Michael	75.00
Mahone, Ike	4.00	Thatcher, J. M.	913.90
Marlow, T. A.	1,387.70	Vanleer, J. M.	237.10
Marquett, John	125.65	Wade, James N.	71.20
Marrlott, A. D.	197.75	Watkins, J. H.	6.50
Martin, T. L.	181.74	Watson & King	582.80
Masterson, J. J.	3,911.77	Wendel, Jacob	4.00
Mattison, Charles L.	15.55	Whitney, F. S.	7,801.75
Mix, J. E.	3,189.54	Wickersham, D. W.	1,393.84
Moran, P.	243.00	Wilson, M. J.	2.65
Morton, Robert	2.50	Woodbury, E. D.	275.69
Morton Dray & Warehouse Co	35.00		
Moxham, Frank	146.00		
		Total	204,975.57

F, SUPPLEMENTAL.—*Wagon transportation for 1888-'89.*

Contractors, transportation lines, and individuals.	Amount.	Contractors, transportation lines, and individuals.	Amount.
Ahearn, Thomas	\$17.75	McCormick, Paul	\$497.88
Anderson & Burbage	3,150.41	McLaughlin, W. F.	465.10
Arrington, T. J.	76.73	McManus, P. W.	224.79
Bair, Thomas	877.23	Mix, J. E.	1,280.41
Bann, A.	51.31	Monaghan, J.	468.21
Barnum, E. H.	180.85	Monahan & Murphy	95.53
Bickford, H. L.	396.24	Moulder, W. P.	65.00
Burnett, J. H.	80.30	Mullen, P.	57.00
Bogard, D. L.	78.60	Neff & Stephens	94.52
Benson, Young & Co.	3.30	Nelson, C. P.	228.00
Carr, W. H.	105.14	Norton, J. H.	3,163.98
Chisholm & Deeds	115.67	O'Connell, M.	344.14
Clute, E. R.	179.06	O'Kane, John	20.13
Coleman, J.	370.99	Oliver, A. G.	927.87
Coury, T. J.	48.60	Olsen, L. M.	11.97
Dalton, William	171.64	Oregon Transportation Company	199.00
Dickerson, W. W.	206.64	Popper, Max	531.84
Du Bois Bros.	42.98	Rankin, C. E.	362.35
Earl, D. W.	1,249.95	Reinhart, E.	983.56
Edwards, Dennis	6.50	Reinken, H. D.	10.03
Fitzgerald, A.	21.83	Rennie, James	411.29
Fogarty, A.	23.17	Ryan, Timothy	189.38
Fry, J. S.	58.07	Romiller, A. E.	959.38
Hammes, John	841.45	Samaniego, M. G.	64.67
Hunter, John	302.98	Sanborn & Merchant	4.00
Hunton, John	91.14	Schuhagan, L.	163.91
Jones & Taylor	497.28	Shephard, L. B.	781.27
Kahn, Jacob	595.46	Snow, H. M.	1.68
Kelly, William	9.34	Shirlock, J. H.	1.75
Kirvin, James	1,181.35	Springman, S.	126.65
Lavender, A.	351.97	Thacher, J. M.	63.87
Libby, T., & Co.	139.70	Wilson, W. E.	2.50
Le Claire, Peter	136.72		
Linder & Glenn	686.35		
Marlow, F. A.	1,709.63	Total	26,862.49

G.—*Abstract of payments during fiscal year 1890 on account of stage transportation.*

[The following is an abstract of payments during the year on account of stage transportation out of the appropriation "transportation of the Army," upon accounts settled by disbursing quartermasters stationed throughout the country, so far as accounts have been received in this office.]

Company or individual.	Amount.	Company or individual.	Amount.
Allard, Charles	24.00	Hurlburt, Charles	7.50
Arizona Stage Line	128.24	Lakeview and Linkville	10.00
Bair, Thomas	2,051.51	Lewistown and Youngstown	3.50
Baltimore Transfer Company	52.00	Linkville and Fort Klauath	106.00
Bowie and Fort Thomas Stage Line	56.00	Love, S. R.	136.00
Bowie Station and Fort Bowie	76.00	McGrew, J. D.	33.00
Bowie Station and Fort Thomas	646.43	McLaughlin, W. L.	.50
Bragaw Line	30.00	Mandan, Standing Rock and Fort Yates	180.00
Brown, James B.	489.90	Marquette, John	4.00
Brown & Kinder	235.00	Marshall, E. T.	3.00
Breckenridge, G. E.	13.50	Monahan, P. F.	172.00
Caffey & Hunter	7.00	Montana Stage Company	393.50
Clark & King Stage Line	4.00	National Park Trans. Co.	23.00
Dolch, F.	3.00	Nevada Stage Line	9.00
Douglas, H. T.	49.50	Niobrara Stage and Trans. Co.	54.00
Ellinsburgh and Rock Island Stage	5.00	Northwestern Stage Company	1,021.25
El Reno Stage and Express Co.	52.50	Norton, J. H., Stage Line	904.50
Evans, R. A., & Co.	4.25	Ozanne & Co. Line	616.32
Flake, C. L.	422.65	Pease, A. H.	156.50
Folsom, M. B.	8.50	Pierre, Fort Bennett and Fort Sully	22.50
Fort Spokane and Davenport	113.50	Price, Fort Duchesne and Vernal Stage Line	743.75
George, D. M., Stage Company	6.00	Ray, E.	644.16
Givens' Stage and Express Company	15.00	Reno and Bidwell Stage Company	590.00
Great Falls and Choteau Stage	13.00	Rice and Quinette Stage Line	595.80
Gremminger, J. C.	67.25	Roberts, Joe S.	10.00
Guthrie, A. S.	6.00	Rossum, Rudolph	5.00
Hildebrand, E. J., Stage Company	12.50	Roach & Mahon	94.00
Holbrook & Apache	7.50	Rivers & Gillette	11.00
Howard, M.	3.00		
Hunsaker, A.	45.00		

G.—Abstract of payments during fiscal year 1890, etc.—Continued.

Company or individual.	Amount.	Company or individual.	Amount.
Seattle and Easton Const. Co	\$2.25	Todd, H. A	\$7.00
Shall & Hunt	185.00	Ulm, W. M	10.00
Shurtleff, L., Buckboard Line	2.00	Wakefield, G. W	4.50
Smith, A. T., Stage Line	6.00	Wason, Perley	49.00
Southwestern Stage Company	76.00	Western Mail and Stage Line	346.30
Spearfish and Miles City	97.50	Western Stage Company	5.50
Spencer, A. W	12.50	Wright, J. L	6.25
Spokane Falls and Fort Spokane	36.50	Wyoming Central Mail and Stage	160.80
Teviston and Fort Bowie Stage Line	16.00	Wyoming Stage Company	781.34
Thayer, J. A	4.00		
Tisdale, S. C	8.00		
		Total	13,012.95

G, SUPPLEMENTAL.—Stage transportation for 1888-'89.

Company or individual.	Amount.	Company or individual.	Amount.
Arizona Mail and Stage Company	\$36.50	Norton, J. H	77.50
Bair, Thomas	480.00	Parmlee, F	6.00
Bismarck and Pierre Stage Line	33.00	Pierre and Fort Bennett Stage Line	5.50
Bowie and Fort Thomas Stage Line	22.00	Pomeroy Bros	10.50
Bragaw & Co	23.00	Price, Fort Duchesne and Vernal Stage Line	150.00
Brown & Kinder	15.00	Ray, E	80.00
Buckboard Line	3.00	Reno and Bidwell Stage Line	95.00
Carlin, W. P	4.50	Roach & Mahon	4.00
Cheyenne and Northwestern Stage and Express Company	15.30	Shall & Hunt	8.00
Clampitt, B. F	37.50	Smith, T. B	1.50
Flake, C. L	210.00	Southwestern Stage Company (H. Tisdale, proprietor)	6.00
Green, D. R	3.00	Southwestern Stage Company (B. F. Monahan, proprietor)	49.95
Gremminger, J. C	13.75	Spear, B. H	9.80
Hunton, John (Buckboard Line)	5.50	Spencer, A. W	1.00
Livingston and Youngstown Stage Line	1.00	Spokane Falls and Fort Spokane Stage Line	76.50
Love, L. R	10.00	Teviston and Fort Bowie Stage Line	4.00
Marquette, John .....	.25	Wakefield, G. W	1.50
Marshall, R. J	1.00	Wason, Perley	1.80
McGraw, J. D	33.00	Webster and Fort Sisseton Stage Line	12.50
McLaughlin, W. F	1.50	Williamson, L. P	345.18
Missouri River Stage Line	10.00	Wyoming Central Mail and Stage Co.	16.00
Montana Stage Line	29.00	Wyoming Stage Company	90.00
National Park Transportation Co	2.00		
Nelson, C. A	4.50		
Nevada Stage Line	27.00		
Northwestern Express, Stage and Transportation Company	772.50	Total	2,850.13
Northwestern Stage Company	4.10		

H.—Statement showing the number of civilians employed by the month and paid by the Quartermaster's Department in the divisions, departments, and general depots, independent posts, and recruiting depots of the Army, on what duty employed, their grade and monthly pay, and the appropriation from which paid, as reported by officers of the Department, on their reports of persons and articles hired for June, 1890.

DIVISION OF THE ATLANTIC AND DEPARTMENT OF THE EAST.

Posts.	Regular supplies: Forage master, \$75.	Incidental expenses.															
		Clerks, \$150.	Clerks, \$133.33.	Clerks, \$116.66.	Clerks, \$100.	Draughtsman, \$150.	Interpreter, \$100.	Janitor, \$45.	Janitor, \$30.	Laborer, \$55.	Laborers, \$30.	Messenger, \$75.	Messenger, \$60.	Messengers, \$50.	Messengers, \$45.		
Headquarters, Governor's Island, N. Y.		4	6	1		1		1	1	1	1				1		
Baltimore, Md.		1	1												1		
Buffalo, N. Y.					1												
Fort Monroe, Va.	1		1		1												
New Orleans, La.		1		1	1											1	
Boston, Mass.		1			1										1		
Atlanta, Ga.		1			1										1		
Mount Vernon Barracks, Ala.							1										
Near Newport, Ky.			1													1	
Washington Barracks, D. C.																	
Total		1	9	9	2	5	1	1	1	1	1	1	2	1	1	4	2

Posts.	Incidental expenses.				Barracks and quarters.		Army transportation.								
	Messengers, \$25.	Store-keeper, \$75.	Store-keeper, \$38.	Telegraph operator, \$30.	Watchmen, \$45.	Carpenters, \$60.	Painter, \$60.	Blacksmith, \$70.	Blacksmiths, \$60.	Blacksmith, \$35.	Engineer, \$60.	Engineer, \$30.	Engineers, \$75.	Engineer, \$70.	Engineers, \$60.
Headquarters, Governor's Island, N. Y.	1				1	2	1		1	1					
Fort Monroe, Va.			1						1						1
New Orleans, La.		1													
Boston, Mass.	1				1										
Fort Porter, N. Y.															1
Washington Barracks, D. C.													1		
Fort Niagara, N. Y.															1
Fort Wayne, Mich.													1		
Madison Barracks, N. Y.											1	1			
Jackson Barracks, La.															1
Fort Wadsworth, N. Y.															1
Fort Adams, R. I.													1		
Fort Schuyler, N. Y.															1
Fort Hamilton, N. Y.													1		
Fort Myer, Va.								1							1
Fort Preble, Me.														1	
Total	2	1	1	1	2	2	1	1	2	1	1	1	4	1	6

H.—Statement showing the number of civilians employed by the month and paid by the Quartermaster's Department, etc.—Continued.

DIVISION OF THE ATLANTIC AND DEPARTMENT OF THE EAST—Continued.

Posts.	Army transportation.												
	Laborer, \$40.	Mason, \$60.	Mason's helper, \$35.	Packer, \$45.	Plumber, \$80.	Plumber, \$60.	Plumber's helper, \$35.	Superintendent of transportation, \$116.66.	Teamster, \$35.	Teamsters, \$30.	Wharfinger, \$85.	Wheelwright, \$60.	Launch Monroe.
												Engineer, \$75.	Pilot, \$70.
Headquarters, Governor's Island, N. Y.	1	1	1			1	1	1		5			
Fort Monroe, Va.				1						1	1		
New Orleans, La.				1						1			
Near Newport, Ky.								1					
Fort Adams, R. I.												1	1
Total	1	1	1	1	1	1	1	1	1	6	1	1	1

Posts.	Army transportation.														
	Steam-tug General Wool.				Steamer Atlantic.				Steamer Resolute.						
	Assistant engineer, \$50.	Engineer, \$75.	Fireman, \$35.	Master, \$75.	Deck hands, \$45.	Engineer, \$75.	Engineer, \$65.	Fireman, \$55.	Fireman, \$45.	Master, \$110.	Pilot, \$95.	Deck hands, \$40.	Engineer, \$70.	Fireman, \$50.	Master, \$110.
Headquarters, Governor's Island, N. Y.					4	1	1	1	1	1	1				
Fort Monroe, Va.	1	1	1	1								2	1	1	1
Boston; Mass.															
Total	1	1	1	1	4	1	1	1	1	1	1	2	1	1	1

DIVISION OF THE PACIFIC AND DEPARTMENT OF CALIFORNIA.

Posts.	Regular supplies.		Incidental expenses,								Army transportation.					
	Coal inspectors, \$116.66.	Forge master, \$33.33.	Gardeners, \$50.	Clerks, \$150.	Clerks, \$133.33.	Clerks, \$116.66.	Clerk, \$100.	Laborer, \$75.	Messengers, \$60.	Watchmen, \$65.	Watchman, \$40.	Watchman, \$25.	Barracks and quarters - Carpenter, \$125.	Blacksmith, \$85.	Blacksmiths, \$80.	Blacksmiths, \$60.
Headquarters, San Francisco, Cal.	1			2	2	3	1	1	2	3		1				
Presidio of San Francisco, Cal.		1	1			1									2	
Fort Mason, Cal.			1													1
Fort Gaston, Cal.													1			1
Angel Island, Cal.														1		
Fort Bidwell, Cal.																
Total	1	1	2	3	2	4	1	1	2	3	1	1	1	1	2	2

H.—Statement showing the number of civilians employed by the month and paid by the Quartermaster's Department, etc.—Continued.

DIVISION OF THE PACIFIC AND DEPARTMENT OF CALIFORNIA—Continued.

Posts.	Army transportation.													
	Blacksmith's helper, \$50.	Deck hand, \$75.	Draughtsman, \$133.33.	Engineer, \$100.	Farrier, \$85.	Hostler, \$65.	Hostler, \$50.	Inspector of transportation, \$133.33.	Mason, \$80.	Master mechanic, \$125.	Packer, \$60.	Plumber, \$80.	Saddler, \$80.	Teamsters, \$65.
Headquarters, San Francisco, Cal.	1	1	1	1	1	1	1	1	1	1	1	1	1	3
Presidio of San Francisco, Cal.	1	1	1	1	1	1	1	1	1	1	1	1	1	3
Fort Gaston, Cal.	1	1	1	1	1	1	1	1	1	1	1	1	1	3
Total	1	1	1	1	1	1	1	1	1	1	1	1	1	3

Posts.	Army transportation.													
	Teamsters, \$50.	Teamsters, \$40.	Train master, \$75.	Transportation ag'ts, \$100.	Transportation ag'ts, \$50.	Watchman, \$15.	Wheelwright, \$90.	Steamer McDowell.						
	Assistant engineer, \$90.	Captain, \$133.33.	Engineer, \$125.	Firemen, \$80.	Mate, \$80.	Seamen, \$70.	Watchman, \$70.							
Headquarters, San Francisco, Cal.	1	1	1	2	2	1	1	1	1	2	1	4	1	1
Presidio of San Francisco, Cal.	4	4	1	1	1	1	1	1	1	2	1	4	1	1
Total	4	4	1	2	2	1	1	1	1	2	1	4	1	1

DEPARTMENT OF ARIZONA.

Posts.	Incidental expenses.								Army transportation.								
	Regular supplies: Forge masters, \$60.	Clerks, \$150.	Clerks, \$133.33.	Clerks, \$116.66.	Clerk, \$100.	Interpreters, \$75.	Interpreter, \$10.	Janitor, \$60.	Messengers, \$60.	Messenger, \$50.	Messenger, \$40.	Barracks and quarters: Carpenter, \$80.	Blacksmiths, \$80.	Blacksmiths, \$60.	Engineers, \$100.	Engineers, \$90.	Engineer, \$85.
Headquarters, Los Angeles, Cal.	1	1	4	2	1	1	1	2	1	1	1	1	1	1	1	1	1
Whipple Barracks, Ariz.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
San Carlos, Ariz.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fort Apache, Ariz.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fort Bowie, Ariz.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Tucson, Ariz.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fort Mojave, Ariz.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fort Huachuca, Ariz.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fort Lowell, Ariz.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fort Thomas, Ariz.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fort Grant, Ariz.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fort McDowell, Ariz.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fort Verde, Ariz.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Santa Fé, N. Mex.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fort Wingate, N. Mex.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fort Bayard, N. Mex.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fort Stanton, N. Mex.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fort Union, N. Mex.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	17	3	4	3	1	3	1	1	2	1	1	1	9	4	3	2	1

H.—Statement showing the number of civilians employed by the month and paid by the Quartermaster's Department, etc.—Continued.

DEPARTMENT OF ARIZONA—Continued.

Posts.	Army transportation.															
	Engineers, \$80.	Engineers, \$75.	Laborer, \$50.	Saddler, \$75.	Saddler, \$50.	Teamsters, \$50.	Teamsters, \$40.	Teamsters, \$30.	Transportation agents, \$100.	Transportation agent, \$83.33.	Transportation agents, \$75.	Transportation agent, \$60.	Transportation agents, \$50.	Transportation agent, \$25.	Wheelwrights, \$80.	Wheelwrights, \$60
Headquarters, Los Angeles, Cal.			1			3			2		2		2	1	1	
Whipple Barracks, Ariz					1										1	
San Carlos, Ariz								2								1
Fort Apache, Ariz				1				2							1	
Fort Bowie, Ariz	1							2							1	
Tucson, Ariz									1				2		1	
Fort Huachuca, Ariz								4							1	
Fort Lowell, Ariz	1							1							1	
Fort Thomas, Ariz.	1							3							1	
Fort Grant, Ariz.								3							1	
Fort McDowell, Ariz								1							1	
Fort Verde, Ariz								1							1	
Santa Fé, N. Mex									2				2			1
Fort Wingate, N. Mex		1									1					1
Fort Bayard, N. Mex																1
Fort Stanton, N. Mex		1														1
Fort Union, N. Mex		1							2							
Total	3	3	1	1	1	3	17	11	4	1	2	1	6	1	6	4

DEPARTMENT OF THE COLUMBIA.

Posts.	Regular supplies.		Incidental expenses.								Army transportation.				
	Forage masters, \$80.	Forage men, \$40.	Clerks, \$150.	Clerk, \$133.33.	Clerks, \$116.66.	Clerks, \$100.	Laborers, \$40.	Messengers, \$60.	Superintendent, \$60.	Telegraph operator, \$83.33.	Barracks and quarters: Engineer, \$75.	Blacksmiths, \$80.	Blacksmith, \$75.	Blacksmith, \$70.	Blacksmith, \$50.
Headquarters, Vancouver Barracks, Wash.	1	3	2	1	1	1	2	1	1	1		1			1
Portland, Oregon			1		1	1		1							
Fort Spokane, Wash											1		1		
Fort Walla Walla, Wash.	1											1			
Boisé Barracks, Idaho														1	
Total	2	3	3	1	2	2	2	2	1	1	1	2	1	1	1

Posts.	Army transportation.													
	Carpenter, \$30.	Engineers, \$100.	Engineer, \$60.	Packers, \$60.	Pack master, \$100.	Stable master, \$60.	Teamsters, \$40.	Transportation agents, \$133.33.	Transportation agent, \$83.33.	Warehouseman, \$83.33.	Warehouseman's assistant, \$60.	Watchman, \$60.	Wheelwrights, \$80.	Wheelwrights, \$75.
Headquarters, Vancouver Barracks, Wash	1	1	1	1	1	1	7	1		1	1	1	2	
Portland, Oregon								1						
Fort Spokane, Wash.		1												1
Fort Walla Walla, Wash				1									1	
Fort Klamath, Oregon								1						
Boisé Barracks, Idaho		1		1										1
Fort Sherman, Idaho														
Total	1	3	1	3	1	1	22	2	1	1	1	1	3	2

H.—Statement showing the number of civilians employed by the month and paid by the Quartermaster's Department, etc.—Continued.

DIVISION OF THE MISSOURI.

Posts.	Incidental expenses.								Army transportation.					
	Clerks, \$150.	Clerks, \$133.33.	Clerks, \$116.66.	Clerks, \$100.	Janitor, \$75.	Messenger, \$75.	Messenger, \$50.	Messenger, \$15.	Watchman, \$45.	Watchman, \$40.	Agent, \$83.33.	Foreman of stables, \$65.	Hostlers, \$52.	Teamsters, \$52.
Headquarters, Chicago, Ill	4	4	2	3	1	1	1	1	1	1	1	1	2	5

DEPARTMENT OF THE MISSOURI.

Posts.	Regular supplies.						Incidental expenses.								
	Engineer, \$95.	Engineer, \$80.	Forge masters, \$75.	Foreman, \$100.	Lamplighter, \$30.	Tinsmith, \$45.	Woodranger, \$40.	Clerks, \$150.	Clerks, \$133.33.	Clerks, \$116.66.	Clerks, \$100.	Guide, \$100.	Horsehoer, \$70.	Interpreters, \$100.	Janitor, \$45.
Headquarters and depot, Fort Leavenworth, Kans	1	1	.....	.....	1	1	1	2	2	2	2	.....	1	.....	1
Military prison, Fort Leavenworth, Kans .....	.....	.....	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Denver, Colo .....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Fort Reno, Ind. T .....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Fort Supply, Ind. T .....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Fort Sill, Ind. T .....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Fort Elliott, Tex .....	.....	.....	1	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....
Fort Riley, Kans .....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	1	1	6	1	1	1	1	5	2	2	3	1	1	2	1

Posts.	Incidental expenses.						Army transportation.								
	Messenger, \$50.	Messengers, \$45.	Messengers, \$25.	Store-keeper, \$100.	Veterinary surgeon, \$125.	Watchmen, \$40.	Barracks and quarters: Carpenter, \$60.	Blacksmiths, \$80.	Cartman, \$30.	Corralmaster, \$75.	Engineer, \$100.	Engineer, \$80.	Engineer, \$75.	Engineers, \$60.	Engineer, \$40.
Headquarters and depot, Fort Leavenworth, Kans
Denver, Colo	1	3	.....	.....	.....	.....	.....	1	1	1	.....	.....	.....	.....	1
Fort Reno, Ind. T	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1
Fort Supply, Ind. T	1	.....	.....	.....	.....	.....	.....	1
Fort Sill, Ind. T	1	.....	.....	.....	.....	.....	.....	1
Fort Elliott, T	1	.....	.....	.....	.....	.....	.....	.....
Fort Riley, Kans	1	.....	.....	.....	.....	.....	.....	.....
Fort Crawford, Colo	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Fort Gibson, Ind. T	1	.....	.....	.....	.....	.....	.....	.....
Fort Lewis, Colo	1	.....	.....	.....	.....	1	.....	.....
Total	1	3	2	1	1	3	1	9	1	1	1	1	1	5	1

H.—Statement showing the number of civilians employed by the month and paid by the Quartermaster's Department, etc.—Continued.

DEPARTMENT OF THE MISSOURI—Continued.

Posts.	Army transportation.													
	Fireman, \$40.	Fireman, \$30.	Foreman, \$100.	Hostler, \$30.	Packer, \$70.	Packers, \$40.	Plumber, \$90.	Plumbers, \$80.	Plumber, \$50.	Plumber's helper, \$30.	Range rider, \$40.	Saddlers, \$60.	Teamster, \$45.	Teamster, \$40.
Headquarters and depot, Fort Leavenworth, Kans.				1	1	1		1	1	1			1	
Military prison, Fort Leavenworth, Kans.			1											1
Denver, Colo.														
Fort Reno, Ind. T.							1					1		
Fort Supply, Ind. T.												1		
Fort Riley, Kans.	1	1						1			1	1		
Fort Lewis, Colo.						2						1		
Total	1	1	1	1	1	3	1	2	1	1	1	4	1	1

Posts.	Army transportation.							Clothing and equipage.						
	Teamsters, \$50.	Train masters, \$60.	Transportation agent, \$133.33.	Transportation agent, \$120.	Transportation agents, \$116.66.	Transportation agents, \$100.	Transportation agent, \$83.33.	Transportation agent, \$50.	Wagon masters, \$60.	Warehouseman, \$40.	Wheelwrights, \$60.	Foreman, \$100.	Inspector, \$116.66.	Instructors, \$100.
Headquarters and depot, Fort Leavenworth, Kans.	14			1	1	5		1		1				
Military prison, Fort Leavenworth, Kans.												1	1	2
Denver, Colo.			1		1	1	1							
Fort Reno, Ind. T.	10					1		1						
Fort Supply, Ind. T.	9	1												
Fort Sill, Ind. T.	9	1												
Fort Elliott, Tex.	7													
Fort Riley, Kans.	13							1						
Fort Crawford, Colo.	2													
Fort Gibson, Ind. T.	2					1								
Fort Lewis, Colo.	2							1			1			
Total	68	2	1	1	2	8	1	1	3	1	5	1	1	2

DEPARTMENT OF DAKOTA.

Posts.	Regular supplies.					Incidental expenses.										
	Engineer, \$100.	Engineer, \$75.	Fireman, \$45.	Forage masters, \$75.	Forage master, \$50.	Clerks, \$150.	Clerks, \$133.33.	Clerks, \$116.66.	Clerks, \$100.	Clerks, \$83.33.	Copyist, \$75.	Guide, \$133.33.	Guide, \$60.	Interpreter, \$75.	Interpreters, \$60.	Interpreter, \$50.
Headquarters, St. Paul, Minn.	1		1			4	3	2	2	1	1					
Fort Snelling, Minn.		1		1				1								
Fort Yates, N. Dak.																1
Helena, Mont.						1										
Fort Custer, Mont.				1					1			1			1	
Fort Shaw, Mont.									1			1				
Fort Buford, N. Dak.					1											
Fort Assiniboine, Mont.									1					1	1	
Fort Keogh, Mont.				1					1					1		
Fort Meade, S. Dak.				1												
Fort Maginnis, Mont.									1							
Fort Missoula, Mont.									1							
Total	1	1	1	4	1	5	3	3	6	4	1	1	1	1	2	1

H.—Statement showing the number of civilians employed by the month and paid by the Quartermaster's Department, etc.—Continued.

DEPARTMENT OF DAKOTA—Continued.

Posts.	Incidental expenses.								Barracks and quarters.			Army transportation.			
	Janitor, \$60.	Janitor's assistant, \$40.	Messengers, \$50.	Scavengers, \$60.	Scrubber, \$35.	Scrubber, \$10.	Scout, \$75.	Watchman, \$35.	Engineers, \$33.33.	Engineers, \$75.	Sawyer, \$90.	Blacksmiths, \$33.33.	Blacksmiths, \$80.	Blacksmiths, \$75.	Blacksmiths, \$60.
Headquarters, St. Paul, Minn.....	1	1	2		1	1									
Fort Snelling, Minn.....							1								1
Fort Yates, N. Dak.....															1
Helena, Mont.....			1												
Fort Custer, Mont.....									1	1	1				
Fort Shaw, Mont.....									1					1	
Fort Buford, N. Dak.....												1			
Fort Assiniboine, Mont.....				1								1			
Fort Keogh, Mont.....											1				
Fort Meade, S. Dak.....									1					1	
Fort Maginnis, Mont.....														1	
Fort Missoula, Mont.....				1							1				
Fort Abraham Lincoln, N. Dak.....															1
Fort Randall, S. D.....									1						1
Fort Pembina, N. Dak.....															1
Camp Poplar River, Mont.....														1	
Camp Sheridan, Wyo.....						1						1			
Fort Bennett, S. Dak.....															1
Fort Sully, S. Dak.....															1
Total.....	1	1	3	2	1	1	1	1	2	2	1	3	3	3	3

Posts.	Army transportation.														
	Blacksmith, \$50.	Carpenter, \$85.	Elevator man, \$40.	Engineers, \$116.66.	Engineers, \$100.	Engineer, \$90.	Engineers, \$33.33.	Engineer, \$75.	Engineer, \$55.	Engineers, \$50.	Foreman, \$60.	Hostlers, \$40.	Packer, \$75.	Packers, \$60.	Packer, \$50.
Headquarters, St. Paul, Minn.....				1	1						1	2			1
Fort Snelling, Minn.....		1		1					1						
Fort Yates, N. Dak.....					1					1					
Fort Custer, Mont.....													1		
Fort Assiniboine, Mont.....					1									1	
Fort Keogh, Mont.....								1						1	
Fort Meade, S. Dak.....					1										
Fort Missoula, Mont.....							1								
Fort Abraham Lincoln, N. Dak.....							1			1					
Fort Pembina, N. Dak.....							1								
Fort Sully, S. Dak.....							1								
Fort Totten, N. Dak.....						1									
Total.....	1	1	1	2	3	1	3	1	1	2	1	2	1	2	1

H.—Statement showing the number of civilians employed by the month and paid by the Quartermaster's Department, etc.—Continued.

DEPARTMENT OF DAKOTA—Continued.

Posts.	Army transportation.															
	Saddlers, \$60.	Superintendent, \$100.	Teamsters, \$45.	Teamsters, \$40.	Teamsters, \$35.	Teamsters, \$30.	Train master, \$75.	Train masters, \$60.	Train masters, \$50.	Transportation agents, \$133.33.	Transportation agents, \$100.	Transportation agents, \$83.33.	Transportation agents, \$75.	Wheelwrights, \$83.33.	Wheelwrights, \$75.	Wheelwrights, \$60.
Headquarters, St. Paul, Minn			2			8				3	2		2			
Fort Snelling, Minn						6						1		1		1
Fort Yates, N. Dak						1										
Fort Custer, Mont	1					11										
Fort Shaw, Mont				6					1							
Fort Buford, N. Dak		1				8			1							
Fort Assiniboine, Mont												1		1		
Fort Keogh, Mont	1			10												
Fort Meade, S. Dak	1											1		1		
Fort Maginnis, Mont	1					7										
Fort Meade, S. Dak						10			1							
Fort Missoula, Mont				6		3								1		
Fort Abraham Lincoln, N. Dak						2								1		
Fort Randall, S. Dak						4								1		
Fort Pembina, N. Dak						3			1					1		
Camp Poplar River, Mont				4		4								1		
Camp Sheridan, Wyo																
Fort Bennett, S. Dak						2										
Fort Sully, S. Dak						6										
Fort Totten, N. Dak						3										
Total	3	1	2	26	37	40	1	2	2	3	4	2	2	3	4	6

DEPARTMENT OF THE PLATTE.

Posts.	Regular supplies.				Incidental expenses.												
	Agent, \$100.	Forge masters, \$100.	Forge masters, \$75.	Clerks, \$150.	Clerks, \$133.33.	Clerks, \$116.66.	Clerks, \$100.	Draughtsman, \$133.33.	Draughtsman, \$83.33.	Guide, \$150.	Guide, \$60.	Interpreter, \$75.	Interpreter, \$60.	Laborers, \$35.	Messenger, \$75.	Messenger, \$60.	Messenger, \$50.
Headquarters, fort and depot, Omaha, Nebr	1	1	1	3	5	1	2	1	1					12	1	1	1
Fort McKinney, Wyo		1								1							
Fort Robinson, Nebr											1						
Fort Niobrara, Nebr			1														
Fort Washakie, Wyo													1				
Fort Du Chesne, Utah																	
Total	1	2	2	3	5	1	2	1	1	1	1	1	1	12	1	1	1

Posts.	Incidental expenses.				Barracks and quarters.		Army transportation.										
	Porter, \$50.	Store-keeper, \$100.	Watchmen, \$46.	Watchmen, \$35.	Engineer, \$125.	Engineers, \$60.	Blacksmiths, \$80.	Blacksmiths, \$75.	Blacksmith, \$70.	Blacksmith, \$60.	Cargodores, \$60.	Chief packer, \$133.33.	Corral master, \$75.	Engineers, \$83.33.	Engineer, \$60.	Hosier, \$35.	
Headquarters, fort and depot, Omaha, Nebr	1	1	2	3			1	1	1	1				1		1	
Fort McKinney, Wyo						1											
Fort Robinson, Nebr																	
Fort Niobrara, Nebr																	
Fort Washakie, Wyo																	
Fort Du Chesne, Utah					1	1	1										
Fort D. A. Russell, Wyo											2						
Fort Douglas, Utah												1					
Fort Bridger, Wyo															1		
Fort Sidney, Nebr																	
Total	1	1	2	4	1	2	2	9	1	1	2	1	1	5	1	1	

H.—Statement showing the number of civilians employed by the month and paid by the Quartermaster's Department, etc.—Continued.

DEPARTMENT OF THE PLATTE—Continued.

Posts.	Army transportation.															
	Packers, \$80.	Packers, \$50.	Packer, \$40.	Pack master, \$100.	Painter, \$75.	Saddler, \$80.	Teamsters, \$45.	Teamsters, \$40.	Teamsters, \$35.	Transportation agents, \$133.33.	Transportation agents, \$116.66.	Transportation agents, \$100.	Transportation agents, \$53.33.	Wheelwright, \$80.	Wheelwrights, \$75.	Wheelwrights, \$70.
Headquarters, fort and depot, Omaha, Nebr.....	1		1		1	1	4	4	3	1	2	2	5	1		1
Fort McKinney, Wyo.....		1						1	1						1	
Fort Robinson, Nebr.....							1		4						2	
Fort Niobrara, Nebr.....									1						1	
Fort Washakie, Wyo.....									1						1	
Fort Du Chesne, Utah.....	2			2					3						1	
Fort D. A. Russell, Wyo.....		8						1			1			1		
Fort Douglas, Utah.....									1						1	
Fort Bridger, Wyo.....									3						1	
Fort Sidney, Nebr.....										1					1	
Ogden, Utah.....										1		1				
Total.....	3	9	1	2	1	1	5	6	17	3	2	6	2	1	11	1

DEPARTMENT OF TEXAS.

Posts.	Regular supplies.					Incidental expenses.								
	Engineer, \$85.	Fireman, \$35.	Forage master, \$75.	Forage masters, \$60.	Tinner, \$60.	Clerks, \$150.	Clerks, \$133.33.	Clerk, \$116.66.	Clerks, \$100.	Copyist, \$50.	Draughtsman, \$150.	Janitor, \$50.	Laborers, \$30.	Messenger, \$50.
Headquarters, depot and post, San Antonio, Tex.....	1	1		1	1	2	2	1	3	1	1	1	12	1
Fort Clark, Tex.....			1						1					
Fort Ringgold, Tex.....				1										
Total.....	1	1	1	2	1	2	2	1	4	1	1	1	12	1

Posts.	Incidental expenses.				Barracks and quarters.		Army transportation.							
	Messenger, \$45.	Store-keeper, \$100.	Veterinary surgeon, \$125.	Watchmen, \$40.	Carpenter, \$70.	Carpenter, \$60.	Blacksmith, \$72.	Blacksmith, \$66.	Blacksmiths, \$60.	Corral master, \$60.	Engineers, \$60.	Foreman, \$75.	Hostlers, \$30.	Packers, \$40.
Headquarters, depot and post, San Antonio, Tex.....	1	1	1	6	1	1	1	1	2	1		1	2	4
Fort Clark, Tex.....									1					
Fort Ringgold, Tex.....									1					
Fort McIntosh, Tex.....									1					
Fort Davis, Tex.....									1					
Fort Brown, Tex.....									1					
Total.....	1	1	1	6	1	1	1	1	7	1	5	1	2	4

QUARTERMASTER-GENERAL.

657

H.—Statement showing the number of civilians employed by the month and paid by the Quartermaster's Department, etc.—Continued.

DEPARTMENT OF TEXAS—Continued.

Posts.	Army transportation.													
	Painter, \$73.	Saddlers, \$66.	Scavenger, \$40.	Teamsters, \$35.	Teamsters, \$30.	Transportation agent, \$133.33.	Transportation agent, \$116.66.	Transportation agents, \$100.	Transportation agent, \$50.	Wagon masters, \$60.	Wagon master, \$50.	Wheelwright, \$70.	Wheelwright, \$72.	Wheelwrights, \$60.
Headquarters, depot and post, San Antonio, Tex.	1	2	1	2	7	1	1	1	1	1	1	1	1	1
Fort Clark, Tex.					1					1				1
Fort Ringgold, Tex.														1
Fort McIntosh, Tex.														1
Fort Davis, Tex.					1				1					1
Fort Brown, Tex.					1				1					1
Fort Hancock, Tex.														1
Camp Del Rio, Tex.					1									1
Camp Pena Colorado, Tex.														1
Total	1	2	1	2	10	1	1	3	1	2	1	1	1	6

GENERAL DEPOTS, AS PROVIDED BY ARMY REGULATIONS, 1823, AND SPECIAL ORDERS, 172, A. G. O., 1884.

Posts.	Regular supplies.				Incidental expenses.										
	Coal heaver, \$65.	Engineer, \$100.	Engineer, \$50.	Forge master, \$100.	Clerks, \$150.	Clerks, \$133.33.	Clerks, \$116.66.	Clerks, \$100.	Clerks, \$83.33.	Copyists, \$75.	Copyists, \$60.	Copyist, 50.	Elevator man, \$50.	Elevator man, \$40.	Gardener, \$50.
New York, N. Y.	1				4	1	2	3	1	1			1	1	
Philadelphia, Pa.					4	3	2	1	2						
Washington, D. C.				1	5	3	1	1	1	1					
Jeffersonville, Ind.		1	1		2	3	1	1	1		2				1
San Francisco, Cal.					1	2	1	1	1						
St. Louis, Mo.					4		1		2						
Total	1	1	1	1	20	12	6	7	6	4	2	1	1	1	1

Posts.	Incidental expenses.														
	Janitor, \$60.	Laborers, \$75.	Laborer, \$70.	Laborers, \$45.	Laborer, \$40.	Messengers, \$75.	Messengers, \$65.	Messengers, \$60.	Messengers, \$50.	Messengers, \$45.	Scrubbers, \$30.	Store-keeper, \$133.33.	Store-keepers, \$116.66.	Store-keeper, \$83.33.	Superintendent, \$150.
New York, N. Y.								2			2		1		
Philadelphia, Pa.						2		1							
Washington, D. C.			1	3	1		1	1	1				1		
Jeffersonville, Ind.							1	1					1		
San Francisco, Cal.	1	3					1					1		1	
St. Louis, Mo.				1						2					1
Total	1	3	1	4	1	3	2	4	1	2	2	1	2	1	1

H.—Statement showing the number of civilians employed by the month and paid by the Quartermaster's Department, etc.—Continued.

GENERAL DEPOTS, AS PROVIDED BY ARMY REGULATIONS, 1823, AND SPECIAL ORDERS, 172, A. G. O., 1884—Continue.

Posts.	Incidental expenses.							Cavalry and artillery horses: Inspector, \$180.	Barracks and quarters.		Army transportation.			
	Telegraph operator, \$75.	Veterinary surgeon, \$100.	Watchmen, \$75.	Watchman, \$80.	Watchman, \$52.	Watchman, \$45.	Watchman, \$40.		Carpenter, \$90.	Carpenter, \$80.	Carpenter, \$95.	Carpenter, \$75.	Carpenter, \$70.	Carpenter, \$65.	Carpenter, $60.
New York, N. Y.			2	1						1	1			
Philadelphia, Pa.		1										1		
Washington, D. C.						1	5						1	1
Jeffersonville, Ind.													1	
San Francisco, Cal.	1				1			1	1					
St. Louis, Mo.								1						
Total	1	1	2	1	1	1	5	1	1	1	1	1	1	1

Posts.	Army transportation.														
	Chief packer, \$100.	Drayman, \$70.	Engineer, \$100.	Engineer, \$75.	Fireman, \$50.	Foreman of packers, \$80.	Foreman of stables, \$70.	Hostler, \$60.	Hostlers, \$45.	Hostlers, \$40.	Laborers, \$54.	Laborers, \$43.75.	Marker, \$75.	Marker, \$40.	Master baler \$75.
New York, N. Y.		1	1				1								
Philadelphia, Pa.										2	7	13		1	1
Washington, D. C.				1	1	1	1								
Jeffersonville, Ind.	1											2		1	
St. Louis, Mo.															
Total	1	1	1	1	1	1	1	1	2	7	13	2	1	1	1

Posts.	Army transportation.														
	Master packer, \$75.	Packer, \$75.	Packers, \$70.	Packers, \$65.	Packers, \$60.	Packers, \$54.	Packer, \$50.	Packers, \$43.75.	Packers, \$40.	Painter, \$60.	Saddler, \$75.	Shipper, \$116.66.	Shippers, \$83.33.	Stable master, \$65.	Store-keeper, \$100.
New York, N. Y.				2											
Philadelphia, Pa.	1				7	15								1	
Washington, D. C.			1	1											
Jeffersonville, Ind.			1				1			1	1				
St. Louis, Mo.		1			1		6		10						1
Total	1	1	2	3	8	15	1	6	19	1	1	1	2	1	1

H.—Statement showing the number of civilians employed by the month and paid by the Quartermaster's Department, etc.—Continued.

GENERAL DEPOTS, AS PROVIDED BY ARMY REGULATIONS, 1823, AND SPECIAL ORDERS, 172, A. G. O., 1884—Continued.

Posts.	Army transportation.														
	Superintendent, \$133.33.	Superintendent, \$100.	Superintendent, \$85.	Superintendent, \$70.	Teamster, \$70.	Teamster, \$65.	Teamsters, \$60.	Teamsters, \$55.	Teamsters, \$45.	Teamsters, \$40.	Transportation agents, \$133.33.	Transportation agents, \$116.66.	Transportation agents, \$100.	Transportation agent, \$83.33.	Weighmaster, \$50.
New York, N. Y.....	1	1	1	1							1			1	
Philadelphia, Pa.....							2	1							
Washington, D. C.....	1							1	1	9					
Jeffersonville, Ind.....					1	1			1	4		1	1		
San Francisco, Cal.....											1	2	1		
St. Louis, Mo.....									2		1				
Total.....	1	1	1	1	1	1	2	2	4	13	3	3	2	1	1

Posts.	Clothing and equipage.														
	Carpenter, \$75.	Carpenters, \$65.	Clerks, \$150.	Clerks, \$133.33.	Clerks, \$116.66.	Clerks, \$100.	Clerks, \$83.33.	Clerks, \$75.	Cutters, \$78.	Engineer, \$100.	Fireman, \$60.	Folder, \$40.	Folders, \$35.	Inspectors, \$150.	Inspector, \$116.66.
Philadelphia, Pa.....				1	1			1		1	1			1	
Jeffersonville, Ind.....		1	1	1	2	1	1					1			
San Francisco, Cal.....	1		1			1	1	1	3				5	1	1
St. Louis, Mo.....		1			1	2									
Total.....	1	2	2	2	4	3	2	2	3	1	1	1	5	2	1

Posts.	Clothing and equipage.														
	Inspectors, \$100.	Inspector, \$83.33.	Laborers, \$54.	Packer, \$60.	Packers, \$70.	Packers, \$60.	Trimmer, \$75.	Trimmers, \$60.	Warehousemen, \$133.33.	Warehouseman, \$100.	Warehouseman, \$60.	Watchman, \$85.	Watchmen, \$70.	Watchmen, \$60.	Watchman, \$52.50.
Philadelphia, Pa.....	3		10					1	1	1			1	3	2
Jeffersonville, Ind.....		1						1	1	1					
San Francisco, Cal.....				1	3	9			1					1	
St. Louis, Mo.....											1				1
Total.....	3	1	10	1	3	9	1	2	2	1	1	1	3	3	1

H.—Statement showing the number of civilians employed by the month and paid by the Quartermaster's Department, etc.—Continued.

INDEPENDENT POSTS.

Posts.	Incidental expenses.					Army transportation.			
	Clerk, \$133.33.	Clerk, \$116.66.	Clerk, \$23.16.	Clerk, \$25.	Messenger, \$60.	Teamster, \$45.	Teamster, \$40.	Teamster, \$35.	Transportation agent, \$33.33.
Springfield Armory, Mass.				1					
Augusta Arsenal, Ga.			1						
Benicia Arsenal, Cal.						1			
Frankford Arsenal, Pa.									1
Fort Snelling Ordnance Depot, Minn.								1	
West Point, N. Y.	1								
Hot Springs, Ark.		1			1		1		
Total.	1	1	1	1	1	1	1	1	1

RECRUITING DEPOTS.

Posts.	Regular supplies.			Incidental expenses.				Army transportation.						
	Engineer, \$75.	Fireman, \$35.	Forgemaster, \$75.	Clerk, \$150.	Clerk, \$133.33.	Engineer, \$45.	Farrier, \$120.	Engineer, \$30.	Engineers, \$60.	Plumber, \$75.	Deck hand, \$60.	Engineer, \$80.	Fireman, \$50.	Master, \$100.
Columbus Barracks, Ohio.	1	1			1	1								
David's Island, N. Y.					1		1	1			1	1	1	1
Jefferson Barracks, Mo.			1	1			1	1	1					
Total.	1	1	1	1	2	1	1	1	2	1	1	1	1	1

RECAPITULATION.

From what appropriation paid.	Number of employes.	Monthly pay.	Yearly pay.
Division of the Atlantic and Department of the East:			
Regular supplies.	1	\$75.00	\$900.00
Incidental expenses.	47	4,491.33	53,896.00
Barracks and quarters.	3	180.00	2,160.00
Army transportation.	55	3,271.67	39,260.00
Total.	106	8,018.00	96,216.00
Division of the Pacific and Department of California:			
Regular supplies.	4	300.00	3,600.00
Incidental expenses.	18	1,738.33	20,860.00
Barracks and quarters.	1	125.00	1,500.00
Army transportation.	47	3,405.00	40,860.00
Total.	70	5,568.33	66,820.00
Department of Arizona:			
Regular supplies.	17	1,020.00	12,240.00
Incidental expenses.	20	1,938.33	23,260.00
Barracks and quarters.	1	80.00	960.00
Army transportation.	84	5,063.33	60,760.00
Total.	122	8,101.66	97,220.00

H.—Statement showing the number of civilians employed by the month and paid by the Quartermaster's Department, etc.—Continued.

RECAPITULATION—Continued.

From what appropriation paid.	Number of employes.	Monthly pay.	Yearly pay.
Department of the Columbia:			
Regular supplies	10	\$440.00	\$5,280.00
Incidental expenses	14	1,360.00	16,320.00
Barracks and quarters	1	75.00	900.00
Army transportation	48	2,958.33	35,600.00
Total	73	4,833.33	58,000.00
Division of the Missouri:			
Incidental expenses	19	1,966.66	23,600.00
Army transportation	9	512.33	6,148.00
Total	28	2,478.99	29,748.00
Department of the Missouri:			
Regular supplies	12	820.00	9,840.00
Incidental expenses	28	2,545.00	30,540.00
Barracks and quarters	1	60.00	720.00
Army transportation	133	6,425.00	77,100.00
Clothing and equipage	4	416.66	5,000.00
Total	178	10,266.66	123,200.00
Department of Dakota:			
Regular supplies	8	580.00	6,960.00
Incidental expenses	39	3,471.66	41,660.00
Barracks and quarters	5	376.66	4,520.00
Army transportation	178	4,816.67	57,800.00
Total	230	9,244.99	110,940.00
Department of the Platte:			
Regular supplies	5	450.00	5,400.00
Incidental expenses	40	2,985.00	35,820.00
Barracks and quarters	3	245.00	2,940.00
Army transportation	95	6,265.00	75,180.00
Total	143	9,945.00	119,340.00
Department of Texas:			
Regular supplies	6	375.00	4,500.00
Incidental expenses	34	2,253.33	27,040.00
Barracks and quarters	2	130.00	1,560.00
Army transportation	55	3,134.00	37,608.00
Total	97	5,892.33	70,708.00
General depots:			
Regular supplies	4	325.00	3,900.00
Incidental expenses	102	9,762.00	117,144.00
Cavalry and artillery horses	1	150.00	1,800.00
Barracks and quarters	2	170.00	2,040.00
Army transportation	140	8,182.00	98,184.00
Clothing and equipage	47	5,823.17	69,873.00
Total	296	24,412.17	292,946.00
Independent posts:			
Incidental expenses	5	364.16	4,370.00
Army transportation	4	203.33	2,440.00
Total	9	567.49	6,810.00
Recruiting depots:			
Regular supplies	3	185.00	2,220.00
Incidental expenses	5	581.67	6,980.00
Barracks and quarters	1	80.00	960.00
Army transportation	8	555.00	6,660.00
Total	17	1,401.67	16,820.00
Total amount by appropriations:			
Regular supplies	70	4,570.00	54,840.00
Incidental expenses	371	33,457.50	401,490.00
Cavalry and artillery horses	1	150.00	1,800.00
Barracks and quarters	20	1,521.66	18,260.00
Army transportation	856	44,791.67	537,500.00
Clothing and equipage	51	6,239.33	74,873.00
Total	1,369	90,730.66	1,082,763.00

I.—Statement showing the amounts expended by officers of the Quartermaster's Department during, and on account of the appropriations for, the fiscal year 1890, and balances in their hands so far as shown by accounts received at this office.

Names of officers.	Expenditures.	Balances.
Atwood, E. B., captain and assistant quartermaster	\$224, 627. 04	\$35, 356. 42
Alligood, C. A., captain and military store-keeper	2, 010. 64	.....
Angluth, D. F., lieutenant Twelfth Infantry	7, 707. 31	77. 34
Andrus, E. P., lieutenant Fifth Cavalry	888. 10	.....
Anderson, J., lieutenant, Eighteenth Infantry	5, 800. 50	720 10
Ames, R. F., lieutenant, Eighth Infantry	10, 602. 07	625. 38
Adams, G., lieutenant Fifth Artillery	17, 681. 70	.....
Atkinson, B. W., lieutenant Sixth Infantry	2, 193. 02	.....
Augur, A. A., lieutenant Twenty-fourth Infantry	3, 961. 04	818. 38
Bingham, J. D., colonel and assistant quartermaster-general	65, 139. 53	10, 566. 15
Batchelder, B. N., lieutenant colonel and deputy quartermaster-general	257, 691. 81	.....
Belcher, J. H., major and quartermaster	148, 550. 90	13, 566. 11
Blunt, A. P., major and quartermaster	13, 576. 24	.....
Bird, C., captain and assistant quartermaster	56, 787. 48	744. 42
Booth, C. A., captain and assistant quartermaster	149, 465. 17	4, 391. 36
Barrett, A., captain and military store-keeper	149, 501. 46	20. 13
Baker, F., captain ordnance department	2, 704. 85	8. 40
Brooks, J. C. W., lieutenant Fourth Artillery	67. 27	.....
Buck, W. L., lieutenant Thirteenth Infantry	3, 581. 39	.....
Blow, W. N., lieutenant Fifteenth Infantry	5, 638. 03	.....
Black, W., lieutenant Twenty-fourth Infantry	1, 422. 40	.....
Baldwin, J. A., lieutenant Ninth Infantry	6, 147. 88	55. 75
Brett, J. E., lieutenant Twenty-fourth Infantry	1, 501. 45	.....
Baldwin, W. H., lieutenant Seventh Cavalry	40. 38	.....
Burnham, W. P., lieutenant Sixth Infantry	2, 208. 14	.....
Bowen, W. H. C., lieutenant Fifth Infantry	4, 313. 35	.....
Barnum, M. H., lieutenant Third Cavalry	540. 50	.....
Borden, G. P., lieutenant Fifth Infantry	5, 410. 14	116. 69
Beach, W. D., lieutenant Third Cavalry	1, 322. 30	.....
Bailey, H. L., lieutenant Twenty-first Infantry	4, 041. 45	4. 87
Brush, D. H., lieutenant Seventeenth Infantry	202. 02	.....
Brooke, E. H., lieutenant Twenty-first Infantry	4, 776. 15	92. 42
Brett, L. M., lieutenant Second Cavalry	3, 520. 29	.....
Bailey, C. J., lieutenant First Artillery	1, 066. 84	.....
Bryan, R. B., lieutenant Second Cavalry	765. 64	.....
Brown, E. P., lieutenant Fourth Infantry	12, 204. 25	.....
Browne, E. H., lieutenant Fourth Infantry	10, 983. 10	7, 288. 68
Bates, R. F., captain Eighteenth Infantry	78. 72	.....
Borup, H. D., lieutenant Ordnance Department	767. 24	67. 98
Bomford, G. N., captain Eighteenth Infantry	78. 85	.....
Blunt, A. C., lieutenant Fifth Artillery	22, 060. 22	.....
Biddle, W. S., jr., lieutenant Thirteenth Infantry	397. 35	.....
Beach, F. H., lieutenant Sixth Cavalry	.....	664. 39
Backus, G. B., lieutenant First Cavalry	1, 295. 56	216. 47
Brant, L. P., lieutenant First Infantry	10. 00	.....
Barry, T. H., lieutenant First Infantry	1, 937. 92	93. 80
Brown, E. T., lieutenant Fifth Artillery	286. 55	.....
Bingham, T. A., captain engineer corps	134. 04	35. 96
Chandler, J. G., lieutenant-colonel and deputy quartermaster-general	761, 857. 82	19, 081. 07
Campbell, L. E., captain and assistant quartermaster	339, 472. 17	10, 647. 98
Cook, G. H., captain and assistant quartermaster	9, 000. 00	.....
Clem, J. L., captain and assistant quartermaster	64, 958. 94	7, 210. 37
Clifford, J. C., captain Ordnance Department	2, 187. 71	.....
Chase, C., lieutenant Third Artillery	13, 763. 04	561. 28
Clark, W. O., lieutenant Twelfth Infantry	4, 430. 86	.....
Cornish, L. W., lieutenant Fifth Cavalry	892. 55	.....
Chynoweth, E., lieutenant Seventeenth Infantry	8, 902. 79	.....
Cochran, C. H., lieutenant Seventh Infantry	967. 75	50
Cotton, G. P., captain First Artillery	618. 52	.....
Connolly, T., lieutenant First Infantry	223. 01	.....
Carrington, F. de L., lieutenant First Infantry	1, 233. 20	.....
Clague, J. J., captain subsistence department	18, 417. 41	.....
Carter, J. McL., lieutenant Third Cavalry	3, 315. 43	.....
Chatfield, W. H., lieutenant Fifth Infantry	4, 916. 39	97. 16
Onshing, H. C., captain Fourth Artillery	259. 57	.....
Cronin, M. D., lieutenant Twentieth Infantry	4, 069. 58	.....
Cooke, G. F., lieutenant Fifteenth Infantry	5, 435. 30	.....
Comly, C., major Ordnance Department	246. 66	.....
Carleton, G., lieutenant Second Cavalry	1, 580. 66	.....
Curtis, E. S., lieutenant Second Artillery	486. 10	.....
Cotter, J., lieutenant Fifteenth Infantry	365. 05	171. 75
Cronkrite, A., lieutenant Fourth Artillery	1, 065. 58	1, 527. 95
Crawford, C., lieutenant Tenth Infantry	372. 03	.....
Dandy, G. B., lieutenant-colonel and deputy quartermaster-general	589, 701. 94	46, 300. 73
Dodge, F. L., captain Twenty-third Infantry	262. 05	.....
Davis, G. B., lieutenant Twenty-third Infantry	164. 00	.....
Devors, D. B., lieutenant Twenty-third Infantry	230. 72	.....
Deems, C., lieutenant Fourth Artillery	4, 676. 58	.....

I.—Statement showing the amounts expended by officers of the Quartermaster's Department during the fiscal year 1890, etc.—Continued.

Names of officers.	Expenditures.	Balances.
Davis, T. F., lieutenant Fifteenth Infantry	\$11,196.92	\$5.70
Devol, C. A., lieutenant Twenty-fifth Infantry	11,720.51	118.14
De Lany, H., captain Ninth Infantry	857.10	
Dravo, E. E., lieutenant Sixth Cavalry	15,716.56	
Dickinson, W. M., lieutenant Fourth Cavalry	5,161.69	
Davis, R. P., lieutenant Second Artillery	4,028.95	5,193.00
Edwards, F. A., lieutenant First Cavalry	4,955.33	
Evans, W. P., lieutenant Nineteenth Infantry	6,435.46	2,468.81
Edgar, W. M., superintendent of national cemetery, Mexico City	100.00	
Foster, C. W., major and quartermaster	363,289.63	81,517.19
Furey, J. V., major and quartermaster	287,375.93	1,360.41
Forsyth, L. C., major and quartermaster	41,068.26	4,202.04
Floyd, D. H., captain and assistant quartermaster	812,042.16	6,971.74
Foote, M. C., captain Ninth Infantry	19,503.39	
Foster, A. B., lieutenant Nineteenth Infantry	3,272.31	
Febiger, L., lieutenant Twenty-third Infantry	19,241.08	85.11
Farnsworth, C. S., lieutenant Twenty-fifth Infantry	8,564.14	40.67
Finley, L., lieutenant Tenth Cavalry	16,195.27	10,185.31
Fuller, E. B., lieutenant Seventh Cavalry	24,728.07	1,007.26
Frederick, D. A., lieutenant Seventh Infantry	711.21	
French, F. H., lieutenant Nineteenth Infantry	788.93	69.76
Galbraith, J. G., lieutenant First Cavalry	21,460.90	1,539.97
Gerhardt, C., lieutenant Twentieth Infantry	298.19	
Gillmore, Q. O' M., lieutenant Eighth Cavalry	16,219.77	126.07
Gerlach, W., lieutenant Third Infantry	22,748.63	
Gilman, B. H., lieutenant Thirteenth Infantry	1,595.10	
Geary, W., lieutenant Nineteenth Infantry	714.45	
George, C. P., lieutenant Sixteenth Infantry	17,425.75	366.51
Greene, L. D., lieutenant Seventh Infantry	4,758.51	47.01
Girard, A. C., major Medical Department	800.00	
Gustin, J. H., lieutenant Fourteenth Infantry	10,748.01	
Goodale, G. A., captain Twenty-third Infantry	838.16	
Griffith, E., lieutenant Thirteenth Infantry	489.93	
Guard, A. McC., lieutenant Nineteenth Infantry	533.27	
Gallup, C. C., lieutenant Fifth Artillery	738.47	35.10
Hughes, W. B., lieutenant-colonel and deputy quartermaster-general	373,549.83	27,546.0
Humphrey, C. F., captain and assistant quartermaster	86,197.19	20,697.02
Hathaway, F. H., captain and assistant quartermaster	17,872.72	2,524.65
Haynsworth, H. J., captain and assistant quartermaster	41,830.57	2,520.75
Hoyt, G. S., captain and assistant quartermaster	43,421.51	42.57
Hyde, J. McE., captain and assistant quartermaster	44,056.51	5,631.05
Hull, G. A., captain and military store-keeper	185,737.66	10,631.08
Heath, F., captain Ordnance Department	3,395.15	
Hobbs, C. W., lieutenant Third Artillery	404.88	
Hawthorne, H. L., lieutenant Second Artillery	411.65	
Hunter, A. M., lieutenant Fourth Artillery	4,749.07	
Hinds, E., lieutenant Second Artillery	7,229.64	
Heistand, H. O. S., lieutenant Eleventh Infantry	4,404.49	
Humphrey, H. D., lieutenant Twentieth Infantry	3,311.83	44.74
Hale, H. C., lieutenant Twelfth Infantry	2,394.02	13.32
Hersey, M. L., lieutenant Ninth Infantry	2,061.58	26.01
Hinton, C. B., captain Eighteenth Infantry	608.94	
Hare, L. R., lieutenant Seventh Cavalry	697.46	
Hardie, F. H., lieutenant Third Cavalry	35.70	
Holley, D. E., lieutenant First Infantry	39.10	
Howe, E. W., lieutenant Seventeenth Infantry	794.11	
Hearu, L. J., lieutenant Twenty-first Infantry	4,705.26	
Harris, P. C., lieutenant Thirteenth Infantry	893.08	
Hein, O. L., captain First Cavalry	415.08	
Hall, C. S., lieutenant Thirteenth Infantry	98.37	
Hart, W. H., lieutenant Fourth Cavalry		60.00
Ingalls, C. H., captain and assistant quartermaster	52,861.79	362.61
Irwin, F. G. jr., lieutenant Second Cavalry	177.10	201.87
Jacobs, J. W., captain and assistant quartermaster	90,818.60	54,622.82
Jones, F. B., captain and assistant quartermaster	3,781.42	74.00
Johnson, A., lieutenant Eleventh Infantry	12,519.45	
Jones, S. R., lieutenant Fourth Artillery	11,206.85	613.47
James, W. H. W., lieutenant Twenty-fourth Infantry	7,001.90	291.26
Johnson, F. O., lieutenant Third Cavalry	8,236.75	88.31
Jackson, A. H., captain Seventh Infantry	877.14	
Kirk, E. B., major and quartermaster	256,073.97	35,311.70
Kimball, A. S., major and quartermaster	7,833.10	38,112.88
Kress, J. A., major Ordnance Department	3,586.65	37.72
Kirby, H., lieutenant Tenth Infantry	4,416.37	
Kendrick, F. M. H., captain Seventh Infantry	127.65	
Kingsbury, F. W., lieutenant Second Cavalry	15,224.41	
Ludington, M. I., lieutenant-colonel and deputy quartermaster-general	147,749.16	23,410.53
Lee, J. G. C., major and quartermaster	19,435.33	7,940.06
Lord, J. H., major and quartermaster	40,326.14	4,236.54

I.—Statement showing the amounts expended by officers of the Quartermaster's Departments during the fiscal year 1890, etc.—Continued.

Names of officers.	Expenditures.	Balances.
Lewis, E. M., lieutenant Eleventh Infantry	\$691.90	
Loveridge, E. L., lieutenant Eleventh Infantry	11,466.19	\$6,902.03
Littell, I. W., lieutenant Tenth Infantry	3,334.98	
Loudon, R., lieutenant Fifth Cavalry	20,126.86	
Liggett, H., lieutenant Fifth Infantry	5,383.41	
Logan, T. H., captain Fifth Infantry	1,107.53	
Lassiter, W., lieutenant Sixteenth Infantry	1,276.68	170.99
Leyden, J. A., lieutenant Fourth Infantry	597.74	
Lawton, E. P., lieutenant Thirteenth Infantry	9.50	
Lacey, F. E., jr., lieutenant Tenth Infantry	778.03	
Moore, J. M., lieutenant-colonel and deputy quartermaster-general	257,871.71	26,021.62
McGonnigle, A. J., major and quartermaster	33,868.88	8,108.70
Marshall, J. M., captain and assistant quartermaster	19,610.61	302.57
Milmore, A. E., captain and assistant quartermaster	100,896.83	
McCanley, C. A. H., captain and assistant quartermaster	64,666.02	738.99
Miller, C. P., captain and assistant quartermaster	226,338.40	105,051.94
Michaelis, O. E., major Ordnance Department	1,229.96	
Morgan, A. S. M., captain Ordnance Department	1,030.73	
Macklin, J. E., lieutenant Eleventh Infantry	41,041.45	284.70
Morse, B. C., lieutenant Twenty-third Infantry	1,553.43	
Miller, W. H., lieutenant First Cavalry	1,593.86	
Martin, M. C., lieutenant Twenty-second Infantry	17,393.92	1,369.13
Mosher, T., lieutenant Twenty-second Infantry	3,604.18	
McClure, N. F., lieutenant Fourth Cavalry	7,985.07	
Mann, J. D., lieutenant Seventh Cavalry	1,850.38	
More, E. C., U. S. consul-general, Mexico City	215.25	
Mallory, J. S., lieutenant Second Infantry	36.40	
Maun, W. A., lieutenant Seventeenth Infantry	71.05	
Marsh, F., lieutenant First Artillery	621.03	
Michie, E. E. L., lieutenant Second Cavalry	9,200.66	
McCammon, W. W., lieutenant Fourteenth Infantry	1,305.54	4.74
Mason, J. S., jr., lieutenant First Infantry	4,455.15	196.84
Miller, S. W., lieutenant Fifth Infantry	3,841.84	
McCaskey, E. W., lieutenant Twenty-first Infantry	3,078.42	
McIver, G. W., lieutenant Seventh Infantry	1,052.94	
May, W. T., lieutenant Fifteenth Infantry	1,466.84	141.86
Niles, L., lieutenant Second Artillery	14,005.63	2,596.58
Nordstrom, C. E., captain Tenth Cavalry	815.95	
Normoyle, J. E., lieutenant Twenty-third Infantry	609.39	
O'Brien, M. J., lieutenant Thirteenth Infantry	6,568.50	87.98
Oyster, J. S., lieutenant First Artillery	97,252.97	
O'Neil, J. P., lieutenant Fourteenth Infantry		50.00
Overton, C., lieutenant Fourth Cavalry	642.05	
Perry, A. J., colonel and assistant quartermaster-general	52,484.87	41,201.13
Patten, W. S., captain and assistant quartermaster	32,824.52	
Pond, G. E., captain and assistant quartermaster	311,185.42	3,216.82
Pullman, J. W., captain and assistant quartermaster	29,568.01	1,594.13
Pope, J. W., captain and assistant quartermaster	104,065.78	2,302.25
Phipps, F. H., major Ordnance Department	143.82	
Pendleton, E. P., lieutenant Twenty-third Infantry	4,177.06	
Peirce, W. S., lieutenant Second Artillery	2,854.53	1,664.08
Pitman, J., captain Ordnance Department	880.60	
Plummer, E. H., lieutenant Tenth Infantry	9,333.50	
Palmer, A. M., lieutenant Twenty-fourth Infantry	8,365.99	152.29
Paulding, W., lieutenant Tenth Infantry	711.15	
Peshine, J. H. H., lieutenant Thirteenth Infantry	2,905.70	
Perkins, F., lieutenant Fifth Infantry	1,979.21	
Patterson, G. T. T., lieutenant Fourteenth Infantry	443.69	
Pardee, W. J., lieutenant Eighteenth Infantry	18.80	
Palmer, F. L., lieutenant Twenty-first Infantry	1,426.24	
Palmer, G., lieutenant Ninth Infantry	10,398.06	142.21
Post, J. C., major Engineer Corps	113.06	
Patterson, R. H., lieutenant First Artillery	791.95	1,948.87
Robinson, A. G., major and quartermaster	45,034.09	
Rockwell, A. F., major and quartermaster	346,562.23	45,104.33
Rockwell, J., jr., captain Ordnance Department	2,696.78	
Rexford, W. H., captain Ordnance Department	101.30	
Reilly, J. W., major Ordnance Department	1,553.73	
Ridgway, T., lieutenant Fifth Artillery	434.06	
Roudiez, L. S., lieutenant Fifteenth Infantry	3,871.89	
Rogers, J. S., lieutenant Twentieth Infantry	15,603.44	483.29
Reynolds, A., lieutenant Twentieth Infantry	1,564.01	
Robertson, E. B., lieutenant Ninth Infantry	5,543.34	44.69
Ramsey, F. De W., lieutenant Ninth Infantry	4,893.03	
Rafferty, W. C., lieutenant First Artillery	4,992.40	
Rivers, T. R., lieutenant Third Cavalry	1,587.07	23.97
Robinson, W., lieutenant Fourth Artillery	206.62	63.25
Ryan, T., U. S. minister to Mexico		2,703.36
Scully, J. W., major and quartermaster	86,176.51	23,459.10

I.—Statement showing the amounts expended by officers of the Quartermaster's Department during the fiscal year 1890, etc.—Continued.

Names of officers.	Expenditures.	Balances.
Smith, G. C., major and quartermaster.....	\$34,312.68	\$260.92
Simpson, J., captain and assistant quartermaster.....	68,721.57	1,394.26
Summerhayes, J. W., captain and assistant quartermaster.....	144,448.97	10,271.72
Sage, G. E., lieutenant Fifth Artillery.....	1,957.00	
Schenck, B. P., lieutenant Twelfth Infantry.....	1,035.68	
Smith, A. L., lieutenant Fourth Cavalry.....	6,142.08	
Stembel, J. McB., lieutenant Ninth Infantry.....	1,083.90	
Scott, G. L., lieutenant Sixth Cavalry.....	24,049.79	181.56
Shollenberger, J. H., lieutenant Tenth Infantry.....	1,489.83	58.60
Smith, S., lieutenant Second Artillery.....	299.95	
Stevens, R. R., lieutenant Sixth Infantry.....	16,656.73	467.25
Stevens, R. R., lieutenant Twenty-third Infantry.....	627.56	
Stewart, C., lieutenant Third Cavalry.....	100.35	
Sparrow, S. E., lieutenant Twenty-first Infantry.....	101.50	
Stevens, C. J., lieutenant Ninth Cavalry.....	8,211.54	
Sarson, H. B., lieutenant Second Infantry.....	11,103.26	
Slaker, A., lieutenant First Artillery.....	146.57	
Starr, C. G., lieutenant First Infantry.....	15,791.33	1,070.29
Sibley, F. W., lieutenant Second Cavalry.....	455.26	
Sample, W. R., lieutenant Fourteenth Infantry.....	5,249.41	
Safford, M. B., lieutenant Thirteenth Infantry.....	6,891.01	425.84
Stotsenberg, J. M., lieutenant Sixth Cavalry.....	29,439.03	101.07
Sickel, H. G., jr., lieutenant Seventh Cavalry.....	3,418.94	
Selton, J. L., lieutenant Fourth Infantry.....	2,182.70	
Smith, J. H., captain Nineteenth Infantry.....	44.85	46.12
Tompkins, C. H., colonel and assistant quartermaster-general.....	54,694.78	30,832.98
True, T. E., captain and assistant quartermaster.....	113,086.19	6,646.70
Turner, R. B., lieutenant Sixth Infantry.....	2,476.54	31,284.81
Townsley, C. P., lieutenant Fourth Artillery.....	1,655.41	
Torrey, Z. W., lieutenant Sixth Infantry.....	12,182.61	9,129.17
Townsend, T. G., lieutenant Sixth Infantry.....	1,502.73	
Tillson, J. C. F., lieutenant Fifth Infantry.....	1,585.99	
Thompson, C. B., lieutenant Fifth Infantry.....	1,902.85	
Thurston, W. A., lieutenant Sixteenth Infantry.....	7,347.60	
Trout, H. G., lieutenant Ninth Cavalry.....	7,846.48	38.54
Turner, W. J., lieutenant Second Infantry.....	58.08	
Taylor, C. W., lieutenant Ninth Cavalry.....	15,260.96	104.97
Taggart, E. F., lieutenant Sixth Infantry.....	2,181.02	
Todd, A., lieutenant First Artillery.....	7,607.84	
Tayman, C. E., lieutenant Twenty-fourth Infantry.....	1,580.29	4,235.80
Varney, A. L., captain Ordnance Department.....	2,686.52	
Vogdes, A. W., captain Fifth Artillery.....	3,347.59	
Von Schrader, F., lieutenant, Twelfth Infantry.....	12,903.69	1,786.26
Varnum, C. A., lieutenant Seventh Cavalry.....	13,241.15	
Van Dusen, G. W., lieutenant First Artillery.....	999.00	
Vance, Z. B., jr., lieutenant Nineteenth Infantry.....	266.69	
Weeks, G. H., lieutenant-colonel and deputy quartermaster-general.....	132,742.26	
Williams, C. W., captain and assistant quartermaster.....	41,639.22	572.81
Wheeler, D. D., captain and assistant quartermaster.....	115,563.02	12,872.34
Woodward, C. G., lieutenant Third Artillery.....	5,543.00	96.48
Whistler, G. N., lieutenant Fifth Artillery.....	19,208.21	
Wheeler, C. B., lieutenant Fifth Artillery.....	6,842.30	
West, B. K., lieutenant Sixth Cavalry.....	12,657.34	163.75
Warwick, O. B., lieutenant Eighteenth Infantry.....	2,292.21	
Wilhelm, W. H., lieutenant Tenth Infantry.....	4,364.94	
Wetherill, A. M., captain Sixth Infantry.....	22,298.22	
Wilder, W. F., lieutenant Nineteenth Infantry.....	74.90	
Wilson, J. E., lieutenant Fifth Infantry.....	1,914.55	
Wilkins, H. E., lieutenant Second Infantry.....	40.43	
Woodbury, T. C., lieutenant Sixteenth Infantry.....	7,892.95	75.30
Wilson, J. L., lieutenant Fourth Artillery.....	4,612.09	
Wever, B. S., lieutenant First Infantry.....	2,398.87	
Wilson, E. T., lieutenant First Artillery.....	3,412.69	
Woolley, F., lieutenant Tenth Infantry.....	2,719.83	
Williamson, G. McK., lieutenant Sixth Cavalry.....	3,597.75	
Weeks, E. B., lieutenant Fifth Infantry.....	385.00	58.98
Weston, J. F., captain subsistence department.....	10,139.70	5,202.98
Welsh, B. C., lieutenant Fifteenth Infantry.....	624.91	340.69
Wheeler, W. B., lieutenant Eighteenth Infantry.....	151.55	
Young, A. H., captain and assistant quartermaster.....	161,003.76	
Zinn, G. A., lieutenant Engineer Corps.....	11,707.29	2,262.64
Zalinski, M. G., lieutenant Second Artillery.....	8,560.47	740.25
Total.....	9,050,430.44	906,573.70

4.—*Report of Lieut. Col. M. I. Ludington, Deputy Quartermaster-General, U. S. Army, of the clothing and equipage returns, Branch C, for the fiscal year ending June 30, 1890.*

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 17, 1890.

To this branch is assigned the examination of the returns of clothing and equipage, with the correspondence relating thereto, and the necessary records of letters received and sent, and of returns received and forwarded to the Second Auditor of the Treasury.

There were employed during the year nine clerks. The amount of work done in the branch is shown by the following statement:

Work done in Branch C during the fiscal year ending June 30, 1890.

Returns on hand June 30, 1889.....	1,533
Returns received during fiscal year.....	3,912
	5,445
Returns examined during fiscal year.....	4,009
Returns on hand for examination June 30, 1890.....	1,436
Letters and indorsements written.....	6,660
Letters, sent, recorded.....	1,877
Auditor's settlements registered.....	1,224
Transfers of property verified.....	28,124
Sales by auction and to officers verified.....	2,433

Respectfully submitted.

M. I. LUDINGTON,
Deputy Quartermaster-General, U. S. Army.

5.—*Report of Lieut. Col. M. I. Ludington, Deputy Quartermaster-General, U. S. Army, of the barracks and quarters branch for the fiscal year ending June 30, 1890.*

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 17, 1890.

GENERAL: The following report of the operations of the barracks and quarters branch of the Quartermaster-General's Office during the fiscal year ending June 30, 1890, is respectfully submitted:

The work of this branch pertains to providing by hire, purchase, or construction, of barracks, quarters, hospitals, store-houses, stables, roads, sidewalks, wharves and bridges, shooting galleries and target ranges, and generally to all structures furnished by the Quartermaster's Department for the use of the Army, including the repairs thereof, and matters relating to post cemeteries, except interments therein, and other miscellaneous duties, among which are the preparation of drawings, specifications, estimates, and studies of various works under the heads enumerated above; and of conducting the necessary correspondence, and keeping the requisite books and records of the transactions pertaining to the work of the branch.

Matters relating to the improvement of water supply and sewerage at military posts, which had formerly been part of the duties of this branch, were, on the 16th of December, 1889, by orders of the Quarter-

master-General, transferred to the reservation branch of this office, and are not, therefore, included in this report.

Under the head of barracks and quarters, Congress, provided by the act making appropriations for the support of the Army, approved March 2, 1889

Add amount credited to the appropriation during the year.....	\$620,000.00	
	40,578.20	
<hr/>		
Total to be accounted for		660,578.20
Remitted to officers for rent.....	\$115,254.26	
Remitted to officers for repairs, constructions, labor, etc....	541,448.42	
Requested on Treasury settlements.....	47.00	
		<hr/> 656,749.68
Balance on hand June 30, 1890		3,828.52

The principal operations may be noted as follows :

NEW CONSTRUCTIONS.

During the year the construction of barracks, officers' and non-commissioned staff-officers' quarters, store houses, stables, offices, school, chapel, and library buildings, guard-houses, bake-houses, magazines, shops, granaries, bath-houses, sheds, privies, sentry boxes, and corrals, at military posts was duly authorized from the appropriation for barracks and quarters, at an estimated cost of \$217,650.20.

There has also been authorized for new construction and repairs of hospitals, from the appropriation "for construction and repairs of hospitals," expenditures amounting to \$100,000, and for the construction and repairs of hospital stewards' quarters, from the appropriation "for construction of quarters for hospital stewards," the sum of \$12,500.

These structures were to be erected at the military posts in the States of Massachusetts, Connecticut, New York, Michigan, Virginia, Florida, Alabama, Georgia, Montana, North Dakota, South Dakota, Nebraska, Kansas, Colorado, Texas, California, Idaho, Wyoming, and Washington, and the Territories of Utah, Indian, New Mexico, and Arizona.

REPAIRS.

Based upon special estimates, authority was given for repairs, alterations, etc., to public buildings, and for the purchase of building material and tools for use at the various military posts, to the amount of \$202,242.78.

The distribution of these expenditures to the different military departments is shown in the following statement :

Recapitulation of the expenditures authorized for new constructions, repairs, etc., from the appropriation for barracks and quarters, 1889-90, and how distributed.

Designation.	Construc- tion.	Repairs.	Total.
Department of Dakota	\$25,199.46	\$24,914.24	\$50,113.70
Department of the Platte	38,857.87	20,539.83	59,727.66
Department of the Missouri	17,768.37	18,174.47	35,942.84
Department of Texas	15,578.00	18,156.72	33,734.72
Total division of the Missouri	<hr/> 97,443.66	<hr/> 82,085.26	<hr/> 179,518.92
Department of Arizona	38,270.11	25,132.78	63,402.89
Department of California	7,230.70	22,653.37	29,884.07
Department of the Columbia	16,080.98	16,535.90	32,596.88
Total division of the Pacific	<hr/> 61,561.79	<hr/> 64,322.05	<hr/> 125,883.84
Division of the Atlantic	58,654.75	55,835.47	114,490.22
Grand total	<hr/> <hr/> 217,650.20	<hr/> <hr/> 202,242.78	<hr/> <hr/> 419,892.98

In addition to the foregoing, expenditures were authorized for barracks and quarters repairs, improvements, etc., at the independent posts, recruiting stations, depots, etc., as set forth in the following table:

Designation.	Construction.	Repairs.	Total.
Jefferson Barracks	\$860.00	\$3,428.58	\$4,288.58
Daids Island	20,816.00	3,160.79	23,976.79
Columbus Barracks		3,623.65	3,623.65
West Point		9.00	9.00
Willetts Point		2,600.00	2,600.00
Jeffersonville depot		499.73	499.73
Philadelphia depot		3,703.75	3,703.75
New York depot		550.00	550.00
Washington depot		218.50	218.50
St. Louis clothing depot	2,547.70	2,350.00	4,897.70
Miscellaneous		7,736.05	7,736.05
Total	24,223.70	27,880.05	52,103.75

Included in the foregoing statements, under the head of construction, are authorizations for the erection of the buildings at the posts named in the subjoined list, which also shows the amount allotted for each structure and of what material to be built.

Post.	Designation.	Material.	Amount authorized.
Division of the Atlantic:			
Fort Wayne	Quartermaster's store-house	Brick	\$7,232.20
Fort Niagara	Bake house	do	2,852.84
Madison Barracks	Reconstructing west wing officers' quarters	Stone and brick	20,000.00
Do	Closets for quartermaster's store-room	do	397.92
Fort Warren	Latrine building	Frame	393.25
Fort Hamilton	Two new barracks	Brick	16,621.40
Fort Monroe	Double set officers' quarters	Frame	7,260.00
St. Francis Barracks	Subsistence store-house	do	715.65
Mt. Vernon Barracks	Portable house for school and chapel	do	1,000.00
Do	Commissary store-house	do	170.65
Fort McPherson	Blacksmith and wheelwright shop	do	1,540.00
Do	Four sentry boxes	do	160.00
Fort Barrancas	Six privy buildings	do	261.84
Fisher's Island	Store-house	do	149.00
Total			\$58,654.75
Department of Dakota:			
Fort Assiniboine	Reconstructing double set officers' quarters	Brick	1,948.11
Fort Buford	Dry-earth closets	Frame	1,434.76
Do	Barrack addition	do	3,058.72
Fort Custer	Dry-earth closets	do	1,365.43
Do	Cavalry stables	do	1,228.35
Fort Keogh	Guard-house addition	Brick	477.16
Do	Privies for officers' quarters	Frame	1,151.51
Fort Missoula	Addition to field officers' quarters	do	417.19
Fort Pembina	Quartermaster and commissary store-house	do	5,760.26
Fort Randall	Guard-house addition	do	239.00
Fort Sully	Three earth closets	do	1,192.39
Fort Yates	Earth closets	do	1,070.29
Do	Barrack addition	do	4,956.29
Total			\$25,199.46
Department of the Platte:			
Omaha Depot	Ordnance building	Brick	10,539.70
Fort Du Chesne	Fronts for three double sets officers' quarters	Frame	10,000.00
Do	Two double sets officers' quarters, complete, administration building, library, guard-house, etc.	do	13,000.00
Do	Quartermaster's store-house and granary	do	1,470.13
Fort D. A. Russell	Remodeling guard-house	do	3,878.00
Total			\$38,887.83

Post.	Designation,	Material.	Amount authorized.
Department of the Missouri:			
Fort Gibson	Shelter for field guns.....	Frame	\$50.00
Fort Reno	Two cavalry stables and two blacksmith shops.....	do	6,368.00
Do	One set officers' quarters.....	Brick and frame.....	7,274.00
Fort Sill	Cavalry guard-room and shops.....	Brick	1,400.00
Do	Post shops	do	600.00
Do	Shelter for post quartermaster-sergeant.....	do	800.00
Fort Lewis.....	Gun-shed.....	do	234.00
Little Rock Barracks.....	Commissary store cellar.....	do	533.00
Fort Riley.....	Storm-sheds for officers' quarters.....	Frame	267.83
Do	Storm-sheds for field-officers' quarters	do	241.54
Total			\$17,768.37
Department of Texas:			
Fort Clark.....	Two company kitchens	Stone	2,427.00
Fort McIntosh.....	Subsistence store-house	Brick	3,000.00
Do	Engineers' quarters	do	800.00
Fort Ringgold	Commissary store-house.....	do	7,000.00
Do	Shop buildings.....	do	2,351.00
Total			\$15,578.00
Department of Arizona:			
Fort Stanton.....	Rebuilding two sets officers' quarters.....	Adobe and frame.....	3,102.62
Do	L addition of four barracks.....	Stone	7,892.72
Do	Field-gun shelter.....	Frame	1,240.84
Fort Wingate.....	Two cavalry stables.....	do	3,252.24
Do	Quartermaster's corral, etc.....	do	4,460.48
Do	Gun-shed.....	do	428.93
Fort Apache.....	Commissary-sergeant's quarters	do	666.39
Do	Post ordnance-sergeant's quarters.....	do	666.39
Do	Cavalry corral, etc.....	do	1,614.85
Do	Non-commissioned staff officers' quarters.....	do	760.00
Do	Two new barracks	Adobe	10,000.00
Fort Bowie.....	Magazine	Brick	526.90
Do	Gun-shed.....	Frame	142.18
Fort Lowell.....	Commissary-sergeant's quarters	Brick	794.00
San Carlos	Building for ice-machine.....	Adobe	404.42
Do	Shelter for troops.....	do	2,099.15
Whipple Barracks	Gun-shed.....	Frame	218.00
Total			38,270.11
Department of California:			
Presidio of San Francisco.....	Light battery stable	Frame	4,109.50
Do	Stable guard-house	do	337.60
Do	Gun-shed and storeroom.....	do	2,132.40
Do	Blacksmith and harness shop	do	651.20
Do	Bake-house (from savings from Department allotment), cost \$1,370.....		
Total			7,230.70
Department of the Columbia:			
Fort Sherman.....	Addition to non-commissioned staff quarters	Frame	170.73
Fort Spokane	Bake-house	do	1,300.37
Do	Double set officers' quarters	do	8,035.07
Do	Saw-mill, engine and boiler house	do	129.60
Vancouver Barracks.....	Smith-shop	do	650.75
Do	Water-closets.....	do	3,000.00
Fort Walla Walla.....	Completing double set officers' quarters, No. 42.....	do	359.00
Do	Two sets non-commissioned staff quarters.....	do	2,415.46
Total			16,060.93
Recruiting stations, depots, etc.:			
Dauids Island	Additional barrack building	Brick	20,000.00
Do	Storm-sheds for barracks	do	166.00
Do	Screens for barracks.....	do	650.00
Jefferson Barracks.....	Gate-keeper's lodge.....	do	860.00
Miscellaneous:			
St. Louis clothing depot	ting building No. 22 into stable.....		2,547.70
Total			24,223.70

During the year authorizations have also been made for construction of buildings at various military posts from the appropriations for Army transportation and regular supplies, as follows:

FROM THE APPROPRIATION FOR ARMY TRANSPORTATION.

Posts.	Designation.	Material.	Amount authorized.
Division of the Atlantic:			
Fort Hamilton.....	Building for water-closets and urinals.....	Brick.....	\$1,879.26
Newport, Ky.....	Water-closets.....	.....	560.00
Do.....	Water-closets for new barracks.....	.....	1,522.00
Do.....	Water-closet and urinal in quartermaster's storehouse.....	.....	231.00
Fort McPherson.....	Quarters for chief engineer.....	Brick.....	2,783.00
Do.....	Water-closets.....	do.....	494.12
Do.....	Pump-house.....	do.....	1,800.00
Total.....	.....	.....	9,269.38
Department of the Platte:			
Fort McKinney.....	Bath-house.....	Brick.....	8,539.47
Do.....	Wagon sheds.....	Frame.....	1,000.00
Total.....	.....	.....	4,539.47
Department of Dakota:			
Fort Buford.....	Bath-house.....	Frame.....	1,928.40
Fort Missoula.....	Dry-earth privy system.....	do.....	2,389.09
Fort Sully.....	Bath-house.....	do.....	965.88
Fort Yates.....	Wagon shed.....	do.....	500.00
Do.....	Bath-house.....	do.....	1,277.49
Total.....	.....	.....	7,058.86
Department of the Missouri:			
Fort Leavenworth.....	Screen water-closets.....	.....	315.00
Do.....	Fire engine-house.....	Brick.....	1,900.00
Fort Reno.....	Water-closets, etc.....	.....	960.63
Fort Crawford.....	Water-closets.....	Frame.....	184.00
Fort Riley.....	Engineers' quarters.....	Brick.....	1,865.00
Total.....	.....	.....	5,264.63
Department of Texas:			
Fort McIntosh.....	Bath-house.....	Frame.....	1,740.00
Do.....	Pump and boiler house.....	Brick.....	1,528.01
Do.....	Three company out-houses with urinals, etc.....	Frame.....	1,350.00
Fort Ringgold.....	Two bath-houses and one sink.....	Frame and brick.....	1,468.10
San Antonio.....	Garbage crematory.....	Brick.....	3,000.00
Do.....	Wall for corral.....	do.....	5,387.00
Fort Hancock.....	Pump-house.....	do.....	581.00
Total.....	.....	.....	15,054.11
Department of Arizona:			
Fort Huachuca.....	Wagon shed.....	Frame.....	845.95
Fort Wingate.....	Roof for new reservoir.....	Shingle.....	471.44
Do.....	Rebuilding four company bath and wash rooms.....	Frame.....	3,217.12
Fort Apache.....	Bath-house.....	Adobe.....	1,968.98
Total.....	.....	.....	6,503.49
Department of the Columbia:			
Fort Sherman.....	Bath-house.....	Frame.....	2,002.10
Fort Spokane.....	Water-closets, etc.....	do.....	1,375.20
Do.....	Engine pump-house.....	do.....	168.85
Total.....	.....	.....	3,546.15
Independent posts, etc:			
Willet's Point.....	Water closets.....	Brick.....	1,892.89
Dauids Island.....	Temporary water-closets.....	Wood and brick.....	4,738.00
Do.....	Water-closet and urinal.....	.....	3,069.45
Columbus Barracks.....	Garbage furnace.....	Brick.....	350.00
Total.....	.....	.....	10,050.34
Miscellaneous:			
Hot Springs.....	Wagon shed.....	Frame.....	200.00
Hot Springs Army and Navy Hospital.....	.....	.....	.....
Grand total.....	.....	.....	61,486.48

QUARTERMASTER-GENERAL.

671

FROM THE APPROPRIATION FOR REGULAR SUPPLIES.

Posts.	Designation.	Material.	Amount authorized.
Division of the Atlantic:			
Madison Barracks	Hay-scale protection	Frame	\$94. 73
Do	Coal and wood sheds	do	445. 74
Do	Coal-shed	do	1, 346. 06
Fort Schuyler	do	Brick	2, 500. 00
Fort McHenry	Shed protection for hay and coal scales	Frame	251. 53
Jackson Barracks	Coal-shed	Wood	546. 34
Newport, Ky.	Boiler-house and steam-heating system	Brick	6, 829. 42
Fort McPherson	Oil-house	do	541. 20
Fort Wood	Coal-shed	Wood	367. 00
Total			12, 922. 02
Department of the Platte:			
Fort D. A. Russell	Coal-sheds, etc	Frame	1, 980. 11
Fort Niobrara	Wood-sheds for officers' quarters	do	165. 48
Fort Bridger	Coal-shed	do	464. 20
Total			2, 609. 79
Department of Dakota:			
Fort Sully	Coal-shed	Frame	290. 06
Fort Keogh	Coal-shed for officers' quarters	do	583. 00
Total			875. 06
Department of the Missouri:			
Fort Leavenworth	Coal-sheds	Frame	244. 52
Fort Riley	Coal-shed	Stone and brick	8, 977. 75
Fort Supply	Oil-house	Frame	355. 00
Fort Logan	Coal and forage house	Brick	5, 407. 74
Total			12, 985. 01
Department of Arizona:			
Fort Marcy	Oil-house	Frame	74. 85
Do	Granary	do	2, 685. 13
Do	Hay-shed	do	428. 50
Do	Wood, coal, and storage sheds	do	241. 53
Fort Stanton	Three hay-sheds	do	2, 373. 45
Fort Wingate	Coal and hay sheds	do	5, 123. 38
Do	Grain-house	do	2, 204. 20
Fort Bowie	Oil-house	Adobe and stone	298. 00
Fort Huachuca	Hay-shed	Frame	1, 532. 83
Do	Oil-house	Brick	502. 65
Fort Mojave	Hay-shed and oil-house	Frame	217. 22
Whipple Barracks	Oil-house	Brick	879. 00
Do	Hay-shed	Frame	1, 611. 00
Total			18, 173. 24
Department of the Columbia:			
Vancouver Barracks	Three wood-sheds	Frame	2, 693. 55
Boisé Barracks	Coal-shed	do	201. 33
Total			2, 894. 88
Independent posts, etc:			
Willetts Point	Coal-shed	Frame	1, 492. 60
Do	do	do	350. 00
Total			1, 842. 60
Grand total			52, 302. 60

MILITARY POSTS.

In the act making appropriations for sundry civil expenses of the Government for the fiscal year ending June 30, 1890, approved March 2, 1889, Congress appropriated for the construction of buildings at, and the enlargement of, such "military posts as, in the judgment of the Secretary of War, may be necessary," the sum of \$400,000.

This amount, together with the balances of similar appropriations for previous years \$991.25, which had been allotted but not expended, making the aggregate sum of \$400,991.25, was apportioned as follows:

Post.	Designation.	Allowance.
Fort McPherson.....	For four double sets of officers' quarters and one barrack building, water-closets, and miscellaneous expenses.	\$85,975.89
Fort Logan	For one field officer's quarters, four company officers' quarters, two infantry barracks, one headquarters building, one guard-house, and miscellaneous expenses.	109,285.66
Fort Snelling	For two barrack buildings and lockers for same.....	61,000.00
Fort Leavenworth	For two double sets of officers' quarters, three brick cottages, four brick barracks, one brick latrine, etc.	67,816.10
San Antonio	For seven sets officers' quarters and out-buildings, one bakery, one magazine, extra work, repairs, etc.	51,109.32
Fort Wadsworth	For two double sets officers' quarters, advertising, etc	18,914.60
Fort Hamilton.....	For part of expenditure for barracks	6,564.00
	Balance, June 30, 1890	325.68
Total		400,991.25

FORT M'PHERSON, GA.

The construction of this military post has been continued during the past fiscal year.

With the \$75,000 provided by Congress for this post in the act making appropriations to supply deficiencies for the fiscal year ending June 30, 1889, supplemented by the further sum of \$12,000, allotted by the Secretary of War from the fund for enlargement of military posts, act of October 2, 1888, the following buildings, contracted for during the fiscal year of 1888-'89, were completed during the fiscal year just closed, viz:

Four sets non-commissioned staff officers' quarters:	
No. 34 (brick).....	\$1,770
No. 35 (brick).....	1,770
No. 42 (brick).....	1,770
No. 43 (brick).....	1,770
Total	7,080

The heating and gas-piping cost \$320; plumbing, \$640; total, \$960, chargeable to other appropriations.

From the \$87,000 above referred to, contract was also made for the following buildings:

One field officers' quarters, No. 5 (brick).....	\$10,931
One double set company officers' quarters, No. 9 (brick).....	14,000
One commanding officers' quarters, No. 10 (brick).....	11,985
One administration building, No. 21 (brick).....	13,717
One double barrack, No. 24 (brick).....	27,120
Total	77,753

These prices were exclusive of the cost of plumbing, heating, and gas-piping, which, for all the buildings under this contract amounted to: Plumbing, \$4,160; heating and gas-piping, \$2,887; total cost of buildings under this contract, \$84,800.

It becoming apparent that the contractors, by reason of inexcusable neglect and dilatoriness, would be unable to finish this work within the time specified in their contract, it was taken from them, and bids for the completion of the buildings were advertised for, and a new contract executed as follows:

For completion of the five buildings (from the \$87,000).....	\$73,627
For heating, ranges, and gas-piping	4,263
For plumbing.....	5,965
Total.....	83,855

The expense of heating, ranges, and gas-piping is payable from other appropriations.

These buildings are now under construction:

From the \$400,000 appropriated by the sundry civil act of March 2, 1889, for "the construction of buildings at, and the enlargement of, such military posts as, in the judgment of the Secretary of War, may be necessary," the sum of \$81,255 was apportioned for the construction of the barracks and quarters designated below, which have been contracted for, and are now being built, viz:

Four double sets company officers' quarters:	
No. 11 (brick)	\$13,850
No. 12 (brick)	13,850
No. 13 (brick)	13,850
No. 14 (brick)	13,850
One double barrack, No. 26 (brick)	25,855
Total.....	81,255

The cost of heating, ranges, gas-piping, and plumbing in these buildings, which is chargeable to other appropriations, is as follows:

Heating, ranges, etc	\$5,700
Plumbing.....	4,820

FORT LOGAN, COLO.

In the sundry civil act of October 2, 1888, there was appropriated \$50,000 for continuing the work of construction at this post, with which money the buildings here enumerated, contracted for in 1888-'89, were completed during the fiscal year 1889-'90, viz:

Two infantry barracks, Nos. 44 and 45 (brick)	\$33,224
One double set company officers' quarters, Nos. 9 and 10 (brick).....	12,398
Four outbuildings for barracks, Nos. 43, 49, 50, and 51 (brick).....	2,577
Total.....	48,199

There was also allotted to this post from the \$400,000 granted by the sundry civil act of March 2, 1889, for construction and enlargement of military posts, the sum of \$109,285.66, out of which money, buildings have been contracted for and completed during the year, as follows:

Two field officers' quarters, No. 19 (brick)	\$5,885.95
Four double sets company officers' quarters, Nos. 11, 12, 13, 14, 15, 16, 17, and 18 (brick)	54,480.68
Two infantry barracks and outhouses, Nos. 42 and 43 (brick)	20,510.00
One administration building, No. 54 (brick)	12,232.34
One guard-house, No. 55 (brick).....	6,139.10
One bake-house, No. 65 (brick).....	5,333.19
Total.....	104,581.26

The cost of plumbing is included in the above figures; cost of heating, \$7,910, was charged to other appropriations,

FORT SNELLING, MINN.

Brick barracks Nos. 1 and 2, previously begun at this post, were completed during the fiscal year at a cost of \$59,650, payment of which was made from the \$35,650 allotted from the funds provided in the act of October 2, 1888, for the enlargement of military posts, \$15,000 from the special amount appropriated in the deficiency act of March 2, 1889, and \$9,000 from the barracks and quarters appropriation for 1888-'89.

Two additional brick barracks, Nos. 3 and 4, are being erected at this post at a cost of \$60,213.46, the money being provided from the \$400,000 granted by the sundry civil act of March 2, 1889, for construction and enlargement of military posts, etc.

The cost of plumbing, from other appropriations, is reported as being \$962.95.

FORT LEAVENWORTH, KANS.

Out of an allotment of \$67,816.10 of the \$400,000 provided by the sundry civil act of March 2, 1889, for the construction and enlargement of military posts, the following-named buildings have been constructed under contract at Fort Leavenworth, Kans.:

Three brick cottages for officers' quarters, Nos. 28, 29, 30, at \$2,475, each.....	\$7,425
Two double sets officers' quarters, Nos. 26 and 27, brick, at \$8,300, each.....	16,600
Four brick barrack buildings, Nos. 42, 43, 44, and 45, at \$10,250, each.....	41,000
One brick latrine and bath-room, No. 33	1,081
Total.....	\$66,106

Additions to the barracks were made, costing \$1,710.10.

Plumbing and heating are not included in above.

SAN ANTONIO, TEX.

During the year the following buildings have been constructed at the military post at San Antonio, Tex., from the \$400,000 above mentioned:

Seven sets officers' quarters, Nos. 22 to 28, inclusive (brick), and out-buildings for same, at \$6,062, each.....	\$42,434
One bakery (brick).....	2,050
One magazine (brick)	1,560
Total.....	\$46,044

Plumbing for the above-named buildings, \$3,000 additional, from other appropriations.

FORT WADSWORTH.

During the year two double sets of officers' quarters, Nos. 7 and 8 (frame) contracted for in 1888-'89, were completed. Cost: Buildings \$19,614; plumbing and gas-fitting, \$2,150; total, \$21,764.

There was also contracted for and completed at this post during the fiscal year just closed, two double sets of officers' quarters, Nos. 9 and 10 (frame) at a cost of \$18,850 for the buildings, from the \$400,000. Plumbing, gas-fitting, heating, etc., \$2,896; total, \$21,746.

The cost of plumbing and gas-fitting for these buildings is chargeable to other appropriations.

FORT HAMILTON.

Two brick barracks have been contracted for at this post at a total cost of \$28,098.40, of which amount \$6,564 was taken from the \$400,000 appropriated by the act of March 2, 1889, for military posts, and the balance from other appropriations.

They are now in course of construction.

FORT MONROE.

At Fort Monroe, Virginia, three double sets of officers' quarters, which were contracted for during the fiscal year 1888-'89, have been completed at a cost of \$19,265, including plumbing and heating.

FORT RILEY, KANS.

Buildings at this post, the construction of which was begun last year, have now been completed at the contract prices given below, from the \$150,000 appropriated by the sundry civil act of October 2, 1888:

Two double cavalry barracks, Nos. 1 and 3, 2 and 4 (stone).....	\$46,851.00
One mess-hall, No. 9 (stone).....	26,626.00
Two latrines (stone)	2,563.00
Two double sets cavalry officers' quarters, Nos. 18 and 20, 19 and 21 (stone).....	20,772.00
One single set field officers' quarters, Nos. 39 (stone).....	6,300.00
One double set cavalry officers' quarters, Nos. 22 and 24 (stone)	10,104.00
Three artillery stables and corrals Nos. 1, 2, 5 (stone)	34,886.00
Total	148,102.00

The plumbing cost \$7,569, and heating apparatus \$7,907, paid from other appropriations.

During the year there have also been constructed at this post, from the \$100,000 appropriated by the sundry civil act of March 2, 1889, at the cost stated, the following buildings, viz:

Five cavalry stables, Nos. 1 and 3, 4 and 5, and 7 (stone).....	\$42,805.00
One double set non-commissioned staff officers' quarters (stone)	3,163.00
One guard-house, No. 7 (stone).....	5,825.00
Two double sets cavalry officers' quarters, Nos 6 and 8, 7 and 9 (stone) ...	17,284.00
Two single sets field officers' quarters, Nos. 38 and 40 (stone).....	13,600.00
One administration building, No. 5, completed (stone).....	15,000.00
Total	97,677.00

The plumbing in these buildings cost \$5,579.60, and the heating \$9,711, which sums were taken from other appropriations of the Quartermaster's Department.

FORT SHERIDAN.

Congress, by act of September 22, 1888, making appropriations for the support of the Army, etc., provided for the necessary buildings and wharf at Fort Sheridan the sum of \$300,000. During the fiscal year 1888-'89 the following-named buildings were contracted for at the prices stated, viz:

One double set non-commissioned staff officers' quarters, No. 46 (brick)...	\$6,005.00
Barrack wing for six companies, No. 48 (brick).....	63,902.00
One store-house, No. 35 (brick).....	12,700.00
One guard-house, No. 33 (brick).....	13,820.00
One quartermaster's stable, No. 38 (brick)	8,280.00
Two sets of field-officers' quarters, Nos. 8 and 9 (brick).....	20,502.00
Seven sets captains' quarters, Nos. 10, 11, 12, 13, 18, 19, 20 (brick).....	56,651.00
Fourteen sets lieutenants' quarters, Nos. 3, 4, 5, 6, 7, 15, 16, 21, 22, 23, 24, 25, 26, 27 (brick).....	93,646.00
Shops, No. 36 (brick)	6,821.00
Coal-house, No. 51 (brick).....	3,671.00
Bakery, No. 34 (brick)	4,356.00
Total	290,354.00

The contractors for all of these buildings, with exception of the non-commissioned staff officers' quarters, failed, after performing a small amount of work under their agreement, and a new contract for the completion of the buildings was entered into on September 30, 1889, as follows:

Barrack wing, for six companies, No. 48	\$63,102.00
Store-house, No. 35	12,700.00
Guard-house, No. 33	13,340.00
Quartermaster's stable, No. 38	8,280.00
Two sets of field officers' quarters, Nos. 8 and 9	20,502.00
Seven sets of captain's quarters, Nos. 10, 11, 12, 13, 18, 19, 20	51,051.00
Fourteen sets of lieutenant's quarters, Nos. 3, 4, 5, 6, 7, 15, 16, 21, 22, 23, 24, 25, 26, 27	93,646.00
Shops, No. 36	6,821.00
Coal-house, No. 51	1,931.00
Bakery, No. 34	4,356.00
Total	275,729.00

Of these buildings, the coal-house alone has been completed under this contract.

The foregoing figures do not include plumbing, heating, and gas-fitting, for which separate contracts have been made for the following amount for all of the buildings, the cost thereof to be met from other appropriations:

	Plumbing, etc.	Heating.
Barrack wing	\$8,287.50	
Stable	209.10	
Non-commissioned staff officers' quarters	619.14	
Bakery	191.25	
Store-house	495.00	
Guard-house	535.00	\$1,638.00
Field officers' quarters	1,280.00	2,592.00
Captain's quarters	3,976.00	7,539.00
Lieutenant's quarters	8,302.00	11,970.00
Total	28,844.99	23,739.00

NEWPORT, KY.

Of the buildings mentioned in last annual report as under construction at this post, the following have been completed, viz:

Two artillery barracks, Nos. 11 and 12 (brick)	\$38,888.00
One commanding officer's quarters, No. 1 (brick)	10,643.53
One store-house, No. 14 (brick)	6,541.00
One bake-house, No. 21 (brick)	3,250.00
Three double sets officers' quarters, Nos. 2, 3, 4, 5, 8, 9 (brick)	34,968.00
Total	94,290.53

In addition to these sums, which were paid from the \$100,000 appropriated by act of March 3, 1887, for the erection of necessary and suitable buildings at this post, the following amounts were expended from other appropriations:

Commanding officer's quarters, servants' water-closet, \$80; furnace, \$325; gas fixtures and gas-machine, \$383.15; total, \$788.15.

The two barracks each, gas fixtures and gas-machine, \$626.38.

Three double sets officers' quarters, servants' water-closet, \$480; gas fixtures and gas-machine, \$966.81; total, \$1,446.81.

There were also constructed here during the year from the \$50,000 provided by act of March 2, 1889, the following buildings:

One guard-house, No. 15 (brick).....	\$5,370.00
Three sets non-commissioned staff officers' quarters, Nos. 17, 18, 19 (brick).....	6,300.00
Two single sets officers' quarters, Nos. 6 and 7 (brick), \$6,750 each.....	13,500.00
One stable, No. 13 (brick).....	6,300.00
One administration building, No. 10 (brick).....	9,540.00
The following buildings have also been authorized, viz:	
One magazine (brick).....	683.00
Shops (brick).....	1,000.00
Total	42,693.00

The cost of plumbing is included in the above.

FORT NIOBRARA, NEBR.

In the sundry civil acts of October 2, 1888, and March 2, 1889, Congress provided \$30,000 for completing the work of constructing the necessary buildings at this post, and the following projects, contracted for and begun during the fiscal year 1888-'89, were completed during the fiscal year just closed:

One double set officers' quarters, No. 59 (frame).....	\$6,550.00
One field officer's quarters, No. 58 (frame).....	4,865.00
One quartermaster's store-house, No. 60 (frame).....	3,905.00
One guard-house, No. 24 (adobe).....	2,184.00
One commissary store-house, No. 52 (frame).....	4,913.00
For repairs, fences, etc.....	4,156.72
During the last fiscal year there was also constructed from this fund a frame L addition to officers' quarters, Nos. 3 and 4, at a cost of.....	3,422.00
Total	29,995.72

COLUMBUS BARRACKS, OHIO.

At Columbus Barracks, Ohio, four brick buildings, for officers' quarters, have been completed during the year, at a cost of \$19,320, exclusive of plumbing, heating, etc., the money being supplied from the \$20,000 provided by the Army appropriation act of March 2, 1889.

In addition to this sum, the heating cost \$652; plumbing, etc., \$1,927; total, \$2,579, from other appropriations.

At Fort Sidney, Nebr., with \$15,000 provided by the deficiency act of March 2, 1889, repairs have been made to buildings, etc., as follows:

To three barracks, Nos. 14, 15, 37, \$10,657.90; to officers' quarters, \$3,820; for other repairs, \$522.10.

NEW POST AT FORT OMAHA, NEBR.

The act of Congress approved July 25, 1888, provided for the sale of the site of old Fort Omaha, and appropriated \$200,000 for the purchase of a new site and the construction thereon of buildings necessary and sufficient for a ten-company post, to be known as Fort Omaha; and it was further provided that not more than one-third of this sum (\$66,666.66) should be expended for the site, the remaining \$133,333.33 to be used in the construction of buildings, etc.

The preliminary work of surveying and platting the site has been begun, and plans and estimates for the necessary buildings to accommodate a garrison of eight companies of infantry and four troops of cavalry, as recommended by the Major-General Commanding the Army and approved by the Secretary of War, are being prepared. The en-

tire infantry part is to be constructed first before that for the cavalry is commenced.

Information regarding the purchase of the site for this post will be found in the report of the work of the reservation branch of this office.

NEW POST AT FORT BRADY, MICH.

By an act approved July 8, 1886, the Secretary of War was authorized to purchase grounds in or near the village of Sault Ste. Marie, suitable and sufficient for fortifications and for garrison purposes, and construct thereon the necessary buildings, with appurtenances, sufficient for a four-company military post, to be known as Fort Brady, and for this purpose a sum of money not exceeding \$120,000 was provided.

Instructions have been given by orders of the Secretary of War for the preparation of plans for barracks for four companies of infantry and quarters for company officers and one field officer.

A board of officers has also been convened to select the necessary sites for the buildings to be erected at this post.

The report of the reservation branch contains full information relating to the purchase of the land for the new post.

MACADAMIZED ROAD AT PLATTSBURGH BARRACKS, N. Y.

In pursuance of authority granted by Congress in the sundry civil act of March 2, 1889, which also provided \$10,000 for the purpose, the construction of a macadamized road leading from the village of Plattsburgh, N. Y., through and along the military reservation in that village has been completed under contract during the fiscal year at a cost of \$9,878.77.

NEW POST OF FORT BLISS, TEX.

By act approved March 1, 1890, Congress authorized the sale of the site of Fort Bliss, Tex., the sale or removal of the improvements thereof, and provided for the purchase of a new site within a distance of ten miles of the limits of El Paso, Tex., and the construction of the necessary buildings with appurtenances sufficient for a military post to be known as Fort Bliss, and appropriated \$150,000 for the purpose.

No action was taken during the present fiscal year towards carrying this law into effect.

RESERVATION OF THE PRESIDIO AT SAN FRANCISCO, CAL.

By act approved June 4, 1888, Congress appropriated \$10,000 for the construction and repair of the roads from the entrance to the reservation of the Presidio at San Francisco, Cal., to the national cemetery on the same, and the fencing and protection of the reservation, and by act of March 2, 1889, an additional sum of \$38,000 was appropriated for continuing the work, and for planting trees and construction of a roadway connecting the Fort Mason Reservation with the reservation of the Presidio of San Francisco.

The work accomplished during the year, as reported by Capt. G. A. Hull, military storekeeper, U. S. Army, acting assistant quartermaster, is as follows:

The balance on hand July 1, 1889, of the \$10,000 was \$3,106.74, of which \$2,247.55 has been expended, and a balance of \$859.19 remains.

This money has been expended in excavating an experimental tunnel

in the valley west of the Presidio, repairing wind-mills, fences, planting trees, etc.

Actual count on November 1, 1889, showed that the contractor for planting trees was entitled to payment for 43,127, all of which are in a flourishing condition; 35,372 trees raised at the nursery were transplanted during the year and 80 acres of land broken and put in condition for tree planting.

From the \$38,000 appropriation a nursery was established, seed procured, and the propagation of trees begun as an experiment, resulting in the production of 50,000 trees, 40,000 of the eucalyptus variety and 10,000 Monterey cypress, which were in a thrifty condition until February, when, owing to frequent heavy rains, about 15,000 were destroyed.

A contract has been executed at \$5,250 for the construction of a road along the southern boundary line of the reservation, work on which is steadily progressing.

An additional contract has been entered into for a continuation of this road, which, when completed, will afford direct communication between the First avenue and Central avenue gates.

December 27, 1889, a contract was executed for furnishing and planting 50,000 trees, including their care and cultivation until November 1, 1890. A total of 53,252 trees have been planted, the additional number to serve as a security against possible loss.

A contract for transplanting the trees raised at the nursery has since been awarded, in accordance with which 35,372 trees have been transplanted.

The total number of trees planted this year is 91,727, classified as follows:

Monterey pine.....	7,157
Monterey cypress.....	33,831
Acacia decurrens.....	8,953
Acacia leucoxylum.....	793
Catalpa spiciosa.....	3,512
Willow.....	4,026
Eucalyptus amygdalina.....	28,558
Miscellaneous varieties (purchased).....	1,794
Miscellaneous varieties (donated from Golden Gate Park).....	1,103
Native redwoods, madroues, spruces and laurels (donated by Captain Dougherty, Fort Gaston, Cal.).....	2,000

The trees are in a thrifty condition, the area planted being about 90 acres.

As the road to connect Fort Mason and Presidio Military Reservation, which was provided for in the appropriation, would necessarily traverse city streets, over which the United States would have no control, it was necessary to make arrangements with the city authorities to insure that the road should be kept in good order and repair, if built by the Government. The board of supervisors, which is the legislative body of the city, passed a resolution that if the United States authorities would build the road in a certain specified manner authority to do the work was thereby granted, and the city and county of San Francisco pledged itself by the resolution that the roadway should after its construction be kept in good order and repair. A contract was therefore executed for the construction of the roadway at a cost of \$9,286.59.

When this work is completed there will be a good road connecting the reservations, and affording also an easy communication with the city.

Fourteen thousand feet of barbed-wire fence have been constructed

for the protection of trees and the grass from cattle, and general laboring work has been performed in the care of the reservation.

Expenditures from the \$38,000 appropriation have been made as follows:

Cash expended	\$6,561.59
Outstanding debts.....	601.42
Outstanding on contracts.....	18,344.88
Authorized for the improvement of water supply.....	4,000.00
Total.....	29,507.89
Leaving a balance of.....	8,492.11

Expenditures authorized for wharves, roads, walks, grading, bridges, and various other expenditures, chargeable to the appropriation for Army transportation.

Post.	Roads, walks, grad- ing, bridges.	Wharves.	Miscella- neous.
Fort Wayne, Mich		\$1,515.00	\$674.00
Fort Brady, Mich	\$241.00		50.00
Fort Mackinac, Mich.....			437.50
Fort Niagara, N. Y	342.50		
Fort Ontario, N. Y	381.06		
Madison Barracks, N. Y.....		188.85	
Plattsburgh Barracks, N. Y	68.38	150.00	239.50
Fort Proble, Me	198.00		
Fort Warren, Mass.....	900.00		677.75
Fort Adams, R. I.			320.00
Fort Trumbull, Conn.....	28.50		283.59
Fisher's Island, Conn.....			2,118.20
Fort Hamilton, N. Y	11,861.50		3,379.26
Fort Wadsworth, N. Y.....	6,856.30		1,940.00
Fort Columbus, N. Y			41.55
Governor's Island, New York Harbor.....		283.00	343.00
Fort Schuyler, N. Y	675.00	3,750.00	293.00
Fort McHenry, Md	88.00		65.00
Washington Barracks, D. C	5,195.00	560.00	32.68
Fort Monroe, Va	600.00		1,772.45
St. Francis Barracks, Fla.....			641.30
Fort Barrancas, Fla		399.30	358.60
Mount Vernon Barracks, Ala.....			939.75
Jackson Barracks, La	738.15	1,190.00	
New post at Newport, Ky	20,400.00		2,335.50
Fort McPherson, Ga	3,742.00		3,697.12
Fort Myer, Va			170.68
Fort Wood, N. Y			78.60
Hot Springs, Ark			200.00
Fort Assiniboine, Mont.....			796.00
Fort Buford, N. Dak			1,926.40
Fort Custer, Mont	24.00		
Fort Missoula, Mont			2,589.09
Fort Snelling, Minn			20.00
Fort Sully, S. Dak			965.88
Fort Yates, N. Dak	244.70		1,777.49
Fort D. A. Russell, Wyo.....			25.68
Fort McKinney, Wyo			4,539.47
Fort Niobrara, Nebr			670.63
Fort Omaha, Nebr			7.00
Fort Sidney, Nebr			80.00
Fort Du Chesne, Utah.....	1,500.00		
Cheyenne Ordnance Depot.....			6,050.00
Fort Sheridan, Ill	27,804.76	6,000.00	176.35
Fort Leavenworth, Kans.....	8,571.75		3,684.79
Fort Reno, Ind. T	1,157.50		990.68
Fort Riley, Kans	78,457.95		6,735.60
Fort Logan, Colo	12,516.55		
Fort Crawford, Colo			194.00
Fort Brown, Tex	90.00		13.80
Fort Davis, Tex	10.00		
Fort McIntosh, Tex			3,104.00
Fort Ringgold, Tex			1,488.10
San Antonio, Tex	5,467.29		3,674.62
Fort Wingate, N. Mex.....	1,150.00		3,217.12
Fort Verde, Ariz			10.05
Fort Bowie, Ariz			1,040.90
Fort Grant, Ariz			113.69
Fort Huachuca, Ariz.....			845.95

Expenditures authorized for wharves, roads, walks, grading, bridges, etc.—Continued.

Post.	Roads, walks, grading, bridges.	Wharves.	Miscellaneous.
Fort Lowell, Ariz.....	\$20.00		
Whipple Barracks, Ariz.....			\$198.00
Angel Island, Cal.....		\$4,444.00	17.00
Fort Bidwell, Cal.....	158.25		
Fort Mason, Cal.....		20,050.66	444.85
Presidio of San Francisco.....	147.00	387.00	835.00
Los Angeles, Cal.....			120.50
Fort Sherman, Idaho.....			2,563.70
Fort Spokane, Wash.....			1,544.05
Jefferson Barracks, Mo.....	138.00		200.00
David's Island, N. Y.....	4,270.30		8,135.04
Columbus Barracks, Ohio.....	5,250.45		750.00
Willetts Point, N. Y.....	991.00		
Jeffersonville Depot, Ind.....			52.00
St. Louis Clothing Depot.....	78.00		255.00
Miscellaneous.....	4,000.00		196.00
Total.....	204,363.89	38,917.31	80,906.26

“For shelter and shooting galleries and ranges, and repairs thereof” Congress granted \$10,000 in the act making appropriation for support of the Army, March 2, 1889, which sum was apportioned in the following manner:

Station.	Designation.	Cost.	Station.	Designation.	Cost.
Division of the Atlantic.	Apportionment.....	\$1,630.79	Fort Snelling.....	Rent of land.....	\$200.00
Department of Dakota.	do.....	550.95	Division of the Atlantic.	Card-boards.....	5.40
Department of the Platte.	do.....	296.11	Fort Niagara.....	Hire two saddle horses.....	100.00
Department of the Missouri.	do.....	379.47	Boisé Barracks.....	Flour and repairs.....	25.50
Department of Texas.	do.....	196.54	Department of Dakota.	144 camp stools.....	87.70
Department of the Columbia.	do.....	146.37	Fort Wingate.....	Flour.....	1.14
Department of California.	do.....	674.79	Fort Meade.....	Nails.....	7.00
Department of Arizona.	do.....	257.98	Fort Du Chesne.....	Flour.....	.76
Fort Sheridan.....	Rifle range.....	3,500.00	Fort Randall.....	Work in part.....	73.54
Fort Elliott.....	Flour.....	2.00	Do.....	Pit house.....	33.95
Presidio, San Francisco.	Repairs.....	89.52	Fort Sully.....	Revestments.....	179.91
Fort Adams.....	do.....	72.05	Do.....	Pit house.....	16.21
Fisher's Island.....	Rent of range.....	500.00	Do.....	Skilled labor.....	17.50
Do.....	Flour.....	5.87	Fort Mojave.....	Flour.....	1.25
Omaha.....	Lumber.....	50.00	Fort Marcy.....	Repairs.....	48.45
Do.....	Tags, hammers, etc.....	13.85	Fort McHenry.....	Repairs to butt.....	62.50
Omaha, Bellevue.....	Rent of grounds.....	600.00	Fort Russell.....	Repairs.....	86.04
			Fort Clark.....	do.....	38.75
			Fort Myer.....	do.....	20.00
			Do.....	do.....	25.87
			Mount Vernon Barracks.	Flour.....	2.24
			Total.....		10,000.00

HOSPITALS.

For construction and repair of hospitals, including the extra-duty pay of enlisted men employed on the same, Congress, in the Army appropriation act of March 2, 1889, provided \$100,000. This fund has been disbursed by officers of the Quartermaster's Department, on estimates approved by the Surgeon-General of the Army, as follows:

Department and post.	Amount.	Department and post.	Amount.
Division of the Atlantic:		Fort Riley	\$675. 00
Fort Wayne	\$1, 114. 93	Fort Logan	7. 50
Fort Porter	641. 75	Oklahoma, Ind. T.	124. 65
Fort Ontario	90. 00	Guthrie, Ind. T.	125. 00
Madison Barracks	1, 140. 00	Total	25, 920. 14
Fort Preble	154. 30		
Fort Warren	440. 07	Department of Texas:	
Fort Adams	690. 00	Fort Clark	1, 030. 00
Fort Drumbull	710. 50	Fort Davis	200. 00
Fort Wadsworth	575. 00	Fort Ringgold	2, 124. 46
Fort McHenry	341. 00	San Antonio	1, 344. 29
Fort Monroe	756. 60	Fort Hancock	140. 00
Fort Barrancas	1, 334. 90	Camp Pena, Colorado ..	95. 39
Hot Springs	1, 339. 37	Camp Del Rio	97. 20
Washington Barracks ..	60. 00	Fort Bliss	550. 00
Fort Niagara	10, 430. 30	Fort McIntosh	530. 60
Fort Hamilton	900. 00	Fort Brown	2, 500. 00
Fort Mackinac	25. 00	Camp Eagle Pass	5. 50
Newport Barracks	121. 58	Advertising	22. 50
Jackson Barracks	10, 365. 92	Total	8, 639. 94
Plattsburgh Barracks ..	66. 00		
Fort Myer	1, 442. 00	Department of Arizona:	
Mount Vernon Barracks	120. 00	Fort Bayard	70. 00
Fort Schuyler	700. 00	Fort Selden	74. 88
Fort Brady	375. 00	Fort Stanton	550. 00
St. Francis Barracks ..	108. 00	Fort Wingate	454. 84
Fort Columbus	1, 550. 00	Fort Verde	80. 00
Total	34, 392. 22	Fort Apache	125. 00
		Fort Grant	867. 78
Department of Dakota:		Fort Huachuca	475. 00
Fort Assiniboine	616. 12	Fort Lowell	299. 52
Fort Buford	725. 00	Whipple Barracks	225. 00
Fort Custer	135. 00	Fort Thomas	350. 00
Fort Keogh	900. 00	Fort Marcy	164. 27
Fort Maginnis	34. 73	San Carlos	5, 573. 00
Fort Meade	600. 00	Total	9, 309. 29
Fort Missoula	740. 00		
Fort Pembina	480. 87	Department of California:	
Fort Randall	380. 42	Alcatraz Island	3, 539. 57
Fort Shaw	237. 52	Angel Island	479. 80
Fort Snelling	120. 00	Benicia Barracks	575. 00
Fort Yates	2, 187. 71	Fort Bidwell	14. 50
Fort Sully	314. 83	Fort Gaston	250. 00
Camp Sheridan	450. 00	Fort Mason	288. 23
Total	7, 922. 20	Presidio of San Francisco	634. 10
		Total	5, 781. 20
Department of the Platte:			
Fort Bridger	59. 35	Department of the Columbia:	
Fort McKinney	450. 00	Boise Barracks	80. 00
Fort Niobrara	870. 00	Fort Spokane	100. 00
Fort Omaha	133. 40	Fort Townsend	200. 00
Fort Washakie	750. 00	Vancouver Barracks ..	471. 37
Fort Du Chene	19. 32	Fort Canby	295. 70
Fort Douglas	239. 10	Fort Walla Walla	1, 175. 00
Fort Sidney	372. 00	Total	2, 322. 07
Total	2, 893. 17		
		Recruiting stations, etc.:	
Department of the Missouri:		Jefferson Barracks	525. 00
Little Rock Barracks ..	528. 50	David's Island	149. 88
Fort Sheridan	49. 12	Willet's Point	90. 00
Fort Leavenworth	4, 157. 69	West Point	2, 054. 89
Fort Gibson	227. 75	Total	2, 819. 77
Fort Elliott	150. 00		
Fort Reno	18, 580. 00	Grand total	100, 000. 00
Fort Sill	650. 00		
Fort Supply	326. 44		
Fort Crawford	300. 00		
Purcell, Ind. T.	18. 40		

Included in the foregoing are new hospital constructions at the following posts:

Fort Niagara, 12-bed, brick.....	\$10,304.80	Fort Reno, 24-bed, wooden.....	\$18,000.00
San Carlos, 8-bed, adobe.....	5,573.00	Alcatraz Island, new ward, brick.....	3,500.00
Jackson Barracks, wooden.....	9,925.92	Fort Ringgold, isolation ward, etc.....	1,770.64

None of these constructions were completed during the fiscal year.

HOSPITAL STEWARDS' QUARTERS.

An appropriation of \$12,500 was also made in the above-mentioned act for the construction of hospital stewards' quarters, including the extra-duty pay of enlisted men employed thereon.

This money has been apportioned by the Secretary of War to the posts named below under the provision of law "that the cost of construction of quarters at any one post shall in no case exceed \$800, except where a post is situated at a city of more than 50,000 inhabitants, the cost of construction of such quarters may be not to exceed \$1,200."

Station.	Amount.	Station.	Amount.
Fort Adams	\$798.00	Fort Meade.....	\$257.84
Fort Apache.....	75.00	Fort Monroe.....	9.00
Fort Bayard.....	84.25	Mount Vernon Barracks.....	40.00
Benicia Barracks.....	875.00	Fort Myer.....	75.00
Boise Barracks.....	800.00	Fort Niobrara.....	155.00
Fort Canby.....	195.50	Fort Pembina.....	44.73
Fort Clark.....	680.00	Presidio of San Francisco.....	63.00
Columbus Barracks.....	174.29	Fort Randall.....	16.04
Fort Custer.....	30.00	Fort Reno.....	75.00
Fort D. A. Russell.....	190.00	Fort Selden.....	24.65
David's Island.....	128.69	Fort Snelling.....	28.80
Fort Elliott.....	49.97	Fort Spokane.....	65.00
Fort Grant.....	124.98	Fort Stanton.....	225.00
Fort Gibson.....	35.40	Fort Sully.....	59.49
Fort Hamilton.....	165.00	Fort Supply.....	175.00
Fort Hancock.....	124.80	Fort Thomas.....	40.00
Fort Huachuca.....	85.00	Fort Trumbull.....	7.45
Jefferson Barracks.....	120.00	Vancouver Barracks.....	40.50
Fort Keogh.....	300.00	Fort Washakie.....	292.72
Fort Leavenworth.....	271.50	Washington Barracks.....	35.50
Fort Lowell.....	799.67	Fort Wayne.....	1,200.00
Fort McHenry.....	300.00	Fort Wingate.....	799.93
Fort McPherson.....	1,199.50	Fort Yates.....	320.00
Madison Barracks.....	145.00		
Fort Marcy.....	798.80	Total.....	12,500.00

BRIDGES.

During the year a steel bridge was constructed across the Kansas river at Fort Riley, Kans., to connect the two portions of the reservation separated thereby. It was built under contract from transportation funds, at a total cost of about \$15,454, which included the necessary approaches.

A new bridge over the Rio Puerco, on the road leading from Fort Wingate to Wingate Station, N. Mex., has also been built, at a cost of \$1,150.

At Fort Sheridan a bridge was authorized in connection with 3,000 yards of roadway, the contract price for the whole work being \$24,500, of which sum it is estimated that \$800 was necessary for the construction of the bridge. The work was not completed during the year.

WHARVES, ETC.

For the extension of the wharf at Fort Schuyler, New York Harbor, the Secretary of War authorized the expenditure of \$3,750, and work has been done at the contract price of \$2,795.

For the enlargement and repair of the wharf at Fort Mason, Cal., \$16,700 was authorized from the Army transportation appropriation, and the work has been contracted for at \$14,450. It was not completed during the year.

An additional sum of \$3,000 was also authorized for the construction of a bulk-head on the reservation line at Fort Mason, to prevent the erosion of the bank by the wash of the waves.

PURCHASE OF POST TRADERS' BUILDINGS.

The establishment of canteens at military posts having been authorized by General Orders No. 10, of February 1, 1889, the post traders at those posts where canteens were introduced, having no longer any use for their buildings, which had been erected at their own cost, in many cases offered their property for sale to the Government. Where such offers have been made the post traders' buildings have generally been examined by boards of officers appointed for that purpose, with a view to ascertaining their adaptability for purposes of barracks and quarters, or other garrison uses, and appraised for purchase, where such purchase was considered desirable, according to what was estimated to be their actual value to the Government.

During the fiscal year the following post traders' buildings were authorized to be purchased by the United States for the prices named, from the appropriation for barracks and quarters, 1889-'90.

At Fort Adams, R. I.	\$1,200.00
At Fort McHenry, Md.	800.00
At Fort Myer, Va.	2,000.00
At Fort Robinson, Nebr. (one building)	600.00
At Fort Meade, S. Dak. (two buildings)	2,237.50
At Fort Yates, N. Dak. (one building)	1,000.00
At Benicia Barracks, Cal.	500.00
At David's Island, New York Harbor	2,666.00
At Jefferson Barracks	4,800.00
At Willets Point	1,000.00
Total	16,803.50

Losses by fire.

Post.	Property injured or destroyed.	Post.	Property injured or destroyed.
Fort Bidwell	Guardhouse.	Fort Monroe	Officers' quarters No. 18.
Fort Brown	Roof administration building.	Fort Snelling	Coal shed.
Fort Clark	Barber shop.	Fort Spokane	Sawmill.
Do	Band quarters.	Vancouver Barracks	Band leader's quarters.
Fort Buford	Commanding officer's quarters.	Fort Wadsworth	Old laundress' quarters.
Fort Crawford	Engineer's quarters.	Washington Barracks	Commanding officer's quarters No. 31.
Fort Du Chesne	New sawmill.	Willets Point	School and theater building.
Fort Gibson	Gristmill.	do	Engineer's storehouse.
Fort Grant	Officers' quarters Nos. 3 and 4.	Whipple Barracks	Officers' quarters No. 31.

Losses by storm and flood.

Post.	Property injured or destroyed.	Post.	Property injured or destroyed.
Fort Assinniboine	Officers' quarters No. 15.	Fort McKinney	Stables, corral, wagon shed, fences, and windows of buildings.
Fort Gaston	Agency sawmill, trestle, and water pipe.	Newport Barracks	Roads, banks, and esplanade.
Jackson Barracks	Fences.	Fort Ontario	Barracks, officers' quarters, stable, and coalshed.
Jeffersonville Depot	Roof of office over main entrance.	Fort Porter	Chimneys and roofs of barracks and hospital.
Fort Klamath	Hay shelter.		
Fort Lewis	Coal shed.		

SALE OF BUILDINGS.

The sale of five temporary cottages, wholly beyond repair, at San Antonio, Tex., has been authorized.

In connection with this report a statement is herewith submitted, marked A, compiled from the latest data on file, showing the actual expenditures made during the fiscal year on account of barracks and quarters at the various posts and stations, the particular building repaired, etc., also a statement, B, showing property rented by the Quartermaster's Department, during the fiscal year, as shown by estimates of funds.

Very respectfully,

M. I. LUDINGTON,
Deputy Quartermaster General, U. S. Army.

A.—Statement compiled from reports thus far received, showing expenditures actually made on account of repair and construction of public buildings at various posts during fiscal year ending June 30, 1890 :

DIVISION OF THE ATLANTIC.

Post.	Designation.	Amount.	Total.
Fort Monroe, Va.	Commanding officers' quarters No. 1	\$193.34	
	Ordnance store-house No. 2	1.92	
	Double set officers' quarters No. 3	57.58	
	Ordnance store-house No. 4	32.36	
	Barracks No. 5	525.53	
	Boiler house No. 6	18.00	
	Men's library and reading-room No. 7	70.48	
	Company officers' quarters No. 8	562.21	
	Photographic studio and court-martial room No. 11.	71.12	
	Officers' library and reading-room No. 12	14.93	
	Company officers' quarters No. 14	57.97	
	Double set company officers' quarters No. 15 ..	50.56	
	Chaplains and captains' quarters, double set, No. 16.	25.60	
	Surgeon and two company officers' quarters No. 17.	262.01	
	Field and two company officers' quarters No. 18.	375.16	
	Captains' quarters No. 19	17.23	
	Company officers' quarters and officers' club-room No. 20.	242.17	
	Company officers' quarters No. 21	244.36	
	One company officer, band, and non-commissioned officers' quarters No. 22.	298.25	
	Fire engine and school house No. 24	80.17	
	Quartermaster's stables No. 30	28.33	
	Employés' quarters, wagon master No. 31	117.29	
	Blacksmith and carpenter shops No. 37	22.00	
	Tinsmith and plumber's shop No. 38	16.80	

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE ATLANTIC—Continued.

Post.	Designation.	Amount.	Total.
Fort Monroe, Va.....	Hay scales and coal office No. 39.....	\$9.00	
	Officers' quarters and post quartermaster No. 45.....	483.97	
	Commanding officers' office No. 46.....	5.00	
	Adjutant, sergeant-major, and printing office No. 47.....	40.00	
	Guard house, casemate No. 48.....	465.00	
	Commissary office, etc., officers' school, and electric rooms No. 49.....	116.77	
	Field officers and captains' quarters, double set, No. 50.....	245.48	
	Company officers' quarters No. 51.....	129.29	
	Commissary officers' quarters No. 55.....	255.55	
	Pumping station No. 56.....	35.00	
	Coal sheds No. 60.....	59.88	
	Company officers' quarters, double set, No. 62.....	6,590.96	
	Employes' clerks' quarters No. 61.....	4.70	
	Company officers' quarters, double set, No. 63.....	6,600.36	
	Company officers' quarters, double set, No. 64.....	6,595.66	
Instructor's quarters, double set, No. 65.....	8,525.20		
			\$33,676.19
Fort Adams, R. I.....	Commanding officers' quarters No. 1.....	315.07	
	Post surgeon's quarters No. 2.....	75.00	
	Double set company officers' quarters No. 3.....	187.14	
	Double set company officers' quarters No. 4.....	112.14	
	Double set company officers' quarters No. 5.....	112.14	
	Double set company officers' quarters No. 6.....	112.14	
	Double set company officers' quarters No. 7.....	57.94	
	Double set company officers' quarters No. 8.....	57.94	
	Double set company officers' quarters No. 9.....	57.94	
	Light battery and quartermaster's stables' No. 36.....	161.00	
Gun shed No. 37.....	47.30		
Light battery barracks No. 44.....	350.00		
			1,645.75
Fort Ontario, N. Y.....	Double set officers' quarters No. 1.....	27.88	
	Company officers' quarters.....	4.23	
	Post surgeon's quarters No. 2.....	30.15	
	Guard house, office of post quartermaster, and commissary, store-room, etc., No. 3.....	16.00	
	Canteen No. 5.....	.50	
	Barracks for one company No. 6.....	117.94	
	Commissary sergeant's quarters No. 8.....	6.88	
	Coal and wood sheds No. 10.....	419.94	
	Quartermaster's stable and gun shed No. 11.....	12.74	
Madison Barracks, N. Y.....	Commanding officer's and eight company officers' quarters No. 1.....	60.10	
	Field officer and eight company officers' quarters No. 2.....	15,000.00	
	Barracks (quarters for three companies) No. 3.....	954.75	
	Barracks (quarters for three companies and band) No. 4.....	1,077.79	
	Non-commissioned staff officers' quarters No. 9.....	67.30	
	Non-commissioned staff officers' quarters No. 10.....	9.00	
	Non-commissioned staff officers' quarters No. 11.....	14.70	
	Gun-shed No. 13.....	14.90	
	Guard house No. 18.....	7.30	
	Quartermaster's stable No. 22.....	161.70	
	Commanding officer's stable No. 23.....	8.10	
	Quartermaster's store-house No. 25.....	397.92	
Administration building No. 32.....	72.90		
Scale house No. 34.....	125.00		
			17,971.46
Fort Mackinac, Mich.....	Old laundress' quarters (used now as canteen) No. 3.....	82.43	
	Commissary No. 8.....	16.21	
			98.64
Fort Porter, N. Y.....	Commanding officer's quarters No. 1.....	68.60	
	Double set company officers' quarters Nos. 2 and 3.....	27.48	
	Double set company officers' quarters Nos. 4 and 5.....	12.15	
	Double set company officers' quarters Nos. 6 and 7.....	7.48	
	Double set company officers' quarters Nos. 8 and 9.....	4.90	

QUARTERMASTER-GENERAL.

687

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE ATLANTIC—Continued.

Post.	Designation.	Amount.	Total.		
Fort Porter, N. Y.....	One set company barracks No. 13	\$10.58			
	Double set non-commissioned staff quarters Nos. 17 and 18.	1.05			
Governor's Island, N. Y.....	Commanding general's quarters No. 1.	89.16	\$130.24		
	Double set staff officers' quarters No. 2.	91.56			
	Double set staff officers' quarters No. 3.	157.14			
	Double set staff officers' quarters No. 4.	147.10			
	Double set staff officers' quarters No. 5.	538.51			
	Double set staff officers' quarters No. 6.	507.52			
	Double set staff officers' quarters No. 7.	371.41			
	Field officers' quarters No. 8.	96.23			
	Field officers' quarters No. 9.	99.41			
	Field officers' quarters No. 10.	122.76			
	Field officers' quarters No. 11.	27.18			
	Field officers' quarters No. 12.	487.87			
	Headquarters building No. 13.	80.34			
	Office of post commanding adjutant and guard house No. 14.	59.05			
	Office row No. 15.	289.09			
	Offices of quartermaster and acting commissary subsistence, and store-rooms No. 16.	37.10			
	Coal-shed No. 18.	100.00			
	Quartermaster's stable No. 20.	121.23			
	Quartermaster's store-house No. 21.	33.12			
	Quartermaster's store-house No. 22.	28.38			
	Carpenter and paint shop No. 23.	54.23			
	Employés quarters No. 25.	111.22			
	Blacksmith and plumber's shops No. 24.	95.40			
	South battery officers' mess and Catholic chapel No. 27.	63.05			
	Employés and married soldiers' quarters No. 26.	100.30			
	Chapel No. 29.	21.15			
	Employés quarters No. 30.	44.38			
	Commissary sergeant's quarters No. 31.	13.88			
	Fort Trumbull, Conn.....	Captain's quarters No. 2.		8.00	3,939.77
		Commissary sergeant's quarters No. 18.		20.00	
		Post quartermaster sergeant's quarters No. 19.		12.00	
Fort Columbus, N. Y.....	Battery and two officers' quarters No. 1.	567.14	40.00		
	Three sets officers' quarters No. 2.	229.21			
	Four sets officers' quarters No. 3.	370.86			
	Barracks for two batteries No. 4.	55.27			
	Castle Williams (guard room and prison No. 5.	69.44			
	Ordnance sergeant and one employés quarters No. 6.	10.97			
	Mount Vernon Barracks, Ala.	Commanding officers' quarters No. 1.		7.15	1,302.89
Double set company officers' quarters Nos. 2 and 3.	20.25				
Double set company officers' quarters Nos. 4 and 5.	34.05				
Double set company officers' quarters Nos. 6 and 6½.	17.50				
Company officers' quarters No. 7.	7.75				
Company officers' quarters No. 9.	20.75				
Administration building No. 12.	15.80				
Guard-house No. 13.	9.50				
Office of acting assistant quartermaster and acting commissary subsistence No. 14.	5.80				
Stable and granary No. 19.	13.50				
Non-commissioned staff quarters No. 24.	4.28				
Non-commissioned staff quarters No. 25.	4.28				
Non-commissioned staff quarters No. 26.	4.28				
Men's privy No. 31.	9.00				
Fort Myer, Va.....	Commanding officers' quarters.	93.29	173.89		
	Double set company officers' quarters No. 2.	710.50			
	Double set company officers' quarters No. 3.	738.48			
	Three sets company officers' quarters No. 4.	96.76			
	Commissary-sergeant's quarters No. 5.	3.00			
	Post quartermaster sergeant's quarters No. 6.	3.38			
	Married soldiers' quarters, four sets, No. 7.	20.20			
	Married soldiers' quarters No. 8.	16.20			
	Four sets married soldier's quarters No. 9.	16.20			
	Barracks for one troop cavalry No. 10.	307.39			
	Barracks for one troop cavalry No. 11.	50.00			

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE ATLANTIC—Continued.

Post.	Designation.	Amount.	Total.	
Fort Myer, Va.	Mess hall for two troops No. 12.....	\$117.05		
	Administration building No. 14.....	405.67		
	Guard-house No. 15.....	36.30		
	Quartermaster and commissary store-house and offices No. 16.....	5.00		
	Quartermaster's store-house No. 20.....	7.21		
	Quartermaster's stable No. 21.....	2.50		
	Cavalry stables No. 23.....	2,500.00		
	Cavalry stables No. 24.....	2,500.00		
	Double set company officers' quarters No. 38..	33.39		
	Post canteen No. 39.....	2,000.00		
				\$9,662.50
	Fort Wayne, Mich.	Two sets field officers' quarters Nos. 9 and 10..	167.50	
Twelve sets company officers' quarters Nos. 1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 14, and 15.....		674.35		
Two sets company officers' quarters No. 13....		83.75		
Engine house No. 18.....		6.50		
Ice house No. 19.....		8.00		
Carpenter shop, etc., No. 23.....		10.00		
Quartermaster's store-house No. 27.....		9.00		
Court-martial and school-rooms No. 28.....		6.00		
Executive building No. 29.....		44.00		
Library No. 30.....		47.00		
Pump and tank house No. 32.....		44.00		
Barracks No. 33.....		82.02		
Bath-house No. 35.....		22.00		
Bakery No. 36.....		1.50		
Non-commissioned staff building No. 41.....		253.75		
Coal sheds Nos. 43 and 44.....		53.00		
Reservation and cross fences.....		62.00		
Sweeping chimneys.....		25.00		
Carpenters' tools, etc.....		57.74		
Material.....	220.09			
			1,877.20	
Fort Preble, Me.	Adjutant's office No. 2.....	187.19		
	Company officers' quarters No. 3.....	279.54		
	Double set officers' quarters No. 4.....	219.91		
	Quartermaster's office, bakery, and drill hall, No. 18.....	207.50		
			804.14	
Plattsburgh Barracks, N. Y. ..	Four sets officers' quarters No. 1.....	226.50		
	Company barracks No. 2.....	219.00		
	Ordinance shed No. 10.....	36.00		
	Commanding officers' office No. 12.....	28.75		
	Double set non-commissioned staff quarters No. 15.....	61.75		
	Fences No. 20.....	52.00		
Boat-house and dock No. 21.....	150.00			
			772.00	
Newport Barracks, Ky.	Administration building No. 1.....	2.00		
	Company barracks No. 3.....	4.70		
	Guard-house No. 4.....	15.75		
	Non-commissioned staff quarters No. 6.....	1.00		
	Field officers' quarters Nos. 8 and 9.....	20.85		
	Commanding officers' quarters Nos. 10 and 11..	91.60		
	Field officers' quarters Nos. 12 and 13.....	27.36		
	Field officers' quarters Nos. 14 and 15.....	34.00		
			197.26	
Fort Hamilton, N. Y.	Field officers' quarters No. 1.....	14.28		
	Company officers' quarters Nos. 2 and 3.....	28.56		
	Company officers' quarters Nos. 4 and 5.....	216.19		
	Field officers' quarters No. 6.....	102.08		
	Company officers' quarters Nos. 7 and 8.....	216.19		
	Company officers' quarters Nos. 9 and 10.....	216.19		
	Company officers' quarters Nos. 11 and 12.....	216.19		
	Company officers' quarters Nos. 13 and 14.....	224.79		
	Non-commissioned staff building No. 10.....	70.00		
	Light battery gun-shed No. 17.....	125.00		
	School-house building No. 21.....	99.84		
			1,529.31	
Fort Niagara, N. Y.	Double set company officers' quarters No. 4....	60.00		
	Double set company officers' quarters No. 5....	60.00		
	Company quarters (E. C.) No. 6.....	61.00		
	Company quarters No. 7.....	219.96		
	Water-tank and trestle No. 10.....	200.00		
	Double set non-commissioned staff quarters No. 11.....	130.60		
	Castle No. 22.....	125.00		
Magazine No. 27.....	60.00			
			915.96	

QUARTERMASTER-GENERAL.

689

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE ATLANTIC—Continued.

Post.	Designation.	Amount.	Total.
St. Francis Barracks, Fla....	Monastery (six sets) No. 1.....	\$1, 178. 28	
	Barracks (two companies) No. 2.....	47. 00	
	Commanding officer's quarters No. 18.....	101. 34	
	Captain's quarters No. 19.....	113. 04	
	Captain's quarters No. 20.....	118. 54	
	General repairs.....	474. 99	
Washington Barracks, D. C..	Commanding officer's quarters No. 1.....	75. 00	\$2, 033. 19
	Officers' quarters Nos. 8 and 9.....	265. 00	
	Officers' mess quarters Nos. 21 and 22.....	60. 00	
	Canteen building No. 20.....	450. 00	
Fort Warren, Mass.....	Office acting assistant quartermaster and clothing storehouse No. 7.....	10. 34	850. 00
	Post library No. 9.....	103. 23	
	Post canteen No. 10.....	137. 24	
	Post gymnasium No. 11.....	2. 51	
	Men's quarters No. 15.....	9. 79	
	Men's quarters No. 16.....	74	
	Men's quarters No. 17.....	28	
	Men's quarters No. 18.....	21	
	Mess-room and kitchen No. 19.....	4. 44	
	Mess-room and kitchen No. 20.....	8. 08	
	Men's quarters No. 22.....	17	
	Men's quarters No. 23.....	22	
	Carpenter's shop No. 38.....	40	
	Blacksmith shop No. 39.....	50	
	Officers' quarters No. 45 to 47.....	47. 19	
	Officers' quarters No. 49.....	28	
	Officers' quarters No. 50.....	28. 87	
	Guard-house No. 52.....	84. 49	
	Quartermaster's stable No. 53.....	91. 40	
	Plane table house No. 54.....	91. 33	
	Plane table house No. 55.....	91. 18	
Bath-room No. 6 (B).....	35		
Fort Schuyler, New York Harbor.	Field officers' quarters No. 2.....	462. 50	713. 24
	Company officers' quarters Nos. 3 and 4.....	426. 98	
	Company officers' quarters Nos. 5 and 6.....	426. 98	
	Company officers' quarters Nos. 7 and 8.....	426. 96	
	Artillery barracks No. 10.....	210. 98	
	Tank-house No. 20.....	115. 00	
	Quartermaster's stables No. 26.....	38. 00	
Bakery No. 30.....	102. 88		
Fort Brady, Mich.....	Company quarters No. 1.....	324. 32	2, 210. 28
	Mess-hall and kitchen No. 2.....	54. 86	
	Commanding officer's quarters No. 5.....	19. 75	
	Company officers' quarters, double set, No. 6.....	15. 83	
	Double set company officers' quarters No. 7.....	8. 30	
	Stable No. 13.....	42. 75	
Fort McHenry, Md.....	Barracks No. 1.....	8. 11	465. 81
	Barracks No. 2.....	125. 61	
	Barracks No. 3.....	125. 61	
	Commanding officer's quarters No. 5.....	31. 17	
	Double set company officers' quarters No. 6.....	30. 85	
	Field officers quarters' No. 7.....	32. 35	
	Double set company officers' quarters No. 8.....	31. 85	
	Double set company officers' quarters No. 9.....	31. 35	
	Administration building No. 29.....	1, 271. 41	
	Commanding officer's quarters No. 5.....	26. 00	
	Shed over coal scales No. 30.....	250. 00	
Fort Wood, New York Harbor	Coal shed No. 4.....	410. 00	1, 964. 31
Fort Wadsworth, N. Y.....	Commanding officer's quarters No. 1.....	419. 90	410. 00
	Company officers' quarters Nos. 2 and 3.....	770. 32	
	Company officers' quarters Nos. 4 and 5.....	1, 016. 32	
	Company officers' quarters Nos. 6 and 7.....	1, 500. 88	
	Company officers' quarters Nos. 8 and 9.....	430. 72	
	Company officers' quarters Nos. 10 and 11.....	430. 72	
	Company officers' quarters Nos. 12 and 13.....	1, 135. 00	
	Company officers' quarters Nos. 14 and 15.....	1, 110. 00	
	Non-commissioned staff quarters No. 16.....	333. 00	
	Non-commissioned staff quarters No. 17.....	241. 00	
	Non-commissioned staff quarters No. 18.....	301. 50	
	Stable and wagon-shed building No. 14.....	51. 50	
	Office building No. 18.....	21. 51	
	Upper fort (Tompkins) barracks, storehouses, etc.	2, 610. 50	

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE ATLANTIC—Continued.

Post.	Designation.	Amount.	Total.
Fort Wadsworth, N. Y	Engine-room and blacksmith shop	\$500. 00	
	Roads and sidewalks	2, 074. 20	
			\$13, 007. 07
Fort McPherson, Ga	Double set company officers' quarters No. 1	393. 75	
	Double set company officers' quarters No. 2	393. 75	
	Double set company officers' quarters No. 3	393. 75	
	Double set company officers' quarters No. 4	393. 75	
	Cement sidewalks	3, 600. 00	
			5, 175. 00
Fort Barrancas Fla.....	Orderly's room, kitchen, storerooms, and bath-rooms No. 3	312. 00	
	Commanding officers' quarters No. 7	378. 75	
	Officers' quarters No. 10	288. 00	
	Officers' quarters No. 12	400. 00	
	Officers' quarters No. 14	48. 00	
	Officers' quarters No. 15	64. 00	
	Officers' quarters No. 17	65. 00	
			1, 555. 75
Jackson Barracks, La	Commanding officer's quarters No. 1	546. 15	
	Field officers' quarters No. 2	3. 00	
	Double set company officers' quarters No. 4	9. 00	
	Double set company officers' quarters No. 5	227. 00	
	Double set company officers' quarters No. 6	3. 50	
	Double set company officers' quarters No. 7	18. 00	
	Barracks No. 8	11. 80	
	Barracks No. 9	343. 92	
	Barracks No. 10	14. 50	
	Quartermaster's storehouse No. 13	380. 78	
	Commissary storehouse, guard-house, quartermaster and acting commissary office No. 15	17. 50	
	Non-commissioned staff officers' quarters No. 17	5. 00	
	Non-commissioned staff officers' quarters No. 18	5. 00	
	Bakery No. 23	4. 50	
			1, 595. 65
	Total division of the Atlantic.....		105, 497. 76

DIVISION OF THE MISSOURI

DEPARTMENT OF THE MISSOURI

Fort Crawford, Colo.....	Commanding officers' quarters No. 1	\$20. 37	
	Officers' quarters No. 2	16. 37	
	Officers' quarters No. 3	10. 50	
	Officers' quarters No. 4	14. 54	
	Officers' quarters No. 5	7. 80	
	Officers' quarters No. 6	18. 75	
	Officers' quarters No. 8	15. 61	
	Guard-house No. 11	7. 00	
	Shooting-gallery No. 15	1. 00	
	Gymnasium No. 16	1. 00	
	Quartermaster and commissary, storehouse No. 17	2. 00	
	Barracks No. 18	261. 05	
	Barracks No. 19	293. 55	
	Lavatory No. 22	7. 50	
	Post canteen No. 23	17. 50	
	Lavatory No. 24	7. 50	
	Quartermaster shops No. 25	1. 00	
	Quartermaster's corral No. 27	1. 00	
			\$724. 04
Fort Gibson, Ind. T	Commanding officers' quarters No. 1	25. 00	
	Double set officers' quarters No. 2	23. 38	
	Double set officers' quarters No. 3	49. 14	
	Barracks No. 4	24. 75	
	Single set officers' quarters No. 6	20. 25	
			147. 52
Fort Sill, Ind. T.....	Commanding officer's quarters No. 1	136. 50	
	Field officers' quarters No. 2	275. 00	
	Two sets captains' quarters No. 3	185. 00	
	Two sets captains' quarters No. 4	29. 00	
	Two sets captains' quarters No. 5	55. 00	
	Two sets lieutenants' quarters No. 6	20. 00	
	Two sets lieutenants' quarters No. 7	25. 00	

QUARTERMASTER-GENERAL.

691

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE MISSOURI—Continued.

DEPARTMENT OF THE MISSOURI—Continued.

Post.	Designation.	Amount.	Total.
Fort Sill, Ind. T.....	Two sets lieutenants' quarters No. 8.....	\$65.00	
	Two sets lieutenants' quarters No. 9.....	55.00	
	Two sets lieutenants' quarters No. 10.....	34.00	
	Two sets lieutenants' quarters No. 11.....	19.00	
	Two sets company quarters No. 12.....	84.00	
	Two sets company quarters No. 13.....	63.00	
	Two sets company quarters No. 14.....	49.00	
	Two sets company quarters No. 15.....	47.00	
	Executive buildings No. 16.....	165.00	
	Library No. 17.....	75.50	
	Guard-house No. 18.....	35.00	
	Bakery No. 19.....	13.00	
	Quartermaster's store-house No. 23.....	26.00	
	Chapel No. 30.....	46.00	
	Cavalry corrals Nos. 23 to 42, inclusive.....	117.52	
	Troop-shop No. 60 (built).....	45.00	
Fort Sheridan, Ill.....	Officers' quarters No. 4.....	4.00	
	Officers' quarters No. 6.....	25.00	
	School-room No. 7.....	12.60	
	Library No. 8.....	240.50	
	Headquarters No. 9.....	16.50	
	Barracks No. 10.....	46.06	
			344.66
Fort Leavenworth, Kans.....	Officers' quarters No. 1.....	976.00	
	Officers' quarters No. 2.....	80.00	
	Officers' quarters No. 3.....	80.00	
	Officers' quarters No. 4.....	115.00	
	Officers' quarters No. 5.....	115.00	
	Officers' quarters No. 7.....	120.25	
	Officers' quarters No. 9.....	465.75	
	Officers' quarters No. 10.....	22.25	
	Officers' quarters No. 11.....	249.00	
	Officers' quarters No. 12.....	267.00	
	Officers' quarters No. 13.....	168.00	
	Officers' quarters No. 14.....	200.00	
	Officers' quarters No. 15.....	200.00	
	Officers' quarters No. 16.....	150.20	
	Officers' quarters No. 17.....	200.00	
	Officers' quarters No. 18.....	200.00	
	Officers' quarters No. 19.....	200.00	
	Officers' quarters No. 20.....	85.00	
	Officers' quarters No. 21.....	85.00	
	Officers' quarters No. 22.....	85.00	
	Officers' quarters No. 23.....	85.00	
	Officers' quarters No. 24.....	85.00	
	Officers' quarters No. 25.....	85.00	
	Non-commissioned staff quarters No. 35.....	271.50	
	Drill hall No. 52.....	326.50	
	General repairs.....	681.55	
Fort Leavenworth Depot....	Quarters of commanding general No. 1.....	943.42	
	Quarters of medical director No. 2.....	236.42	
	Quarters of chief paymaster No. 3.....	97.83	
	Quarters of inspector of rifle practice No. 4.....	132.04	
	Quarters of chief quartermaster No. 55.....	169.04	
	Quarters of acting judge advocate No. 6.....	33.90	
	Quarters of acting adjutant-general No. 7.....	164.29	
	Quarters of chief commissary of subsistence No. 8.....	48.00	
	Quarters of aides-de-camp No. 9.....	55.71	
	Quarters of aides-de-camp No. 10.....	169.84	
	Quarters of chief ordnance officer No. 11.....	86.49	
	Quarters of depot quartermaster No. 12.....	113.47	
	Quarters of department inspector-general No. 13.....	130.01	
	School No. 14.....	55.33	
	Office and store-house depot commissary No. 15.....	83.15	
	Department headquarters No. 21.....	35.60	
	Depot warehouse Nos. 2 and 22.....	2.69	
	Depot quartermaster's office No. 23.....	9.23	
	Work-shops No. 28.....	1.11	
	Depot stable No. 37.....	4.00	
Quarters for ordnance detachment No. 52.....	.26		
Quarters for corral master No. 67.....	13.17		

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE MISSOURI—Continued.

DEPARTMENT OF THE MISSOURI—Continued.

Post.	Designation.	Amount.	Total.
Fort Leavenworth Depot...	Quarters for chief quartermaster's clerk No. 69.	\$9.14	
	Quarters for wood ranger No. 70	30.33	
			\$2,024.06
Fort Lewis, Colo	No repairs.		
Fort Supply, Ind. T	Commanding officer's quarters No. 1	131.93	
	Two sets officers' quarters No. 2	89.10	
	Two sets officers' quarters No. 3	91.20	
	Two sets officers' quarters No. 4	89.10	
	Two sets officers' quarters No. 5	95.40	
	Two sets officers' quarters No. 6	93.30	
	Two sets officers' quarters No. 7	91.20	
	Two sets officers' quarters No. 8	91.20	
	Two sets officers' quarters No. 9	27.12	
	Barracks No. 10	40.16	
	Barracks No. 11	29.66	
	Barracks No. 12	27.56	
	Barracks No. 13	27.56	
	Barracks No. 15	29.66	
	Barracks No. 16	27.56	
	Ordnance sergeant's quarters No. 18	50.91	
	Guard-house No. 31	29.36	
	Stable No. 37	25.20	
	Quartermaster's store-house and office No. 45	8.55	
	Store-house for oil No. 78 (built)	174.84	
			1,270.57
Fort Riley, Kans. (cavalry post).	Commanding officer's quarters No. 1	3.72	
	Officers' quarters Nos. 2 and 4	25.41	
	Officers' quarters Nos. 3 and 5	22.67	
	Officers' quarters Nos. 10 and 12	24.17	
	Officers' quarters Nos. 11 and 13	23.46	
	Officers' quarters Nos. 26 and 28	76.93	
	Officers' quarters Nos. 27 and 29	76.93	
	Officers' quarters Nos. 30 and 32	5.90	
	Officers' quarters Nos. 31 and 33	3.50	
	Officers' quarters Nos. 34 and 36	76.93	
	Officers' quarters Nos. 35 and 37	76.93	
	Old stable No. 1	13.00	
	Old stable No. 2	18.40	
	Old stable No. 3	16.35	
	Old stable No. 4	16.05	
	Barracks Nos. 5 and 7	10.39	
	Barracks Nos. 6 and 8	135.37	
	Barracks Nos. 9 and 11	8.07	
	Barracks Nos. 10 and 12	132.33	
	Quartermaster's storehouse No. 19*	3.94	
	Veterinary dispensary No. 23*	2.10	
	Carpenter's shop No. 24*	2.75	
	Magazine No. 26*	4.54	
	Civilian employes' quarters No. 23*	27.22	
	Ice-house No. 35*	11.50	
	Chaplain's quarters No. 11*	2.79	
	Mess-hall No. 9	17.68	
Commanding officer's quarters. No. 1	31.18		
Officers' quarters Nos. 6 and 8	68.77		
Officers' quarters Nos. 7 and 9	68.77		
Officers' quarters Nos. 14 and 16	68.77		
Officers' quarters Nos. 15 and 17	68.77		
Administration building No. 6	5.10		
Barracks No. 1	10.04		
Barracks No. 5	8.40		
			1,168.81
Little Rock barracks, Ark...	Post guard-house No. 1	40.00	
	Commanding officer's quarters No. 4	82.65	
	Company officers' quarters No. 6	18.38	
	Company officers' quarters No. 9	27.00	
	Commissary storehouse No. 19	510.00	
	General repairs	263.58	
			941.59
Fort Elliott	Officers' quarters No. 1	29.90	
	Commanding officer's quarters No. 2	57.27	
	Officers' quarters No. 3	51.81	
	Officers' quarters No. 4	47.24	
	Officers' quarters No. 5	63.41	
	Officers' quarters No. 6	37.91	
	Officers' quarters No. 7	52.13	

* Old numbers.

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued

DIVISION OF THE MISSOURI—Continued.

DIVISION OF THE MISSOURI—Continued.

Post.	Designation.	Amount.	Total.	
Fort Elliott.....	Quartermaster store-house No. 8.....	\$11.64		
	Subsistence store-house and office No. 10.....	9.30		
	Signal office, library, and canteen No. 11.....	72.33		
	Barracks No. 12.....	50.90		
	Barracks No. 13.....	135.31		
	Barracks No. 14.....	103.93		
	Barracks No. 15.....	159.40		
	Office of commanding officer and post adjutant No. 16.....	6.12		
	Chapel and court-martial room No. 17.....	4.62		
	Bakery No. 20.....	26.70		
	Quartermaster and cavalry stables Nos. 29 and 30.....	36.94		
	Cavalry stable No. 31.....	10.07		
	General repairs.....	33.70		
				\$1,000.63
Fort Logan, Colo.....	Chaplain's quarters No. 1.....	21.00		
	Post canteen No. 2.....	15.00		
	Ordnance and regimental quartermasters' quarters, No. 3.....	5.00		
	Storehouse No. 4.....	6.00		
	Oil storehouse No. 7.....	93.00		
	Line officers' quarters Nos. 1 to 8 inclusive, \$21 each.....	168.00		
				308.00
Fort Reno, Ind. T.....	Officers' quarters No. 1.....	31.20		
	Officers' quarters No. 2.....	522.23		
	Officers' quarters No. 3.....	519.83		
	Officers' quarters No. 4.....	60.00		
	Officers' quarters No. 5.....	31.20		
	Officers' quarters No. 6.....	30.00		
	Officers' quarters No. 7.....	32.40		
	Officers' quarters No. 8.....	20.00		
	Officers' quarters No. 10.....	10.40		
	Barracks No. 19.....	175.00		
	Barracks No. 20.....	165.00		
	Barracks No. 21.....	100.25		
	Band barracks, etc., No. 22.....	65.00		
	Barracks No. 23.....	172.50		
	Barracks No. 24.....	165.00		
	Barracks No. 25.....	146.36		
	Cavalry stables No. 44.....	60.00		
	Cavalry stables No. 45.....	55.50		
	Quartermaster and band stables No. 46.....	65.13		
	Cavalry sheds No. 48.....	21.00		
	Officers' quarters No. 9.....	32.00		
				2,500.00
		Total department of Missouri.....		17,693.00

DEPARTMENT OF TEXAS.

Fort McIntosh, Tex.....	Band quarters No. 1.....	\$75.00	
	Officers' quarters No. 2.....	20.00	
	Bakery No. 3.....	15.00	
	Chapel No. 4.....	50.00	
	Double set officers' quarters Nos. 5 and 6.....	75.00	
	Double set officers' quarters Nos. 7 and 8.....	75.00	
	Double set officers' quarters Nos. 10 and 11.....	75.00	
	Officers' quarters No. 13.....	100.00	
	Barracks No. 15.....	195.00	
	Barracks No. 16.....	525.00	
	Barracks No. 17.....	200.00	
	Guard-house No. 18.....	20.00	
	Granary in quartermaster's corral No. 19.....	5.00	
	Quartermaster's corral No. 20.....	15.00	
	Cavalry corral No. 21.....	45.00	
	Commissary sergeant's quarters No. 26.....	15.00	
Non-commissioned staff officers' quarters No. 34.....	20.00		
			\$1,525.00
Fort Brown, Tex.....	Commanding officers' quarters No. A.....	116.39	
	Double set officers' quarters Nos. 1 and 2.....	89.53	
	Double set officers' quarters Nos. 3 and 4.....	54.00	
	Double set officers' quarters Nos. 5 and 6.....	69.00	

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE MISSOURI—Continued.

DEPARTMENT OF TEXAS—Continued.

Post.	Designation.	Amount.	Total.	
Fort Brown, Tex	Double set officers' quarters Nos. 7 and 8	\$83.10		
	Double set officers' quarters Nos. 9 and 10	195.89		
	Double set officers' quarters Nos. 11 and 12	370.21		
	Double set officers' quarters Nos. 13 and 14	74.75		
	Officers' quarters No. 15	27.43		
	Administration (building) No. 31	300.00		
	Barracks No. 34	91.90		
	Quartermaster's shop No. 56	21.98		
			\$1,399.18	
Fort Bliss, Tex	Field officers' quarters No. 1	96.84		
	Two sets officers' quarters Nos. 2 and 3	219.77		
	Two sets officers' quarters Nos. 4 and 5	163.35		
	Two sets officers' quarters Nos. 6 and 7	206.40		
	Barracks No. 6	342.43		
	Guard-house No. 7	27.00		
	Corral, stables, and sheds No. 8	118.51		
	Clothing and equipage ware-house No. 12	40.00		
	Grain-house No. 13	80.00		
	Work-shops No. 14	50.08		
Fort Hancock, Tex	Commanding officers' quarters No. 1	134.85		
	Officers' quarters No. 2	59.99		
	Officers' quarters No. 3	60.12		
	Officers' quarters No. 4	53.79		
	Administration building No. 5	31.78		
	Store-house No. 6	32.10		
	Guard-house No. 7	8.92		
	Bakery No. 8	10.23		
	Barracks No. 9	80.19		
	Cavalry stables No. 10	36.65		
	Blacksmith and wheelwright shops No. 21 (built)	145.10		
	Blacksmith and wheelwright repairs	8.85		
	Commissary sergeant's quarters No. 23	5.39		
	Wagon-shed No. 26	22.89		
	Chapel and school-room No. 27 (built)	480.46		
	Magazine No. 28 (built)	66.87		
				1,354.43
Fort Davis, Tex	Officers' quarters No. 1	18.00		
	Officers' quarters No. 2	2.87		
	Officers' quarters No. 4	28.55		
	Officers' quarters No. 5	26.78		
	Officers' quarters No. 6	27.34		
	Commanding officer's quarters No. 7	34.81		
	Officers' quarters No. 11	20.97		
	Double set officers' quarters Nos. 12 and 13	27.98		
	Officers' quarters No. 14	22.56		
	Officers' quarters No. 16	2.45		
	Officers' quarters Nos. 17 and 18	1.40		
	Officers' quarters No. 19	1.78		
	Officers' quarters No. 20	1.40		
	Ice machine cover No. 21	23.94		
	Barracks No. 22	2.26		
	Guard-house No. 24	24.13		
	Barracks No. 25	53.37		
	Subsistence store-house No. 26	1.56		
	Granery No. 27	1.33		
	Quartermaster's office and store-house No. 28	1.43		
	Chapel and school-room No. 31	39.50		
	Post headquarters No. 32	1.63		
	Barracks No. 33	30.21		
	Barracks No. 34	37.91		
	Barracks No. 35	38.09		
	Barracks No. 36	3.65		
	Barracks No. 37	53.24		
	Work shops No. 39	7.96		
	Paint, tin, and plumbers' shops No. 40	5.73		
	Old quartermaster's store-house No. 41	5.49		
				1,298.09
	Fort Ringgold, Tex.....	General repairs	521.67	
		Double set officers' quarters Nos. 1 and 2	86.51	
Double set officers' quarters Nos. 3 and 4		86.51		
Commanding officers' quarters No. 5		86.51		
Double set officers' quarters Nos. 8 and 9		86.51		
Barracks No. 17		123.59		
Barracks No. 18		62.09		
			539.31	

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE MISSOURI—Continued.

DEPARTMENT OF TEXAS—Continued.

Post.	Designation.	Amount.	Total.		
Fort Ringgold, Tex.....	Commissary store-house No. 34 (built).....	\$6,721.30			
	Engine-house No. 35.....	24.00			
	Wheelwright shop No. 36 (built).....	1,100.00			
San Antonio, Tex.....	Administration building No. 16.....	8.49	\$8,898.69		
	Officers' quarters No. 18.....	11.65			
	Officers' quarters No. 20.....	28.82			
	Officers' quarters No. 22.....	14.42			
	Officers' quarters No. 24.....	36.92			
	Officers' quarters No. 26.....	20.60			
	Officers' quarters No. 28.....	9.62			
	Officers' quarters No. 30.....	47.90			
	Officers' quarters No. 32.....	25.32			
	Officers' quarters No. 34.....	16.83			
	Officers' quarters No. 36.....	16.96			
	Officers' quarters No. 38.....	18.60			
	Officers' quarters No. 40.....	16.18			
	Officers' quarters No. 42.....	8.68			
	Officers' quarters No. 44.....	8.58			
	Officers' quarters No. 19.....	8.60			
	Officers' quarters No. 21.....	8.60			
	Officers' quarters No. 23.....	8.60			
	Barracks No. 3.....	34.95			
	Barracks No. 5.....	195.04			
	Barracks No. 6.....	142.54			
	Band barrack.....	38.71			
	Post guard-house.....	21.05			
	Quartermaster's stables.....	39.40			
	Cavalry and artillery stables.....	413.70			
	San Antonio depot and head-quarters.	Medical director's quarters No. 1.....		173.00	1,200.76
		Chief paymaster's quarters No. 2.....		119.90	
Chief commissary of subsistence's quarters No. 3.....		129.00			
Assistant adjutant-general's quarters No. 4.....		443.43			
Assistant surgeon's quarters No. 5.....		104.90			
Commanding general's quarters No. 6.....		846.78			
Aides-de-camp's quarters No. 7.....		104.90			
Inspector-general's quarters No. 8.....		119.90			
Department chief quartermaster's quarters No. 9.....		104.90			
Post commander's quarters No. 10.....		119.90			
Acting judge-advocate's quarters No. 11.....		134.90			
Paymaster's quarters No. 12.....		298.90			
Chaplain's quarters No. 13.....		132.39			
Post surgeon's quarters No. 14.....		189.90			
Quarters of assistant quartermaster at department headquarters No. 15.....		296.00			
Offices for commanding general and staff.....		112.00			
Camp Del Rio, Tex.....		Commanding officer's quarters No. 1.....	14.50	3,430.70	
	Officers' quarters No. 2.....	26.30			
	Officers' quarters No. 3.....	21.50			
	Store-houses and offices No. 7.....	40.00			
	Barracks No. 9.....	33.68			
Fort Clark, Tex.....	Officers' quarters No. 1.....	97.00	135.98		
	Officers' quarters No. 4.....	59.40			
	Officers' quarters No. 5.....	16.30			
	Officers' quarters Nos. 6 and 7.....	34.60			
	Officers' quarters Nos. 8 and 9.....	35.27			
	Officers' quarters Nos. 10 and 11.....	9.80			
	Officers' quarters Nos. 12 and 13.....	75.00			
	Officers' quarters Nos. 14 and 15.....	50.70			
	Officers' quarters Nos. 16 and 17.....	63.95			
	Officers' quarters Nos. 18 and 19.....	33.35			
	Officers' quarters No. 20.....	50.00			
	Officers' quarters Nos. 21 and 22.....	33.35			
	Officers' quarters Nos. 23 and 24.....	47.00			
	Officers' quarters Nos. 25 and 26.....	7.20			
	Officers' quarters Nos. 27 and 28.....	40.00			
	Officers' quarters No. 29.....	104.00			
Barracks No. 1.....	7.40				
Barracks No. 2.....	20.20				
Barracks No. 3.....	9.15				
Barracks No. 4.....	38.30				

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE MISSOURI—CONTINUED.

DEPARTMENT OF TEXAS—Continued.

Post.	Designation.	Amount.	Total.
Fort Clark, Tex.....	Barracks No. 6.....	\$9.70	
	Barracks No. 7 (new kitchen).....	1,213.83	
	Barracks No. 8.....	86.70	
	Barracks No. 9 (new kitchen).....	1,213.83	
	Barracks No. 10.....	45.90	
	Additional building No. 1.....	700.00	
	Additional building No. 2.....	58.00	
	Additional building No. 3.....	109.00	
	Additional building No. 8.....	31.70	
	Additional building No. 9.....	7.10	
	Additional building No. 10.....	27.40	
	Additional building No. 11.....	42.00	
	Additional building No. 12.....	17.00	
	Additional building Nos. 14 to 21, inclusive.....	44.60	
	Total Department of Texas.....		24,270.87

DEPARTMENT OF THE PLATTE.

Fort Niobrara, Nebr.....	Commanding officer's quarters No. 1.....	\$43.00	
	Officers' quarters Nos. 3 and 4.....	36.00	
	Officers' quarters Nos. 5 and 6.....	11.00	
	Officers' quarters Nos. 7 and 8.....	34.00	
	Officers' quarters Nos. 9 and 10.....	41.00	
	Officers' quarters Nos. 11 and 12.....	37.00	
	Officers' quarters Nos. 13 and 14.....	39.00	
	Officers' quarters Nos. 15 and 16.....	42.00	
	Officers' quarters Nos. 17 and 18.....	45.00	
	Officers' quarters Nos. 19 and 20.....	31.00	
	Barracks No. 1.....	41.75	
	Barracks No. 2.....	169.81	
	Barracks No. 3.....	273.00	
	Barracks No. 4.....	348.50	
	Barracks No. 5.....	374.75	
	Barracks No. 6.....	197.80	
	Barracks No. 8.....	8.00	
	Barracks No. 9.....	7.00	
	School, etc., No. 22.....	86.75	
	Guard-house No. 24 (reconstructed).....	2,184.00	
	Quartermaster sergeant's quarters No. 27.....	73.00	
	Stable No. 35.....	35.00	
	Non-commissioned staff quarters No. 39.....	12.00	
Commissary store-house No. 52.....	14.80		
Teamsters' house No. 55.....	45.00		
General repairs.....	332.32		
Tools.....	41.52		
			\$4,602.00
Fort McKinney, Wyo.....	Officers' quarters No. 9.....	3.95	
	Officers' quarters No. 10.....	24.50	
	Officers' quarters No. 11.....	5.00	
	Officers' quarters No. 12.....	9.65	
	Officers' quarters Nos. 13 and 14.....	15.00	
	Officers' quarters No. 15.....	12.25	
	Officers' quarters Nos. 16 and 17.....	15.20	
	Officers' quarters No. 18.....	3.00	
	Officers' quarters Nos. 19 and 20.....	3.00	
	Cavalry barracks No. 23.....	124.00	
	Cavalry barracks No. 24.....	97.65	
	Cavalry barracks No. 25.....	90.72	
	Infantry barracks No. 26.....	5.00	
	Infantry barracks No. 27.....	13.65	
	Infantry barracks No. 28.....	105.15	
	Infantry barracks No. 29.....	90.00	
	Subsistence store-house No. 33 (built).....	1,213.64	
Teamsters' quarters No. 38.....	67.50		
School No. 48.....	5.00		
Non-commissioned staff quarters No. 52.....	10.00		
Non-commissioned staff quarters No. 53.....	6.90		
Non-commissioned staff quarters No. 54.....	6.90		
Guard-house No. 56.....	209.77		
Bake-house No. 61 (built).....	1,000.00		
			3,137.43

QUARTERMASTER-GENERAL.

697

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE MISSOURI—Continued.

DEPARTMENT OF THE PLATTE—Continued.

Post.	Designation.	Amount.	Total.	
Fort DuChesne, Utah.....	Officers' quarters No. 1 (built)	\$1,610.00		
	Officers' quarters No. 2 (built)	1,610.00		
	Officers' quarters No. 3 (built)	1,610.00		
	Officers' quarters No. 4 (built)	1,610.00		
	Officers' quarters No. 5 (built)	1,829.92		
	Officers' quarters No. 6 (built)	1,829.92		
	Officers' quarters No. 7 (built)	1,829.92		
	Officers' quarters No. 8 (built)	1,829.92		
	Officers' quarters No. 9 (built)	1,829.92		
	Officers' quarters No. 10 (built)	1,829.91		
	Officers' quarters No. 11 (built)	1,829.91		
	Officers' quarters No. 12 (built)	1,829.91		
	Officers' quarters No. 13 (built)	1,610.00		
	Officers' quarters No. 14 (built)	1,610.00		
	Officers' quarters No. 15 (built)	2,435.00		
	Officers' quarters No. 16 (built)	2,435.00		
	Officers' quarters No. 17 (built)	2,435.00		
	Officers' quarters No. 18 (built)	2,435.00		
	Cavalry barracks No. 23	259.00		
	Cavalry barracks No. 24	259.00		
	Cavalry barracks No. 25	219.12		
	Cavalry barracks No. 26	219.12		
	Infantry barracks No. 27	219.12		
	Infantry barracks No. 28	219.12		
	Administration building No. 42	2,263.95		
				\$37,697.66
	Fort D. A. Russell, Wyo....	Officers' quarters No. 1	340.00	
		Officers' quarters No. 2	342.93	
		Officers' quarters No. 3	342.93	
		Officers' quarters No. 4	340.00	
		Officers' quarters No. 5	2.07	
Officers' quarters No. 6		12.93		
Officers' quarters No. 7		1.32		
Officers' quarters No. 8		3.23		
Double set officers' quarters Nos. 9 and 10		2.49		
Double set officers' quarters Nos. 11 and 12		743.20		
Double set officers' quarters Nos. 13 and 14		741.85		
Double set officers' quarters Nos. 15 and 16		743.00		
Double set officers' quarters Nos. 17 and 18		743.36		
Double set officers' quarters Nos. 19 and 20		743.50		
Double set officers' quarters Nos. 21 and 22		742.50		
Double set officers' quarters Nos. 23 and 24		748.05		
Officers' quarters No. 25 .....		.80	
Double set officers' quarters Nos. 26 and 27		773.67		
Officers' quarters No. 28		364.00		
Officers' quarters No. 29		1.20		
Officers' quarters No. 30		16.37		
Officers' quarters No. 31		13.59		
Officers' quarters No. 32		12.75		
Officers' quarters No. 33		1.20		
Officers' quarters No. 34		18.50		
Barracks No. 39		77.79		
Barracks No. 40		64.12		
Band barracks No. 41		20.80		
Barracks No. 42		23.57		
Barracks No. 43		77.97		
Barracks No. 44	53.13			
Guard-house No. 47 (remodeled)	3,876.30			
Barracks No. 48	78.47			
Barracks No. 49	65.05			
Barracks No. 50	75.30			
Non-commissioned staff quarters Nos. 58 to 62, inclusive, \$3.24 each	16.20			
Non-commissioned staff quarters No. 63	5.64			
Repairing fences	428.90			
			12,659.28	
Fort Douglas, Utah	Commanding officers' quarters	34.50		
	Officers' quarters Nos. 1 to 20, inclusive	1,086.50		
	Officers' quarters, 21 to 26, inclusive	290.50		
	Barracks Nos. 1 to 6, inclusive	954.25		
	Barracks Nos. 7 to 10, inclusive	195.00		
	Band quarters and headquarters office	165.00		
	Guard-house	55.25		
	Artillery stable	9.00		
	Water-closets Nos. 1 to 4	12.80		
Recreation hall	47.50			
			2,850.30	

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE MISSOURI—Continued.

DEPARTMENT OF THE PLATTE—Continued.

Post	Designation.	Amount.	Total	
Fort Washakie, Wyo.....	Officers' quarters No. 1.....	\$37.20		
	Officers' quarters No. 2.....	43.80		
	Officers' quarters No. 3.....	70.05		
	Officers' quarters No. 4.....	62.60		
	Barracks No. 5.....	127.95		
	Barracks No. 6.....	76.23		
	Barracks No. 7.....	10.25		
	Civilian employes' quarters No. 8.....	18.70		
	Civilian employes' quarters No. 9.....	29.25		
	Commissary sergeant's quarters No. 10.....	12.10		
	Laundress' quarters No. 11.....	17.00		
	Adjutant's office No. 14.....	15.70		
	United States Signal office No. 15.....	15.35		
	Guard-house No. 16.....	4.05		
	Officers' quarters No. 17.....	36.50		
	Quartermaster's shops No. 18.....	1.75		
	Quartermaster's store-house No. 20.....	351.30		
	Commissary store-house No. 30.....	11.20		
	Saw-mill No. 31.....	81.25		
	Quartermaster's stable No. 32.....	71.48		
	Cavalry stables No. 33.....	74.48		
	Water-wagon house No. 36.....	3.00		
	Library, school-room, etc., No. 37.....	267.70		
	Post quartermaster-sergeant's quarters No. 38.....	.40		
	Bake-house No. 41.....	.40		
	Granary No. 42.....	130.00		
	Fences, outhouses, etc.....	430.31		
				\$2,000.00
	Fort Omaha, Nebr.....	General repairs.....		500.00
	Omaha Depot, Nebr.....	Main building No. 1.....	33.30	
		Stable No. 6.....	77.17	
		Stable No. 10.....	111.53	
		Hay shed No. 13.....	49.64	
Store-house No. 16.....		94.93		
Store-house No. 17.....		157.60		
Ordinance store-house No. 18 (built).....		10,000.00		
			10,524.17	
Fort Sidney, Nebr.....	Double set officers' quarters Nos. 1 and 2.....	5.34		
	Double set officers' quarters Nos. 3 and 4.....	15.58		
	Double set officers' quarters Nos. 5 and 6.....	1,928.50		
	Officers' quarters No. 7.....	223.11		
	Double set officers' quarters Nos. 8 and 9.....	1,947.89		
	Officers' quarters No. 10.....	48.33		
	Barracks No. 13.....	13.21		
	Barracks No. 14 (remodeled).....	3,552.65		
	Barracks No. 15 (remodeled).....	3,552.65		
	Barracks No. 16.....	107.11		
	Administration building No. 17.....	77.37		
	Quartermaster's stables No. 23.....	2.41		
	Non-commissioned staff quarters No. 32.....	79.90		
	Non-commissioned staff quarters No. 33.....	10.50		
	Non-commissioned staff quarters No. 35.....	34.00		
	Bakery No. 36.....	38.35		
	Barracks No. 37 (remodeled).....	3,556.00		
Officers' quarters Nos. 39 and 40.....	38.53			
Guard-house No. 41.....	7.90			
Bath-house No. 42.....	3.28			
Officers' quarters Nos. 44 and 45.....	49.59			
Non-commissioned staff quarters No. 47.....	40			
Non-commissioned staff quarters No. 52.....	89.40			
General repairs.....	391.72			
			15,773.70	
Fort Bridger, Wyo.....	General repairs.....		800.00	
Fort Robinson, Nebr.....	do.....		5,258.72	
	Total for Department of the Platte.....		95,803.06	

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE MISSOURI—Continued.

DEPARTMENT OF DAKOTA.

Post.	Designation.	Amount.	Total.	
Fort Assiniboine, Mont.....	Company officers' quarters No. 1	\$21.08		
	Company officers' quarters No. 2	14.14		
	Company officers' quarters No. 3	12.87		
	Company officers' quarters No. 4	12.87		
	Company officers' quarters No. 5	12.87		
	Company officers' quarters No. 6	21.26		
	Field officers' quarters No. 7	23.57		
	Commanding officer's quarters No. 8	18.31		
	Field officers' quarters No. 9	13.14		
	Company officers' quarters No. 10	16.64		
	Company officers' quarters No. 11 (reconstructed).	1,948.11		
	Company officers' quarters No. 12	14.14		
	Company officers' quarters No. 13	19.14		
	Company officers' quarters No. 14	14.96		
	Company officers' quarters No. 15	18.21		
	Chapel and school building No. 16	40.70		
	Gymnasium and band quarters No. 18	57.59		
	Barrack No. 19	126.55		
	Barrack No. 20	152.59		
	Barrack No. 21	144.30		
	Office building No. 22	26.38		
	Barrack No. 23	144.75		
	Barrack No. 24	112.68		
	Guard-house No. 25	60.28		
	Non-commissioned staff officers' quarters No. 30.	5.90		
	Commissary store-house No. 31	29.69		
	Quartermaster's store-house No. 33	27.94		
	Stable No. 37	8.00		
	Stable No. 38	6.02		
	Stable No. 39	7.00		
	Stable No. 40	12.00		
	Stable No. 41	11.10		
	Civilian employes' quarters No. 42	2.82		
	Laundress' building No. 47	2.00		
	Laundress' building No. 48	2.00		
	Laundress' building No. 49	2.00		
	Field officers' stables Nos. 50 and 51	1.00		
	Company bath-houses Nos. 55 to 59	2.00		
	Mechanics' quarters No. 61	5.00		
	Officer of the guards' quarters No. 63	5.00		
	Library building No. 70 (built)	1,408.58		
	Ice-house No. 71	10.00		
	Officers' stable No. 72	5.00		
				\$44,599.18
	Fort Buford, N. Dak.....	Company officers' quarters No. 1	6.50	
Company officers' quarters No. 2		29.50		
Company officers' quarters No. 3		13.50		
Company officers' quarters No. 4		55.20		
Company officers' quarters No. 5		15.25		
Company officers' quarters No. 6		29.70		
Company officers' quarters No. 7		227.00		
Company officers' quarters No. 8		17.70		
Company officers' quarters No. 9		75.00		
Company officers' quarters No. 10		56.00		
Barracks No. 11 (new addition)		1,625.70		
Barracks No. 12 (new addition)		1,781.52		
Barracks No. 13		8.00		
Barracks No. 14		185.00		
Band barracks No. 15		135.50		
Post headquarters No. 21		18.00		
Library, chapel, etc. No. 22		14.00		
Quartermaster's office, No. 24		19.00		
Quartermaster's store-rooms No. 25		6.00		
Quartermaster's store-rooms, Nos. 26, 27, 28		20.00		
Subsistence office No. 29		18.00		
Subsistence store-rooms No. 30		13.00		
Guard house No. 32		32.00		
Cavalry stables No. 36		48.00		
Cavalry stables No. 37		39.00		
Saw-mill No. 43		10.00		
Bake-house No. 48		7.00		
Commanding officer's quarters No. 49	189.50			
Latrines, No. 51 (built)	1,434.76			
Ice-house No. 52	38.00			
			6,162.23	

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE MISSOURI—Continued.

DEPARTMENT OF DAKOTA—Continued.

Post.	Designation.	Amount.	Total.
Fort A. Lincoln, N. Dak.	No repairs.		
St. Paul, Minn.	Headquarters Department Dakota, No. A 1.		\$1,000.00
Fort Keogh, Mont.	Commanding officers' quarters No. 1	\$103.72	
	Field officers' quarters No. 2	62.70	
	Officers' quarters No. 3	42.13	
	Officers' quarters No. 4	34.16	
	Officers' quarters No. 5	36.11	
	Officers' quarters No. 6	61.40	
	Officers' quarters No. 7	34.54	
	Officers' quarters No. 8	46.31	
	Officers' quarters No. 9	35.78	
	Officers' quarters No. 10	35.77	
	Officers' quarters No. 11	21.59	
	Officers' quarters No. 12	29.49	
	Officers' quarters No. 13	45.40	
	Officers' quarters No. 14	143.50	
	Administration building No. 15	12.02	
	Band barracks No. 16	79.53	
	Company barracks No. 17	602.51	
	Company barracks No. 18	536.66	
	Company barracks No. 19	613.91	
	Company barracks No. 20	332.04	
	Chapel No. 21	7.36	
	Subsistence store-house No. 35	46.68	
	Subsistence store-house No. 36 .....	.30	
	Quartermaster's store-house No. 37 .....	.30	
	Quartermaster's store-house No. 38 .....	.30	
	Quartermaster's store-house No. 39	1.68	
	Quartermaster's stable No. 42	17.59	
	Cavalry stable No. 43	7.40	
	Cavalry stable No. 44	7.40	
	Guard-house No. 45	384.68	
	Pump-house No. 47	356.35	
	Water-wagon house No. 50	17.25	
	Non-commissioned staff officers' quarters No. 59 (built).	778.66	
			4,535.17
Fort Meade, S. Dak.	Company officers' quarters No. 1	106.91	
	Company officers' quarters No. 2	6.46	
	Double set officers' quarters Nos. 3 and 4	275.09	
	Company officers' quarters No. 5	22.57	
	Double set officers' quarters Nos. 6 and 7	31.73	
	Double set officers' quarters Nos. 8 and 9	39.32	
	Double set officers' quarters Nos. 10 and 11	156.37	
	Commanding officer's quarters No. 12	143.04	
	Double set officers' quarters Nos. 13 and 14	202.12	
	Double set officers' quarters Nos. 15 and 16	137.71	
	Double set officers' quarters Nos. 17 and 18	24.29	
	Officers' quarters No. 19	16.59	
	Officers' quarters No. 20	25.26	
	Field officers' quarters No. 21	47.42	
	Officers' quarters No. 22	120.65	
	Officers' quarters No. 23	86.90	
	Officers' quarters No. 24	117.97	
	Library, etc., No. 244	19.27	
	Transportation agent's quarters, No. 28	52.35	
	Non-commissioned staff quarters No. 29	3.83	
	Trainmaster's quarters No. 30	4.61	
	Non-commissioned staff quarters No. 33	4.35	
	School-house No. 36	7.20	
	Non-commissioned staff quarters No. 37	5.75	
	Band barracks No. B 1	38.28	
	Double barracks No. B 2 and 3	42.73	
	Double barracks No. B 4 and 5	57.08	
	Barracks No. B 6	23.59	
	Barracks No. B 7	30.63	
	Double barracks No. B 8 and 9	24.18	
	Double barracks No. B 10 and 11	46.39	
	Offices post commander and post adjutant No. Z 1 and 2	18.90	
	Quartermaster's office and store-house No. Z 3	32.50	
	Quartermaster's freight warehouse No. Z 4	32.50	
	Granary No. Z 5	1.96	
	Bakery No. Z 15	2.75	
	Guard-house No. Z 16	46.95	
	Commissary store-house No. Z 17	2.80	

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE MISSOURI—Continued.

DEPARTMENT OF DAKOTA—Continued.

Post.	Designation.	Amount.	Total.
Fort Meade, S. Dak	Office guard-room No. Z 26.....	\$2.90	
	Cavalry stables No. S 1.....	4.15	
	Cavalry stables No. S 2.....	1.75	
	Cavalry stables No. S 3.....	4.15	
	Cavalry stables No. S 4.....	1.91	
	Cavalry stables No. S 5.....	4.00	
	Cavalry stables No. S 6.....	2.20	
			\$2,070.06
Fort Custer, Mont	Commanding officer's quarters No. 6.....	32.16	
	Officers' quarters, Nos. 1 to 5 and 7 to 11.....	345.08	
	Officers' mess No. 13.....	8.27	
	Officers' club No. 14.....	11.26	
	Headquarters, building, offices No. 15.....	9.33	
	Band quarters No. 17.....	146.99	
	Cavalry barracks No. 18.....	37.12	
	Canteen building No. 19.....	32.82	
	Barrack building No. 20.....	218.56	
	Barrack building No. 21.....	219.53	
	Barrack building No. 22.....	216.07	
	Post school and chapel No. 26.....	93.85	
	Veterinary surgeon's quarters No. 27.....	1.51	
	Sergeant-major's quarters No. 28.....	.81	
	Chief musician's quarters No. 29.....	.82	
	Post quartermaster-sergeant's quarters No. 30.....	.81	
	Post guide and saddler sergeant's quarters No. 31.....	.81	
	Telegraph office and mechanic's shops No. 32.....	7.23	
	Civilian employes' hospital, matron and married soldiers' quarters Nos. 35 to 42.....	3.19	
	Teamster's quarters and mess No. 43.....	1.60	
	Quartermaster's stables No. 48.....	118.01	
	Cavalry stable No. 50.....	7.17	
	Cavalry stable No. 51.....	7.24	
	Cavalry stable No. 52.....	7.17	
	Cavalry stable No. 53.....	7.24	
	Cavalry stable No. 54.....	4.74	
	Troop blacksmith and saddler shops Nos. 55 to 59.....	3.04	
	Post bakery No. 61.....	34.63	
	Tank-house No. 62.....	19.50	
	Steam planing-mill No. 63.....	53.95	
	Headquarters' stable No. 75.....	2.39	
Cavalry stable No. 77.....	1,228.35		
Yard fences.....	10.27		
Tools, machinery, etc.....	336.63		
			3,228.35
Fort Randall, S. Dak	Commanding officers' quarters A, 1.....	20.20	
	Company officers' quarters A, 2 and 3.....	37.74	
	Company officers' quarters A, 4 and 5.....	44.85	
	Company officers' quarters A, 6.....	12.65	
	Company officers' quarters A, 7.....	6.97	
	Company officer's quarters A, 8.....	16.68	
	Company officers' quarters A, 9.....	43.61	
	Company officers' quarters A, 10.....	13.98	
	Company officers' quarters A, 11.....	9.24	
	Company officers' quarters A, 12, 13, and 14.....	26.76	
	Barracks, Company A, 1.....	54.90	
	Barracks, Company H, 2.....	46.89	
	Barracks, Company C, 3.....	50.42	
	Barracks, Company D, 4.....	45.19	
	Barrack band quarters, 5.....	32.58	
	Commissary-sergeant's quarters B, 1.....	40.54	
	Ordnance sergeant's quarters B, 2.....	.40	
Post quartermaster-sergeants' quarters B, 3.....	1.00		
Ice-house C, 7.....	55.14		
			559.74
Fort Sully, S. Dak	Commanding officers' quarters No. 1.....	7.20	
	Company officers' quarters No. 2.....	6.50	
	Company officers' quarters No. 3.....	4.24	
	Company officers' quarters Nos. 5 and 7.....	3.50	
	Company officers' quarters Nos. 8 and 10.....	4.00	
	Company officers' quarters No. 11.....	7.00	
	Company officers' quarters Nos. 12 and 14.....	3.00	
	Company officers' quarters No. 9.....	6.00	
	Company quarters No. 15.....	285.82	
	Company quarters No. 42.....	304.67	

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE MISSOURI—Continued.

DEPARTMENT OF DAKOTA—Continued.

Post.	Designation.	Amount.	Total.
Fort Sully, S. Dak.....	Company quarters No. 43.....	\$309.87	
	Coal-shed No. 44.....	48.03	
	Coal-shed No. 46.....	289.03	
	Company quarters' No. 47.....	289.87	
	Post bath-house No. 51.....	923.30	
	General repairs.....	243.89	
			\$2, 735. 72
Camp Poplar River, Mont...	Officers' quarters No. 1.....	2.63	
	Officers' quarters No. 2.....	6.63	
	Officers' quarters No. 3.....	10.47	
	Officers' quarters No. 5.....	13.79	
	Officers' quarters No. 6.....	2.22	
	Officers' quarters No. 7.....	12.69	
	Barracks No. 14.....	22.37	
Barracks No. 15.....	28.90		
			99.70
Fort Pembina, N. Dak.....	Commanding officers' quarters No. 1.....	131.76	
	Company officers' quarters No. 2.....	62.74	
	Company officers' quarters (double set) No. 3.....	106.44	
	Company officers' quarters (double set) No. 4.....	106.44	
	Non-commissioned staff quarters No. 6.....	45.87	
	Non-commissioned staff quarters (double set) No. 7.....	53.42	
	Quartermaster and commissary store-house No. 9.....	7.20	
	Company barracks (1) No. 10.....	37.50	
	Company barracks (2) No. 12.....	48.30	
Fort Snelling (ordnance depot).	Commanding officers' quarters No. 1.....		946.01
Fort Snelling, Minn.....	Prison No. 6.....	38.90	
	Bakery No. 7.....	12.20	
	Company officers' quarters No. 8.....	23.00	
	Company officers' quarters No. 9.....	69.50	
	Schoolhouse No. 10.....	14.00	
	Company officers' quarters No. 11.....	38.00	
	Company officers' quarters No. 12.....	59.00	
	Company officers' quarters No. 13.....	32.00	
	Company officers' quarters No. 14.....	46.00	
	Company officers' quarters No. 15.....	46.75	
	Company officers' quarters No. 16.....	102.00	
	Company officers' quarters No. 17.....	9.00	
	Quartermasters' warehouse No. 22.....	71.57	
	Three sets company barracks No. 23.....	54.20	
	Company barracks No. 24.....	27.00	
	Old hospital No. 25.....	5.00	
	Company officers' quarters No. 26.....	32.00	
	Company officers' quarters No. 27.....	41.00	
	Field officers' quarters No. 28.....	33.00	
	Field officers' quarters No. 29.....	30.00	
	Company officers' quarters No. 30.....	64.00	
	Company officers' quarters No. 31.....	63.00	
	Company officers' quarters No. 32.....	23.00	
	Commanding officer's quarters No. 33.....	84.00	
	Company officers' quarters No. 34.....	12.00	
	Company officers' quarters No. 35.....	51.50	
	Company officers' quarters No. 36.....	47.00	
	Company officers' quarters No. 37.....	19.00	
	Company officers' quarters No. 38.....	51.00	
	Regimental and post headquarters, etc., No. 39.....	45.00	
	Company barracks No. 40.....	81.00	
	Non-commissioned staff and married soldiers' quarters No. 41.....	69.00	
Ice-house No. 42.....	5.00		
Stables and outhouses No. 43.....	31.00		
Quartermaster store-house No. 44.....	41.00		
Quartermaster shops No. 45.....	23.50		
Quartermaster corral No. 46.....	57.30		
Employés quarters No. 47.....	37.75		
Civilian employés' mess-house No. 48.....	17.35		
Engine house, coal-sheds, etc., No. 49.....	9.40		
Engineer's quarters No. 50.....	9.00		
Post hall No. 51.....	210.00		
			1, 734. 92
Fort Totten, N. Dak.....	Double set company officers' quarters No. 1.....	14.24	
	Quadruple set company officers' quarters No. 2.....	26.04	

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE MISSOURI—Continued.

DEPARTMENT OF DAKOTA—Continued.

Post.	Designation.	Amount.	Total.
Fort Totten, N. Dak	Commanding officers' quarters No. 3	\$37.19	\$466.09
	Quadruple set company officers' quarters No. 4	25.76	
	Double set company officers' quarters No. 5	10.48	
	Company quarters No. 12	31.77	
	Company quarters No. 13	11.45	
	Company quarters No. 14	1.08	
	Mess-room and kitchen No. 15	1.48	
	Guard-house No. 17	3.18	
	Mess-rooms and kitchen No. 18	1.72	
	Sinks Nos. 20 and 21	274.00	
	Commissary store-house No. 23	2.52	
	Bakery No. 24 .....	.98
	Offices No. 25	3.56	
	Quartermaster's stable No. 27	3.47	
	Ice-house No. 36	6.85	
	Bath-house No. 37	2.60	
	Garrison fence	8.62	
Fort Bennett, S. Dak	Commanding officers' quarters No. 1	13.21	123.31
	Company officers' quarters Nos. 2, 3, and 4	39.66	
	Barracks No. 6	4.34	
	Store-houses No. 9	49.85	
	Guard-house No. 11	13.76	
	Quartermaster's stable No. 12 .....	.08
	Non-commissioned staff quarters Nos. 15 and 16 .....	.28
	Magazine No. 22	2.13	
Fort Shaw, Mont	Double set company officers' quarters Nos. 1 and 2	38.07	428.59
	Double set company officers' quarters Nos. 3 and 4	27.79	
	Double set company officers' quarters Nos. 5 and 6	3.70	
	Commanding officer's quarters No. 7	19.63	
	Double set company officers' quarters Nos. 8 and 9	13.33	
	Double set company officers' quarters Nos. 10 and 11	32.11	
	Double set company officers' quarters Nos. 12 and 13	9.83	
	Headquarters building No. 14	26.02	
	Company quarters No. 15	39.17	
	Company quarters No. 16	42.27	
	Company quarters No. 18	46.52	
	Company quarters No. 19	48.44	
	School-room, store-room, and guard-house No. 20	13.54	
	Library No. 21	1.95	
	Quartermaster and commissary store-house No. 22	25.51	
	Bakery No. 24 .....	.55
	Stable No. 26	19.32	
	Saw-mill and pump-house No. 28	5.33	
	Hall No. 29	12.11	
Ice-house	2.50		
Fort Yates, N. Dak	Commanding officers' quarters No. 1	139.68	
	Officers' quarters No. 2	38.90	
	Officers' quarters No. 3	41.25	
	Officers' quarters No. 4	40.83	
	Double set officers' quarters Nos. 5 and 7	60.25	
	Double set officers' quarters Nos. 6 and 8	47.65	
	Double set officers' quarters Nos. 9 and 11	40.04	
	Double set officers' quarters Nos. 10, 7, and 12	50.34	
	Officers' quarters No. 13	51.10	
	Double set officers' quarters Nos. 14 and 16	61.05	
	Officers' quarters No. 15	34.30	
	Officers' quarters No. 18	31.55	
	Double set officers' quarters Nos. 54 and 56	57.49	
	Band quarters No. 19	60.50	
	Double set infantry barracks Nos. 21 and 23	150.06	
	Headquarters building No. 22	61.75	
	Double set infantry barracks Nos. 24 and 26	155.80	
Bakery No. 25	22.70		
Commissary store-house and office No. 27	40.55		
Quartermasters' store-house and office No. 28	41.70		

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE MISSOURI—Continued.

DEPARTMENT OF DAKOTA—Continued.

Post.	Designation.	Amount.	Total.	
Fort Yates, N. Dak.	Non-commissioned staff quarters Nos. 29 and 31	\$55.27		
	Guard-house No. 30	66.05		
	Double set cavalry barracks Nos. 34 and 36 ..	158.25		
	Shelter for civilian employes' quartermasters' department No. 37	10.02		
	Granary No. 38	31.65		
	Quartermasters' stables No. 39	48.85		
	Two cavalry stables, No. 42 and 44	149.45		
	Ice-house No. 45	14.75		
	Shooting gallery No. 46	54.00		
	Coal shed No. 48	15.50		
	Guard-house and shops for cavalry troops No. 50	16.02		
	Canteen and amusement hall No. 51	27.94		
				\$1, 875. 15
	Camp Sheridan, Wyo.	Barracks No. 1	85.89	
		Warehouse No. 2	47.10	
		Guard-house No. 3	3.55	
Cavalry stables No. 4		29.58		
Quartermasters' stable No. 5		90.96		
Office building No. 7		62.89		
Double set officers' quarters No. 8		162.15		
				482. 12
Fort Missoula, Mont.	Double set company officers' quarters Nos. 1 and 2	20.52		
	Double set company officers' quarters Nos. 3 and 4	21.03		
	Double set company officers' quarters Nos. 5 and 6	20.17		
	Commanding officers' quarters No. 7	10.55		
	Double set company officers' quarters Nos. 8 and 9	15.06		
	Double set field officers' quarters Nos. 10 and 11	441.52		
	Double set company officers' quarters Nos. 12 and 13	6.52		
	Company barracks No. 19	23.31		
	Company barracks No. 21	21.93		
	Company barracks No. 23	30.54		
	Company barracks No. 25	63.08		
	Administration building No. 27	8.31		
	Old hall used as band barracks No. 28	3.75		
	Guard-house No. 29	4.50		
	Commissary store-house No. 32	18.03		
	Quartermasters' store-house No. 33	5.60		
	Teamsters' quarters (civilians) No. 36	28.76		
	Quartermasters' corral No. 37	47.00		
	Bath-house No. 44	6.75		
	Saw-mill No. 45	21.40		
			818. 33	
	Total Department of Dakota		32,465. 34	

RECAPITULATION.

Department of the Missouri	\$17, 693. 00
Department of Texas	24, 270. 87
Department of the Platte	95, 803. 06
Department of Dakota	32, 465. 34
Total Division of the Missouri	170, 232. 27

QUARTERMASTER-GENERAL.

705

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE PACIFIC.

DEPARTMENT OF THE COLUMBIA.

Post.	Designation.	Amount.	Total.	
Fort Walla Walla, Wash....	Commanding officer's quarters No. 1	\$116.19		
	Officers' quarters No. 2	47.25		
	Officers' quarters No. 3	31.20		
	Barracks No. 9	95.09		
	Barracks No. 10	59.09		
	Barracks No. 12	59.99		
	Barracks No. 13	59.99		
	Barracks No. 14	47.46		
	Post school No. 18	723.95		
	Administration building No. 20	206.30		
	Quartermaster store-house No. 21.....	351.11		
	Guardhouse No. 25	435.31		
	Officers' quarters No. 43.....	359.00		
			\$2,591.63	
Vancouver Depot, Wash	Officers' quarters No. A 28	140.00		
	Officers' quarters No. B 30	148.34		
	Officers' quarters No. C and D, 31 and 32.....	71.35		
	Officers' quarters No. E 33	46.52		
	Officers' quarters No. F 34	55.10		
	Officers' quarters No. G 35	119.00		
	Officers' quarters No. H and I 36 and 37	246.97		
	Officers' quarters No. L 40	296.03		
	Officers' quarters No. M 41	125.00		
	Officers' quarters No. N 42.....	120.21		
	Officers' quarters No. 6.....	47.00		
	Headquarters Department of the Columbia, No. 65.....	358.94		
	Magazine No. 58	150.00		
Quarters ordnance detachment No. 61	75.00			
			1,999.50	
Fort Townsend, Wash.	Commanding officers' quarters No. 1	192.60		
	Officers' quarters No. 2	171.50		
	Officers' quarters No. 3	82.00		
	Officers' quarters No. 4	82.00		
	Officers' quarters No. 5	82.00		
	Officers' quarters No. 6	154.51		
	Barracks No. 7	668.90		
	Mess-hall and kitchen No. 8	160.40		
	Quartermaster and commissary storehouse No. 9	100.00		
	Guard-house No. 11.....	40.00		
	School-house, library and chapel No. 12	80.00		
	Bakery No. 13	36.00		
	Non-commissioned staff quarters No. 14	32.95		
	Non-commissioned staff quarters No. 15	25.00		
	Stables No. 18	197.50		
	Magazine No. 20	15.00		
	House for water tanks No. 23	30.00		
	Granary No. 24.....	20.00		
				2,168.36
	Vancouver Barracks, Wash	Officers' quarters No. 1 and 2	49.00	
Officers' quarters No. 3 and 4.....		39.00		
Commanding officers' quarters No. 5		97.00		
Officers' quarters No. 7		99.40		
Officers' quarters No. 8 and 9		230.69		
Officers' quarters No. 10 and 11		275.54		
Officers' quarters No. 12 and 13.....		36.26		
Officers' quarters No. 16		19.00		
Officers' quarters No. 17		45.00		
Officers' quarters No. 18		53.00		
Officers' quarters No. 19		33.75		
Officers' quarters No. 20 and 21		18.00		
Officers' quarters No. 22 and 23.....		57.35		
Officers' mess No. 26		52.75		
Officers' quarters No. 30		47.00		
Officers' quarters No. 31 and 32.....		52.25		
Post Office, No. 33		10.50		
Frame barracks No. 34		57.45		
Frame barracks No. 35		62.45		
Frame barracks No. 36		99.90		
Building for school, etc., No. 37		383.62		
Company quarters No. 38.....		62.45		
Frame barracks No. 38		105.42		
Frame barracks No. 39	99.90			
Frame barracks No. 40	74.45			
Company quarters No. 42.....	99.90			
Guard-house No. 43	20.25			

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE PACIFIC—Continued.

DEPARTMENT OF THE COLUMBIA—Continued.

Post.	Designation.	Amount.	Total.
Vancouver Barracks, Wash..	Post headquarters No. 44.....	\$19.00	
	Frame barracks No. 45.....	99.90	
	Band quarters, No. 46.....	65.96	
	Band leader's quarters No. 47.....	11.10	
	Quartermaster's store-house No. 48.....	13.25	
	Commissary store-house No. 49.....	17.00	
	Non-commissioned staff quarters No. 52.....	4.35	
	Non-commissioned staff quarters No. 53.....	8.25	
	Bake-house No. 55.....	11.50	
	Water-closets No. 56.....	17.25	
	Company quarters No. 57.....	24.25	
	Mess building No. 59.....	9.10	
	Post school and library No. 61.....	15.05	
	Post quartermaster's stables No. 62.....	26.00	
	Post canteen No. 63.....	17.00	
	Hook and ladder shed No. 66.....	6.25	
	Water-closets No. 67 (built).....	1,100.00	
	Water-closets No. 68 (built).....	1,100.00	
Water-closets No. 69 (built).....	798.00		
			\$5,644.50
Fort Klamath, Oregon.....	No repairs.		
Fort Sherman, Idaho.....	Offices quartermaster and store-houses No. 1.....	323.80	
	Barrack No. 1.....	215.25	
	Barrack No. 2.....	241.21	
	Barrack No. 3.....	21.65	
	Barrack No. 4.....	5.45	
	Band quarters.....	43.93	
	Officers' quarters Nos. 1 and 2.....	36.60	
	Officers' quarters Nos. 3 and 4.....	35.30	
	Officers' quarters No. 5.....	169.15	
	Officers' quarters Nos. 6 and 7.....	211.10	
	Officers' quarters Nos. 8 and 9.....	304.45	
	Officers' quarters Nos. 10 and 11.....	10.77	
	Officers' quarters Nos. 12 and 13.....	3.55	
	Officers' quarters Nos. 14 and 15.....	6.97	
	Chapel.....	187.72	
	Non-commissioned staff officers' quarters Nos. 1 and 2.....	138.38	
	Non-commissioned staff officers' quarters Nos. 3 and 4.....	93.28	
	Non-commissioned staff officers' quarters Nos. 5 and 6.....	108.65	
	Non-commissioned staff officers' quarters Nos. 7 and 8.....	210.43	
	Saw-mill.....	406.90	
	Quartermaster's stables.....	5.00	
	Cavalry stables.....	5.15	
	Offices and recreation hall.....	51.30	
	Store-house, quartermaster's department.....	18.00	
	Teamsters' quarters.....	95.95	
	Cavalry shops.....	57.31	
	Officers' quarters Nos. 16 and 17.....	65.35	
	Barracks No. 5.....	47.75	
	Bake-house.....	7.50	
	Pump-house.....	265.69	
	Post school.....	6.30	
	Commanding officer's quarters.....	184.00	
	Guard-house (new).....	105.45	
	Bath-house (built).....	2,002.01	
			5,696.30
Fort Canby, Wash.....	Officers' quarters No. 1.....	93.00	
	Officers' quarters No. 2.....	101.19	
	Officers' quarters No. 3.....	72.06	
	Officers' quarters No. 4.....	80.31	
	Officers' quarters No. 5.....	164.95	
	Officers' quarters No. 6.....	162.13	
	Old hospital building No. 7.....	174.75	
	Laundress' quarters No. 10.....	86.50	
	Double barracks No. 11.....	722.80	
	Engine-house No. 12.....	21.40	
	Wash-room No. 13.....	22.70	
	Bakery No. 14.....	102.10	
	Laundress' quarters No. 15.....	94.50	
	Guard-house No. 16.....	111.50	
	Quartermaster and commissary building No. 17.....	205.50	
	Stable No. 18.....	72.45	
	Shed No. 20.....	26.25	
	Pump and boiler house No. 21.....	23.55	
			2,337.64

QUARTERMASTER-GENERAL.

707

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE PACIFIC.—Continued.

DEPARTMENT OF THE COLUMBIA—Continued.

Post.	Designation.	Amount.	Total.	
Fort Spokane, Wash	Officers' quarters Nos. 12 and 13	\$211.87		
	Officers' quarters Nos. 14 and 15	211.87		
	Officers' quarters Nos. 16 and 17	211.87		
	Barracks	71.34		
	Head quarters building	24.75		
	Quartermaster's store-house (built)	2,295.80		
			\$3,027.50	
Boisé Barracks, Idaho	Field officers' quarters No. 1	100.54		
	Officers' quarters No. 2	152.76		
	Officers' quarters No. 3	174.99		
	Quartermaster's store-house No. 6	23.28		
	Officers' quarters No. 4	52.31		
	Granary and commissary office and store-house No. 7	20.00		
	Post canteen, library, and school, No. 8	48.33		
	Post bakery No. 9	18.00		
	Blacksmith shop No. 10	18.44		
	Carpenter shop No. 11	12.00		
	Troop barracks No. 12	87.42		
	Administration building No. 13	4.59		
	Infantry barracks No. 14	63.84		
	Post guard-house No. 15	29.76		
	Magazine No. 16	45.03		
	Saw-mill No. 17	7.00		
	Cavalry stables No. 18	32.15		
	Wooden sheds No. 19	12.85		
	Ice-house No. 21	13.00		
	General non-commissioned staff quarters No. 22	81.51		
				997.80
		Total, Department of the Columbia		24,463.23

DEPARTMENT OF CALIFORNIA.

Benicia Barracks, Cal	Dormitory No. 10	\$30.00	
	Dining-room and kitchen No. 11	113.91	
	Dormitory No. 12	5.47	
	Dining-room and kitchen No. 13	20.21	
	Officers' quarters Nos. 2 and 3	83.38	
	Commanding officers' quarters No. 1	333.25	
	Officers' quarters Nos. 4 and 5	36.50	
	Officers' quarters Nos. 6 and 7	59.44	
	Officers' quarters No. 8	88.80	
	Commanding officer's quarters No. 15	22.00	
	Coal-shed No. 23	8.00	
	Canteen and library No. 9	3.44	
	Post quartermaster's quarters No. 28	23.00	
	Commissary-sergeant's quarters No. 25	70.66	
	Stables No. 22	7.00	
	Guard-house No. 19	4.00	
	Hay-shed No. 14	1.50	
	Engine-house No. 29	2.50	
	Magazine No. 26	4.00	
	Wagon-sheds	2.00	
	Tools for general repairs	35.00	
	Materials for general repairs	89.45	
Fort Gaston, Cal	Officers' quarters No. 1	500.00	
	Officers' quarters No. 3	10.50	
	Officers' quarters No. 5	500.00	
	Barracks No. 11	67.50	
	Canteen No. 28 (built)	63.00	
			1,141.00
Angel Island, Cal	Officers' quarters No. 1	177.00	
	Officers' quarters Nos. 2 and 3	215.00	
	Officers' quarters No. 4	107.00	
	Officers' quarters No. 5	107.00	
	Officers' quarters Nos. 6 and 7	201.00	
	Officers' quarters No. 8	98.00	
	Officers' quarters No. 9	100.00	
	Officers' quarters No. 10	128.50	
	Officers' quarters No. 11	133.50	
	Officers' quarters No. 12	118.00	

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE PACIFIC—Continued.

DEPARTMENT OF CALIFORNIA—Continued.

Post.	Designation.	Amount.	Total.
Angel Island, Cal.....	Company quarters No. 15.....	\$120.00	
	Company quarters No. 16.....	55.00	
	Company quarters No. 17.....	50.00	
	Headquarters building No. 18.....	53.00	
	Band quarters No. 19.....	118.00	
	Guard-house No. 20.....	520.00	
	Company quarters No. 21.....	428.00	
	Quartermaster's store-room No. 22.....	42.00	
	Carpenter's shop No. 23.....	30.00	
	Quartermaster's stable No. 24.....	249.00	
	Bake-shop No. 25.....	36.00	
	Non-commissioned staff quarters No. 26.....	626.00	
	Non-commissioned staff quarters No. 27.....	33.00	
	Non-commissioned staff quarters No. 28.....	33.00	
	Blacksmith-shop No. 30.....	24.00	
	Coal-house No. 33.....	40.00	
	Boat-house No. 34.....	17.00	
	Engine-house No. 35.....	314.00	
	Paint, saddler's, and tin shops No. 36.....	520.00	
Presidio of San Francisco, Cal.	Officers' quarters No. 1.....	234.00	
	Officers' quarters No. 2.....	113.00	
	Officers' quarters No. 3.....	164.00	
	Officers' quarters No. 4.....	157.00	
	Officers' quarters No. 5.....	247.50	
	Officers' quarters No. 6.....	277.00	
	Officers' quarters No. 7.....	353.00	
	Officers' quarters No. 8.....	236.00	
	Officers' quarters No. 9.....	199.00	
	Officers' quarters No. 10.....	140.00	
	Officers' quarters No. 11.....	194.00	
	Officers' quarters No. 12.....	228.00	
	Officers' quarters No. 13.....	231.00	
	Officers' quarters No. 14.....	400.50	
	Officers' quarters No. 15.....	144.00	
	Officers' quarters No. 16.....	179.00	
	Officers' quarters No. 17.....	379.00	
	Officers' quarters No. 18.....	80.00	
	Officers' quarters No. 21.....	90.00	
	Officers' quarters No. 22.....	221.84	
	Headquarters' offices, library, and band quarters No. 24.....	340.00	
	Quartermaster's store-house No. 25.....	340.00	
	Forage and coal house No. 28.....	25.00	
	Kitchen and mess-room No. 31.....	27.50	
	Barracks No. 32.....	70.00	
	Barracks No. 37.....	65.75	
	Gun-shed (built) No. 42.....	2,198.00	
	Stable No. 46.....	62.50	
	Gun-shed No. 50.....	255.16	
	Gate-house No. 55.....	105.00	
	Non-commissioned staff quarters No. 56.....	49.00	
	Light-battery stables No. 58.....	3,729.00	
	Gymnasium.....	20.00	
	Light-battery shops No. 59.....	678.00	
	Non-commissioned staff quarters No. 60.....	338.00	
	Non-commissioned staff quarters No. 62.....	70.00	
	Canteen No. 63.....	267.20	
	Canteen No. 64.....	70.00	
	Quarters non-commissioned staff No. 65.....	70.00	
	Quarters non-commissioned staff No. 66.....	70.00	
	Quarters non-commissioned staff No. 68.....	70.00	
Quarters non-commissioned staff No. 69.....	119.00		
Barracks No. 72.....	65.75		
Guard-house No. 77.....	350.00		
Gate-house No. 83.....	145.00		
Barracks No. 88.....	331.50		
Barracks No. 89.....	331.50		
Officers' quarters No. 91.....	99.50		
Officers' quarters No. 92.....	99.50		
Officers' quarters No. 93.....	99.50		
Officers' quarters No. 94.....	99.50		
Ordinance store-house No. 95.....	95.00		
Barracks No. 97.....	17.50		
Barracks No. 98.....	17.50		
Officers' quarters No. 101.....	298.75		

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE PACIFIC—Continued.

DEPARTMENT OF CALIFORNIA—Continued.

Post.	Designation.	Amount.	Total.	
Presidio of San Francisco, Cal.	Officers' quarters No. 102	\$298. 75		
	Repairing gutters and pipes	130. 00		
	Advertising	94. 10		
	Material for general repairs	1, 255. 34		
			\$17, 175. 64	
Alcatraz Island, Cal.	Officers' quarters No. 1	400. 00		
	Adjutant's quarters No. 2	40. 00		
	Officers' quarters No. 7	50. 00		
	Officers' quarters No. 8	186. 87		
	Officers' quarters No. 9	50. 40		
	Non-commissioned staff quarters No. 13	12. 00		
	Barracks No. 17	100. 00		
	First sergeant's room and store-room No. 18 ..	10. 00		
	Store-room No. 19	10. 00		
	Company tailor-shop No. 20	10. 00		
	Prison and kitchen Nos. 23 and 22	300. 00		
	Battery kitchens and mess-hall No. 32	30. 00		
	Battery wash-house and bath-rooms No. 35 ..	50. 00		
	Water-closets No. 40	100. 00		
	General repairs	100. 00		
	Tools and lockers	88. 00		
				1, 536. 87
	Fort Mason, Cal.	Division commander's quarters No. 58	120. 00	
		Division commander's stable No. 59	64. 66	
Commanding officer's quarters No. 1		51. 00		
Officers' quarters No. 4		58. 00		
Barracks No. 6		40. 00		
Canteen and shops No. 11		430. 31		
Quartermaster's office No. 15		51. 00		
Ordnance sergeant's quarters No. 18		26. 56		
Oil shed and shops No. 22		45. 00		
				881. 43
	Total Department of California		26, 471. 45	

DEPARTMENT OF ARIZONA.

Fort Grant, Ariz.	Commanding officer's quarters No. 1	\$30. 80		
	Officers' quarters No. 2	28. 80		
	Officers' quarters No. 3	173. 50		
	Officers' quarters No. 4	84. 25		
	Officers' quarters No. 5	92. 60		
	Officers' quarters No. 6	87. 25		
	Officers' quarters No. 7	23. 50		
	Officers' quarters No. 8	10. 50		
	Officers' quarters No. 9	36. 25		
	Officers' quarters No. 10	22. 50		
	Officers' quarters No. 11	78. 75		
	Officers' quarters No. 12	25. 15		
	Post headquarters No. 13	24. 10		
	Headquarters No. 15	38. 35		
	Guard-house No. 16	65. 05		
	Bake-house No. 20	12. 60		
	Oil-house No. 21	28. 00		
	Post amusement rooms No. 25	53. 95		
	Company barracks No. 26	99. 05		
	Company barracks No. 27	21. 50		
	Company barracks No. 28	51. 60		
	Company barracks No. 29	80. 50		
	Company barracks No. 30	98. 00		
	Company barracks No. 31	41. 50		
	Company barracks No. 32	243. 50		
	Cavalry corrals Nos. 33 and 37	20. 00		
	Quartermaster's corral No. 38	100. 00		
	Foragmaster's quarters No. 47	89. 25		
				\$1, 756. 80
	Whipple Barracks, Ariz.	Officers' quarters No. 17	206. 50	
		Commissary store-house No. 21	194. 30	
		Barracks No. 22	390. 00	
		Granary No. 38	122. 25	
General repairs		586. 95		
Wagon-sheds No. 44		198. 00		
Officers' quarters No. 31		365. 25		
Oil-house	870. 00			

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE PACIFIC.—Continued.

DEPARTMENT OF ARIZONA.—Continued.

Post.	Designation.	Amount.	Total.
Whipple Barracks, Ariz.....	Hay-sheds	\$1,611.00	\$4,762.25
	Gun-sheds	218.00	
Fort Wingate, N. Mex	Post headquarters No. 23	173.50	23,324.79
	Barracks Nos. 24, 25, 26, 27	3,507.13	
	Guard-house No. 28	3.72	
	Barracks Nos. 29, 30, 31, and 32	1,860.88	
	Cavalry stables No. 39 (built)	1,626.12	
	Cavalry stables No. 40 (built)	1,626.12	
	Saw-mill No. 44 (built)	3,105.33	
	Quartermaster's corral No. 64	4,460.48	
	Gun-shed No. 65	428.93	
	Granary No. 66	1,894.20	
	Hay and coal shed No. 67	4,638.38	
Fort Stanton, N. Mex	Commanding officer's quarters No. 1	30.00	13,236.18
	Officers' quarters No. 2	50.00	
	Officers' quarters No. 3	220.00	
	Quartermaster's store-house No. 4	10.00	
	Barracks No. 5 (additions and repairs)	4,046.36	
	Chapel and amusement hall No. 6	75.00	
	Post guard-house No. 7	50.00	
	Post headquarters No. 8	40.00	
	Cavalry barracks No. 9 (addition and repairs)	2,033.18	
	Cavalry barracks No. 10 (addition and repairs)	2,033.18	
	Commissary store-house No. 11	10.00	
	Post bakery No. 12	15.00	
	Officers' quarters No. 13	150.00	
	Signal-service building No. 15	105.00	
	Officers' quarters No. 25	3,102.62	
	Commissary and quartermaster sergeant's quarters No. 29	25.00	
	Shelter for guns and fire apparatus No. 30 (built)	1,240.84	
Fort Bowie, Ariz	Officers' quarters No. 1	52.44	1,936.08
	Officers' quarters No. 2	50.56	
	Officers' quarters No. 3	42.10	
	Officers' quarters No. 4	3.76	
	Officers' quarters No. 5	25.94	
	Officers' quarters No. 6	15.04	
	Barracks No. 8	81.45	
	Troop store-room No. 9	18.80	
	Barracks No. 10	78.94	
	Wash and bath house No. 11	116.84	
	Oil-house, No. 12 (built)	298.00	
	Subsistence store-house No. 14	106.50	
	Post canteen No. 15	170.09	
	Administration building No. 17	27.19	
	Shops, stables, corrals, and wagon-shed No. 18	48.87	
	Quartermaster's store-house No. 22	59.52	
	Engine-house No. 23	9.40	
	Ice-machine house, No. 24	18.80	
	Officers' quarters No. 25	27.19	
	Guard-house No. 26	4.70	
School-house No. 32	10.65		
Magazine No. 35 (built)	528.00		
Gun-shed No. 36	141.80		
Fort Lowell, Ariz.....	Officers' quarters No. 1	66.50	1,936.08
	Officers' quarters No. 2	26.00	
	Officers' quarters No. 3	45.50	
	Officers' quarters No. 4	31.25	
	Officers' quarters No. 5	73.50	
	Officers' quarters No. 6	17.50	
	Officers' quarters No. 7	67.25	
	Barracks No. 9	67.00	
	Barracks No. 10	116.00	
	Barracks No. 11	159.32	
	Barracks No. 12	188.00	
	Store-house No. 13	233.00	
	Quartermaster's store-house No. 14	27.90	
	Guard-house No. 15	10.00	
Bakery No. 16	20.35		
Administration building No. 17	39.75		
Granary No. 18	16.00		

QUARTERMASTER-GENERAL.

711

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE PACIFIC—Continued.

DEPARTMENT OF ARIZONA—Continued.

Post.	Designation.	Amount.	Total.	
Fort Lowell, Ariz.....	Shops No. 19	\$400.50		
	Pump-house No. 20	22.50		
	Corral No. 21	4.25		
	Corral No. 22	52.25		
	Corral No. 23	257.25		
	Corral No. 24	307.25		
	Chief musician's quarters No. 25	61.25		
	Married men's quarters No. 27	4.75		
	Married men's quarters No. 32	7.25		
				\$2,272.07
Fort Bayard, N. Mex	Officers' quarters (adobe) No. 1	125.00		
	Officers' quarters (adobe) No. 2	125.00		
	Officers' quarters (adobe) No. 3	80.00		
	Officers' quarters (adobe) No. 5	20.00		
	Officers' quarters (adobe) No. 6	65.00		
	Commanding officer's quarters (adobe) No. 7	90.00		
	Officers' quarters (adobe) No. 8	65.00		
	Officers' quarters (adobe) No. 9	125.00		
	Officers' quarters (adobe) No. 10	90.00		
	Officers' quarters (adobe) No. 11	90.00		
	Officers' quarters (adobe) No. 12	100.00		
	Officers' quarters (brick) No. 14	20.00		
	Officers' quarters (brick) No. 15	20.00		
	Barracks (frame) No. 1	160.00		
	Barracks (frame) No. 2	150.00		
	Barracks (frame) No. 3	170.00		
	Barracks (frame) No. 4	30.00		
	Barracks (frame) No. 5	60.00		
	Barracks (brick and frame) No. 6	35.00		
	Band quarters (brick) No. 17	7.00		
	Guard-house (brick) No. 20	130.00		
	Offices commanding officer and adjutant, library, and chapel (adobe) No. 21	75.00		
				1,832.00
Fort Thomas, Ariz.....	Boiler, engine, and ice-machine house, No. 31 (adobe, one story, shingled)	90.00		
Fort Marcey, N. Mex	Field officers' quarters (adobe) No. 1	86.52		
	Officers' quarters (adobe) No. 2	24.03		
	Officers' quarters (adobe) No. 3	40.64		
	Officers' quarters (adobe) No. 4	43.23		
	Officers' quarters (adobe) No. 5	26.55		
	Officers' quarters (adobe) No. 6	5.82		
	Officers' quarters (adobe) No. 7	46.76		
	Officers' quarters (adobe) No. 8	47.75		
	Officers' quarters (adobe) No. 9	41.82		
	Double set of barracks Nos. 10 and 11	13.62		
	Post headquarters, guard-house and band quarters (adobe) No. 12	262.83		
	Chapel and reading-rooms (adobe) No. 13	11.20		
	Corral, store-rooms, etc. (adobe) No. 14	183.85		
	Double set of barracks (adobe) No. 15	267.58		
	General repairs	97.80		
				1,200.00
	Fort Mojave, Ariz	Hay shed No. 30	166.75	
Oil-house No. 31		50.47		
			217.22	
Fort Verde, Ariz	Officers' quarters (adobe and frame) No. 1	62.75		
	Officers' quarters (adobe and frame) No. 2	55.00		
	Officers' quarters (adobe and frame) No. 3	55.00		
	Officers' quarters (adobe and frame) No. 4	55.00		
	Officers' quarters (adobe) No. 5	10.00		
	Officers' quarters (adobe) No. 6	9.75		
	Commanding officer's quarters (adobe) No. 7	93.10		
	Company quarters (frame) No. 10	43.50		
	Troop quarters (frame) No. 12	91.50		
	Office acting assistant quartermaster, assistant commissary-sergeant, telegraph office, etc. (frame) No. 13	28.00		
	Guard-house (frame) No. 14	54.50		
	Commissary storehouse (adobe) No. 15	36.00		
	Quartermaster store and grain house (frame) No. 16	18.00		
	Carpenter, tinner, saddler shops, store-rooms, etc. (adobe) No. 20	20.00		
			632.10	
San Diego Barracks, Cal.....	Barracks, quartermaster and subsistence store-house No. 1	410.60		
	Office building No. 2	71.75		

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE PACIFIC—Continued.

DEPARTMENT OF ARIZONA—Continued.

Post.	Designation.	Amount.	Total.		
San Diego Barracks, Cal.	Guard-house No. 3	\$63.86			
	Non-commissioned staff and married soldiers' quarters No. 4	358.61			
	Magazine No. 6	83.25			
	Wood-shed No. 8	15.20			
	Hay-house No. 10	175.68			
			\$1,178.95		
Fort Selden	Company barracks (adobe) No. 1	41.40			
	Post and company commander's quarters (adobe) No. 3	27.00			
	Officers' quarters (adobe) No. 5	8.00			
	Headquarters, shops, and store-house (adobe) No. 6	65.80			
	Granary (adobe) No. 12	18.00			
	Granary (adobe) No. 13	14.80			
Fort Apache, Ariz.	Officers' quarters (frame) No. 1	3.00			
	Commanding officers' quarters (frame) No. 3	5.00			
	Officers' quarters (frame) No. 5	4.00			
	Officers' quarters (frame) No. 6	4.00			
	Officers' quarters (frame) No. 7	4.00			
	Officers' quarters (frame) No. 8	5.00			
	Officers' quarters (frame) No. 9	4.00			
	Officers' quarters (frame) No. 10	3.00			
	Officers' quarters (frame) No. 16	5.00			
	Band barracks (frame) No. 2	26.69			
	Troop barracks (adobe) No. 3	26.69			
	Troop barracks (frame) No. 4	26.72			
	Troop barracks (frame) No. 5	26.69			
	Troop barracks (frame) No. 6	26.69			
	Cavalry stables (frame) No. 1 C	33.58			
	Cavalry stables (frame) No. 2 C	35.15			
	Cavalry stables (frame) No. 3 C	17.58			
	Cavalry stables (frame) No. 4 C	67.16			
	Quartermaster's corral (frame) No. 6 C	20.00			
	Post administration building (adobe) No. 1 B	10.00			
	Telegraph office (slab) No. 12	10.00			
	Post guard-house (stone) No. 5 B	6.00			
	Granary (frame) No. 15 B	131.65			
	Quartermaster's store-house (adobe) No. 17 B*	1,687.70			
	Commissary store-house (adobe) No. 18 B*	2,937.01			
	Saw-mill, steam-pump, etc. (stone) No. 19 B*	98.40			
	Range, store-house (frame) No. 20 B	56.00			
					175.00
	Fort Huachuca, Ariz.	Officers' quarters (adobe) No. 1		78.00	
		Officers' quarters (adobe) No. 2		84.00	
		Officers' quarters (adobe) No. 3		45.00	
		Officers' quarters (adobe) No. 4		33.00	
		Officers' quarters (adobe) No. 5		51.31	
Officers' quarters (adobe) No. 6		37.30			
Officers' quarters (adobe) No. 7		36.46			
Officers' quarters (adobe) No. 8		40.28			
Officers' quarters (adobe) No. 9		31.45			
Officers' quarters (adobe) No. 10		73.00			
Officers' quarters (adobe) No. 11		37.78			
Officers' quarters (adobe) No. 12		40.75			
Officers' quarters (adobe) No. 13		81.31			
Double barracks (frame) No. 14		243.66			
Troop barracks (frame) No. 15		174.23			
Troop barracks (frame) No. 16		169.77			
Post headquarters, administration building, etc. (frame) No. 17		121.46			
Troop barracks (adobe) No. 18		174.54			
Quartermaster's store-house (adobe) No. 19		8.00			
Guard-house (adobe) No. 21		57.00			
Post bakery (adobe) No. 23		49.32			
Teamsters' mess (frame) No. 25		23.29			
Quartermaster's stables (frame) No. 26		23.00			
Cavalry stables (frame) No. 27		27.00			
Cavalry stables (frame) No. 28		26.73			
Cavalry stables (frame) No. 29		29.14			
Commissary store-house (adobe) No. 30		19.41			
Granary (adobe) No. 31		15.00			
Cavalry stables (frame) No. 33		27.13			
Cavalry stable (frame) No. 34		13.00			
Non-commissioned staff's quarters (adobe) No. 35		7.24			

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

DIVISION OF THE PACIFIC—Continued.

DEPARTMENT OF ARIZONA—Continued.

Post.	Designation.	Amount.	Total.	
Fort Huachuca, Ariz	Saw-mill (frame) No. 36	\$17.76		
	Non commissioned staff's quarters (adobe) No. 37	14.00		
	Magazine (adobe) No. 39	600.00		
	Wagon-shed (frame) No. 40	585.14		
	Hay-shed (frame) No. 41	1,137.80		
San Carlos, Ariz	Cavalry and Infantry mess-room and kitchen Nos. 1 and 2	305.50	\$4,242.26	
	Flooring tent for post library No. 3	21.55		
	Officers' quarters No. 4	88.40		
	Cavalry and infantry store tents No. 5	88.40		
	Guard-house (built) No. 7	7,784.25		
	Gun-shelter (built) No. 8	260.50		
	Canvas store-houses (built) Nos. 9 and 10	664.50		
	Officers' mess and kitchen (built) No. 11	250.65		
	Infantry company mess and kitchen (built) No. 12	250.65		
	Flooring and framing tents Nos. 13 to 19 inclusive, \$58.15 each	407.05		
	General repairs	148.00		
				10,269.43
		Total Department of Arizona .....			72,405.86

* Built during the year.

RECAPITULATION.

Department of the Columbia	\$24,463.23
Department of California	26,471.45
Department of Arizona	72,405.86
Total Division of the Pacific	123,340.54

RECRUITING STATIONS.

Post.	Designation.	Amount.	Total.		
Davids Island, N. Y	Officers' quarters No. 1	\$0.00			
	Officers' quarters No. 2	50.00			
	Officers' quarters No. 3	100.00			
	Officers' quarters No. 4	100.00			
	Officers' quarters No. 5	100.00			
	Officers' quarters No. 6	100.00			
	Army mess-hall and kitchen No. 24	1,012.67			
	Barracks No. 25	342.21			
	Post-office and officers' mess No. 45	147.00			
	Water-tower No. 50	69.00			
	Coal-shed and wharf No. 57	317.50			
	Barracks No. 60	253.29			
	Jefferson Barracks, Mo	Officers' quarters No. 1		20.99	\$2,623.67
		Officers' quarters No. 2		24.55	
Commanding officer's quarters No. 3		39.49			
Officers' quarters No. 4		16.95			
Barracks No. 5		148.80			
Barracks No. 6		104.26			
Barracks No. 7		84.72			
Officers' quarters, No. 8		84.36			
Quartermaster's and commissary sergeant's offices and store-houses No. 9		43.35			
Guard-house No. 10		237.82			
Canteen No. 11		137.37			
Water-tower No. 12		163.60			
Stables No. 13		69.05			
Post bakery No. 16		17.41			
Latrines No. 24		4.32			
Stables No. 25		3.82			
Steam-laundry No. 28		1,464.75			
Quartermaster-sergeant's quarters No. 29		2.52			
Forage-master's quarters No. 30	2.35				

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

RECRUITING STATIONS—Continued.

Post.	Designation.	Amount.	Total.
Jefferson Barracks, Mo	Commissary-sergeant's quarters No. 31	\$3.29	\$34,724.61
	Shops No. 33	61	
	Mess-hall and kitchen (brick) constructed ...	31,950.23	
	General repairs	100.09	
Columbus Barracks, Ohio....	Officers' barracks Nos. 1 and 2	83.51	3,237.55
	Officers' quarters Nos. 3 and 4	76.63	
	Officers' quarters Nos. 5 and 6	73.93	
	Commanding officer's quarters No. 9	174.90	
	Men's quarters No. 10	850.60	
	Guard-house	1,763.46	
	Officers' quarters No. 13	146.59	
	Officers' quarters Nos. 7, 8, and 9	67.93	
	Total for recruiting stations .....			40,585.83

INDEPENDENT POSTS.

Willets Point, N. Y.	Commanding officers' quarters No. 1	\$4.65	\$2,787.39
	Officers' quarters Nos. 2 and 3	223.14	
	Officers' quarters Nos. 4 and 5	74.21	
	Officers' quarters Nos. 6 and 7	87.71	
	Officers' quarters No. 10	84.49	
	Officers' quarters Nos. 11 and 12	23.64	
	Old headquarters' building No. 13	9.80	
	Quarters of post quartermaster-sergeant No. 14	79.01	
	Quarters of torpedo-sergeant No. 16	63.49	
	Battery quartermaster-sergeant's quarters No. 18	38.74	
	Commissary-sergeant's quarters No. 19	5.19	
	Headquarters' building No. 20	22.36	
	Company B, barracks No. 21	3.76	
	Company C, barracks No. 22	36.78	
	Company A, barracks No. 23	23.88	
	Mess-building No. 24	62.63	
	Quartermaster's store-house No. 25	41.43	
	Commissary store-house No. 26	44.58	
	Quartermaster's stables No. 31	284.00	
	Canteen No. 35	623.05	
	Post school and band barracks No. 34	2.69	
	Post guard-house No. 36	29.92	
	Post chapel No. 37	63.26	
	Married soldiers' quarters No. 38	1.50	
	Married soldiers' quarters No. 39	45	
	Married soldiers' quarters No. 40	11.26	
	Married soldiers' quarters No. 43	12.39	
	Married soldiers' quarters No. 41	1.18	
	Married soldiers' quarters No. 44	8.32	
	Old photograph gallery	15.33	
	Officers' quarters Nos. 47 and 48	12.01	
	Photographic laboratory No. 51	9.12	
	Officers' mess building No. 53	159.20	
Officers' quarters Nos. 54 and 55	267.56		
Battery sergeant-major's quarters No. 86	356.80		
St. Louis clothing depot, St. Louis, Mo.	Warehouse and packing room No. 1	55.63	\$3,047.53
	Dwelling No. 4	6.00	
	Commanding officer's quarters No. 13	218.80	
	Warehouse No. 14	25.00	
	Office No. 15	65.00	
	Stable and wagon-shed No. 22	2,547.70	
Philadelphia depot	Miscellaneous repairs	129.40	5,153.75
	General repairs	2,200.00	
	Quartermaster's stores	653.75	
	Field officers' quarters	1,800.00	
Jeffersonville depot	Schuylkill Arsenal	500.00	706.73
	Quartermaster's stores	151.26	
	Lumber, glass, and tools	140.25	
	General repairs	225.00	
	Carpenter-shop	125.00	
Main office	65.22		
Total for independent posts			11,895.40

A.—Statement compiled from reports showing expenditures for repairs, etc.—Continued.

GENERAL RECAPITULATION.

Division of the Atlantic.....	\$105,497.76
Division of the Missouri.....	170,232.27
Division of the Pacific.....	123,340.54
Recruiting stations.....	40,585.83
Independent posts and depots.....	11,695.40
Total.....	451,351.80

B.—Statement showing property rented by the Quartermaster's Department during the fiscal year ending June 30, 1890, and total amount paid as shown by estimates for funds.

DIVISION OF THE ATLANTIC.

Post.	Designation.	Amount.
Fort Macomb, La.....	Quarters for sergeant.....	\$75.00
Fort Monroe, Va.....	Quarters for major.....	192.00
	Quarters for captain.....	234.00
	Quarters for two lieutenants.....	192.00
Fort Trumbull, Conn.....	Quarters for one lieutenant.....	120.00
Yorktown, Va.....	Quarters for soldier in charge of monument.....	60.00
Fort Wadsworth, N. Y.....	Quarters for major.....	240.00
	Quarters for captain.....	175.00
	Quarters for three lieutenants.....	300.00
	Quarters for one lieutenant.....	160.00
	Quarters for post quartermaster-sergeant.....	60.00
New Orleans, La.....	Store-houses for quartermaster and subsistence departments.....	1,800.00
	Offices for quartermaster, subsistence, and pay departments.....	1,080.00
	do.....	999.96
Baltimore, Md.....	Office for paymaster at Pittsburgh, Pa.....	281.67
Pittsburgh, Pa.....	Offices for quartermaster, subsistence, pay, and ordnance departments.....	1,320.95
Boston, Mass.....	Offices for inspector of ordnance.....	300.00
Buffalo, N. Y.....	Offices for quartermaster's department.....	750.00
Atlanta, Ga.....	Offices for pay department.....	300.00
	Camping ground, batteries, and troops on the march from the following posts:	
Fort Myer, Va.....	18 nights, at \$25.....	450.00
Fort Hamilton, N. Y.....	20 nights, at \$5.....	100.00
Fort Adams, R. I.....	20 nights, at \$5.....	100.00
Washington Barracks, D. C.....	20 nights, at \$10.....	200.00
Fort McPherson, Ga.....	Quarters for three musicians, one month.....	24.00
	Quarters for one major.....	336.00
	Quarters for hospital steward.....	84.00
	Quarters for two musicians.....	112.00
Madison Barracks, N. Y.....	Quarters for five lieutenants.....	13.00
	do.....	278.00
	do.....	200.00
Fort Niagara, N. Y.....	Quarters for one lieutenant.....	80.00
Columbia Arsenal, Tenn.....	Quarters for soldiers, five months, at \$10.....	50.00
	Total for Division of the Atlantic.....	10,727.58

HEADQUARTERS DIVISION OF THE MISSOURI.

Chicago, Ill.....	Offices for headquarters depot quartermaster, and store-room.....	\$14,472.00
	Offices and store-rooms for depot commissary of subsistence.....	3,600.00
	Stables for quartermaster's department.....	1,800.00
	Rooms used for general court-martial.....	80.00
Highland Park, Ill.....	Office and stable for assistant quartermaster, U. S. Army, in charge of construction at Fort Sheridan.....	240.00
	Total for headquarters Division of the Missouri.....	20,142.00

B.—Statement showing property rented by the Quartermaster's Department, etc.—Cont'd.

DEPARTMENT OF THE MISSOURI

Post.	Designation.	Amount.
St. Louis depot	Offices for headquarters Department Missouri	\$1,800.00
Denver, Colo	Offices quartermaster's department	610.00
	Offices subsistence department	320.00
	Offices pay department	840.00
Leavenworth, Kans	do	175.00
	Offices tactical board	898.00
	Quarters for student officers, United States Infantry and Cavalry School	84.00
Paul's Valley, Ind. T	Office of transportation agent, quartermaster's de- partment	168.00
Woodward, Ind. T	do	240.00
Miami, Tex	do	120.00
Fort Sheridan, Ill	Quarters for commanding officer	430.00
	Quarters for post quartermaster-sergeant	124.00
	Building for hospital	152.00
	Quarters for post surgeon	330.00
Fort Elliot	For sections 38, 46, 54, 58, and 66, leased from State of Texas	128.00
Guthrie, Ind. T	Quarters for officers	300.00
El Reno, Ind. T	Office of transportation agent	20.00
Oklahoma	Quarters for two captains and three lieutenants, twelve rooms	259.20
Camp Wade, Kingfisher, Ind. T ..	Accommodations for the sick	50.00
	Total for Department of the Missouri	7,078.20

DEPARTMENT OF THE PLATTE.

Omaha, Nebr	Headquarters offices, etc	\$9,360.00
	Department headquarters stable lot	500.04
	Office for Captain Humphrey, one and one-half months at \$45	67.50
Salt Lake City	Paymaster's office	360.00
Cheyenne, Wyo	do	480.00
Ogden, Utah	Quartermaster's office and warehouse	300.00
Price, Utah	do	360.00
Carter Wyoming	do	200.04
Bordeaux, Utah	do	275.00
	Camp grounds for troops en route to summer camp near Fort Robinson	268.50
	Total for Department of the Platte	12,171.08

DEPARTMENT OF DAKOTA.

Sioux City, Iowa	Office for paymaster	\$120.00
Helena, Mont	Office for paymaster and quartermaster	810.00
Huron, S. Dak	Office for paymaster	30.00
Fort Snelling, Minn	For use of ground adjacent to military reservation for rifle and carbine practice from May 15 to June 30, 1890	250.00
	Total for Department of Dakota	1,210.00

DEPARTMENT OF TEXAS.

Pena, Tex	Office of quartermaster's agent	\$96.00
San Antonio, Tex	Quarters for two commissary sergeants	288.00
	Quarters for chief musician	144.00
	Quarters for two principal musicians	288.00
Edinburgh, Tex	Store-room	180.00
Fort Davis, Tex	Site	900.00
Camp Del Rio, Tex	Part of site	239.16
Camp Pena, Colo	Site	600.00
Camp Eagle Pass, Tex	do	900.00
Camp Langtry, Tex	do	99.96
Camp Santa Maria	do	150.00
El Paso, Tex	Office for paymaster	300.00
Fort Bliss, Tex	Barracks and quarters, etc	2,100.00
Camp Nevill's Springs	Site July 1 to March 31, nine months, at \$25; April, May, and June, \$75	300.00
	Total for Department of Texas	6,685.12

B.—Statement showing property rented by the Quartermaster's Department, etc.—Cont'd.

HEADQUARTERS DIVISION OF THE PACIFIC, AND DEPARTMENT OF CALIFORNIA.

Post.	Designation.	Amount.
Headquarters Division of the Pacific and Department of California.	Offices for headquarters	\$9,000.00
	Stable	1,080.00
Mojave, Cal	Office for quartermaster's agent	144.00
	For hire of camps in connection with field instructions of troops in Department of California.	775.00
	Total	10,999.00

DEPARTMENT OF ARIZONA.

Wilcox, Ariz.	Office for quartermaster's agent	\$240.00
Bowie Station, Ariz.	Office for quartermaster's agent	240.00
	Store-room for quartermaster department	240.00
	Office for quartermaster's agent	180.00
Holbrook, Ariz.	Store-room for quartermaster department	180.00
Hackberry, Ariz.	Office for quartermaster's agent	180.00
Phenix, Ariz.	Offices for paymasters (2)	840.00
Tucson, Ariz.	Office for quartermaster department	600.00
	Stable for quartermaster department	150.00
	Office for quartermaster's agent	180.00
Carthage, N. Mex.	Store-house for quartermaster department	180.00
	Office for quartermaster's agent	180.00
Albuquerque, N. Mex.	Office for quartermaster's agent	180.00
	Office for paymaster	360.00
Silver City, N. Mex.	Office for quartermaster's agent	180.00
Seligman, Ariz.	Office for quartermaster's agent	120.00
Los Angeles, Cal.	Offices for Headquarters Department Arizona	6,900.00
	Store-rooms quartermaster department and purchasing commissary.	300.00
Santa Fé, N. Mex.	Stables and grounds for quartermaster department	360.00
	Office of attending surgeon	275.00
	Quarters for commissary sergeant	180.00
	Quarters for hospital steward	180.00
	Quarters for non-commissioned staff, Tenth Infantry	840.00
San Diego, Cal.	Office disbursing quartermaster	300.00
	Office commissary subsistence	120.00
	Two buildings for hospital	675.00
	Quarters for officers	888.00
	Quarters for chaplain	92.20
	Quarters for officers	912.00
	Buildings for hospital	75.00
Total for Department of Arizona	16,147.20	

DEPARTMENT OF THE COLUMBIA.

Portland, Oregon	Offices for quartermaster and paymaster	\$840.00
	Quartermaster's store-room	540.00
	Office for depot and purchasing commissary subsistence.	170.00
East Portland, Oregon	Lodging thirty-one enlisted men, changing station. May 5, 1890.	7.75
Fort Walla Walla, Wash.	Offices for paymaster	240.00
Total for Department of the Columbia		1,797.75

ATLANTA, GA., NEW YORK, PHILADELPHIA, AND WASHINGTON DEPOTS.

Atlanta, Ga.	Office for quartermaster department	\$300.00
New York depot	Quarters for hospital steward, medical purveying depot.	252.00
	Quarters for hospital steward attending surgeon's office.	168.00
	Stable at 40 West Thirteenth street, at \$800 per annum.	733.37
	Store-room for subsistence department	1,833.37
	Stables, 122 West Eighteenth street, at \$1,350 per annum.	112.50
Total for New York depot		3,099.24

B.—Statement showing property rented by the Quartermaster's Department, etc.—Cont'd.

ATLANTA, GA., NEW YORK, PHILADELPHIA, AND WASHINGTON DEPOTS—Cont'd.

Post.	Designation.	Amount.
Philadelphia depot	Offices and stable for quartermaster department	\$2, 150. 04
	Office for attending surgeon	162. 00
	Total for Philadelphia depot	2, 312. 04
Washington depot, D. C.	Lots Nos. 9 and 10, square 231, occupied by subsistence department.	243. 97
	Lots 50 to 53, inclusive, square 100, occupied by quartermaster department.	1, 500. 00
	Quarters for hospital steward, Army Medical Dispensary.	252. 00
	Quarters for post quartermaster-sergeant, Freedmen's village, Arlington military reservation.	14. 00
	Quarters for ordnance sergeant, Wrightsville, N. C.	8. 45
	Offices for officers attached to the United States legations in foreign countries.	540. 00
Total for Washington depot	2, 558. 42	
San Francisco depot, Cal.	Offices and store-houses for medical, subsistence, and quartermaster departments and quartermaster stable at general depot.	9, 981. 63
	Additional store-rooms for shelter of supplies	1, 500. 00
	Storage of mineral oil	620. 00
	Total for San Francisco depot	12, 101. 63
St. Louis depot, Mo.	Offices and store-house, medical department	2, 700. 00
	Offices, store-house, and corral, subsistence department.	1, 920. 00
	Offices, store-rooms, and stable, quartermaster department.	283. 75
	Offices and store-rooms, pay and quartermaster department.	3, 121. 25
	Total for St. Louis depot	8, 025. 00

RECAPITULATION.

Divisions, departments, etc.	Amount.
Division of the Atlantic	\$10, 727. 58
Headquarters Division of the Missouri	20, 142. 00
Department of the Missouri	7, 078. 20
Department of the Platte	12, 171. 08
Department of Dakota	1, 210. 00
Department of Texas	6, 585. 12
Headquarters Division of Pacific and Department of California	10, 999. 00
Department of Arizona	16, 147. 20
Department of the Columbia	1, 797. 75
Atlanta, Ga.	300. 00
New York depot	3, 099. 24
Philadelphia depot	2, 312. 04
Washington depot, D. C.	2, 558. 42
San Francisco depot	12, 101. 63
St. Louis depot, Mo.	8, 025. 00
Total	115, 254. 26

Report of Lieut. Col. M. I. Ludington, Deputy Quartermaster-General, U. S. Army, relative to the care and maintenance of National Military Cemeteries during the fiscal year ending June 30, 1890.

QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 12, 1890.

GENERAL: I have the honor to submit the following report, pertaining to the National Military Cemeteries for the fiscal year ending June 30, 1890.

At the commencement of the year there were 82 National Cemeteries, and no changes having occurred, the number remains the same.

The accompanying statement, marked A, shows the names and classification of the several cemeteries, and the number of interments, known and unknown, in each to June 30, 1890; also the name of Superintendent, with dates of his original appointment and present assignment.

At the close of the last fiscal year there were 73 Superintendents in service.

During the year three other Superintendents have been appointed and two have resigned, leaving the number in service 74 as provided by law. There is also one Assistant Superintendent who has completed his probationary term of service and is now awaiting an opportunity for appointment.

Removals of remains of deceased soldiers have been made during the year from Monticello, Ark., to the Little Rock, Ark., national cemetery; from Bellefonte, Ark., to the Fayetteville, Ark., national cemetery; from Fort Pike, La., and from Ponchatoula, La., to the Chalmette, La., national cemetery; from Stephenson, Ala., to the Chattanooga, Tenn., national cemetery; from Budd's Ferry, La., to Alexandria, La., national cemetery; from Fort Morgan, Ala., to the Mobile, Ala., national cemetery; from Piney Grove church-yard, Anacostia, D. C., to the Arlington, Va., national cemetery; from Bryson City, N. C., and from Knoxville, Tenn., to the Knoxville, Tenn., national cemetery; from Midlothian, Chesterfield County, Va., to the Richmond, Va., national cemetery; from Morris Island, S. C., to the Beaufort, S. C., national cemetery; from Ridge Top, Tenn., to the Nashville, Tenn., national cemetery; from Brownsville, Tex., to the Brownsville, Tex., national cemetery; from Holloway Farm, Ballard County, Ky., to the Mound City, Ills., national cemetery; from Hagerstown, Md., to the Antietam, Md., national cemetery; from Fort Lyon, Colo., to the Fort Leavenworth, Kans., national cemetery; from Fort Sisseton, S. Dak., to the Custer battle-field, Mont., national cemetery; from Atlanta, Ga., to the Marietta, Ga., national cemetery; and from the Potter's field, Philadelphia, Pa., to the Philadelphia, Pa., national cemetery.

Other removals of remains have been authorized, but not yet reported, viz: From Fort Belknap, Tex., to the San Antonio, Tex., national cemetery; from Lebanon, Tenn., to the Nashville, Tenn., national cemetery; from Camp Pilot Butte, Wyo., to the post cemetery at Fort D. A. Russell, Wyo.; from the Kinsley estate, West Point, N. Y., to the cemetery at that post; from Fort Yuma, Ariz., to the San Francisco, Cal., national cemetery; and from Iowa City, Iowa, to the Keokuk, Iowa, national cemetery.

During the year 5,221 headstones to mark the graves of United States soldiers, sailors, and marines, buried in national post, private, city, and village cemeteries were provided from the appropriations for that purpose, approved October 2, 1888, and March 2, 1889. This completed

the contract for 20,000 headstones made August 21, 1888, with Messrs. Sheldon and Sons, of West Rutland, Vt., and on June 1, 1890, another contract for 10,000 headstones was made with Gross Brothers, of Lee, Mass.

During the year permanent rostrums were erected in the Alexandria, Va.; Andersonville, Ga.; Beaufort, S. C.; Corinth, Miss.; Fort Smith, Ark.; New Berne, N. C.; and San Antonio, Tex., National Cemeteries.

All were completed prior to Memorial Day, May 30, upon which occasion appropriate services were held at nearly all the National Cemeteries and the graves decorated with flags and flowers under the auspices of the members of the Grand Army of the Republic. These ceremonies were attended by large numbers of persons and good order prevailed.

At Andersonville, Ga., National Cemetery the grounds surrounding the new rostrum were graded and sodded; a part of the inclosing wall repointed, new gutters constructed, the avenues regraded, and the grave sections in the northwest corner of the cemetery graded and top-dressed.

At the Arlington, Va., National Cemetery repairs were made to the mansion, conservatory, greenhouse, and rostrum, and a new brick latrine of improved construction erected; the inclosing wall extended on the east and south sides and the old buildings within the inclosure removed. The gates at the principal entrances repaired, painted, and lettered; the burial sections extended and improved; the sunken graves filled up; the avenues and drives graveled, and the drainage extended.

At the Barrancas, Fla., National Cemetery a fence has been built to inclose the angle front of the cemetery; the inclosing wall repointed and repaired; necessary repairs have been made to the lodge and out-buildings; the gates, tablets, etc., repainted, and the headstones on the naval side cleaned and aligned.

Five hundred young eucalyptus trees were received from the Depot Quartermaster, San Francisco, Cal., and planted in accordance with the instructions.

At the Beaufort, S. C., National Cemetery a new well and pump were provided; the sunken graves refilled the shell road along the front of the cemetery repaired, and the inclosing wall repointed.

At the Beverly, N. J., National Cemetery the lodge was thoroughly repaired; the outside of the inclosing wall repointed, the cistern repaired, and a contract made to connect the cemetery with the city water service.

At the Brownsville, Tex., National Cemetery the lodge has been repaired and provided with a new tin roof, and the grounds inside the inclosing wall put in good condition. The low grounds adjoining the cemetery have been mown and the weeds removed; these grounds if protected from overflow by a levee, as recommended, can be kept in good condition and will add greatly to the beauty of the cemetery. One thousand young eucalyptus trees were received from the Depot Quartermaster, San Francisco, Cal., and planted according to instructions.

At the Camp Butler, Ill., National Cemetery about 120 feet of the inclosing wall at the northwest corner of the cemetery washed out by heavy rains, have been rebuilt. Necessary repairs were also made to the sewerage and to the roadway.

At the Cave Hill, Ky., National Cemetery the basement rooms of the lodge were repaired and improved, and grave sections A and B, containing nearly 2,400 graves, regraded and put in good order. Two other sections are yet to be regraded.

At the Chalmette, La., National Cemetery the Government wharf

has been repaired and is now in good condition. All the sunken graves have been refilled, necessary repairs been made to the lodge and out-buildings, and the iron fence in front of the cemetery and the flagstaff and gun monuments repainted.

Five hundred young eucalyptus trees were received from the Depot Quartermaster, San Francisco, Cal., and planted according to instructions. About 50 per cent. of the plants were dead when received, the earth in the boxes having become dry and the roots exposed.

At the Chattanooga, Tenn., National Cemetery necessary repairs have been made to the lodge and a picket fence erected to inclose the lodge and outbuildings. For the protection of visitors to the cemetery a neat passenger shed has been erected by the Chattanooga Union Railway Company on the line of the cemetery land and next the road leading to the main entrance. That railway company having submitted a petition for permission to cross with their tracks two corners of the national cemetery reservation, the Honorable Secretary of War granted a revokable license to construct and maintain a railway across the southwesterly and southeasterly corners of the reservation, upon certain conditions therein specified and with the understanding that said license terminate at the close of the present session of Congress should it not enact a law granting the desired right of way. The right of way was subsequently confirmed by act of Congress approved July 2, 1890.

At the Culpeper, Va., National Cemetery the ordinary repairs have been made and the inclosing wall repointed. Conveyances can no longer approach the cemetery, for the reason that the railroad company has purchased ground for stock pens about 100 yards south of the Cemetery avenue, and has graded for side tracks.

At the Corinth, Miss., National Cemetery the rear verandah of the lodge has been screened with latticed wood-work and new posts provided for all the iron tablets. The drainage has been placed in good condition and an ornamental, serviceable well-house erected over the well near the stable. The sunken graves have been refilled and leveled and the head-stones raised.

At the Cypress Hills, New York, National Cemetery the lodge has been thoroughly repaired and painted. The iron frame of the rostrum, the iron door, and the inside of the receiving vault, and outside wood-work of the stable have also been painted.

The floor of the rostrum has been repaired and raised in the center. Sunken graves have been refilled and head-stones reset. At the upper cemetery the cistern has been filled up and the site of the old lodge graded and leveled.

At the Custer Battle-field National Cemetery white marble head-stones of the regulation pattern have been placed at the graves of the officers and soldiers removed to that cemetery during the last fiscal year from the abandoned cemetery at Fort Phil Kearney, Wyoming. Two hundred and forty-nine head-stones of same pattern were erected to mark the places on the battle-field of the Little Big Horn, where General Custer and the officers and men of his command fell, June 25, 1876, and the ground inclosed with a substantial barbed-wire fence. The remains of United States officers and soldiers, originally buried in the abandoned post cemetery at Fort Sisseton, South Dak., have been removed to this cemetery, and provision will be made for the proper marking of their graves.

At the Danville, Va., National Cemetery the lodge has been repaired and the inclosing wall on the north side keyed and repointed, and

other portions repaired, leaving the wall in good condition. Drain pipe has been laid, making a thorough drainage of the east end of the cemetery, between the flagstaff mound and the inclosing wall, and also on the north side to about the center of the cemetery, making connection with the main sewer, under Lee street. The catch-basins have been repaired, and the drainage is now good.

At the Fayetteville, Ark., National Cemetery the lodge has been repaired and painted and a lightning-rod erected; the lattice work around the out-buildings has been repaired, and the entrance to and the floors of the tool-room and stable paved with brick, and a drain laid from the stable to the main pipe. The inclosing wall has been repointed where necessary, and the entrance gates, flag-staff, and arbors over the cistern and well-house painted; the lawn and burial sections filled up and graded, and head-stones raised and aligned, and many of them cleaned.

At the Fort Leavenworth, Kans., National Cemetery about 10 feet of the inclosing wall has been taken down and rebuilt and the remainder of the wall repointed where necessary. The burial sections have been refilled and sodded, and the head-stones received with the remains transferred from Fort Lyon, Col., set.

At the Hampton, Va., National Cemetery, in consequence of the probable contamination of the water in the well near the lodge from graves in that vicinity, and in order to avoid possible injury to the health of the superintendent's family and of visitors to the cemetery, it was deemed expedient to abandon the well and obtain water for domestic purposes from the Hampton Water Company, at an annual cost of \$30 for water rent. The new graves in the Soldiers' Home lot have been filled up and graded.

At the Jefferson Barracks, Mo., National Cemetery necessary repairs have been made to the lodge and out-buildings, the sunken graves filled up and rolled, and the Government headstones reset and aligned. The monuments, brick vault, private head-stones, and iron railings in the old burying-ground (officers' section) have also been put in good condition.

At the Jefferson City, Mo., National Cemetery the lodge has been thoroughly repaired and painted, and a new shingle roof put on the tool-house and wood-shed. A new cistern has been constructed, and the old one repaired, and a 4-inch filtering wall built across the center. Brick sidewalks have been laid connecting the lodge, tool-house, wood-shed, and new cistern, and the old sidewalks taken up and relaid. The grounds have been graded and sodded where necessary.

At the Knoxville, Tenn., National Cemetery the grounds have been improved and the drives, 2,557 feet in length by an average width of 15½ feet, surfaced with gravel. In steep places, where badly washed, trenches were made about 18 inches wide by 10 inches deep, and filled with broken rock. April 25, 1890, in compliance with the application of the Fountain Head Railroad Company of Knoxville, the Honorable Secretary of War granted that company a revocable license to construct the line over Holston street, from Munson to Broad street (over the National Cemetery road) in the city of Knoxville, upon certain conditions specified therein.

At the Marietta, Ga., National Cemetery the lodge has been repaired and the surrounding grounds graded and sodded. All the avenues and grassed roads (3,600 feet in length) have been graveled, rolled, and dressed, and 320 feet of brick drain 2 feet wide, and 366 feet 1 foot wide, laid. The rostrum has been repainted and the floor sodded, the

grave sections filled up and top-dressed, the head-stones raised, aligned, and cleaned.

At the Memphis, Tenn., National Cemetery the inner face and coping of the inclosing wall have been repaired and flag-staff mound enlarged; the gutter along the main avenues and the catch-basins repaired, the sunken graves refilled, and the head-stones reset.

At the City of Mexico National Cemetery the lodge has been improved by the addition of a second story, and is now a two-story, nine-room stone building in good condition.

The soldiers' monument is in good order, and the monuments belonging to the resident families have received more attention than heretofore.

At the Nashville, Tenn., National Cemetery necessary repairs have been made to the lodge and to the well and cistern houses.

About 1,400 linear feet of the inclosing wall yet remains to be rebuilt, provision for which will be made from the appropriation for the ensuing fiscal year.

The burial sections have been filled up, top-dressed, and seeded in grass, and the head-stones reset and aligned.

Permission was granted the Louisville and Nashville Railroad Company to lay an additional track through the cemetery grounds upon condition that the company sod the slopes, both excavation and embankment, and keep them in good condition; also that all local passenger trains should stop there, both going from and returning to Nashville.

At the Philadelphia, Pa., National Cemetery the mansion has been repaired and painted, and an obstruction to the drainage outside the wall on the north side of the cemetery removed.

At the Raleigh, N. C., National Cemetery the brick inclosing wall has been repointed; a number of sunken graves refilled, and one of the Unknown burial sections regraded and sodded; and the head-stones cleaned.

Quincy, Ill., National Cemetery. It having been reported that the city authorities were opening a street through or near the soldiers' lot in Woodland Cemetery, at that city, and that there was danger that some of the graves would be washed away, the matter was referred to the officer in charge of that cemetery, Lieut. Col. J. M. Moore, Deputy Quartermaster-General, U. S. Army, who, after a thorough examination, submitted an estimate of the cost of the necessary repairs and improvements for the protection of the cemetery, amounting to \$1,171.25, which was approved, and the work authorized from the appropriation for the ensuing fiscal year.

At the Richmond, Va., National Cemetery a pair of ornamental wrought-iron gates have been erected at the principal entrance, and the driveway graded to conform thereto; the rostrum has been repainted; sunken graves filled up and leveled; and a number of plants, presented by Phil Kearney, Post No. 10, G. A. R., set out.

At the San Antonio, Tex., National Cemetery the lodge has been repaired; a new rostrum erected; and a new flag-staff 75 feet in length provided. The inclosing wall has been repaired; the vacant land filled up and graded; and the iron gates at the entrance to the cemetery painted.

At the San Francisco, Cal., National Cemetery the porch, steps, and roof of the lodge have been repaired; also the windmills, which supply the cemetery with water.

From observations made at the experimental catchment basin, built

at the spring in the ravine southwest of the cemetery, it was evident that if the proper method was adopted for collecting the water an abundant supply could be obtained for use at the cemetery, with a probability of obtaining sufficient to partially supply the post. Proposals were therefore invited for the construction of a tunnel, together with other work in connection therewith; a contract was made, and the work commenced. The construction of this tunnel is a difficult undertaking, its entrance being in sand through which the water flows.

For continuing the work of improving the reservation by developing and perfecting the water supply, the reclaiming of sand dunes, the planting of trees and the construction of new roads, the erection of a permanent fence or wall on the south and east lines of the reservation, the reclamation of the marsh, and other general and much-needed improvements, an annual appropriation of \$25,000 should be provided for several years at least. These improvements are a necessity, and if continued will very materially add to the comfort of the garrison upon the reservation, as well as beautify the grounds, and result eventually in large savings in the water supply and in the care of the reservation.

At the Shiloh (Pittsburg Landing, Tenn.) National Cemetery the roofs of the lodge and out-buildings have been repaired and the cistern house painted. The central drive has been graded, and on the upper side a sod gutter constructed from the main gateway to the culvert on the north side.

The inclosing wall has been repaired and is in good condition, and the fence around the stable lot repaired. A gravel walk has been constructed from the lodge to the well and stable, and all the head-stones raised and reset.

At the Soldiers' Home (District of Columbia) National Cemetery the inclosing wall on the west side has been repaired, and the iron fence raised; and the improvement of the drainage in the addition to the cemetery completed.

At the Vicksburg (Miss.) National Cemetery the laborers cottage has been repainted, and the stable repaired. Three panels of the inclosing wall, damaged by the high water, have been repaired; the large sewers and the bottom of the fountain repointed, and gutters laid. A ditch has been cut on the outside of the wall, on the west side, to carry off back water. The basin and dam furnishing water for the hydraulic ram, have been cleaned out; the water-tank calked and painted; and the ram and the water pipes repaired.

A new cistern, 20 by 12 feet, has been constructed near the stable; the sunken graves refilled, head-stones raised, and the grounds around the Grant-Pemberton monument put in good condition.

At the other national cemeteries not specified necessary repairs have been made to the lodges, outbuildings, etc., the water supply, and drainage put in order; the sunken graves re-filled, and head-stones reset.

Soldiers' lots.—During the year the soldiers' lot, in the city cemetery at Alton, Ill., has been graded and improved at a cost of \$487, and a flag provided therefor to be hoisted daily. The trustees of the cemetery having pledged themselves to keep the lot in good condition, after improvement by the United States at an annual cost of \$16.20, the sexton of the cemetery was employed for that duty, from April 1, 1890.

Provision has also been made for the care of the soldiers' lot in Lakeside Cemetery, Port Huron, Mich., at an annual expenditure of \$30 and the Depot Quartermaster at Jeffersonville, Ind., authorized to make the necessary repairs to a lot near that city in which old soldiers were buried.

Burial of indigent soldiers.—Under the act of Congress (sundry civil) approved March 2, 1889, appropriating the sum of \$1,000 “for expense of burying in the Arlington National Cemetery or in the cemeteries in the District of Columbia, indigent ex-Union soldiers who may die in the District of Columbia,” accounts have been paid during the fiscal year for the burial of seventeen such persons at a total cost of \$807.

Other accounts received during the year, and not yet adjudicated, will exhaust the remainder of the appropriation.

Roadways.—The road, authorized by act of Congress approved April 5, 1888, from the town of Pineville, La., to the Alexandria, (La.), National Cemetery near that place, has been completed.

Amount appropriated.....	\$11,000.00
Amount expended.....	10,986.88

The road, authorized by acts of Congress approved October 2, 1888, and March 2, 1889, from Antietam Station, on the Shenandoah Valley Railroad, to the Antietam (Md.), National Cemetery, has also been completed so far as the amount of the appropriation would admit, and an additional appropriation of \$5,000 requested for its completion in front of the east half of the cemetery, for additional drainage and for construction of stone curbing and grading walks along the road, omitted in former construction for want of funds.

Amount appropriated.....	\$25,000.00
Amount expended.....	24,734.08

The road authorized by act of Congress, approved June 29, 1888, from the city of New Berne, N. C., to the National Cemetery, near that city has also been completed.

Amount appropriated.....	\$20,000.00
Amount expended.....	19,972.00

The road, authorized by act of Congress approved January 8, 1889, from the city of Florence, S. C., to the National Cemetery near that city, has also been completed.

Amount appropriated.....	\$15,000.00
Amount expended.....	14,175.02

The road from Danville, Va., to the National Cemetery near that place, for the completion of which an appropriation was made by act of Congress (sundry civil) approved March 2, 1889, has also been completed.

Amount appropriated.....	\$5,000.00
Amount expended.....	4,596.82

The construction of a foot pavement and repair of roadway to the Beverly (N. J.) National Cemetery, for which an appropriation was made by act of Congress (sundry civil) approved March 2, 1889, has also been completed.

Amount appropriated.....	\$2,306.70
Amount expended.....	1,855.26

An appropriation of \$6,000 having been made by act of Congress approved February 1, 1888, for completion of the road from the city of Natchez, Miss., to the National Cemetery near that city, a contract therefor has been made and the work of construction commenced.

The work of repairing and draining the road to the National Cemetery at Hampton, Va., for which an appropriation of \$2,000 was made by act of Congress (sundry civil) approved March 2, 1889, has not been commenced, awaiting further action by Congress looking to the acqui-

sition by the Government of a title to the strip of land over which the road is to be constructed, the Acting Judge-Advocate-General of the Army having expressed the opinion that no money should be expended by the Government on this road while it remains an ordinary highway under the absolute control of the State and county authorities.

In consequence of the death of the contractor prior to the date fixed for commencing the work of constructing the road authorized by act of Congress approved April 2, 1888, from the city of Corinth, Miss., to the National Cemetery near that place, the contract was annulled by order of the honorable Secretary of War. New plans and specifications therefor have been prepared and proposals for the work invited.

Appropriations have also been made by Congress for the construction of roads to the Staunton, Va., and Port Hudson, La., National Cemeteries. The surveys for these roads have been made and plans and specifications for the work prepared.

Under the act of Congress (sundry civil), approved March 2, 1889, appropriating the sum of \$15,000 "For repairs to roadways to national cemeteries, which have been constructed by special authority of Congress," necessary repairs have been made to the roads leading to the Antietam, Md.; Beaufort, S. C.; Chalmette, La.; Danville, Va.; Knoxville, Tenn.; Richmond, Va.; Springfield, Mo., and Vicksburg, Miss., national cemeteries. Of these, the repairs to the approach road to the Knoxville cemetery, have been the most extensive, having been in part provided for during the previous fiscal year.

This road extends along Holston street, from the northeast corner of the national cemetery to the southeast corner of Gray Cemetery. The east side of the road has a brick sidewalk built by the city of Knoxville. On the west side the walk built by the United States extends only the length of the cemetery front. The sidewalk is properly graded and well covered with stone screenings; the terrace, graded to the natural slope, and neatly sodded.

The cemetery wall on the east side, including gates and posts, was taken down and rebuilt. The curbing and guttering along the road and the culverts are well constructed. The surface macadam is covered with fine stone screenings, and terra cotta section-pipe placed at the junction of the terrace slopes with the wall, and the road as a whole compares favorably with the best constructed street in the city of Knoxville.

A statement (marked B) showing the expenditures on account of the national cemeteries during the year is submitted herewith.

Very respectfully,

M. I. LUDINGTON,
Deputy Quartermaster-General, U. S. Army.

The QUARTERMASTER-GENERAL, U. S. ARMY.

A.—Statement showing names and classification of national cemeteries, the number of interments in each; also names, dates of original appointment, and dates of present assignment of superintendents.

Name of cemetery.	Class.	Interments.			Superintendent.	Date of original appointment.	Date of present assignment.
		Known.	Un-known.	Total.			
Alexandria, Va.	2	3,400	123	3,523	J. V. Davis	Jan. 10, 1872	Nov. 28, 1887
Alexandria, Va.	3	525	772	1,297	R. C. Taylor	Sept. 7, 1871	Oct. 11, 1886
Andersonville, Ga.	1	12,779	923	13,702	J. M. Bryant	Feb. 10, 1879	May 29, 1883
Annapolis, Md.	3	2,288	204	2,492	Lyman B. May	Apr. 1, 1881	Apr. 13, 1888
Antietam, Md.	1	2,860	1,840	4,690	George Hess.	June 30, 1879	July 2, 1887
Arlington, Va.	1	12,001	4,349	16,350	J. A. Commerford. . .	Apr. 9, 1869	Oct. 18, 1886
Ball's Bluff, Va.	4	1	24	25	No superintendent.		
Barrancas, Fla.	3	854	709	1,563	Thomas Shea	Apr. 16, 1887	Sept. 24, 1887
Baton Rouge, La.	2	2,490	532	3,022	Thomas Kremenz. . .	Nov. 7, 1872	Feb. 6, 1889
Battle Ground, D. C. . .	4	43	-----	43	E. Ritterhouse.	July 15, 1884	July 21, 1884
Beverly, N. J.	4	157	7	164	Peter Wynne.	Apr. 13, 1888	Apr. 13, 1888
Beaufort, S. C.	1	4,759	4,520	9,279	George W. Ford	Nov. 9, 1878	Nov. 9, 1881
Brownsville, Tex.	2	1,450	1,379	2,829	John J. Smith	Aug. 24, 1868	May 9, 1881
Camp Nelson, Ky.	2	2,455	1,189	3,644	S. S. Cole.	Dec. 20, 1882	June 5, 1884
Camp Butler, Ill.	3	1,008	354	1,362	Ed. Harbison	Sept. 22, 1887	Sept. 24, 1887
Cave Hill, Ky.	4	3,368	582	3,950	John Bryson	Aug. 6, 1867	Jan. 13, 1885
Chalmette, La.	1	6,879	5,741	12,620	Ed. M. Main	Mar. 22, 1876	Oct. 18, 1886
Chattanooga, Tenn. . .	1	8,056	4,967	13,023	John Trindle	Sept. 27, 1867	Oct. 3, 1882
City Point, Va.	2	3,779	1,379	5,158	George A. Dichtl. . .	June 23, 1868	Nov. 20, 1882
Cold Harbor, Va.	3	672	1,288	1,960	Thomas H. Savage. . .	July 20, 1883	July 23, 1883
Corinth, Miss.	1	1,783	3,937	5,720	James M. Dickey. . .	Feb. 15, 1882	Mar. 5, 1884
Crown Hill, Ind.	4	680	32	712	No superintendent.		
Culpeper, Va.	2	456	912	1,368	R. T. Patterson. . .	Nov. 19, 1881	Nov. 25, 1881
Custer Battlefield, Mont.	4	312	102	414	No superintendent.		
Cypress Hills, N. Y. . .	1	4,500	373	4,963	Noble Warwick	June 11, 1879	July 2, 1887
Danville, Va.	3	1,175	153	1,328	James H. Smith	Aug. 20, 1879	Sept. 24, 1887
Danville, Ky.	4	349	8	357	No superintendent.		
Fayetteville, Ark.	3	440	776	1,216	Richard B. Hill	Feb. 28, 1889	Mar. 1, 1889
Finn's Point, N. J.	4	106	2,539	2,645	Patrick Hart	Aug. 6, 1867	Feb. 6, 1889
Florence, S. C.	2	206	2,799	3,005	W. M. Jones	Sept. 12, 1884	Feb. 21, 1890
Fredericksburgh, Va. . .	1	2,488	12,785	15,273	A. J. Birdsall	July 18, 1876	Nov. 19, 1883
Fort Donelson, Tenn. . .	3	158	511	669	A. Hyde	July 16, 1868	Aug. 4, 1885
Fort Gibson, Ind. T. . .	3	236	2,212	2,448	Charles F. Moore. . .	Feb. 21, 1890	Feb. 21, 1890
Fort Harrison, Va.	4	242	575	817	D. M. Bryan	Apr. 16, 1887	Apr. 18, 1887
Fort Leavenworth, Kans.	2	1,260	1,109	2,369	William Dillon.	Sept. 1, 1875	July 2, 1887
Fort McPherson, Nebr. . .	4	258	293	551	Benjamin F. Baker. . .	Nov. 14, 1883	Oct. 19, 1885
Fort Scott, Kans.	2	438	161	599	Frank Barrows.	Nov. 9, 1877	Oct. 11, 1886
Fort Smith, Ark.	2	747	1,150	1,897	R. G. Bulgin	Oct. 15, 1885	Oct. 19, 1885
Gettysburgh, Pa.	1	1,978	1,612	3,590	Calvin in Hamilton, asst. sup't.	Oct. 2, 1889	Oct. 2, 1889
Glendale, Va.	4	238	961	1,199	W. D. Holtzworth. . .	Sept. 27, 1887	Sept. 30, 1887
Grafton, W. Va.	1	635	620	1,255	F. H. Osbourne.	June 8, 1888	June 12, 1888
Hampton, Va.	4	839	493	6,332	M. M. Jeffrys.	Oct. 12, 1875	Nov. 10, 1887
Jefferson Barracks, Mo.	1	8,741	2,906	11,647	T. D. McAlpin.	Aug. 6, 1867	Dec. 20, 1887
Jefferson City, Mo.	3	481	334	815	Martin Burke.	June 5, 1869	Dec. 9, 1869
Keokuk, Iowa.	3	636	33	669	Clayton Hart	June 2, 1870	Oct. 4, 1888
Knoxville, Tenn.	2	2,122	1,047	3,169	J. S. Ferguson.	Feb. 13, 1883	Oct. 4, 1888
Lexabon, Ky.	4	592	277	869	James McCauley. . .	Oct. 24, 1867	Sept. 24, 1887
Lexington, Ky.	4	840	112	952	John Ridgely.	Jan. 12, 1874	Mar. 17, 1881
Little Rock, Ark.	1	3,315	2,373	5,688	No superintendent.		
London Park, Md.	2	1,931	208	2,139	Ed. Tambenspeck. . .	June 24, 1880	Apr. 13, 1888
Marietta, Ga.	1	7,195	2,984	10,159	Thomas J. Brown. . .	Oct. 4, 1878	July 23, 1883
Memphis, Tenn.	1	6,164	8,813	13,982	A. B. Drum	June 7, 1881	June 23, 1888
Mexico City, Mex.	1	434	750	1,184	C. P. Rogers	Apr. 16, 1889	*Nov. 23, 1889
Mill Springs, Ky.	3	348	366	714	W. M. Edgar.	Feb. 23, 1889	*Apr. 30, 1886
Mobile, Ala.	1	770	115	885	Peter McKenna.	July 3, 1874	Aug. 1, 1889
Mound City, Ill.	2	2,481	2,763	5,244	Lucien B. Gould. . .	Dec. 14, 1886	Dec. 15, 1886
Nashville, Tenn.	1	11,836	4,701	16,537	Thomas A. Fitzpatrick.	Apr. 26, 1875	Dec. 20, 1887
Natchez, Miss.	1	309	2,780	3,089	L. S. Doolittle.	Oct. 3, 1867	Aug. 2, 1888
New Albany, Ind.	3	2,168	676	2,844	Charles Fitchett. . .	Nov. 16, 1869	Nov. 19, 1888
New Berne, N. C.	2	2,136	1,091	3,227	John Laun	June 2, 1884	Feb. 6, 1889
Philadelphia, Pa.	2	2,008	214	2,222	William O'Brien. . .	Jan. 9, 1874	Apr. 13, 1888
Poplar Grove, Va.	2	2,198	4,001	6,199	Fred. Kaufman.	Aug. 6, 1867	Feb. 23, 1884
Port Hudson, La.	2	568	3,239	3,827	E. L. Grant	Apr. 20, 1885	Apr. 5, 1890
Quincy, Ill.	4	167	55	222	George A. DeSanno. . .	Dec. 12, 1881	Sept. 6, 1882
Raleigh, N. C.	2	626	571	1,197	No superintendent.		
Richmond, Va.	1	843	5,700	6,543	William J. Elgie. . .	Nov. 3, 1862	Feb. 21, 1890
Rock Island, Ill.	4	288	20	308	David Allen	June 1, 1868	Feb. 23, 1882
St. Augustine, Fla.	4	1,470	-----	1,470	No superintendent.		

A.—Statement showing names and classification of national cemeteries, the number of interments in each, etc.—Continued.

Name of cemetery.	Class.	Interments.			Superintendent.	Date of original appointment.	Date of order of present assignment.
		Known.	Un-known.	Total.			
Salisbury, N. C.	1	97	12,035	12,132	James Burke	Aug. 6, 1867	Oct. 4, 1878
San Antonio, Tex.	3	750	225	975	August Miller.....	Aug. 6, 1867	Dec. 20, 1887
San Francisco, Cal.	4	322	11	333	Henry V. Richet.....	Oct. 15, 1885	Oct. 19, 1885
Seven Pines, Va.	4	150	1,221	1,371	E. P. Barrett.....	Jan. 15, 1889	Jan. 18, 1889
Shiloh, Tenn.	1	1,234	2,362	3,596	Frederick Schmidt ..	Sept. 14, 1875	Aug. 2, 1888
Soldiers' Home, D. C. ..	1	6,033	293	6,326	Mathias Glynn	Jan. 6, 1874	Apr. 8, 1878
Springfield, Mo.	3	886	734	1,620	John Delacroix.....	June 1, 1868	Aug. 1, 1889
Staunton, Va.	4	234	523	757	James Browning.....	Aug. 6, 1867	June 22, 1877
Stone River, Tenn.	1	3,815	2,330	6,145	T. D. Godman.....	Jan. 6, 1879	June 6, 1890
Vicksburg, Miss.	1	3,901	12,719	16,620	Thomas Frame	Oct. 18, 1871	June 6, 1890
Wilmington, N. C.	2	714	1,577	2,291	H. C. Lacy	Feb. 16, 1875	Apr. 5, 1890
Winchester, Va.	2	2,098	2,383	4,481	W. A. Donaldson.....	Aug. 2, 1878	July 30, 1888
Woodlawn, N. Y.	4	3,068	7	3,075	No superintendent.		
Yorktown, Va.	3	748	1,435	2,183	Thomas Ridge.....	Aug. 6, 1867	Sept. 24, 1887
Total.....		178,225	148,954	327,179			

* Acting superintendent.

B.—Statement of disbursements of appropriation for national cemeteries during the fiscal year ending June 30, 1890.

Name of cemetery.	Employés.	Tools, stores, and miscellaneous expenditures.	Improvement of grounds.	Inclosures.			Repair of lodges.	Outhouses (sheds, stables, etc.).	Trees, plants, etc.	Drainage.	Barrack and office furniture and stoves.
				Construction.	Repair.	Gates.					
Alexandria, La.....	\$270.00	\$19.75	\$77.20		\$14.00			\$73.50	\$22.75	\$159.57	\$7.00
Alexandria, Va.....	400.00	20.00	23.00		20.00		\$50.00	550.00			15.00
Andersonville, Ga.....	563.02	41.49	919.31	\$60.80	176.90		64.54	491.33	50.20	18.68	
Annapolis, Md.....	92.00	32.55							15.00		3.00
Antietam, Md.....	425.00	66.90	87.50							30.00	38.25
Arlington, Va.....	7,200.00	537.00	5,569.83	7,243.61		\$257.50	150.00	975.00	200.00	406.87	
Ball's Bluff, Va.....	25.00										
Barrancas, Fla.....	296.00	58.05	50.00		95.50						
Baton Rouge, La.....	360.00	43.08	7.00				1.35		10.00	4.50	
Battle Ground, D. C.....		25.00	25.00		50.00			50.00			5.00
Beaufort, S. C.....	587.24	19.29	200.00		99.70		134.28	489.15	49.90		5.25
Beverly, N. J.....		25.19	17.95				47.50				10.00
Brownsville, Tex.....	420.00	10.00					197.00		15.00		42.50
Camp Butler, Ill.....	228.12	29.63	25.00		192.46		36.70		13.07	24.37	
Camp Nelson, Ky.....	221.00	23.23	2.25				59.31	1.70			31.30
Cave Hill, Ky.....	15.00	9.50	100.00				6.00	2.00			2.10
Chalmette, La.....	1,257.00	28.67	61.35				25.00	24.25	24.50		
Chattanooga Tenn.....	2,389.75	51.83	22.50		70.65		63.12		98.88	2.50	
City Point, Va.....	225.00	16.30	45.00				15.00				25.00
Cold Harbor, Va.....		11.15	4.50		81.70					19.30	10.00
Corinth, Miss.....	795.00	50.00	206.60				20.80	589.55	100.00	50.00	6.30
Crown Hill, Ind.....									18.00		
Culpeper, Va.....	176.00	52.80	15.81		29.75						
Cypress Hills, N. Y.....	850.00	125.06	46.00		20.00		98.00	97.00	96.75		23.00
Danville, Ky.....	125.00										
Danville, Va.....	110.00	37.78	60.00		45.60		82.95			121.90	
Fayetteville, Ark.....	256.00	111.29	75.50		21.50		112.32	16.50	9.80	56.10	1.00
Finns Point, N. J.....		117.25	64.03				140.19	28.50			4.40
Florence, S. C.....	190.00	29.03	50.00		9.75				25.00		
Fort Donelson, Tenn.....	118.50	38.50	104.00				20.00	25.25			
Fort Gibson, Ind. T.....	217.51	88.00	95.62				30.85	17.75	14.90		
Fort Harrison, Va.....	21.00	11.98	14.00		2.00		14.50	27.00		8.00	24.00
Fort Leavenworth, Kans.....	565.00	4.45	100.00		24.00						3.00
Fort McPherson, Nebr.....	229.00	41.60	13.50		23.00		10.95		15.00		2.00
Fort Scott, Kans.....	225.00	81.05	42.94				20.20	4.78	28.00		4.40
Fort Smith, Ark.....	324.75	125.05	97.93				14.20	499.08	29.80		40.00
Fredericksburgh, Va.....	598.00	50.55	124.30		20.00			12.00	3.20		
Gettysburgh, Pa.....	620.35	82.32	180.25						15.00		11.00
											28.00

B.—Statements of disbursements of appropriation for national cemeteries during the fiscal year ending June 30, 1890—Continued.

Name of cemetery.	Employés.	Tools, stores, and miscellaneous expenditures.	Improvement of grounds.	Inclosures.			Repair of lodges.	Outhouses (sheds, stables, etc.).	Trees, plants, etc.	Drainage.	Barrack and office furniture and stoves.
				Construction.	Repair.	Gates.					
Glendale, Va		\$19.87					\$47.14			\$76.12	\$26.00
Grafton, W. Va.	\$180.00	61.66	\$64.04		\$99.75		20.00	\$24.64		15.25	9.67
Hampton, Va.	478.75	230.25	135.01				58.05	310.00		33.00	13.00
Jefferson Barracks, Mo.	1,237.25	174.56	23.90		78.50	\$8.90		66.35	\$6.00		6.00
Jefferson City, Mo.	127.03	11.90	21.00		9.00		149.70	35.00	10.00		11.80
Keokuk, Iowa	87.50	20.55	23.00				19.50		4.71	11.87	20.00
Knoxville, Tenn.	144.75	67.65	927.50				31.24		14.50	3.70	10.00
Lebanon, Ky.	125.00	26.08	1.50				8.99				32.10
Lexington, Ky.	75.00										
Little Rock, Ark.	399.25	48.77	80.00		186.25		124.75	25.00	15.00		
London Park, Md.	238.87	16.07	29.50				41.50	7.00			
Marietta, Ga.	1,018.16	236.76	752.25		50.00		119.75	15.00	80.00	237.74	48.75
Memphis, Tenn.	1,393.00	47.55	29.65		57.00		54.36	50.00	25.52		22.50
Mexico City, Mexico	284.31	46.62					1,409.37				
Mill Springs, Ky.	82.00	64.03	30.02				126.45	2.88			49.80
Mobile, Ala.	59.50	25.80	52.50				100.00	35.00			
Mound City, Ill.	505.00	36.21	4.05		150.00		140.00	79.00	18.00		
Nashville, Tenn.	1,705.24	49.67	775.00				35.84	21.41	50.00	30.00	
Natchez, Miss.	566.50	62.79	12.50				5.00	5.00	10.86		
New Albany, Ind.	291.25	51.37	18.94				82.05				27.75
New Berne, N. C.	181.50	38.35	48.00		30.00		58.00	553.00			19.00
Philadelphia, Pa.	817.50	43.78	59.00				175.65		25.00		
Poplar Grove, Va.	272.50	21.60	11.20				23.25	10.00			21.10
Port Hudson, La.	319.00	42.58	85.00				6.00				
Quincy, Ill.	31.25										
Raleigh, N. C.	464.00	24.15	13.95		12.25		23.98		10.00		
Richmond, Va.	423.70	29.36	50.00		23.80	750.00	19.00		5.79		4.45
Rock Island, Ill.		7.48						57.69			
Salisbury, N. C.	208.87	32.05	51.52		25.00		3.60	1.10	22.45		
San Antonio, Tex.	75.25	5.50	50.00		19.90		18.00	491.85	15.00		
San Francisco, Cal.	338.75	18.25	10.00				112.19				
Seven Pines, Va.	4.00	141.75	24.75		36.00		9.00	15.00	10.00		
Shiloh, Tenn.	372.00	22.80	253.22		50.00		11.24	50.00	24.01	26.35	20.00
Soldiers' Home, D. C.	900.00	75.00	200.00		364.00				100.00	600.00	25.00
Springfield, Mo.	243.74	82.17	104.38				32.05		10.00		7.50
St. Augustine, Fla.	74.50						66.35				
Staunton, Va.	59.00	17.60	30.00		10.00		62.50	23.50	4.50	73.35	2.85
Stone River, Tenn.	517.25	18.04	40.20				101.00				
Vicksburgh, Miss.	3,205.00	255.44	100.00		66.50		12.90	15.00	50.00	78.25	12.00

Wilmington, N. C.....	156.25	117.63	50.00	-----	-----	-----	75.00	5.00	-----	-----	20.25
Winchester, Va.....	222.00	41.70	75.00	-----	-----	-----	32.00	20.00	-----	70.20	{ 15.00
Woodlawn, N. Y.....	99.99	-----	-----	-----	-----	-----	-----	-----	-----	-----	{ 12.00
Yorktown, Va.....	60.00	18.10	8.75	-----	10.00	-----	-----	-----	-----	-----	-----
Soldiers Lots.....	200.55	-----	515.25	-----	10.00	-----	-----	-----	-----	-----	-----
Miscellaneous.....	-----	544.02	-----	-----	-----	-----	-----	-----	100.00	-----	-----
Total.....	38,650.23	5,001.43	13,288.45	\$7,304.41	2,350.81	1,016.40	4,760.81	5,892.76	1,466.09	2,157.62	779.27

QUARTERMASTER-GENERAL.

731

B.—Statement of disbursements of appropriation for national cemeteries during the fiscal year ending June 30, 1890—Continued.

Name of cemetery.	Flag-staffs and monuments.	Water supply.	Interments.	Fuel.	Forage.	Shoeing animals.	Transportation, tolls, etc.	Repairs to harness.	Lawn mowers.	Flags and halliards.	Total for fiscal year.
Alexandria, La.	\$12.50		\$21.00	\$25.50	\$82.99		\$6.00	\$4.00			\$795.76
Alexandria, Va.	10.00	\$50.00		70.00							1,208.00
Andersonville, Ga.	10.93	22.00	8.00		175.17	\$15.10	\$5.00	\$1.46			2,613.93
Annapolis, Md.		43.00		68.54							234.39
Antietam, Md.	31.21		8.00	69.19							756.05
Arlington, Va.	10.00	75.00	7.50	350.00							22,982.31
Ball's Bluff, Va.											25.00
Barrancas, Fla.											499.55
Baton Rouge, La.	3.50	11.00		37.29	77.74	7.00	16.00	8.25			586.71
Battle Ground, D. C.	10.00	25.00		70.00							260.00
Beaufort, S. C.	13.20	349.00	19.50	45.00	108.75	3.00					2,123.26
Beverly, N. J.				50.88							151.52
Brownsville, Tex.			9.75	48.00	1.50	10.50					754.25
Camp Butler, Ill.		10.00		26.72							586.07
Camp Nelson, Ky.				54.00	66.51	3.00					462.30
Cave Hill, Ky.	30.00	12.60		42.79							219.99
Chalmette, La.	10.00		29.00	76.50	104.91	12.00		7.00			1,660.18
Chattanooga, Tenn.		3.55		29.63	238.95	21.00	3.00				2,995.36
City Point, Va.	2.90			75.19	134.93	2.25					551.57
Cold Harbor, Va.		5.50	1.50	45.00							160.90
Corinth, Miss.	10.00	40.00		36.08	192.28	12.50		9.50			2,118.61
Crown Hill, Ind.											18.00
Culpeper, Va.				34.37							308.73
Cypress Hill, N. Y.	25.00	52.25		60.77							1,484.43
Danville, Ky.							11.70				136.70
Danville, Va.		58.00		50.14							566.37
Fayetteville, Ark.	6.00	13.00	37.80	24.00							745.21
Fenn's Point, N. J.				61.04							411.01
Florence, S. C.	5.00			30.90							339.68
Fort Donelson, Tenn.				25.00							337.25
Fort Gibson, Ind. T.	5.00	10.00		24.90			59.50				564.03
Fort Harrison, Va.				48.00							170.48
Fort Leavenworth, Kans.	1.80	44.35		71.04	68.12			5.00			886.76
Fort McPherson, Nebr.	5.00	81.99		140.49							512.53
Fort Scott, Kans.				29.34							435.71
FortSmith, Ark.		42.00		32.05							1,205.46
Fredericksburgh, Va.				49.89	83.64	1.25					942.83
Geutysburgh, Pa.				46.81							933.73
Glendale, Va.		6.00		39.00							214.33
Grafton, W. Va.		15.00		19.49							509.50
Hampton, Va.	8.00	75.00		47.94							1,395.00
Jefferson Barracks, Mo.	8.83	15.05		47.88	95.18						1,774.20
Jefferson City, Mo.	5.50	89.50		40.20			4.00				502.83

Keokuk, Iowa.....	2.00	10.00		53.99									259.12
Knoxville, Tenn.....	6.00		58.00	31.06									1,284.40
Lebanon, Ky.....	3.25			46.96									243.88
Lexington, Ky.....													85.40
Little Rock, Ark.....	10.00		122.85	15.00	102.51	11.20	10.40	5.00					1,183.33
Loudon Park, Md.....	5.00			46.81			7.75						384.75
Marietta, Ga.....			6.00	26.71	223.37	9.00		31.00					2,854.49
Memphis, Tenn.....		115.00		24.77	218.50	20.50	14.00	6.85					2,079.20
Mexico City, Mexico.....		46.58		90.00									1,876.91
Mill Springs, Ky.....		6.30		16.80									378.28
Mobile, Ala.....	15.00		8.40	52.00									348.20
Mound City, Ill.....			5.35	28.39	76.70	10.50							1,053.20
Nashville, Tenn.....	17.90	33.00	6.00	35.74	186.95	9.60	94.00						3,050.35
Natchez, Miss.....	7.50	3.08		49.11	81.76	6.00		8.00					818.10
New Albany, Ind.....	15.00	101.75		31.80									619.91
New Berne, N. C.....				35.00	109.40	6.00							1,078.25
Philadelphia, Pa.....				108.28	127.92	4.20	54.50						1,415.83
Poplar Grove, Va.....	6.50			34.80	108.57	2.50							512.02
Port Hudson, La.....				25.00	115.58								593.16
Quincy, Ill.....													31.25
Raleigh, N. C.....				39.00									587.33
Richmond, Va.....	5.15		8.00	51.89	99.36	8.75							1,479.25
Rock Island, Ill.....													65.17
Salisbury, N. C.....				20.65	50.98	4.40	50						421.12
San Antonio, Tex.....			5.00										680.50
San Francisco, Cal.....		9.00											488.19
Seven Pines, Va.....	5.75	6.75		36.00									289.00
Shiloh, Tenn.....	10.00	75.00		34.69	114.20	12.50		17.50					1,093.51
Soldiers' Home, D. C.....		10.00		70.00									2,344.00
Springfield, Mo.....	44.00		6.75	41.98									572.57
St. Augustine, Fla.....													140.85
Staunton, Va.....	10.00	6.50		29.88									329.68
Stone's River, Tenn.....	39.50			50.00	105.00	2.00	12.00						884.99
Vicksburg, Miss.....		337.85		93.00	162.26	24.74	25.00						4,437.95
Wilmington, N. C.....	5.00	10.00		42.32									481.45
Winchester, Va.....	10.00			67.16									565.06
Woodlawn, N. Y.....													99.99
Yorktown, Va.....				39.00									155.85
Soldiers' lots.....	5.00												730.80
Miscellaneous.....											\$1,282.99	\$443.95	2,370.96
Total.....	452.92	1,869.60	368.40	3,522.25	3,313.73	219.50	323.35	103.56	1,282.99	443.95			94,577.53

QUARTERMASTER-GENERAL.

7.—*Report of Maj. James Gilliss, quartermaster, U. S. Army.*WAR DEPARTMENT,
QUARTERMASTER GENERAL'S OFFICE,
Washington, D. C., September 17, 1890.

GENERAL: I have the honor to report that during the fiscal year ending June 30, 1890, I have been on duty in this office, in charge of matters pertaining to transportation, regular supplies, contracts, records and files, and the adjustment of claims against the Quartermaster's Department which accrued during the war of the rebellion, and respectfully submit the following reports of the branches of the office in which the work pertaining to these matters has been performed.

TRANSPORTATION BRANCH.

The Quartermaster-General, through this branch of the office, exercises a general supervision of Army transportation, under sections 219, 220, and 1133, Revised Statutes; the transportation of arms, ordnance stores, quartermaster's stores, and camp equipage issued to the several States and Territories under the law for arming and equipping the militia, act of Congress of February 11, 1887 (24 Stat., 401); the transportation of public property for any Government survey, for the National Museum, for the civil or naval departments of the Government in Washington or elsewhere, as required by act of Congress of July 5, 1884 (23 Stat., 111); the transportation of invalid pensioners to have artificial limbs fitted, under act of Congress approved August 15, 1876 (sec. 4791, Rev. Stats.); also telegraphing on military business between officers of the Army, under paragraph 1315, Army Regulations.

The general work of the branch may be stated as follows:

- (1) The preparation of drafts of general orders of the War Department governing Army transportation and telegraphing.
- (2) Furnishing information, instructions, and decisions to officers of the Army, railroad companies, transportation and telegraph lines, and all interested in the subjects above cited.
- (3) The preparation of formal reports for Congress, the Court of Claims, the Secretary of War, and the accounting officers of the Treasury.
- (4) The selection of routes of travel, fixing official distances, ascertaining rates, estimating cost of movement of troops and stores, and directing their transportation.
- (5) The adjustment of railroad, water, wagon, stage, telegraph, turnpike, ferry, and bridge accounts, which for any reason are not settled by disbursing officers of the Quartermaster's Department, including all such accounts and claims arising out of the transportation service of the Army during the war of the rebellion; all the accounts for transportation furnished through the Quartermaster's Department for other departments and bureaus of the Government, and all the accounts of the bond-aided Pacific railroads, their leased lines and branches.
- (6) The preparation and revision of transportation contracts, the interpretation of the terms of these contracts, and of railroad and telegraph tariffs, rates, schedules, and freight classifications, and the issue of instructions in disputed claims arising thereunder.
- (7) The purchase and charter of vessels, and the operation, maintenance, and repair of those owned by the United States and in charge of the Quartermaster's Department. This work is not limited to that

of a current nature; it includes all matters relating to such business which arose during the war of the rebellion.

This branch has also the charge of matters pertaining to United States military railroads, and to the Southern railroad companies which became indebted to the United States for railway material purchased at the close of the war.

Eight clerks are employed in the branch, one of class 4, one of class 3, four of class 2, one of class 1, and one at \$1,000.

The reports of officers in charge of transportation stationed throughout the country (see consolidated tabulation herewith, marked A) show that during the year the Quartermaster's Department provided transportation for 283,430 persons, 3,993 animals, and 1,212,218 tons of material, costing approximately in the aggregate the sum of \$1,570,323.76, as follows:

By—	Persons.	Animals.	Freight.	Cost.
	No.	No.	Pounds.	
Railroad	31,008	3,550	119,041,404	*\$1,223,414.96
Wagon			12,424,381	204,975.56
Water, excluding Government vessels	3,771	341	98,044,398	25,406.38
Government vessels	246,525	102	12,924,341	103,573.91
Stage	2,126		1,413	12,952.95
Total	283,430	3,993	242,435,937	1,570,323.76

* Including \$553,236.34, earned by the bond-aided Pacific railroads, their leased lines and branches.

The larger movements of troops are set forth in statement marked B, and may be briefly stated as follows, the expenses incident thereto payable from the appropriation for Army transportation 1890 being given in each case. The amounts inuring to free land-grant and bond-aided railroads are not included, as no payments are made to these railroads from the appropriation Transportation of the Army:

Second Cavalry.—Headquarters and seven troops from Department of the Columbia to Department of Arizona; four troops from Department of California to Department of Arizona; and one troop from Department of the Columbia to Department of the Missouri, costing in all \$36,051.57.

Fourth Cavalry.—Headquarters and eight troops from Department of Arizona to Department of the Columbia, and three troops from Department of Arizona to Department of California, costing \$33,823.83.

Sixth Cavalry.—Two troops from Department of the Missouri to Department of Arizona, and one troop from Department of Arizona to Department of the Missouri, costing \$2,500, estimated.

First Artillery.—Headquarters and nine batteries from Department of California to Department of the East; one battery from Department of the Columbia to Department of the East; and one battery from Department of California to Department of the Platte, costing \$6,670.40.

Fifth Artillery.—Headquarters and eight batteries from Department of the East to Department of California; one battery from Department of the Platte to Department of California; and two batteries from Department of the East to Department of the Columbia, costing \$6,216.94.

Seventh Infantry.—Headquarters and five companies from Department of the Platte to Department of the Missouri, costing \$1,751.76.

Fifteenth Infantry.—Four companies from Department of Dakota to Department of the East, costing \$6,173.90.

Eighteenth Infantry.—Entire regiment from Department of the Missouri to Department of Texas, costing \$17,322.07.

Nineteenth Infantry.—Headquarters and eight companies from Department of Texas to Department of the East, costing \$9,003.46.

Twenty-third Infantry.—Entire regiment from Department of the East to Department of Texas, costing \$13,730.

SUMMER ENCAMPMENTS.

The sum of \$40,208.45 was expended during the fiscal year out of appropriation Transportation of the Army on account of the movements of troops which were directed during the year in practice marches, maneuvers, and field instructions; of this amount \$10,985.82 was expended in the Department of the Platte; \$13.20 in the Department of Texas; \$5,582.49 in the Department of Dakota; \$6,892.29 in the Department of the Missouri; \$538.81 in the Department of Arizona; \$3,996.31 in the Department of California; \$2,199.53 in the Department of the Columbia; and \$10,000 (estimated) in the Division of the Atlantic.

For target practice and rifle competition during the year it is estimated that the sum of \$25,000 has been expended from the appropriation transportation of the Army; of this amount \$7,766.34 was expended in the Department of Dakota, \$6,489.44 in the Department of the Platte, \$2,563.87 in the Department of Texas, \$79 in the Department of California, \$5.99 in the Department of Arizona, and the balance in the Division of the Atlantic and Department of the Missouri, complete reports of which have not yet been received.

In providing transportation by common carriers, both on land and water, the Quartermaster's Department in making small consignments is generally governed by the tariffs in force at the time, publishing the ordinary rates for such service, but in consignments of any magnitude, or where competition can be excited, special rates lower than the tariff are secured, which, in conjunction with the deductions directed by law from such rates in settlement of the accounts of the sixty-seven land-grant railroads of the country, secures transportation for the Quartermaster's Department and the other departments of the Government which rely upon the Quartermaster's Department for transportation at a cost which on the whole is much less than that paid by the people generally.

One hundred and seventeen transportation contracts, made with private parties by officers of the Quartermaster's Department after advertisements inviting bids, were received at this office during the year, an abstract of which, showing the names of the contractors, routes of supply, date of each contract, and date of its expiration and rates payable, accompanies this report marked E.

BOND-AIDED PACIFIC RAILROADS, THEIR BRANCHES AND LEASED LINES.

Nine thousand one hundred persons, 1,520 animals, and 42,173,986 pounds of freight were transported for the Department over the bond-aided Pacific railroads, their branches, and leased lines during the year.

The service performed by each road is shown in the following table:

Company.	Persons transported.	Animals transported.	Freight transported.
Union Pacific.....	No. 6,849	No. 1,002	Pounds. 26,088,209
Central Branch, Union Pacific, operated by the Missouri Pacific system.....	None.	None.	None.
Central Pacific (branches and leased lines) operated by the Southern Pacific Company.....	1,616	454	13,308,334
Sioux City and Pacific.....	635	64	2,777,443
Total.....	9,100	1,520	42,173,986

One thousand three hundred and sixty-eight accounts of these railroads, aggregating the amount of \$320,082.29, were received at this office during the year and transmitted to the Treasury Department for settlement as required by law.

Of this amount \$175,756.91 inured to the Union Pacific, \$142,957.20 to the Central Pacific (operated by the Southern Pacific Company), and \$1,368.18 to the Sioux City and Pacific.

Of the above amount (\$320,082.29) 467 accounts, aggregating \$85,381.65, were for transportation performed under the provisions of the law of July 5, 1884, for other departments of the Government; of this amount \$14,827.05 inured to the Union Pacific, \$20,548.79 to the Central Pacific (operated by the Southern Pacific Company), and \$5.81 to the Sioux City and Pacific.

The following statement is an analysis of the accounts of these companies for the year, showing amounts received and referred, portions inuring for troops and stores, respectively, and proportions inuring for transportation over the bond-aided lines and the lines not aided by United States bonds, respectively :

Company.	Amount of accounts received and referred to the Treasury for settlement.	Estimated amount of accounts not rendered	Portion inuring for troops.	Portion inuring for stores.	Proportion subsidized.	Proportion unsubsidized.	Total amount.
Union Pacific	\$175, 756. 91	\$94, 941. 59	\$106, 330. 36	\$164, 368. 14	\$223, 844. 31	\$46, 854. 19	\$270, 608. 50
Southern Pacific Company, operating the Central Pacific Railroad.....	142, 957. 20	137, 942. 37	93, 633. 19	187, 266. 38	87, 460. 36	193, 439. 21	280, 899. 57
Sioux City and Pacific..	1, 368. 18	270. 09	866. 34	771. 93	1, 503. 86	134. 41	1, 638. 27
Total.....	320, 082. 29	233, 154. 05	200, 829. 89	352, 406. 45	312, 808. 53	240, 427. 81	553, 236. 34

Settlement of the accounts of the bond-aided Pacific railroads has continued to be made during the year under the provisions of the circular of the honorable the Secretary of the Treasury of June 23, 1887, as published in last report of the Quartermaster-General.

VESSELS IN THE SERVICE OF THE QUARTERMASTER'S DEPARTMENT.

The following-named vessels, owned by the War Department, have been in the service of the Quartermaster's Department during the year, viz:

Propeller *General Wool*, purchased September 1, 1883, for \$27,870.80; employed at Fort Monroe, Va., between the fort and Norfolk, Va.; also in rendering relief to vessels in distress. The cost of repairs during the year was \$264.40, and for running expenses \$4,527.95.

Steam-tug *Atlantic*, purchased October 15, 1878, for \$13,865.56; employed between Governor's Island and New York Harbor and the Battery, New York. During the year \$1,229.45 have been expended for repairs and \$11,105.34 for running expenses. This steamer is fitted with pumps designed for putting out fires on the island, should they occur.

Steam-tug *Resolute*, purchased November 14, 1879, for \$17,947.46; employed in Boston Harbor, Massachusetts. The cost of repairs during the year was \$6,011.21, and for running expenses \$8,521.80.

Steam-launch *Thayer*, purchased October 8, 1874, for \$7,200; employed generally at Governor's Island, New York Harbor, and for short periods at David's Island, Fort Hamilton, and Fort Wadsworth, New York Harbor. During the year \$465 have been expended for repairs, and \$2,527.42 for running expenses.

Steam-launch *Monroe*, purchased November 30, 1875, for \$15,200; employed at Fort Adams, R. I. The cost of repairs to this vessel during the year was \$2,177.92, and for running expenses \$4,110.64.

Sloop *Belle of the Bay*, purchased July 25, 1882, for \$275; employed at St. Francis Barracks, Florida. No amounts have been reported during the past fiscal year for running expenses. Repairs, \$125.

Steamer *Chester A. Arthur*, purchased June 30, 1876, for \$26,000; employed in New York Harbor. This steamer has been run (manned and victualled) under contract during the past year, the United States furnishing the fuel. The cost of repairs to this vessel during the last fiscal year was \$4,965.19, and for running expenses, including fuel, \$11,561.14. Of this amount the sum of \$3,163.50 was paid for temporary hire of vessels while the vessel was undergoing repairs.

Propeller *Ordnance*, purchased June 30, 1876, for \$18,000; employed in New York Harbor; run (manned and victualled) under contract during the last year; fuel furnished by the United States; in service of the Ordnance Department exclusively. The cost of repairs to this steamer during the last fiscal year was \$3,463.80, and for running expenses, \$6,839.18. Of this amount the sum of \$228 was paid for temporary hire of vessels while the vessel was undergoing repairs.

Steam-launch *Hamilton*, purchased February 1, 1875, for \$7,800; in service at David's Island, New York Harbor. During the past year \$5,899.42 for repairs and \$1,875.44 for running expenses have been expended on this vessel.

Propeller *General McDowell*, purchased November 17, 1886, for \$56,150; employed in San Francisco Harbor, California. The cost of repairs to this steamer during the past fiscal year was \$3,257.95, and for running expenses \$24,645.66.

The United States schooner *Matchless* has remained in service of the U. S. Coast and Geodetic Survey (to which she was loaned in May, 1885) during the past fiscal year.

A statement showing the vessels owned or purchased by the Quartermaster's Department, and in service during the past fiscal year, is herewith, marked C.

The total cost of running, repairing, and maintaining these vessels, including the wages of crews, during the year, as reported to this office, was \$103,573.91.

Twenty-two vessels of different kinds are reported by officers of the Quartermaster's Department to have been employed at various times, under charter or by the trip, as the necessities of the service required during the fiscal year, at an expense of \$17,817.03. Statement accompanying marked D.

INCREASED EXPENDITURE FROM THE APPROPRIATION "TRANSPORTATION OF THE ARMY" ON ACCOUNT OF RAILROAD SERVICE.

On June 27, 1889, the Second Comptroller of the Treasury decided that the accounts of the Oregon Railway and Navigation Company, which had been considered a portion of the Union Pacific—a bond-aided railroad—should be paid in cash out of the appropriation "transportation of the Army."

On March 3, 1890, a similar decision was rendered affecting the settlement of the accounts of the Oregon Short Line, and Utah Northern Railway Company, which had also been considered a portion of the Union Pacific Railway.

In settling the accounts of the Southern Pacific Company during the past year, the Treasury Department has segregated the amounts earned over the lines of that company south of Goshen, Cal., constituting the Southern Pacific Railroads of California, Arizona, and New Mexico, and has charged the same to the appropriation "transportation of the Army."

The accounts of land-grant railroad companies, which prior to 1889 had been paid from a special appropriation, were during the past fiscal year paid out of the regular Army transportation appropriation, in conformity with the provisions of the last Army appropriation bill.

The increased expenditure arising out of the foregoing changes in methods of settlement has been, it is estimated, on account of—

Oregon Railway and Navigation Company	\$35,000.00
Oregon Short Line and Utah Northern Railway	40,000.00
Southern Pacific roads of California, Arizona, and New Mexico (actual) ..	193,439.21
Land-grant railroad accounts	50,000.00
Total	318,439.21

It is also remarked that the movements of troops during the year, incident to the exchange of stations of regiments, in field maneuvers and instructions, target practice, etc., have been greater in magnitude than during preceding fiscal years. Notwithstanding these increased expenditures, which could not be anticipated, the appropriation for "transportation of the Army" was not increased over that of the previous fiscal year.

On investigation it is ascertained that the deficiency in the appropriation "transportation of the Army" for the fiscal year ending June 30, 1890, aggregates in amount, approximately, \$430,487.91, of which \$193,439.21 is for transportation over the non-aided lines of the Southern Pacific Company.

TELEGRAPHING ON ARMY BUSINESS.

In each military department an officer of the Quartermaster's Department has been assigned to the duty of adjusting and settling telegraph accounts accruing in their respective departments, under the instructions of the Quartermaster-General. No other duty is required on the part of officers sending telegrams beyond the proper delivery of the message to the telegraph company for transmission. Blank forms for use in telegraphing are furnished from this office to all Army officers, and official messages written thereupon are accepted by the telegraph companies in lieu of prepayment, settlements for the service being made monthly by the Quartermaster's Department upon presentation of the original telegrams.

The general rule governing telegraphing for the Army are published in Army Regulations of 1889, paragraphs 1309 to 1317 inclusive.

The service has been satisfactorily performed, but the Western Union Telegraph Company has refused to accept the rates fixed by the Postmaster-General for Government telegrams sent during the fiscal year ending June 30, 1890, and has presented no accounts to the Quartermaster's Department for such service, but has retained the original telegrams in its possession, consequently no expenditure has been made by the Quartermaster's Department on account of telegrams sent by this

company, which constitute nearly the entire telegraphic service performed for the Army.

The following is the order of the Postmaster-General fixing Government rates on telegrams for fiscal year 1890 :

RATES OF PAY FOR COMMUNICATIONS BY TELEGRAPH.

POST-OFFICE DEPARTMENT,
Washington, D. C., October 30, 1889.

Pursuant to the authority vested in the Postmaster-General by the act of Congress entitled "An act to aid in the construction of telegraph lines, and to secure to the Government the use of the same for postal, military, and other purposes," approved July 24, 1866, and by the Revised Statutes of the United States, Title LXV, I hereby fix the rates at which such communications as the said statutes prescribe (not including those passing over circuits established by the Chief Signal Officer of the Army) shall be sent during the fiscal year beginning July 1, 1889, and terminating June 30, 1890, by the several companies within the effect of said statutes, as follows:

For day messages containing not more than ten words, exclusive of place from, date, address, and signature, 10 cents for all distances not exceeding 400 miles, and one-half cent for each word in excess of ten words; all distances being arbitrarily determined by the method hereinafter stated.

For distances so determined exceeding 400 miles and not exceeding 1,000 miles, 15 cents for the first ten words counted as above provided, and three-fourths of 1 cent for each word in excess of ten words.

For all distances exceeding 1,000 miles there shall be added to the price of the message fixed for distances over 400 and under 1,000 miles the sum of one-half cent for each word counted as above provided.

In cases where the price of a message determined as herein provided shall include a fraction of a cent such fraction if less than one-half is to be disregarded; if one-half or more it is to be counted as 1 cent. This applies only to single messages, and the totals of bills containing two or more items.

For night messages of not exceeding twenty words, exclusive of place from, date, address, and signature, 15 cents for all distances, and one-half cent for each additional word.

Instead of computing the actual distances of transmission, the distance for payment shall in all cases be taken absolutely to be the number of miles between the capital of the State or Territory, or from the city of Washington, if from within the District of Columbia, from within which (whatever the place) the message is sent, and the capital of the State or Territory, or the city of Washington, if within the District of Columbia, within which (whatever the place) the message is received, as shown in the accompanying table, wherein such distances are given as computed upon the shortest practicable route between such capitals, and which is to be taken as part of this order: *Provided*, That if the message be sent and received within the same State, Territory, or said District of Columbia, the distance for payment shall be taken absolutely to be the minimum distance of 400 miles.

But it is provided that if at any time during the year ending June 30, 1890, any such company shall charge the public for a message of ten body words a less rate than is herein fixed for a like number of body words, the rates herein prescribed shall, as to such company thenceforth during the year, be reduced to the rates so charged to the public.

The rate for all messages in cipher known as the Signal Service Weather Report is hereby fixed at not exceeding $2\frac{1}{2}$ cents for each word sent over each circuit as now or hereafter established by the Chief Signal Officer of the Army; all messages sent over a circuit being dropped at all designated offices therein without additional charge.

The statutes provide that telegrams between the several departments of the Government and their officers and agents, in their transmission over the lines of any such company, shall have priority over all other business. All officers of the United States sending such telegrams should indorse thereon the words "Official business," and should report to the Postmaster-General any failure to transmit them in such priority and any charge made in excess of the rates above prescribed.

Each company will be allowed to charge for messages received from another line at the same rate as if received from the Government direct at the point of transfer for transmission over its own line.

JOHN WANAMAKER,
Postmaster-General.

ACCOUNTS AND CLAIMS ACTED UPON IN TRANSPORTATION BRANCH.

Three thousand and fifty-four accounts and claims, amounting to \$694,257.90, were adjusted in the Transportation Branch during the year. Of these, 3,008, amounting to \$688,083.01, were referred to the proper bureau or office for settlement; 9, amounting to \$818.05, were unfavorably reported upon and rejection recommended; and 37, amounting to \$5,356.84, remained at the close of the fiscal year under adjustment, awaiting action, or suspended for additional evidence.

REGULAR SUPPLIES BRANCH.

This branch has charge of all matters relating to the procurement and distribution of supplies furnished to the Army by the Quartermaster's Department, excepting clothing, camp and garrison equipage, and such other supplies as are assigned to the barracks and quarters and reservation branches, including means of transportation, horses for the cavalry and artillery and other troops authorized to be mounted; to the procurement of the prescribed blank-books and forms authorized by the regulations, and to the conducting of the necessary correspondence and the keeping of the necessary record of the transactions connected with the work of this branch.

This branch has also charge of matters relating to all contracts to which the Quartermaster's Department is a party.

The following statement shows the number of cavalry and artillery horses purchased during the fiscal year, their aggregate cost and average cost:

Cavalry and artillery horses purchased.

For what military division.	No.	Total cost.	Average cost.
Division of the Atlantic.....	55	\$8,949.70	\$162.72
Division of the Missouri.....	495	64,884.95	131.04
Division of the Pacific.....	436	56,363.80	129.27
Total	986	130,178.45	132.03
Average cost of cavalry horses.....			\$129.07
Average cost of artillery horses.....			166.21

The following statement shows the number of draught and pack animals purchased during the fiscal year, their distribution, aggregate cost, and average cost:

Mules and team horses purchased.

For what department, depot, or post.	Horses.			Mules.		
	No.	Total cost.	Average cost.	No.	Total cost.	Average cost.
Division of the Atlantic.....	7	\$1,250.00	\$178.57	3	\$470.00	\$156.66
Department of Dakota.....	3	700.00	233.33	4	630.00	157.50
Department of Arizona.....				77	11,563.80	160.18
Department of the Missouri.....				89	14,096.40	158.32
Department of California.....	2	442.00	221.00	50	6,760.25	135.25
St. Louis Depot.....				1	174.00	
Columbus Barracks, Ohio.....				1	174.00	
Atlanta, Ga.....				42	5,880.00	140.00
West Point, N. Y.....	2	388.00	194.00			
New York Depot.....	2	450.00	225.00			
David's Island, New York Harbor.....				4	1,000.00	250.00
Washington Depot.....	10	1,875.00	187.50			
San Francisco Depot.....	2	422.00	211.00			
Jeffersonville Depot.....				2	425.00	212.50
Total	28	5,527.00	197.39	273	41,167.45	150.79

The following statement shows the number of cavalry and artillery horses purchased during the fiscal year, their aggregate cost, average cost, and place of purchase:

Cavalry and artillery horses purchased (by department or post).

For what department, depot, or post.	Cav- alry.	Artil- lery.	Total cost.	Average cost.	Where purchased.
Division of the Atlantic.....	24	31	\$8,949.70	\$162.72	St. Louis, Mo. (6 Artillery horses, New York City.)
Department of the Missouri.....	296	28	43,172.55	133.24	St. Louis, Mo.
Department of Dakota.....	93	.....	11,304.00	122.51	Department of Dakota.
Department of Texas.....	31	.....	4,185.00	135.00	Department of Texas.
Department of the Columbia.....	76	.....	10,226.00	134.55	Department of the Columbia.
Department of Arizona.....	322	.....	41,036.80	127.44	St. Louis, Mo.
Department of California.....	36	2	5,101.00	134.23	Department of California.
Department of the Platte.....	35	12	6,203.40	131.99	Cavalry, Department of Platte (Artillery, St. Louis).
Total.....	913	73	130,173.45	132.03	

The following is a summary of the number of animals purchased, sold, died, etc., during the fiscal year and remaining on hand at its close, as indicated by reports received at this office:

	Cavalry and artil- lery horses.	Team horses.	Mules.	Ponies.
On hand July 1, 1899.....	5,795	293	4,229	.....
Purchased.....	986	28	273	.....
Taken up.....	.....	.....	1	1
Total to be accounted for.....	6,781	321	4,503	1
Sold.....	691	33	226	1
Died.....	145	7	124	.....
Lost and stolen.....	.....	.....	2	.....
Total sold, died, etc.....	836	40	352	1
On hand July 1, 1890.....	5,945	281	4,151	.....

The following is a statement of the sales of public animals in the different departments and at general and other depots during the fiscal year, as reported to this office, showing the number of each class and the total amount realized:

Where sold.	Cavalry and artil- lery horses.		Draught horses.		Mules.		Ponies.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
Division of the Atlantic.....	31	\$1,808.00	5	\$245.50	3	\$197.00	.....	.....
Department of the Missouri.....	186	6,544.00	1	75.00	49	1,653.75	.....	.....
Department of Dakota.....	102	2,730.50	1	61.00	10	308.00	1	\$28.00
Department of Texas.....	78	2,276.05	.....	.....	67	2,256.52	.....	.....
Department of the Columbia.....	30	844.00	8	40.00	19	741.30	.....	.....
Department of Arizona.....	161	6,229.32	.....	.....	31	1,281.50	.....	.....
Department of California.....	24	735.00	2	36.00	7	173.00	.....	.....
Department of the Platte.....	66	2,301.90	.....	.....	35	1,379.20	.....	.....
St. Louis depot.....	.....	.....	.....	.....	1	75.00	.....	.....
Columbus Barracks, Ohio.....	.....	.....	.....	.....	2	48.00	.....	.....
West Point, N. Y.....	8	286.50	1	28.00	1	28.00	.....	.....
Philadelphia depot.....	.....	.....	1	65.00	.....	.....	.....	.....
David's Island, New York Harbor.....	.....	.....	1	21.00	1	20.00	.....	.....
New York depot.....	5	367.50	1	15.00	.....	.....	.....	.....
Washington depot.....	.....	.....	8	597.00	.....	.....	.....	.....
San Francisco depot.....	.....	.....	2	150.00	.....	.....	.....	.....
Jeffersonville depot.....	.....	.....	2	189.00	.....	.....	.....	.....
Total.....	691	24,122.77	33	1,522.50	226	8,161.27	1	28.00

Horse and mule shoes, horseshoe nails, and shoeing tools purchased during the fiscal year.

For what department, depot, or post.	Articles.	Quantity.	Total cost.
Division of the Atlantic	Mule shoes	pounds 100	\$4.50
Do	Horseshoes	do 50	2.13
Do	Files	11	2.56
Do	File brush	1	.15
Department of Dakota	Mule shoes	pounds 900	48.50
Do	Horseshoe nails	do 75	12.03
Do	Rasps	each 24	8.20
Department of Texas	Mule shoes	pounds 100	7.50
Do	Horseshoes	do 400	22.10
Department of the Columbia	Mule shoes	do 200	11.80
Do	Horseshoes	do 200	14.00
Do	Horseshoe nails	do 250	45.00
Do	Rasps	144	105.00
Do	Knives (Farriers)	6	1.60
Do	Hammers	12	17.40
Do	Nippers (hoof)	6	8.40
Do	Nippers (nail)	6	7.40
Department of the Platte	Mule shoes	pounds 100	5.65
Do	Rasp	1	1.00
West Point, N. Y.	Mule shoes	pounds 50	3.50
New York depot	do	3,400	159.10
Do	Horseshoes	do 15,150	563.14
Do	Horseshoe nails	do 2,550	313.37
Do	Toe-calks	do 2,250	104.99
Do	Shoeing-knives	48	12.00
Do	Rasps	240	56.64
Do	Tuyere-iron	1	2.00
Philadelphia depot	Horseshoes	pounds 200	8.60
San Francisco depot	do	do 64,700	3,184.00
Do	Mule shoes	do 34,000	2,012.40
Do	Farriers' pincers	22	15.63
Do	Farriers' tongs	1	.40
Do	Farriers' rasps	30	21.00
Do	Horseshoe nails	pounds 8,500	1,511.25
Jeffersonville depot	Horseshoe rasps	288	74.88
Do	do	864	313.20
Do	do	576	288.00
Do	Horseshoes	pounds 79,700	2,924.99
Do	Mule shoes	do 30,000	1,419.00
Do	Horseshoe nails	do 7,000	885.50
Do	do	do 500	75.50
Do	do	do 6,500	877.50
St. Louis depot	do	do 25	9.25
Do	do	do 50	8.75
Do	Horseshoes	do 300	12.40
Do	Mule shoes	do 250	12.75
Jefferson Barracks, Missouri	do	do 200	11.00
Do	Rasps	do 12	5.50
Total			15,211.16

Harness and harness supplies purchased during the fiscal year, except that manufactured at Fort Leavenworth Military Prison.

For what department, depot, or post.	Articles.	No.	Total cost.
Division of the Atlantic	Horse-collars	6	\$30.50
Do	Carriage whip	1	1.25
Do	Sweat pads	6	2.75
Do	Set double harness	1	45.00
Do	Set single harness	1	25.00
Department of Dakota	Set express harness	1	13.50
Department of the Missouri	Set cart harness	1	15.00
Department of the Platte	Halters	2	8.50
Department of the Columbia	Village cart harness	1	17.00
St. Louis depot	Set single harness, wheel	2	28.00
Do	do	2	32.00
San Francisco depot	Set double harness	1	64.00
Washington depot	do	3	225.00
Do	Sets single harness	3	73.50
Atlanta, Ga.	Set cart harness	1	17.50
Total			597.00

WAGON CARTS, ETC.

During the fiscal year 1889-90, there were purchased :

For what depot or post.	Style.	No.	Cost each.	Total cost.
Fort Warren, Mass	Dump-cart	1	.....	\$47.00
Fort Mackinac, Mich	Double bobsleigh	1	.....	50.00
Fort Porter, N. Y	Spring-wagon	1	.....	249.00
Do	Dump-carts	2	\$60.00	120.00
Fort Monroe, Va.	Sprinkling-wagon	1	.....	305.00
New Orleans, La.	Two-horse freight-wagon	1	.....	51.50
Jackson Barracks, La.	Market-cart	1	.....	75.00
Fort McPherson, Ga.	Express-wagon	1	.....	100.00
Do	Two-horse dray	1	.....	175.00
Do	Buckboard	1	.....	50.00
Fort Meade, S. Dak.	Truck-wagons	2	200.00	400.00
Camp Sheridan, Wyo.	Buckboard	1	.....	45.00
Fort Crawford, Colo.	do	1	.....	50.00
Fort Bliss, Tex	Delivery-wagon	1	.....	135.00
Fort Clark, Tex	Sewerage-carts	2	105.00	210.00
Fort Leavenworth depot for issue.	Army wagons	50	114.50	5,725.00
Little Rock Barracks, Ark	Water-wagon	1	.....	150.00
Headquarters Department of the Platte	Light spring-wagon	1	.....	250.00
Jeffersonville depot	Hand-carts	25	12.44	311.00
Do	do	25	13.64	341.00
Do	do	4	13.68	54.72
Do	Spring-wagons	15	188.85	2,832.75
Do	Army wagons	40	109.50	4,380.00
Do	Ambulance wagons	10	223.90	2,239.00
St. Louis depot	Water-carts	1	.....	125.00
San Francisco depot	Hand-carts	10	14.25	142.50
Fort Myer, Va.	Spring-wagon	1	.....	380.00
West Point, N. Y	Truck (2-horse)	1	.....	340.00
Fort Schuyler, N. Y	do	1	.....	275.00
West Point, N. Y	Hearse (2-horse)	1	.....	1,100.00
Fort McPherson, Ga.	Dump-carts	2	42.00	84.00
Do	Running-gears (2-horse wagon).	17	36.00	612.00
Total				21,404.47

ILLUMINATING SUPPLIES.

During the fiscal year 2,338 lamps (pendent and bracket), 1,065 lanterns (assorted); 666 street-lamps, 42 lamps (assorted); 2 hotel lamps, 8 chandeliers, and the necessary chimneys, wicks, and various parts required for expenditure and repairs were purchased at general depots at a cost of \$22,413.38. Seven thousand seven hundred and fifty gallons of gasoline were purchased at a cost of \$1,159.89. Five hundred and eighty-one thousand eight hundred and thirty gallons of mineral oil were purchased at a cost of \$79,743.56. Expenditure for gas and matches, \$4,325.91. The aggregate expenditure on account of said illuminating supplies was \$107,572.92. The money received from sales of illuminating supplies to officers reverts to the appropriation for regular supplies.

VETERINARY SUPPLIES.

During the fiscal year veterinary supplies were purchased as follows :

New York depot	\$7,339.17
Washington depot	11.90
St. Paul depot	12.56
Fort Riley, Kans.	7.05
Total	7,420.68

Estimates for annual supplies and miscellaneous requisitions have been received and acted upon during the fiscal year as follows :

From Division of the Atlantic	545
From Division of the Missouri	768
From Division of the Pacific	324
Total	1,637

Quartermaster stores and money value of the property issued to the military prison at Fort Leavenworth, Kans., during fiscal year ending June 30, 1890.

Articles.	Quantity.	Amount.	Articles.	Quantity.	Amount.
Bricks.....	2,000	\$10.00	Founds.....	84	53.64
Books.....	1	9.00	Joupling-poles.....	42	49.62
Axles.....	6	44.00	Tongues.....	40	85.92
Felloes.....	480	82.36			
Spokes.....	1,440	97.20	Total.....		431.74

Total cost of all table-ware and kitchen utensils purchased.

Philadelphia depot.....	\$52,761.69
St. Louis depot.....	557.55
Total.....	53,319.24

CONTRACTS.

During the fiscal year ended June 30, 1890, 1,828 contracts were received, examined, and filed in this office. One thousand and ninety-three were for 118,755 cords of wood, 212,440,000 pounds of coal, 32,967 bushels of charcoal, 12,845,600 pounds of corn, 31,904,209 pounds of oats, 8,188,200 pounds of barley, 9,929,883 pounds of bran, 84,633,900 pounds of hay, 7,572,860 pounds of straw, 50,000 pounds of middlings, and 50,000 pounds of shorts; 11 for indefinite quantities of fuel, forage, and straw; 117 for transportation; 2 for work on national cemeteries; 109 for services; 1 for dredging; 8 for printing; 1 for gasoline; 118 for leases; 70 for buildings; 38 for horses and mules; 28 for water and water supply; 12 for heating apparatus; 3 for lighting apparatus; 20 for plumbing and plumbing materials; 4 for woven-wire bunk-bottoms; 106 for clothing, camp and garrison equipage; 4 for packing-boxes; 3 for chair seats; 1 for glue; 9 for lumber and miscellaneous purposes; 1 for hardware; 1 for machinery and machine parts; 10 for mineral oil; 24 for shoeing public animals; 16 for table-ware and kitchen utensils; 25 for roadways and sidewalks; 3 for bridges; 2 for culverts; 5 for grading; 6 for artificial gas and fixtures; 2 for natural gas; 9 for stoves and stove parts; 7 for wagons and wagon parts; 1 for paulins; 1 for coffins, wheelbarrows, etc.; 8 for stationery; 11 for building material; 1 for galvanized iron screens; 9 for telephone services; 1 for cisterns; 2 for meals, lodgings, and stabling; 1 for harness materials; 2 for paints and oils; 1 for lamp chimneys; 2 for furnaces; 1 for iron railing; 5 for digging and drilling wells; 1 for constructing stone tunnel; 5 for sewerage system; 3 for fences; 1 for glass cases; 1 for wood-sawing machine; 1 for gas machine; and 1 for headstones.

Stoves and ranges, and extra parts therefor, were purchased at general depots during the fiscal year to extent of \$66,756.55, as follows:

	Cooking-stoves.		Ranges.		Heating-stoves.		Cost of repairs of stoves and ranges.
	No.	Cost.	No.	Cost.	No.	Cost.	
Division of the Atlantic.....	1	\$14.00	18	\$1,293.25	78	\$770.25	\$4,467.00
Department of the Missouri.....			11	701.80	23	147.25	1,826.59
Department of the Platte.....	4	146.70			26	522.00	1,499.22
Department of California.....							19.50
Department of the Columbia.....	6	225.00			24	257.50	749.28
Department of Texas.....			1	120.00			875.28
Department of Dakota.....	40	438.00	2	119.00			3,274.75
Department of Arizona.....							21.75
Jefferson Barracks, Mo.....							292.11
Atlanta, Ga.....	2	42.50	5	300.00	6	50.00	
National Armory, Mass.....							12.10
Hot Springs (Army and Navy Hospital).....							95.55
St. Louis depot.....	12	365.25			27	169.00	635.26
Jeffersonville depot.....	207	15,092.00			981	15,821.80	6,104.84
San Francisco depot.....	41	1,748.50	30	1,933.50	108	1,362.60	1,352.65
New York depot.....	1	23.00	12	540.16			748.91
David's Island, New York Harbor.....			5	371.20			
Philadelphia depot.....							159.78
Willetts Point, New York Harbor.....							230.52
West Point, N. Y.....			3	915.30			135.20
Fort Riley, Kans.....			13	776.70			
Total.....	314	18,094.95	100	7,010.91	1,273	19,100.40	22,550.29

The following-described articles of tin and sheet-iron ware were, under authority of the Secretary of War, manufactured at the Fort Leavenworth Military Prison during fiscal year ending June 30, 1890:

Furniture for stoves and ranges.

Articles.	No.	Cost each.	Material.	Civilian labor.	Prison labor.	Total.
Wash-boilers, army range, 1 and 2, pit and flat bottoms.....	891	\$1.28	\$874.42	\$150.09	\$111.37	\$1,135.88
Coffee boilers, army range, 1 and 2, pit and flat bottoms.....	394	.67	148.78	64.74	49.38	262.90
Tea-kettles, army range, 1 and 2, pit and flat bottoms.....	765	.60	309.84	84.47	63.75	458.06
Pot-covers, army range, 1 and 2.....	131	.06	5.53	1.64	1.38	8.55
Steamers, army range, 1 and 2.....	169	.28	24.56	13.85	10.50	48.91
Bake-pans:						
Large, army range, 1 and 2.....	470	.37	112.32	35.71	26.50	174.53
Small, army range, 1 and 2.....	408	.24	47.86	30.62	23.37	101.85
Boilers, square:						
8 gallons.....	252	1.11	179.56	58.06	42.00	279.62
8 gallons, F.....	36	1.69	43.21	10.01	7.50	60.72
8 gallons, F. and S.....	24	1.81	29.62	7.94	6.00	43.56
12 gallons.....	134	1.21	110.49	30.04	22.37	162.90
12 gallons, F. and S.....	24	1.96	38.06	7.94	6.00	47.00
14 gallons.....	6	1.80	7.20	2.10	1.50	10.80
15 gallons.....	237	1.72	285.43	70.85	50.63	406.91
15 gallons, F.....	10	2.27	17.14	3.07	2.50	22.71
15 gallons, F. and S.....	46	2.66	79.97	18.92	13.38	112.27
16 gallons.....	12	1.68	14.22	3.53	2.50	20.25
20 gallons.....	66	2.03	95.65	21.85	16.50	134.00
20 gallons, F.....	6	2.31	11.70	2.21	1.75	15.66
20 gallons, F. and S.....	12	2.77	23.66	5.65	4.00	33.31
24 by 12 by 16 inches.....	11	1.34	10.72	2.33	1.75	14.80
24 by 12 by 18 inches.....	12	1.20	11.45	1.76	1.25	14.46
24 by 18 by 18 inches.....	4	2.63	7.42	1.85	1.25	10.52
24 by 24 by 18 inches.....	12	3.22	31.33	4.40	3.00	38.73
25 by 25 by 12 inches, F.....	13	4.40	47.57	5.65	4.00	57.22
26 by 13 by 13 inches.....	12	1.53	14.74	2.20	1.50	18.44
26 by 18 by 15 inches, F. and S.....	2	4.06	5.95	1.29	.88	8.12
30 by 18 by 14 inches, double lids.....	12	2.78	25.94	4.50	3.00	33.44
15 gallons, with steamers.....	24	2.59	39.72	2.64	10.00	62.36
Copper, 20 gallons, F. and S.....	9	5.21	35.99	16.46	4.50	46.05
Copper, 12 by 24 by 18 inches, F. and S.....	3	5.20	12.18	1.93	1.50	15.61
Copper, 26 by 20 by 13 inches.....	1	6.05	4.85	.70	.50	6.05

Furniture for stoves and ranges—Continued.

Articles.	No.	Cost each.	Material.	Civilian labor.	Prison labor.	Total.
Boilers, round :						
5 gallons	36	1.10	28.07	6.71	5.00	39.78
5 gallons, F. and S	12	1.52	13.73	2.52	2.00	18.25
10 gallons	71	1.29	63.10	16.94	11.62	91.66
10 gallons, F	12	1.91	17.20	3.24	2.50	22.94
10 gallons, F. and S	41	2.03	59.13	13.86	10.25	83.24
12 gallons, F. and S	2	2.51	2.61	1.41	1.00	5.02
15 gallons	60	1.48	64.85	13.88	10.00	88.73
15 gallons, F	36	2.05	56.83	9.64	7.50	173.97
15 gallons, F. and S	66	2.18	105.11	23.20	16.50	144.81
Boilers, wash, 16 gallons	12	1.35	12.29	2.21	1.75	16.25
Boilers, coffee, 4 gallons	12	1.28	6.69	4.90	3.87	15.46
Coffee pots :						
1-quart, bailed	12	.29	1.89	.95	.75	3.59
3-quart, bailed	24	.48	4.90	3.79	3.00	11.09
2-gallon, bailed	9	.62	3.44	1.18	1.00	5.62
1-quart, handled	24	.27	1.45	2.94	2.00	6.39
2-quart, handled	21	.34	4.78	1.89	1.50	8.17
4-quart, handled	24	.42	3.90	3.67	2.50	10.07
Tea kettles :						
No. 1	6	.56	2.27	.59	.50	3.36
No. 7	1	.71	.39	.20	.12	.71
4-quart	6	.62	2.66	.59	.50	3.75
Copper	1	1.14	.83	.18	.13	1.14
Tea pots :						
3-quart, handled	8	.31	.80	.95	.75	2.50
copper, 2-gallon	2	.66	.77	.31	.25	1.33
Saucepans, No. 7	2	.56	.48	.40	.25	1.13
Stewpans, No. 8	30	.50	8.83	3.79	2.62	15.24
Dippers :						
1-pint	1	.21	.15		.06	.21
1-quart	31	.18	2.26	1.93	1.50	5.69
2-quart	102	.19	10.55	5.54	4.25	20.34
Dishpans :						
20 inches diameter	8	.69	3.44	1.19	.88	5.51
24 inches diameter	1	.99	.66	.20	.13	.99
26 inches diameter	6	1.18	5.34	1.00	.75	7.09
Steamers, square	12	.68	4.83	1.89	1.38	8.10
Strainers	1	1.13	.57	.31	.25	1.13
Scoops	1	.53	.25	.15	.13	.53
Colanders :						
12 by 19 by 3 inches	1	.45	.17	.15	.13	.45
24 by 18 by 10 inches	1	1.55	.70	.47	.38	1.55
Bake pans :						
Tin, assorted sizes	12	.20	1.25	.73	.50	2.48
Sheet-iron, assorted sizes	1,014	.40	280.45	74.39	54.01	408.85
Fine stoppers	56	.08	1.94	1.33	1.12	4.39
Flue stoppers, ventilating, 6-inch	144	.11	9.05	3.90	3.00	15.95
Stove-pipe collars :						
4 1/2 inches	24	.02	.27	.15	.13	.55
8 inches	35	.07	1.40	.45	.38	2.23
Dampers :						
5 inches	25	.07	.47	.70	.50	1.67
6 inches	25	.07	.56	.75	.50	1.81
Field stoves, sheet-iron	1	6.47	2.27	2.45	1.75	6.47
Oven, " Buzzacott "	12	6.53	39.67	22.69	16.00	78.36
Stove-pipe, common :						
4 1/2 inches	1299	.08	94.96	8.17	6.68	109.81
5 inches	2713	.09	219.13	17.76	14.12	251.01
5 1/2 inches	1038	.10	93.47	7.02	5.49	105.98
6 inches	9832	.11	962.99	64.26	51.24	1,078.49
6 1/2 inches	6	.18	.93	.07	.06	1.06
7 inches	2146	.14	341.08	28.54	22.75	392.37
8 inches	2761	.18	447.36	36.18	29.01	512.55
9 inches	26	.39	9.64	.30	.25	10.19
Stove-pipe, Russia, 8 inches	71	.34	22.93	.81	.63	24.37
T-joints, common :						
5 inches	16	.18	1.38	.80	.63	2.81
6 inches	6	.25	.69	.46	.37	1.52
7 inches	2	.29	.28	.18	.12	.58
Elbows, common :						
4 1/2 inches	231	.11	9.03	9.17	7.37	25.57
5 inches	692	.21	36.74	25.98	21.63	84.35
5 1/2 inches	182	.13	10.65	6.87	5.62	23.14
6 inches	1509	.13	88.97	59.83	47.25	196.10
6 1/2 inches	3	.21	.37	.14	.12	.61
7 inches	409	.18	45.31	18.26	12.87	76.44
8 inches	128	.19	14.96	5.27	4.00	24.23
9 inches	12	.27	2.15	.59	.50	3.24
Elbows, Russia 8 inches	3	.34	.73	.15	.18	1.01
Total cost						\$, 041.69

HARNESSES.

Under authority of the Secretary of War, harness was manufactured at Fort Leavenworth military prison for the Quartermaster's Department during fiscal year ending June 30, 1890, as follows, viz:

Articles.	Number.	Cost each.	Material.	Civilian labor.	Prison labor.	Total.
Single sets harness:						
Ambulance, wheel.....	184	\$15.75	\$2,213.53	\$247.56	\$436.75	\$2,897.84
Ambulance, lead.....	254	9.97	1,925.15	202.10	352.00	2,479.25
Wagon, wheel.....	78	13.53	890.86	111.05	53.25	1,055.16
Wagon, lead.....	119	9.02	869.51	144.40	59.50	1,073.41
Truck.....	10	20.12	128.75	48.71	23.75	201.21
Sets harness:						
Express-wagon.....	6	22.70	114.94	6.27	15.00	136.21
Cart.....	25	15.93	328.62	41.48	28.12	398.22
Spring-wagon or buckboard..	6	21.78	69.62	46.83	14.25	130.70
Backbands:						
Ambulance.....	12	.83	5.80	2.99	1.12	9.91
Wagon.....	4	.83	1.95	.99	.37	3.31
Bellybands, wagon.....	6	5.56	1.97	1.01	.38	3.36
Breast-straps.....	55	.47	19.25	4.22	2.70	26.17
Breechings:						
Ambulance.....	4	1.94	4.09	2.67	1.00	7.76
Wagon.....	2	2.72	4.06	1.01	.38	5.45
Bridles, driving or blind.....	14	1.96	17.35	7.34	2.75	27.44
Chain-pips, wagon.....	12	.48	3.87	1.34	.50	5.71
Halters and straps.....	3	1.13	3.03	.13	.25	3.41
Halter-straps.....	343	.26	83.49	3.03	8.38	89.90
Hame-straps.....	242	.13	22.61	4.30	3.06	29.97
Hames with tugs, pairs.....	2	4.22	5.02	2.80	.62	8.44
Lines:						
Ambulance, 2-horse.....	22	1.82	33.22	4.11	2.63	39.96
Ambulance, 4-horse.....	8	2.71	18.96	1.60	1.12	21.68
Cart.....	2	.80	.69	.67	.25	1.61
Check.....	6	.55	2.37	1.11	.75	4.23
Lead or jerk.....	2	1.76	2.85	.32	.12	3.29
Side.....	6	.16	2.81	.21	.50	3.52
Neck-yoke straps, pairs.....	1	.97	.67	.33	.07	.97
Pole-straps.....	6	1.56	3.95	3.52	1.88	9.35
Saddles:						
Riding.....	51	11.81	277.99	252.99	71.38	602.36
Wagon.....	46	4.83	186.70	23.79	11.50	221.99
Stirrup-straps.....	18	.29	4.81	.67	.25	5.23
Surcingle.....	66	1.01	48.95	14.65	3.25	66.83
Traces, ambulance.....	20	3.02	37.88	15.80	6.68	60.36
Total.....						9,634.23

MESS-TABLES, BENCHES, STABLE-BROOMS, COMPANY FIELD-DESKS, AND LOCKERS.

There were manufactured during the fiscal year ended June 30, 1890, at Fort Leavenworth Military prison, viz:

Articles.	Number.	Cost each.	Material.	Civilian labor.	Total.
Mess-tables:					
10 feet, pine.....	134	\$5.94	\$689.30	\$106.25	\$795.55
10 feet, poplar.....	264	4.71	1,007.97	236.25	1,244.22
Folding.....	2	4.02	6.04	2.00	8.04
12 feet, turned wooden legs.....	24	5.35	113.29	15.00	128.29
5 feet, turned wooden legs.....	12	2.95	29.36	6.00	35.36
5 feet 6 inches.....	2	4.14	6.52	1.75	8.27
Mess-benches:					
10 feet, pine.....	235	2.11	435.87	59.63	495.50
5 feet, poplar.....	261	1.84	356.76	124.12	480.88
Folding.....	4	2.71	7.81	3.00	10.81
6 feet, pine.....	4	1.49	4.46	1.50	5.96
Stable-brooms.....	1,000	.25	188.77	58.50	247.27
Stable broom-handles.....	230	.06	8.75	4.00	12.75
Mess-stools.....	144	.36	43.06	8.75	51.81
Company field-desks.....	25	7.31	689.30	106.25	182.68
Standing-lockers.....	185	5.64	739.13	3.05	1,044.13
Total.....					4,751.52

The following statement shows the quantities and average contract price of fuel, forage, and straw as received in the several military departments during the fiscal year ending June 30, 1890.

Articles.	Department of the East.		Department of the Platte.	
	Quantity.	Average cost.	Quantity.	Average cost.
Hard wood..... cords..	4,541	\$4.34 per cord.....	1,415	\$5.67 per cord.
Soft wood..... do.....	1,227	4.89 per cord.....	14,910	5.49 per cord.
Hard coal..... pounds..	72,119,160	5.28 per 2,240 lbs.....	2,430,400	9.73 per 2,240 lbs.
Soft coal..... do.....	7,204,180	2.76 per 2,240 lbs.....	38,420,480	6.35 per 2,240 lbs.
Corn..... do.....	279,100	.95 per 100 lbs.....	1,032,000	1.05 per 100 lbs.
Oats..... do.....	3,432,150	1.26 per 100 lbs.....	5,198,400	1.12 per 100 lbs.
Bran..... do.....	170,800	1.08 per 100 lbs.....	303,500	1.12 per 100 lbs.
Hay..... do.....	4,747,290	.81 per 100 lbs.....	8,915,500	.45 per 100 lbs.
Straw..... do.....	1,608,460	.70 per 100 lbs.....	1,107,000	.45 per 100 lbs.
Middlings..... do.....	50,000	.95 per 100 lbs.....		
Shorts..... do.....	50,000	.90 per 100 lbs.....		
Charcoal..... bushels..			7,815	.22 per bush.

Articles.	Department of Dakota.		Department of the Missouri.	
	Quantity.	Average cost.	Quantity.	Average cost.
Hard wood..... cords..	1,854	\$5.33 per cord.....	6,407	\$4.45 per cord.
Soft wood..... do.....	25,967	4.72 per cord.....	1,250	4.75 per cord.
Hard coal..... pounds..	11,944,000	11.32 per 2,240 lbs.....	4,596,120	7.01 per 2,240 lbs.
Soft coal..... do.....	4,616,000	5.36 per 2,240 lbs.....	31,893,200	4.67 per 2,240 lbs.
Corn..... do.....	1,369,000	1.17 per 100 lbs.....	5,085,000	.76 per 100 lbs.
Oats..... do.....	7,026,285	1.35 per 100 lbs.....	5,272,226	.92 per 100 lbs.
Bran..... do.....	406,500	1.06 per 100 lbs.....	1,236,600	.77 per 100 lbs.
Hay..... do.....	15,863,110	.52 per 100 lbs.....	15,702,272	.34 per 100 lbs.
Straw..... do.....	919,700	.26 per 100 lbs.....	1,424,300	.35 per 100 lbs.
Charcoal..... bushels..	1,000	.23 per bush.....	1,000	.15½ per bush.

Articles.	Department of Texas.		Department of California.	
	Quantity.	Average cost.	Quantity.	Average cost.
Hard wood..... cords..	9,578	\$3.98 per cord.....	520	\$6.46 per cord.
Soft wood..... do.....	1,450	2.53 per cord.....	2,164	4.35 per cord.
Hard coal..... pounds..			141,000	12.37 per 2,240 lbs.
Soft coal..... do.....	3,530,000	8.83 per 2,240 lbs.....	29,273,446	10.41 per 2,240 lbs.
Corn..... do.....	2,353,000	1.21 per 100 lbs.....		
Oats..... do.....	2,364,000	1.56 per 100 lbs.....	1,927,200	1.56 per 100 lbs.
Barley..... do.....			2,417,200	1.25 per 100 lbs.
Bran..... do.....	537,000	1.44 per 100 lbs.....	260,600	.94 per 100 lbs.
Hay..... do.....	8,599,000	.47 per 100 lbs.....	7,528,800	.72 per 100 lb..
Charcoal..... bushels..	3,766½	.31 per bush.....		

Articles.	Department of Arizona.		Department of the Columbia.	
	Quantity.	Average cost.	Quantity.	Average cost.
Hard wood..... cords..	17,436	\$4.62 per cord.....	9,330	\$4.82 per cord.
Soft wood..... do.....	4,106	4.14 per cord.....	16,600	3.87 per cord.
Hard coal..... pounds..			908,400	4.16 per 2,240 lbs.
Soft coal..... do.....	4,738,100	6.59 per 2,240 lbs.....	625,520	14.80 per 2,240 lbs.
Corn..... do.....	2,727,500	1.58 per 100 lbs.....		
Oats..... do.....	1,325,784	1.97 per 100 lbs.....	5,358,164	1.31 per 100 lbs.
Barley..... do.....	5,771,000	1.42 per 100 lbs.....		
Bran..... do.....	6,619,483	2.05 per 100 lbs.....	396,000	.98 per 100 lbs.
Hay..... do.....	15,434,400	.82 per 100 lbs.....	7,843,528	.91 per 100 lbs.
Straw..... do.....	1,569,400	.67 per 100 lbs.....	944,000	.32 per 100 lbs.
Charcoal..... bushels..	13,586	.26 per bushel.....	5,800	.20 per bushel.

Payments made by quartermasters for purchases for the Army at general depots for use thereat and for shipment elsewhere during the fiscal year ending June 30, 1890, from appropriations pertaining to that period.

Depots.	Regular supplies.	Incidental expenses.	Barracks and quarters.	Army transportation.	Total.
Jeffersonville	\$120,385.90	\$12,455.27	\$262.99	\$51,575.74	\$184,679.90
St. Louis	9,844.65	4,772.10	4,365.15	46,342.09	65,323.99
New York	82,615.57	4,652.71	2,533.34	18,425.28	108,226.90
Philadelphia	42,045.25	170.53	2,338.06	12,901.59	58,055.43
San Francisco	40,675.15	7,259.12	1,581.38	87,194.89	86,710.54
Total	296,166.52	20,309.73	11,080.92	166,439.59	502,996.76

Purchases have been made in the departments and at general depots, for post bakeries, schools, and gardens, as follows:

For bakeries	\$717.46
For schools	13,361.09
For gardens	6,006.71
Total	20,085.26

RECORDS, FILES, AND CLAIMS BRANCH.

This branch is charged with the care and preservation of the general records and files of the Quartermaster-General's Office from the date of its organization, June 15, 1818, and of such records and files of the several branches of the office as are not required for frequent reference, and are transferred to the custody of this branch for permanent file.

It takes administrative action upon all miscellaneous claims and accounts presented to the office, embracing those for pay for services rendered as clerks, messengers, mechanics, teamsters, laborers, scouts, etc., and for extra-duty pay to enlisted men employed in the Quartermaster's Department; re-imbursement of expenses incurred by officers, soldiers, and civilian employes for which the Quartermaster's Department is accountable; expenses for burial of officers and soldiers; rewards for the apprehension and delivery of deserters, and expenses incident to their pursuit; rewards for recovery of lost and stolen public animals, and such other claims and accounts as do not pertain to the other branches of the office.

It is charged with the necessary action for the supply of current reading matter to the military post libraries, for the use and benefit of the enlisted men of the Army, and also with the preparation and record of requisitions upon the Public Printer for all printing and binding, and for books and blanks required for use in the office and in the quartermaster's department at large.

A sub-branch has charge of the receipt, distribution, and dispatch of the official mails.

MISCELLANEOUS CLAIMS AND ACCOUNTS.

At the beginning of the fiscal year there were on hand awaiting action 184 miscellaneous claims and accounts, amounting to \$40,377.14; during the year there were received in the office 1,145 such claims and accounts, amounting to \$182,395.99. Of these 1,136 claims and accounts, amounting to \$179,999.93, were finally acted upon, leaving on hand, awaiting action at the close of the year, 193 claims and accounts amounting to \$42,773.20.

The following statement shows in detail the number of miscellaneous claims and accounts received and acted upon in the office during the fiscal year :

	Number.	Amount.
On hand July 1, 1889, awaiting action :		
Claims	178	\$39,428.51
Accounts	6	948.63
	184	40,377.14
Received during the fiscal year:		
Claims	882	170,667.97
Accounts	263	11,728.02
	1,145	182,395.99
Total on hand and received	1,329	222,773.13
Final action taken during the fiscal year :		
Claims approved.....	9	9,883.62
Claims referred to other Departments.....	59	11,253.63
Claims referred to Third Auditor for action of the accounting officers.....	532	54,513.44
Reduction on claims approved and referred.....		25,320.87
Claims rejected.....	273	66,462.59
Accounts approved.....	201	4,033.19
Reduction on accounts approved.....		202.14
Accounts referred to other Departments.....	57	8,131.35
Accounts rejected.....	5	199.10
Total upon which final action has been taken.....	1,136	179,999.93
Remaining on hand July 1, 1890 :		
Claims.....	187	42,662.33
Accounts.....	6	110.87
	193	42,773.20

Final action was also taken during the year upon 41 miscellaneous claims, amounting, as presented, to \$15,159.21, which were received in years prior to July 1, 1888, and are not included in the foregoing statement.

NEWSPAPERS AND PERIODICALS.

Newspapers and periodicals were supplied to the military post libraries during the fiscal year, upon the basis of an allowance of \$10 for each company or troop, at an aggregate expenditure of \$4,557.21.

The supply of reading matter during the current fiscal year was authorized upon the basis of an allowance of \$20 to a post garrisoned by one company or troop, and for each additional company or troop at a post an allowance of \$5 was authorized. This method of distribution gives to the isolated posts, garrisoned by one and two companies, an increased supply, and reduces the allowance to the larger posts, but does not deprive them of a liberal quantity of reading matter.

Reading matter was authorized to be supplied to 125 military posts, of which 20 were garrisoned by 1 company each, 28 by 2 companies, 14 by 3 companies, 11 by 4 companies, 13 by 5 companies, 11 by 6 companies, 2 by 7 companies, 4 by 8 companies, 3 by 9 companies, 6 by 10 companies, 1 by 12 companies, 1 by 13 companies, and 11 by smaller detachments, in all 462 companies and detachments, costing \$4,155.75, or \$401.46 less than the cost for supply of reading matter to the Army in the preceding fiscal year.

Of the newspapers and periodicals selected by the troops to be subscribed to, there were 44 dailies, 1 tri-weekly, 4 semi-weeklies, 89 weeklies, 1 bi-monthly, 22 monthlies, and 1 quarterly.

The following is a list of the newspapers and periodicals for which the most numerous requests for supply were received, viz :

Name of paper.	Posts.	Name of paper.	Posts.
DAILIES.			
Kansas City Times	37	Frank Leslie's Illustrated Newspaper...	55
New York Herald	28	Judge	43
St. Louis Globe Democrat	28	New York Clipper	26
WEEKLIES.		MONTHLIES.	
Army and Navy Register	101	Century Magazine	42
Harper's Weekly	75	Scribner's Magazine	27
Puck	71	Frank Leslie's Popular Monthly	25
		Harper's Monthly	25
		Cosmopolitan	10

PRINTING AND BINDING.

During the fiscal year there were 461 requisitions issued upon the Public Printer for printing, binding, and supplies.

The cost for the work done and supplies furnished, as shown by bills presented by the Public Printer, was \$18,688.24.

There were furnished upon these requisitions 716 record books, 1,625,000 blank forms, 8,500 specifications, and 10,500 rosters of the officers serving in the Quartermaster's Department, and many other articles of less importance.

CLAIMS FILED UNDER ACT OF CONGRESS OF JULY 4, 1864.

The duties of this branch are as follows:

First. The investigation and adjudication of claims for quartermaster stores taken or furnished for the use of the Army during the war of the rebellion in States not in insurrection, as provided for in the act of July 4, 1864, section 300 A, Revised Statutes of the United States.

Second. Many of these claims are being called up by the Department of Justice and by the Court of Claims under the provisions of the act of March 3, 1883, commonly known as the "Bowman Act," and this office is called upon to furnish the evidence in these cases. The time of the clerical force of the branch is mainly occupied in replying to these calls and to those from the committees of the Senate and House of Representatives and in answering inquiries relative to claims made by members of Congress, claimants, and others. Eight hundred and thirteen of these cases have been reported upon during the fiscal year.

Third. The examination of certain miscellaneous, claims, consisting of (1) cases based on certified accounts and known as "regular purchase vouchers," and (2) cases known as "soldiers' claims," being for private horses turned into regiments and appropriated to the public service, or for horses lost in the service by officers and soldiers.

Most of these miscellaneous claims are referred to this office by the Third Auditor of the Treasury, and after receiving an administrative examination in this branch are returned with an appropriate report in each case for settlement by the accounting officers of the Treasury under any law applicable.

The third section of the act of March 3, 1879, provides that all claims not presented and filed under the act of July 4, 1864, prior to the 1st day of January, 1880, shall be forever barred. Consequently no new claims under the act of July 4, 1864, are being received.

During the war, however, many claims were presented to certain military boards and commissions appointed by department and district commanders, and received a greater or less investigation but no final and complete action. The Quartermaster-General, in 1880, held that the presentation of claims before such boards and commissions was such a presentation and filing as to save them from being barred under the third section of the act of March 3, 1879. During the past fiscal year five of this class of claims have been called up in this office by the parties interested.

The clerical force employed in this branch at the commencement of the fiscal year consisted of two clerks of class 2, one clerk of class 1, and one clerk at \$1,000. Early in December, 1889, two clerks, one of class 2 and one of class 1, were transferred to other branches of the office. It was subsequently found that the force remaining in the branch was not sufficient to keep up the work, as it had materially increased, and in February, 1890, a clerk of class 1 was detailed for temporary duty and continued on duty till the end of the fiscal year.

The following statement shows the number of claims reported on hand July 1, 1889; number of claims presented to military boards and commissions and called up in the Quartermaster-General's office during the fiscal year; number of claims adjudicated by the Quartermaster General; the amounts approved in whole or in part; the amounts disallowed, and the number and amount of those remaining on hand July 1, 1890.

Number of claims remaining on hand July 1, 1889.....		46
Amount	\$67, 671. 76	
Military board claims called up		5
Amount	\$1, 262. 50	
Total on hand and received during the year		51
Amount	\$68, 934. 26	
Upon the foregoing action was taken, as follows:		
Approved in whole or in part.....		5
Amount	\$2, 299. 94	
Upon these claims there was allowed.....	\$885. 50	
And disallowed	\$1, 414. 44	
Total on which action was had		5
Amount	\$2, 299. 94	
Remaining on hand July 1, 1890		46
Amount	\$66, 634. 32	

On the claims (46) reported as on hand no final action has been taken, because in most cases neither the address of the claimant nor of any attorney in the case is known. But few of these claims are likely ever to be called up. A few, however, have been suspended at the request of claimants, to afford them an opportunity to furnish additional evidence.

RECAPITULATION.

Number of claims on hand July 1, 1889	46	\$67, 671. 76
Military board claims called up	5	1, 262. 50
Total on hand and received during the year	51	68, 934. 26
Approved in whole or in part	5	2, 299. 94
Upon these there was allowed		885. 50
Disallowed		1, 414. 44
Total on which action was had	5	2, 299. 94
Remaining on hand July 1, 1890	46	66, 634. 32

Respectfully,

JAMES GILLISS,
Major and Quartermaster, U. S. Army.

The QUARTERMASTER-GENERAL, U. S. ARMY.

A.—Troops and property transported under direction of the Quartermaster's Department during the fiscal year ending June 30, 1890.

	By railroad.	By water.	By wagon.	By stage.	By Govern- ment ves- sel.	Grand total.
Passengers:						
Officers	1,564	205	.....	47	21,015	22,831
Men	29,444	3,566	.....	2,079	225,510	260,599
Total	31,008	3,771	.....	2,126	246,525	283,430
Animals:						
Horses	2,384	188	.....	3	98	2,673
Mules	1,166	153	.....	4	4	1,327
Total	3,550	341	.....	7	102	4,000
Stores:						
Subsistence	30,497,166	3,347,598	18,986,392	63	2,554,923	55,386,142
Quartermasters	60,211,801	4,525,586	44,711,540	147	2,417,302	111,866,376
Ordnance	9,970,584	2,462,744	4,940,350	.....	1,525,681	18,899,359
Medical	1,802,252	279,466	1,809,970	11	90,089	3,981,788
Signal Service	1,021,560	81,320	122,347	238	1,372	1,226,837
Miscellaneous	15,538,041	1,727,667	27,473,799	954	6,334,974	51,075,435
Total	119,041,404	12,424,381	98,044,398	1,413	12,924,341	242,435,937

B.—Principal movements of troops during the fiscal year ending June 30, 1890.

Regiment and troop, battery, or company.	From Depart- ment of—	To Depart- ment of—	Stations before move- ment.	Stations after movement.
Second Cavalry:				
Headquarters ..	The Colum- bia.	Arizona	Fort WallaWalla, Wash.	Fort Lowell, Ariz.
A	California ..	do	Presidio of San Fran- cisco, Cal.	Fort Bowie, Ariz.
B	The Colum- bia.	do	Fort WallaWalla, Wash.	Fort Huachuca, Ariz.
C	California ..	do	Fort Bidwell, Cal.	Do.
D	The Colum- bia.	do	Boisé Barracks, Idaho ..	Fort Lowell, Ariz.
E	do	do	Fort Sherman, Idaho ..	Fort Bowie, Ariz.
F	do	The Missouri	Vancouver Barracks, Wash.	Fort Leavenworth, Kans.
G	California ..	Arizona	Fort Bidwell, Cal.	Fort Huachuca, Ariz.
H	The Colum- bia.	do	Fort WallaWalla, Wash.	Fort Lowell, Ariz.
I	do	do	do	Fort Huachuca, Ariz.
K	California ..	do	Presidio of San Fran- cisco, Cal.	Fort Bowie, Ariz.
L	The Colum- bia.	do	Fort WallaWalla, Wash.	Whipple Barracks, Ariz.
M	do	do	do	Fort Lowell, Ariz.
Fourth Cavalry:				
Headquarters ..	Arizona	The Colum- bia.	Fort Lowell, Ariz.	Fort WallaWalla, Wash.
A	do	do	Fort Huachuca, Ariz.	Do.
C	do	do	Fort Bowie, Ariz.	Do.
D	do	do	Fort McDowell.	Do.
E	do	do	Fort Lowell, Ariz.	Vancouver Barracks, Wash.
F	do	do	Fort Huachuca, Ariz.	Boisé Barracks, Idaho.
G	do	do	Fort Lowell, Ariz.	Fort Sherman, Idaho.
H	do	do	Fort Bowie, Ariz.	Fort WallaWalla, Wash.
I	do	California ..	Fort Huachuca, Ariz.	Presidio of San Francisco, Cal.
K	do	do	Fort Verde, Ariz.	Do.
L	do	do	San Carlos, Ariz.	Fort Bidwell, Cal.
M	do	The Colum- bia.	Fort Huachuca, Ariz.	Fort WallaWalla, Wash.
Sixth Cavalry:				
E	The Missouri	Arizona	Fort Lewis, Colo.	Fort Wingate, N. Mex.
F	do	do	do	Do.
I	Arizona	The Missouri	Fort Wingate, N. Mex. ..	Fort Lewis, Colo.
First Artillery:				
Headquarters ..	California ..	The East	Presidio of San Fran- cisco, Cal.	Fort Hamilton, N. Y.
A	do	do	do	Do.
B	The Colum- bia.	do	Fort Canby, Wash.	Fort Columbus, N. Y. H.

B.—Principal movements of troops, etc.—Continued.

Regiment and troop, battery, or company.	From Department of—	To Department of—	Stations before movement.	Stations after movement.
First Art'y—Cont'd.				
C	California...	The East...	Presidio of San Francisco, Cal.	Fort Wadsworth, N. Y.
D	do.....	do.....	do.....	Do.
E	do.....	The Platte...	do.....	Fort Douglas, Utah.
G	do.....	The East...	Alcatraz Island, Cal.	Fort Hamilton, N. Y.
H	do.....	do.....	Presidio of San Francisco, Cal.	Fort Columbus, N. Y. H.
I	do.....	do.....	do.....	Fort Hamilton, N. Y.
K	do.....	do.....	do.....	Do.
L	do.....	do.....	Fort Mason, Cal.	Fort Wadsworth, N. Y.
M	do.....	do.....	Alcatraz Island, Cal.	Fort Columbus, N. Y. H.
h Artillery:				
Fifth Headquarters	The East...	California...	Fort Hamilton, N. Y.	Presidio of San Francisco, Cal.
A	do.....	do.....	Fort Columbus, N. Y. H.	Alcatraz Island, Cal.
B	do.....	do.....	Fort Wadsworth, N. Y.	Presidio of San Francisco, Cal.
C	do.....	do.....	Fort Columbus, N. Y. H.	Do.
D	The Platte...	do.....	Fort Douglas, Utah	Do.
E	The East...	The Columbia...	Fort Hamilton, N. Y.	Fort Canby, Wash.
F	do.....	California...	Fort Hamilton, N. Y.	Presidio of San Francisco, Cal.
H	do.....	do.....	do.....	Do.
I	do.....	do.....	do.....	Alcatraz Island, Cal.
K	do.....	do.....	Fort Schuyler, N. Y.	Presidio of San Francisco, Cal.
L	do.....	The Columbia...	Fort Columbus, N. Y. H.	Fort Canby, Wash.
M	do.....	California...	Fort Schuyler, N. Y.	Fort Mason, Cal.
Seventh Infantry:				
Headquarters	The Platte...	The Missouri...	Fort Laramie, Wyo	Fort Logan, Colo.
B	do.....	do.....	do.....	Do.
C	do.....	do.....	do.....	Do.
E	do.....	do.....	do.....	Do.
G	do.....	do.....	Fort Washakie, Wyo	Do.
K	do.....	do.....	Fort McKinney, Wyo.	Fort Leavenworth, Kans.
Fifteenth Infantry:				
A	Dakota.....	The East...	Fort Randall, S. Dak.	Mount Vernon Barracks, Ala.
D	do.....	do.....	do.....	Fort Barrancas, Fla.
G	do.....	do.....	Fort Buford, N. Dak.	Mount Vernon Barracks, Ala.
K	do.....	do.....	do.....	Jackson Barracks, La.
Eighteenth Inf.:				
Headquarters	The Missouri...	Texas.....	Fort Hays, Kans.	Fort Clark, Tex.
A	do.....	do.....	Fort Logan, Colo.	Do.
B	do.....	do.....	Fort Hays, Kans.	Do.
C	do.....	do.....	Fort Gibson, Ind. T.	Do.
D	do.....	do.....	Fort Hays, Kans.	Do.
E	do.....	do.....	Fort Logan, Colo.	Do.
F	do.....	do.....	Fort Lyon, Colo.	Do.
G	do.....	do.....	do.....	Do.
H	do.....	do.....	Fort Hays, Kans.	Do.
I	do.....	do.....	Fort Gibson, Ind. T.	Do.
K	do.....	do.....	Fort Lyon, Colo.	Do.
Nineteenth Inf.:				
Headquarters	Texas.....	The East...	San Antonio, Tex.	Fort Wayne, Mich.
A	do.....	do.....	do.....	Do.
D	do.....	do.....	Fort Davis, Tex.	Jackson Barracks, La.
E	do.....	do.....	San Antonio, Tex.	Fort Brady, Mich.
F	do.....	do.....	Fort Davis, Tex.	Mount Vernon Barracks, Ala.
G	do.....	do.....	San Antonio, Tex.	Fort Wayne, Mich.
H	do.....	do.....	do.....	Do.
I	do.....	do.....	do.....	Do.
K	do.....	do.....	do.....	Do.
Twenty-third Inf.:				
Headquarters	The East...	Texas.....	Fort Wayne, Mich.	San Antonio, Tex.
A	do.....	do.....	Fort Brady, Mich.	Do.
B	do.....	do.....	do.....	Fort Davis, Tex.
C	do.....	do.....	Fort Porter, N. Y.	Do.
D	do.....	do.....	do.....	Do.
E	do.....	do.....	Fort Mackinac, Mich.	San Antonio, Tex.
F	do.....	do.....	Fort Wayne, Mich.	Do.
G	do.....	do.....	do.....	Fort Davis, Tex.
H	do.....	do.....	do.....	San Antonio, Tex.
I	do.....	do.....	do.....	Do.
K	do.....	do.....	Fort Mackinac, Mich.	Do.

C.—Vessels owned or purchased by the Government and employed in the Quartermaster's Department during the fiscal year ending June 30, 1890.

Name.	Class.	Ton- nage.	When pur- chased or built.	Estimated cost or value.	By whom employed.	Where employed.	Amount paid for repairs.	Amount paid for running ex- penses, in- cluding crews' wages.	Total ex- penses.
Monroe	Steam-launch...	62.25	Nov. 30, 1875	\$15,200.00	Post quartermaster.....	Fort Adams, R. I.	\$2,177.92	\$4,110.64	\$6,288.56
Resolute	Steam-tug	70.30	Nov. 14, 1879	17,947.46	Depot quartermaster	Boston, Mass.	6,011.21	8,521.80	14,533.01
Atlantic	do	60.31	Oct. 15, 1878	13,865.56	Post quartermaster.....	Governor's Island, New York Harbor.	1,229.45	11,105.34	12,334.79
Thayer	Steam-launch...	32.36	Oct. 8, 1874	7,200.00	do	do	465.00	2,527.42	2,992.42
General Wool.....	Propeller	97.00	Sept. 1, 1883	27,870.00	do	Fort Monroe, Va.	264.40	4,527.95	4,792.35
Belle of the Bay	Sloop	16.00	July 25, 1882	275.00	do	St. Francis Barracks, Fla.	125.00	.....	125.00
Chester A. Arthur* ..	Steamer	178.00	June 30, 1876	26,000.00	Depot quartermaster	New York Harbor.....	4,965.19	11,561.14	16,526.33
Ordnance†	Propeller	75.00	do	18,000.00	do	do	3,463.80	6,839.18	10,302.98
Hamilton	Steam-launch...	37.68	Feb. 1, 1875	7,800.00	Post quartermaster	David's Island, New York Harbor.	5,899.42	1,875.44	7,774.86
General McDowell...	Propeller	160.00	Nov. 17, 1886	56,150.00	Chief quartermaster.....	San Francisco, Cal	3,257.95	24,645.66	27,903.61
Total.....	.....	.....	.....	.....	.....	.....	27,859.34	75,714.57	103,573.91

* Paid for substitute boat while the *Arthur* was being repaired, \$3,163 50, and for fuel for same, \$457.

† Paid for substitute boat while the *Ordnance* was being repaired, \$228, and for fuel for same, \$13.84.

D.—Vessels chartered, impressed, or employed by the Quartermaster's Department during the fiscal year ending June 30, 1890.

Name.	Class.	Ton- nage.	When char- tered.	Period of service.		Where charter money is payable.	By whom em- ployed.	Rate of pay.	Total earnings.	Remarks.
				From—	To—					
Edwin M. Hawley.....	Steam-tug...	(*)	1889. June 26	Aug. 1, 1889	June 26, 1890	New York City.	Depot quarter- master.	\$57 per day ...	\$2, 878. 00	Employed at intervals; fuel paid for by United States.
Excelsior	do	(*)	June 26	May 1, 1890	.....do	do	do	do	57. 00	
J. G. Emmons	do	(*)	June 26	{May 8, 1890 May 17, 1890}	.....do	do	do	do	114. 00	
John E. Moore	Steam-boat ..	(*)	June 26	June 10, 1890	June 27, 1890	.....do	do	do	285. 00	Employed at intervals.
Baltic	Steam-tug ..	(*)	June 26	June 21, 1890	.....do	do	do	do	57. 00	
Sylvan Shore.....	Propeller ...	84. 00	Dec. 7	Dec. 7, 1889	Jan. 15, 1890	David's Island, New York Harbor.	Post quarter- master.	\$40 per day ...	1, 600. 00	While <i>Hamilton</i> was being repaired.
Princess Ida.....	Sloop	10. 00	July 1	July 1, 1889	June 30, 1890	Fort Adams, R. I.	do	\$4 per day ...	450. 00	When steam-launch was not running.
Florence.....	Steam-launch	28. 01	Dec. 18	Dec. 18, 1889	.....do	Fort Barrancas, Fla.	do	\$200 per month	1, 464. 00	Freight and mail between Pensacola and Barrancas.
Ellen Hodge	Steam-tug ..	26. 00	Aug. 8	Aug. 8, 1889	Sept. 21, 1890	Boston, Mass ..	Depot quarter- master.	\$15 per trip ...	1, 365. 00	While <i>Resolute</i> was being re- paired.
Sylph.....	Sloop	11. 00	July 1	July 1, 1889	June 30, 1890	New Orleans, La.	do	\$18 per month.	216. 00	Freight and mail between Biloxi and Ship Island, Miss.
Native	do	8. 00	July 1	.....do .....	.....do	do	do	\$25 per month.	300. 00	Freight and mail between Mobile and Forts Gaines and Morgan.
Relief.....	Schooner ...	30. 00	July 1	.....do .....	.....do	do	do	\$50 per month.	600. 00	Freight and mail between Key West and Fort Jeffer- son, Fla.
Ella	Steamer	(*)	July 1	.....do .....	.....do	Fort Trumbull, Conn.	Post quarter- master.	.....do	229. 86	Freight and passengers be- tween New London and Fisher Island.
Fisher's Island	do	(*)	July 13	July 13, 1889	.....do	do	do .....	.....do	22. 67	Do.
Challenge.....	Schooner ...	(*)	Aug. 1	Aug. 1, 1889	.....do	Boston, Mass ..	Depot quarter- master.	.....do	20. 00	Transporting powder to Fort Adams, R. I.
Thomas Hix	do	(*)	May 16	May 16, 1889	.....do	do	do .....	.....do	12. 00	Do.
Ontario	Steamer	(*)	July 1	{July 1, 1889 July 2, 1889}	.....do	Buffalo, N. Y...	Post quarter- master.	For trip	75. 00	Transporting Company C, Eleventh Infantry, to sta- tion.
San Juan	Sloop	15. 00	May 1	July 1, 1889	Aug. 31, 1889	.....do .....	.....do	\$40 per month.	80. 00	Freight and passengers be- tween Point Isabel and Brazos Santiago, Tex.
(No name)	Skiff.....	.....	May 1	.....do .....	.....do .....	.....do .....	.....do	\$5 per month..	10. 00	At convalescent camp at Brazos Santiago, Tex.

* Unknown.

D.—Vessels chartered, impressed, or employed by the Quartermaster's Department during the fiscal year ending June 30, 1890—Continued.

Name.	Class.	Ton- nage.	When char- tered.	Period of service.		Where charter money is payable.	By whom em- ployed.	Rate of pay.	Total earnings.	Remarks.
				From—	To—					
General Canby.....	Tug	44.88	1889. June 29 1890.	July 1, 1889	June 30, 1890	Portland, Oreg.	Depot quarter- master.	\$17 per trip ...	6,301.50	Between Astoria, Oregon, and Fort Canby, Wash. While the <i>McDowell</i> was being repaired. Do.
Sonoma.....	Steamer	305.00	Apr. 11	Apr. 16, 1890	May 20, 1890	San Francisco, Cal.	Chief quarter- master.	\$55 per day ...	1,656.00	
Do	do	305.00	May 26	May 26, 1890	.....	do	do	\$30 per trip ...	30.00	
Total .....	.....	.....	.....	.....	.....	.....	.....	.....	17,817.03	

E.—Abstract of contracts for water and wagon transportation entered into by the Quartermaster's Department received at the office of the Quartermaster General during the fiscal year ending June 30, 1890.

Contracting officer.	Contractor.	Date of contract.	Expiration of contract.	Route of supply.	Rates.
Col. J. D. Bingham, A. Q. M. Gen'l, U. S. Army, Chicago, Ill.	William G. Livingston	July 1, 1889	June 30, 1890	Cartage of manure from stables of quartermaster's department at Chicago, Ill.	\$14 per month.
Do.....	The McMurtry Teaming Company.	do	do	Drayage in Chicago as required.....	1.9 cents per 100 pounds.
Maj. C. W. Foster, chief Q. M., Department of the Missouri, St. Louis, Mo.	James Ruckles	do	do	Hauling between railroad stations, Fort Riley, and Junction City, Kans.	Various.
Do.....	M. J. O'Brien	do	do	Hauling at Fort Leavenworth, Kans., and between the fort and the city.	Do.
Do.....	T. B. Osterhout	do	do	Hauling between Fort Lyon and Las Animas, Colo.	7 cents per 100 pounds.
Do.....	Thomas J. Arrington	do	do	Hauling between Fort Lewis and Durango, Colo.	20 cents per 100 pounds.
Do.....	Eugene J. Mullen	do	do	Hauling between Fort Hays and Hays City, Kans.	25 cents per load of 200 pounds or less, 2 cents per 100 pounds in excess of 200.
Do.....	J. J. Monahan	do	do	Wagon route No. 2, between Woodward, Ind. T., and Fort Supply, Ind. T.	\$1.20 per 100 pounds per 100 miles between any and all points on route.
Do.....	James Lister	do	do	Wagon route No. 3, between Miami, Tex., and Fort Elliott, Tex.	15 cents per 100 pounds.
Do.....	James Rennie	do	do	Wagon route No. 1, between Paul's Valley and Fort Sill, Ind. T.	60.38 cents per 100 pounds per 100 miles between any and all stations.
Do.....	John Fuller	do	do	Wagon route No. —, between Fort Riley and railroad stations.	1½ cents per 100 pounds.
Do.....	Albert K. Nail	do	do	Wagon route No. —, between Fort Lewis and Durango, Colo.	22½ cents per 100 pounds.
Do.....	Peter F. Weazel	do	do	Wagon route No. —, between Fort Reno and El Reno, Ind. T.	5½ cents per 100 pounds.
Lieut. Col. W. B. Hughes, chief Q. M., Department of the Platte, Omaha, Nebr.	Gilbert H. McDowell and Cicero H. Thompson.	July 31, 1889		Wagons (4 horse or mule) to accompany troops on march to Fort Niobrara, Nebr., to establish camp near Fort Robinson, Nebr.	\$8.75 per day for each team.
Do.....	Charles J. Johnson	July 1, 1889	June 30, 1890	Drayage of stores to and from cars at Rawlins, Wyo.	2 cents per 100 pounds, no load to be less than 25 cents.
Do.....	William S. Howard	Aug. 12, 1889		Wagon (4 horse or mule teams) to accompany troops from Fort Sidney to Fort Robinson, Nebr.	\$6.97 per day for each team.
Do.....	F. J. Stanton	Aug. 8, 1889		Wagon (4 horse or mule teams) to accompany troops from Fort D. A. Russell to camp near Fort Robinson, Nebr.	\$10 per day for each team.

E.—Abstract of contracts for water and wagon transportation entered into by the Quartermaster's Department, etc.—Continued.

Contracting officer.	Contractor.	Date of contract.	Expiration of contract.	Route of supply.	Rates.
Lieut. Col. W. B. Hughes, chief Q. M., Department of the Platte, Omaha, Nebr.	James Stephenson	Aug. 10, 1889	.....	Wagon (4 horse or mule teams) to accompany troops from Bordeaux, Wyo., to Fort Robinson, Nebr.	\$10.95 per day for each team.
Do.....	John C. Davis	July 1, 1890	June 30, 1891	Wagon route No. 4, between Rawlins and Fort Washakie, Wyo.	\$1.10 per 100 pounds per 100 miles between any all points on route.
Do.....	Mary E. Carter	.....do.....	.....do.....	Wagon route No. 5, between Carter, Wyo., and Fort Bridger, Wyo.	\$1.55 per 100 pounds per 100 miles.
Do.....	Jones & Taylor	.....do.....	.....do.....	Wagon route No. 6, between Price and Fort Duchesne, Utah.	\$1.07 per 100 pounds for whole distance; \$1.45 per 100 pounds per 100 miles between any and all other points on route.
Do.....	John L. Murray	.....do.....	.....do.....	Wagon route No. 9, between Cheyenne City and quartermaster's depot and Fort D. A. Russell.	Various.
Do.....	Jones & Taylor	.....do.....	.....do.....	Drayage, route No. 13, between railroad depot and quartermaster's storehouse at Price, Utah.	2½ cents per 100 pounds for coal and grain in sacks; 2½ cents per 100 pounds for all other stores.
Do.....	Harry W. Chowens	.....do.....	.....do.....	Drayage, route No. 14, between Fort Sidney and Sidney, Nebr.	6½ cents per 1,000 for coal; 1 cent per 100 pounds for grain in sacks; 1½ cents per 100 pounds for all other stores.
Do.....	Orlando J. King	June 1, 1890	Aug. 1, 1890	Removing buildings at Cheyenne depot.	\$4,323 for the job.
Do.....	L. B. Shephard	July 1, 1890	June 30, 1891	Wagon route No. 1, between Casper, Wyo., and Fort McKinney.	80 cents per 100 pounds for whole distance; \$1 per 100 pounds per 100 miles between any and all points on route.
Do.....	Russell Thorp	.....do.....	.....do.....	Wagon route No. 2, between New Castle, Wyo., and Fort McKinney.	88 cents per 100 pounds for whole distance; \$1.09 per 100 pounds per 100 miles between any and all points on route.
Do.....	L. B. Shephard	.....do.....	.....do.....	Wagon route No. 3, between Casper and Fort Washakie, Wyo.	\$1.07 per 100 pounds for whole distance; \$1 per 100 pounds per 100 miles between any and all points on route.
Do.....	William Dalton	.....do.....	.....do.....	Hauling between Omaha, Nebr., and Fort Omaha and points on Omaha route No. 7.	5 cents per 100 pounds, including handling stores.
Do.....	.....do.....	.....do.....	.....do.....	Hauling, at Omaha, Nebr., on route No. 8.	3 cents per 100 pounds, including handling stores.
Do.....	Edwin R. Clute	.....do.....	.....do.....	Drayage, route No. 10, between Salt Lake City and Fort Dotglas, Utah.	5 cents per 100 pounds for coal; 6 cents per 100 pounds for all other stores.
Do.....	Mathew R. Tarris	.....do.....	.....do.....	Wagon route No. 11, between Valentine and Fort Niobrara, Nebr.	4 cents per 100 pounds for coal; 5 cents per 100 pounds for grain in sacks; 6½ cents per 100 pounds for all other stores.
Do.....	L. B. Shephard	.....do.....	.....do.....	Wagon route No. 15, at Casper, Wyo.	3½ cents per 100 pounds.
Capt. C. F. Humphrey, A. Q. M., Cheyenne, Wyo.	George East	Oct. 30, 1889	Feb. 15, 1890	Move, remodel, and repair guard house at Fort D. A. Russell, Wyo.	\$3,590 for the job.

Do.....	do.....	Apr. 1, 1890	May 1, 1890	Move railroad track scales at Cheyenne and set same up at Fort D. A. Russell.	\$210 for the job.
Maj. A. F. Rockwell, chief Q. M., department of Dakota, St. Paul, Minn.	William H. Carr	July 1, 1889	June 30, 1890	Wagon between St. Paul and Fort Snelling, Minn.	1½ cents per 100 pounds, in city of St. Paul; 8 cents per 100 pounds, between St. Paul and Fort Snelling.
Do.....	John M. Turner	Apr. 1, 1889	Nov. 15, 1890	Steamboat on Missouri River between Sioux City, Iowa, and Bismarck, N. Dak.	Officers 4 cents, enlisted men 3½ cents per mile; animals, 4 cents per mile; stores, 42 cents per 100 pounds per 100 miles.
Do.....	William F. Burgy	July 1, 1890	June 30, 1891	Wagon route No. 1, between Big Sandy Station and Fort Maginnis, Mont.	84 cents per 100 pounds for whole distance; \$1.18 per 100 pounds per 100 miles, between any and all stations on the route.
Do.....	Isaac P. Baker	do.....	do.....	Wagon route No. 8, between Bismarck and Fort Yates, N. Dak.	30 cents per 100 pounds, whole distance; \$1.10 per 100 pounds per 100 miles between any and all stations on route.
Do.....	William A. Wiegand	do.....	do.....	Wagon route No. 2, between Cascade and Fort Shaw, Mont.	24 cents per 100 pounds, whole distance; \$1.40 per 100 pounds per 100 miles between any and all points on route.
Do.....	Paul McCormick	do.....	do.....	Wagon route No. 3, between Cinnabar, Mont., and Camp Sheridan, Wyo.	21 cents per 100 pounds, whole distance; \$1.49 per 100 pounds per 100 miles between any and all points on the route.
Do.....	Frank D. McCormick	do.....	do.....	Wagon route No. 4, between Custer Station and Fort Custer, Mont.	34 cents per 100 pounds for whole distance; \$1.39 per 100 pounds per 100 miles for any and all points on the route.
Do.....	Paul McCormick	do.....	do.....	Wagon route No. 5, between Custer Station and Fort Maginnis, Mont.	\$1.49 per 100 pounds for whole distance; \$1.49 per 100 pounds per 100 miles between any and all points on route.
Do.....	Addison H. Pease.....	do.....	do.....	Wagon route No. 6, between Armour and Fort Randall, S. Dak.	33 cents per 100 pounds, whole distance; \$1.32 per 100 pounds per 100 miles between any and all points on route.
Do.....	Alex. D. Marriott.....	do.....	do.....	Wagon route No. 10, between Pierre and Fort Sully, S. Dak.	37 cents per 100 pounds, whole distance; \$1.50 per 100 pounds per 100 miles between any and all points.
Do.....	Alexander W. Spencer	July 1, 1890	June 30, 1891	Wagon route No. 11, between Oberon and Fort Totten, N. Dak.	20 cents per 100 pounds whole distance; \$1.66½ per 100 pounds per 100 miles between any and all points on route.
Do.....	Isaac P. Baker	do.....	do.....	Wagon route No. 7, between Mandan and Fort Yates, N. Dak.	32 cents per 100 pounds whole distance; \$1 per 100 pounds per 100 miles between any and all points on route.
Do.....	do.....	do.....	do.....	Wagon route No. 9, between Pierre and Fort Bennett, S. Dak.	20 cents per 100 pounds whole distance; unless started in November, December, January, February, and March, then 25 cents per 100 pounds.
Lieut. William Gerlach, A. A. Q. M., Fort Snelling, Minn.	John Hammes	May 14, 1889	June 30, 1889	Wagon; hauling building material at Fort Snelling, Minn.	Lumber 96 cents per 1,000 feet, brick \$1.10 per 1,000; sand 60 cents, and lime 75 cents per 2,000 pounds.
Do.....	do.....	Sept. 3, 1889	June 30, 1890	do.....	Lumber 95 cents per 1,000 feet; brick \$1.15 per 1,000; lime and cement 50 and 75 cents per 2,000 pounds.
Capt. Charles Bird, A. Q. M., Fort Monroe, Va.	John Faltno	July 1, 1889	do.....	Hauling coal from yard at Fort Monroe, Va., to pumping station at Mill Creek, and stores to fort.	4½ cents per 100 pounds.

E.—Abstract of contracts for wagon and water transportation entered into by the Quartermaster's Department, etc.—Continued.

Contracting officer.	Contractor.	Date of contract.	Expiration of contract.	Route of supply.	Rates.
Capt. A. P. Blunt, A. Q. M., Boston, Mass.	T. Libby & Co	July 1, 1889	June 30, 1890	Hauling in and around Boston, Mass.	Various.
Lieut. E. L. Loveridge, A. A. Q. M., Fort Niagara, N. Y.	John Marquette	July 13, 1889	....do	Hauling from railroad depot at Lewiston to Fort Niagara, N. Y.	10 cents per 100 pounds.
Capt. C. A. H. McCauley, A. Q. M., Chicago, Ill.	R. W. F. Peters	July 1, 1890	June 30, 1891	Hauling at Milwaukee and between railroad depots and steamboat landings.	25 cents per 100 pounds; no load less than 50 cents
Lieut. Col. G. H. Weeks, chief Q. M., Department of Texas, San Antonio, Tex.	Joseph Sender .....	....do .....	....do	Wagon route No. 1, between Marfa and Fort Davis, Tex.	15 cents per 100 pounds for whole distance; \$1 per 100 pounds per 100 miles between any and all other points on route.
Do	John E. Mix .....	....do .....	....do	Wagon route No. 2, between Peña Station and Fort Ringgold, Tex.	\$1 per 100 pounds for whole distance; \$1 per 100 pounds per 100 miles between any and all stations on route.
Do	William Kelly .....	....do .....	....do	Steamboat route No. 4, between Fort Brown and Fort Ringgold, Tex.	\$10 for officer or clerk, \$8 for enlisted man; \$12 for each animal, 60 cents per 100 pounds for stores.
Do	Louis Scheihagen .....	....do .....	....do	Wagon route No. 5, hauling in San Antonio, Tex.	Not exceeding 1 mile $1\frac{1}{2}$ cents per 100 pounds from 1 to 2 miles 2.6 cents per 100 pounds, .7 cent per 100 pounds for every mile or fraction thereof over 2 miles.
Do	H. Sherwood .....	....do .....	....do	Wagon route No. 6, between railroad depot, steamboat landing, and Brownsville, Tex.	$3\frac{1}{2}$ cents per 100 pounds.
Col. Alex. J. Perry, chief Q. M., Department of California, San Francisco, Cal.	D. W. Earl .....	....do .....	....do	Wagon route No. 1, between Reno, Nev., and Fort Bidwell, Cal., between Liegan, Cal., and Fort Bidwell and intermediate points.	Various.
Do	Thomas Bair .....	....do .....	....do	Packmule route No. 2, between Arcata and Camp Gaston, Cal.	\$3 per 100 pounds for whole distance; \$9 per 100 pounds per 100 miles between any and all points on route.
Maj. A. S. Kimball, chief Q. M., Department of Arizona, Los Angeles, Cal.	Joel R. Slack and D. W. Thorne.	July 1, 1889	June 30, 1890	Wagon route No. 1, between Whipple Barracks and Fort Verde, Ariz.	83 cents per 100 pounds.
Do	Leo Goldman .....	....do .....	....do	Wagon route No. 2, between Phoenix and Fort McDowell, Ariz.	43 cents per 100 pounds.
Do	D. W. Wickersham .....	....do .....	....do	Wagon route No. 3, between Bowie Station and Fort Bowie, Ariz.; intermediate points and points not over 100 miles from line of the route, except Fort Huachuca and Huachuca Station, and all points more than 25 miles north of Gila River.	36 cents per 100 pounds between Fort Bowie and Bowie Station; \$2 per 100 pounds per 100 miles between any and all other points.

Do.....	E. A. Cutter	do	do	Wagon route No. 4, between Wilcox, Forts Grant and Thomas, and San Carlos.	Various.
Do.....	John R. Hulet	do	do	Wagon route No. 5, between Holbrook and Fort Apache, Ariz.	\$1.14 per 100 pounds for whole distance; \$1.25 per 100 pounds per 100 miles between any and all points on the route.
Do.....	M. G. Samaneigo.....	do	do	Wagon route No. 6, between Tucson and Fort Lowell, Ariz.	10 cents per 100 pounds.
Do.....	Alonzo Bingham.....	do	do	Wagon route No. 7, between Huachuca Station and Fort Huachuca, Ariz.	11½ cents per 100 pounds.
Do.....	A. H. Hilton	do	do	Wagon route No. 8, between Carthage and Fort Stanton, N. Mex.	94 cents per 100 pounds whole distance; \$1.25 per 100 pounds per 100 miles between any and all points on route.
Do.....	E. D. Woodbury	do	do	Wagon route No. 9, between Watrous and Fort Union, N. Mex.	8.73 cents per 100 pounds.
Do.....	George Hight.....	do	do	Wagon route No. 10, between Wingate and Fort Wingate, N. Mex.	7½ cents per 100 pounds.
Do.....	Harry Booth.....	do	do	Wagon route No. 11, between Silver City and Fort Bayard, N. Mex.....	13½ cents per 100 pounds.
Do.....	James T. Newhall.....	do	do	Wagon route No. 12, between railroad station Santa Fé and Fort Marcy, N. Mex.	2½ cents per 100 pounds.
Do.....	E. H. Barmore.....	do	do	Drayage in City of Los Angeles, Cal.	Various.
Do.....	James W. Payne.....	do	do	Pack train to supply as required by quartermaster's department.	Per month for services as packer, \$133; \$50 per month (and ration) per each packer.
Maj. John A. Kress, A. A. Q. M., Benicia Arsenal, Cal.	James O'Donnell.....	Sept. 7, 1880	do	Hauling between Storehouse or Magazine to railroad depot.	54½ cents per ton of 2,000 pounds.
Maj. J. G. C. Lee, chief Q. M., Department of the Columbia, Vancouver Barracks, Wash.	L. B. Hastings	do	do	Water transportation route No. 3, between Port Townsend and Fort Townsend, Wash.	Various.
Do.....	L. A. Loomis	do	do	Steamer route No. 4, between Astoria, Oregon, and Fort Canby, Wash.....	\$17 each per round trip; \$3 extra for touching at Fort Stevens; detentions at Fort Canby \$6 per hour, and at Fort Stevens, one-fourth hour or more, \$9 per hour.
Do.....	Edward O'Shea and C. B. King.....	July 1, 1890	June 30, 1891	Wagon route No. 1, between Davenport and Fort Spokane, Wash.	32 cents per 100 pounds whole distance; \$1.49 per 100 pounds per 100 miles between any and all points on route.
Lieut. G. Adams, A. A. Q. M., Fort Hamilton, N. Y.	Martin Doyle	Dec. 29, 1880	Mar. 3, 1890	Moving buildings at Fort Hamilton..	\$1,499.97 for the job.
Lieut. Col. R. N. Batchelder, Depot Quartermaster, New York City.	Justus H. Van Wie...	July 1, 1890	June 30, 1891	Steamers, to replace those belonging to United States while being repaired.	\$57 per day of twelve hours, \$5 extra per hour for night service. Services of engineer and fireman included.
Do.....	Timothy Sullivan.....	do	do	Running, manning, and victualing steamer <i>Ordinance</i> .	\$421 per month; when not in use for periods of over three days, \$210.66½ per month.
Do.....	John J. Masterson	do	do	Drayage between points in New York City and Brooklyn.	Various.
Do.....	Joseph A. Baulser	do	do	Running, manning, and victualing steamer <i>Chester A. Arthur</i> .	\$720.83 per month; when not in use for periods of over three days, \$360.41½ per month.

E.—Abstract for contracts for wagon and water transportation entered into by the Quartermaster's Department, etc.—Continued.

Contracting officer.	Contractor.	Date of contract.	Expiration of contract.	Route of supply.	Rates.
Lieut. Col. M. I. Ludington, Depot Quartermaster, Philadelphia, Pa.	Wm. J. Crawford	July 1, 1889	June 30, 1890	Hauling, in and about Philadelphia, Pa.	Various.
Do	J. M. Vanleer	do	do	do	Do.
Lieut. Col. J. G. Chandler, Depot Quartermaster, Philadelphia, Pa.	Clark & Co	July 1, 1890	June 30, 1891	do	Do.
Do	Wm. J. Crawford	do	do	do	Do.
Lieut. Col. J. M. Moore, Depot Quartermaster, St. Louis, Mo.	Frank P. Henseler	do	do	Hauling in St. Louis, Mo.	Do.
Col. H. C. Hodges, Depot Quartermaster, Jeffersonville, Ind.	E. C. Eaken	do	do	Hauling in and around Jeffersonville, Ind., and Louisville, Ky.	Do.
Col. J. D. Bingham, Chief Q. M. Division of the Missouri, Chicago, Ill.	Alfred Long	do	do	Hauling in Chicago, Ill.	3 cents per 100 pounds.
Do	Wm. T. Simon	do	do	Removing refuse at Chicago, Ill.	\$10 per month.
Lieut. Col. M. I. Ludington, Depot Quartermaster, San Francisco, Cal.	William R. Morton	July 1, 1890	do	Hauling between San Francisco Presidio, Forts Mason, and Winfield Scott.	Various.
Capt. H. J. Haynsworth, A. Q. M., Buffalo, N. Y.	Thomas Ahearn	July 1, 1889	June 30, 1890	Hauling in Buffalo, N. Y.	20 cents per 100 pounds or less.
Do	do	July 1, 1890	June 30, 1891	Hauling in Buffalo, N. Y., and between Buffalo and Fort Porter, N. Y.	Various.
Lieut. F. H. French, A. A. Q. M., Fort Porter, N. Y.	George J. Huppuch	do	do	Collecting and hauling away garbage at the fort.	\$480 per year; monthly payments.
Maj. A. J. McGonnigle, Q. M. U. S. Army., Baltimore, Md.	Thomas J. Corry	do	do	Wagon transportation between Baltimore, Fort McHenry, and Loudon Park Cemetery.	Various.
Do	do	July 1, 1889	June 30, 1890	do	18 cents per 100 pounds.
Lieut. C. G. Woodward, A. A. Q. M., Fort McHenry, Md.	A. W. Battzley	Sept. 17, 1889	Nov. 17, 1889	Moving buildings at Fort McHenry, Md.	\$500 for the job.
Lieut. J. C. W. Brooks, A. A. Q. M., Fort Barrancas, Fla.	David Hugelmaun	July 1, 1889	June 30, 1890	Water transportation—receive and deliver all freight for Forts Barrancas and Pickens and to railroad company at Pensacola.	20 cents per 100 pounds, including wharfage and drayage.
Lieut. A. M. Hunter, A. A. Q. M., Fort Barrancas, Fla.	B. Rocheblave	Dec. 18, 1889	do	Steamboat between Fort Barrancas and Pensacola, Fla.	\$200 per month for two trips daily and one extra trip each week.
Lieut. S. R. Jones, A. A. Q. M., Fort McPherson, Ga.	Ike Mahone	Jan. 10, 1890	do	Hauling between Fort McPherson and railroad depots, etc., at Atlanta, Ga.	Various.
Capt. A. L. Varney, A. A. Q. M., Kennebec Arsenal, Me.	James N. Wade	July 1, 1890	June 30, 1891	Hauling between Kennebec Arsenal and Augusta, Me.	50 cents single and 75 cents double loads; single teams 40 cents, and double 60 cents per hour.

Lieut. James Rockwell, jr., A. A. Q. M., Rock Island Arsenal, Ill. Do.....	Thomas Bernes.....	do.....	do.....	Hauling coal from yards of Coal Valley Mining Company to Arsenal	1½ cents per bushel of 80 pounds.
Lieut. Lotus Niles, A. A. Q. M., Fort Adams, R. I. Do.....	John Connolly.....	Aug. 1, 1889	June 30, 1890	Hauling between Arsenal and Davenport, Iowa, Moline, and Rock Island, Ill., and to points on the Island. Drayage between Fort Adams, R. I. and railroad depots and steamboat landing.	Various. \$1 per 1,000 pounds for general freight; \$2 per 1,000 feet for lumber.
Maj. O. E. Michaels, A. A. Q. M., Kennebec Arsenal, Me. Do.....	Daniel Sullivan.....	do.....	do.....	Sailboat, four round trips daily between Fort Adams and Newport.	\$4 per day.
Maj. J. W. Reilly, A. A. Q. M., Augusta Arsenal, Ga. Do.....	William S. Slocum.....	do.....	do.....	Scavenger work at Fort Adams, R. I.	\$30 per month.
Capt. A. S. M. Morgan, A. A. Q. M., Allegheny Arsenal, Pa. Do.....	A. P. Saben.....	July 1, 1889	do.....	Water for use on steam launch <i>Monroe</i> .	\$12.50 per month.
Capt. Frank Heath, A. A. Q. M., Watervliet Arsenal, N. Y. Do.....	James N. Wade.....	do.....	do.....	Hauling between Kennebec Arsenal and Augusta, Me.	75 cents per double-team load; 50 cents per hour double-team load. 60 cents per single-horse load; 40 cents per hour single-horse team.
	Lucius Rokestraw.....	do.....	do.....	Hauling between Arsenal and any place in Augusta, Ga.	\$1.50 per load of 1,000 pounds or over; \$1 per load less than 1,000 pounds.
	William P. Betsell.....	July 1, 1890	June 30, 1891	Wagon transportation between Augusta, Ga. and Augusta Arsenal.	\$1 per load of 1,000 pounds or under; \$1.50 per load of over 1,000 pounds.
	Joseph A. Bender.....	July 1, 1889	June 30, 1890	Hauling between the arsenal and points in Pittsburgh and Allegheny, and railroad station.	30 cents per 100 pounds or less.
	do.....	July 1, 1890	June 30, 1891	do.....	Do.
	William Lee and F. W. Richardson.	July 1, 1889	June 30, 1890	Hauling between Watervliet Arsenal and freight station at Troy, N. Y., and within city of Troy.	Various.
	M. F. Kennan.....	July 1, 1890	June 30, 1891	do.....	Do.

8.—*Report of Capt. John F. Rodgers, military storekeeper U. S. Army of the operations of the clothing supply branch during the fiscal year ending June 30, 1890.*

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., August 28, 1890.

GENERAL: I have the honor to submit the following report of the operations of this office, pertaining to the supply of clothing and equipage of the Army of the United States and to the militia of the States and Territories under the act of Congress amending section 1661 of the Revised Statutes, for the fiscal year ending June 30, 1890.

RECEIPTS AND EXPENDITURES.

There were appropriated by Congress for the purchase and manufacture of clothing, equipage, and materials, as well as for packing of same for transportation, pay of employes, and all other incidental expenses connected with the supply of clothing and equipage of the Army the sum of \$1,150,000.

There were received on account of transfers of clothing and equipage to the militia during the last fiscal year \$162,663.28 and \$78,680.17 were placed on the books of the Treasury to the credit of the appropriation on account of sales to officers and collections by the Pay Department from the enlisted men of the Army of the money value of clothing drawn in excess of the allowance to which they are entitled under existing regulations.

The total expenditures were \$1,391,072.24 leaving a balance in the Treasury of the United States at the close of the fiscal year of only \$271.21.

The amount required on the 30th of June to pay obligations and contracts previously entered into was \$64,080.90, all of which it is thought will be credited to the appropriation from collections by the Pay Department during the present fiscal year.

The expenditures were disbursed as follows:

Philadelphia depot	\$918, 881. 33
Jeffersonville depot	151, 779. 19
San Francisco depot	220, 109. 54
Fort Leavenworth prison	83, 646. 20
St. Louis, Mo., depot	8, 878. 00
Military divisions, departments, and posts	2, 777. 06
Total	1, 391, 071. 32

For fuller and more detailed information upon this subject I respectfully refer to the accompanying statements C and D.

PURCHASES AND MANUFACTURES FOR THE ARMY AND THE MILITIA.

Nearly all the purchases and manufactures of the clothing and equipage supplies for the Army and the militia were made at the general depots of the Quartermaster's Department at Philadelphia, Pa., Jeffersonville, Ind., San Francisco, Cal., and the United States Military Prison at Fort Leavenworth, Kans.

The accompanying statement B shows in detail all of the articles that were purchased during the last fiscal year, the names of the persons of whom made, quantities, prices, whether by contract or in open market, with dates.

The following are the principal articles which were thus procured :

Articles.	Quantity.	Articles.	Quantity.
Helmets	12,913	Pillow cases	19,127
Cork helmets	4,150	Mosquito bars	4,000
Forage caps	37,255	Axes	2,999
Fur caps	10,000	Shovels	3,300
Campaign hats	24,630	Brooms	7,088
Suspenders	23,388	Scrubbing brushes	14,084
Boots	3,621	Linen collars	154,024
Shoes	30,935	D. B. cloth	20,916
Undershirts	51,629	Kersey	146,758
Canvas leggings	20,194	Duck for tents	182,308
Wool stockings	70,841	Duck for canvas clothing	65,265
Cotton stockings	163,313	Canton flannel	90,802
Berlin gloves	215,842	Blouse flannel	124,582
Wool mittens	7,507	Shirting flannel	75,121
Fur gauntlets	13,002	Broom corn	36,000
Leather gauntlets	3,134	C under leather	23,900
Arctic overshoes	4,400	Sole leather, cropped	85,000
Barracks shoes	29,127	Welt leather, cropped	13,600
Wool blankets	18,553	Wax upper	263,937
Bunk bottoms	4,100	Pebble grain leather	28,000

There were manufactured by the Quartermaster's Department from materials purchased under contract, as shown in the accompanying statement A, the following articles :

Articles.	Quantity.	Articles.	Quantity.
Canvas caps	5,594	Shoes	3,264
Kersey overcoats	10,339	Drawers	42,373
Canvas overcoats	416	Canvas mittens	6,499
Dress coats	7,823	Gold lace chevrons	1,101
Blouses	47,539	Cloth chevrons	9,439
Canvas fatigue coats	20,214	Barrack bags	2,969
Canvas fatigue trousers	18,091	Pillow cases	10,050
Overalls	6,590	Tents, all kinds	609
Trousers, kersey	57,347	Corn brooms	23,283
D. B. shirts	16,733	Barrack chairs	3,951
Boots	5,657		

It is believed that the system of manufacturing adopted by the Quartermaster's Department is the best that can be devised.

It gives employment to many needy persons, principally widows and orphans of the soldiers and sailors of the late war, and by purchasing all the materials and trimmings and supervising the manufacture of each garment none but articles of best workmanship, quality, and durability are procured.

There were paid during the last fiscal year at the general depots of Philadelphia, Pa., Jeffersonville, Ind., and San Francisco, Cal., to operatives, such as tailors, sewing women, and tentmakers, the sum of \$132,047.95 on account of the manufacture of clothing and equipage.

ISSUES TO THE ARMY.

There were issued to the Army, as shown in accompanying statement A, the following principal articles of clothing and equipage during the last fiscal year :

Articles.	Quantity.	Articles.	Quantity.
Helmets	9,029	Wool mittens..... pairs..	4,133
Cork helmets	5,229	Canvas mittens..... do ..	3,989
Forage caps	29,444	Fur gauntlets..... do ..	8,849
Fur caps.....	6,680	Leather gauntlets..... do ..	10,329
Canvas caps.....	2,985	Arctic overshoes..... do ..	4,486
Campaign hats.....	23,634	Barrack shoes..... do ..	27,038
Overcoats, kersey.....	10,143	Wool blankets.....	14,361
Overcoats, fur and canvas.....	522	G. L. chevrons..... pairs..	1,618
Dress coats.....	6,800	Cloth chevrons..... do ..	10,175
Blouses.....	38,858	Canvas leggings..... do ..	15,759
Canvas fatigue coats.....	17,912	Barrack bags.....	3,452
Canvas fatigue trousers..... pairs..	20,009	Bunk bottoms.....	2,216
Stable frocks..... do ..	4,444	Mattresses.....	1,716
Linen collars.....	93,240	Mattress covers.....	5,884
Overalls..... pairs..	9,110	Pillows.....	2,837
Trousers, kersey..... do ..	67,664	Pillow cases.....	27,367
Suspenders..... do ..	15,432	Bed sheets.....	12,897
D. B. shirts.....	30,487	Mosquito bars.....	4,220
Boots..... pairs..	7,631	Axes.....	4,340
Shoes..... do ..	50,924	Shovels.....	3,621
Knit undershirts.....	57,514	Tents, all kinds.....	2,349
Drawers..... pairs..	68,592	Corn brooms.....	26,586
Wool stockings..... do ..	105,832	Barrack chairs.....	4,151
Cotton stockings..... do ..	177,952	Scrubbing brushes.....	15,030
Berlin gloves..... do ..	202,171		

ISSUES TO THE MILITIA.

Attention is respectfully invited to the accompanying statements, marked E, F, and G, respectively, which show in detail the transactions of the Quartermaster's Department on account of all the issues to the militia of the States and Territories during the last fiscal year, not alone of clothing and equipage, but also of other stores not under the control of the clothing supply branch of this office.

(1) Under the act of Congress amending section 1661 of the Revised Statutes the money value of the articles issued amounted to \$169,704.60, of which \$162,663.28 were credited to the appropriation prior to June 30, 1890. The remainder has been credited since that date. The following are the States and Territories to which issues were made and the money value of the property :

States and Territories.	Amount.	States and Territories.	Amount.
Alabama.....	\$960.14	Minnesota.....	\$76.12
Alaska.....	35.41	Mississippi.....	3,645.75
Arizona.....	1,239.73	Missouri.....	28,209.41
Colorado.....	2,826.90	Nevada.....	2,544.45
Connecticut.....	2,994.00	New Hampshire.....	4,784.88
Delaware.....	2,999.29	New Jersey.....	100.52
Idaho.....	1,718.54	North Carolina.....	8,360.26
Illinois.....	11,523.72	Ohio.....	22,404.34
Indiana.....	6,831.38	Pennsylvania.....	472.75
Iowa.....	19,608.10	South Carolina.....	5,876.15
Kansas.....	2,631.57	Tennessee.....	4,889.26
Kentucky.....	7,287.47	Virginia.....	2,019.56
Louisiana.....	606.14	West Virginia.....	4,940.73
Maine.....	6,567.22	Wyoming.....	447.78
Maryland.....	3,481.96		
Michigan.....	9,920.94	Total.....	\$169,704.60

The following were the principal articles thus issued :

Articles.	Quantity.	Articles.	Quantity.
Rubber blankets.....number..	1, 179	Helmets.....number..	2, 520
Wool blankets.....do.....	2, 535	Kersey.....yards..	15, 927 $\frac{3}{4}$
Blouses.....do.....	5, 793	Leggings.....pairs..	500
Cloth chevrons.....pairs.....	2, 376	Overcoats.....number..	3, 104
Dark blue cloth.....yards..	2, 891 $\frac{1}{2}$	Ponchos, rubber.....do....	867
Dress coats.....number..	1, 482	Tents, common.....do....	475
Blouse flannel.....yards..	1, 692 $\frac{3}{4}$	Tents, wall.....do....	205
Forage caps.....number..	8, 781	Trousers.....pairs..	5, 710
Berlin gloves.....pairs..	1, 234		

The cost of packing these supplies for shipment, which has been reimbursed to the clothing appropriation, amounted to \$1,643.03.

(2) Under the act of Congress of March 1, 1889, which authorizes the National Guard of the District of Columbia to draw, upon the approval and by direction of the Secretary of War, from the stores and supplies appropriated for use of the Army, such ordnance and ordnance stores, clothing, and camp and garrison equipage, quartermaster's stores, medical supplies, and other military stores as may be necessary for the proper training and instruction of the force, there were issued during the last fiscal year from the limited stock of supplies procured for use of the Army :

Clothing and equipage to the value of.....	\$18, 132. 08
Quartermaster's stores to the value of.....	1, 995. 14
	20, 127. 22

ISSUES TO INDIAN PRISONERS.

From the accompanying Statement F, the quantities of clothing and equipage and materials issued to Indian prisoners of war, confined at Mount Vernon Barracks, Ala., during the last fiscal year, can readily be ascertained.

The estimated value of these articles is \$7,358.10, all of which was paid from the appropriation for clothing and equipage.

THE MILITARY PRISON AT FORT LEAVENWORTH.

There were manufactured at the United States military prison at Fort Leavenworth, Kans., during the last fiscal year, for the Quartermaster's Department, the following articles of clothing and equipage from materials purchased by contract under the supervision of the commandant of the prison and paid for from clothing appropriation :

Boots, all kinds.....	5, 635
Shoes, all kinds.....	32, 645 $\frac{1}{2}$
Corn brooms.....	20, 916
Barracks chairs, all kinds.....	3, 951

at a total expenditure of \$85,908.74.

The value of prison labor performed for this Department and which should be deducted from the foregoing is \$7,568.25; making the actual expenditures, \$78,340.49, specified as follows :

Materials.....	\$74, 719. 62
Civilian labor.....	2, 294. 90
Royalty on machinery.....	1, 125. 97
Total.....	78, 340. 49

The commandant of the United States military prison at Fort Leavenworth, Kans., reports that the value of materials on hand, on the 30th of June last, amounted to \$25,913.60.

On June 30, 1889, the value of materials then on hand was reported at \$16,940.37.

A close calculation develops the following as the cost of each article manufactured :

Articles.	Average cost, exclusive of prison labor.	Cost of prison labor.	Total.
Boots :		<i>Cents.</i>	
Brass screwed, old style.....	\$2. 13	16	\$2. 29
Mounted partly machine-sewed bottoms	2. 86	34	3. 20
Shoes :			
Campaign sewed bottoms	1. 82	16	1. 98
Brass screwed, old style.....	1. 53	10	1. 63
Corn brooms .....	. 09	2	. 11
Barrack chairs :			
Vulcanized, fiber seat	1. 00	8	1. 08
Indurated seat .....	. 73	8	. 81
Perforated veneer seats .....	. 54	8	. 62

The proceeds of the sale of scrap leather during the last fiscal year at the military prison amounted to \$637.80, which, under the law, has been placed on the books of the Treasury to the credit of miscellaneous receipts.

There were issued to the military prison at Fort Leavenworth, Kans., during the last fiscal year, as shown in accompanying Statement K, articles of clothing and equipage to the value of \$10,767.20. Among the articles transferred were 3,000 campaign hats, and 7,506 pairs obsolete field shoes, representing a value of \$9,681.18. These large quantities, while not required for issue during the last fiscal year, were in reality set aside for the requirements of the prison during a period of about five years.

The Department found itself in possession of large quantities of black wool campaign hats and obsolete "field" shoes, both of which articles had been on hand for a number of years, and as it was ascertained that if sold at public auction little or nothing would be realized from them, it was thought to be in the interest of economy to transfer to each of the military prisons at Fort Leavenworth, Kans., and Alcatraz Island, Cal., a five years' supply of these articles, so that they might be utilized by issuing them to convicts upon their discharge from said prisons, instead of purchasing corresponding new articles.

The Quartermaster-General having been advised that the Secretary of War desired that the prisoners at Alcatraz Island, Cal., be clothed in the same kind of garments as are worn by convicts at the Fort Leavenworth military prison, both while in confinement and upon their discharge, steps were taken to ascertain the requirements and to manufacture the articles at the Fort Leavenworth military prison from materials purchased by the commandant, payable from appropriation for clothing and equipage.

There were manufactured and issued 282 coats, 301 pairs trousers 467 shirts, 487 pairs drawers, and 450 pairs woolen stockings, at a total cost of \$2,078.74, including \$418.75 for prison labor.

There were also manufactured at the Fort Leavenworth military prison, for the Subsistence Department, under the authority of th

Secretary of War, 800 carpet and 6,000 whisk brooms, large and small, costing \$96 and \$240, respectively, for which the appropriation for clothing and equipage has been reimbursed by the Subsistence Department.

AMOUNTS PAID TO AND COLLECTED FROM ENLISTED MEN ON ACCOUNT OF CLOTHING AND EQUIPAGE.

The collections by the Pay Department from the enlisted men of the Army, on account of clothing overdrawn for the fiscal year ending June 30, 1888, having been completed, it is ascertained that these collections amounted to \$122,693.34, which is part of the money placed on the books of the Treasury of the United States, to the credit of the appropriation for clothing and equipage.

The amount paid to the enlisted men by the Pay Department, on account of clothing undrawn, during the same period was \$277,333.85.

This amount represents the savings of the enlisted men, on account of clothing, of one year, a conclusive proof that the allowance of clothing in kind is fully ample.

Owing to the changed conditions in settling the clothing accounts, to which reference will be made hereafter, a still better showing in favor of the enlisted men will appear during the present fiscal year and the future.

SALES OF CONDEMNED CLOTHING, ETC.

None but condemned articles of clothing, equipage, and materials were sold by the Quartermaster's Department at public auction.

The entire receipts were covered into the Treasury to the credit of miscellaneous receipts, while the expenses of their sales were defrayed from the appropriation for clothing and equipage.

The following is a statement showing the amounts realized at each of the clothing depots and at the Fort Leavenworth military prison during the last fiscal year:

Depot.	Amount realized.	Expenses.
Philadelphia, Pa.....	\$10, 140. 62	\$52. 55
Jeffersonville, Ind.....	3, 564. 83	107. 16
San Francisco, Cal.....	2, 148. 75	.....
St. Louis, Mo.....	3, 702. 68	84. 59
Military prison, at Fort Leavenworth, Kans. (by inviting proposals).....	637. 80	.....
Total.....	20, 194. 68	244. 30

SALES TO NAVY DEPARTMENT.

There were sold to the Bureau of Navigation, of the Navy Department, 321 rubber blankets, at a cost of \$362.73. This amount has been credited to the appropriation for clothing and equipage for the last fiscal year.

SALES TO UNITED STATES MARINE CORPS.

As reported in my last annual report there were sold to the quartermaster of the United States Marine Corps, with the sanction of the Secretary of War, 300 knit undershirts and 2,000 pairs cotton stockings, payment to be made from funds to be provided for in a deficiency bill to be submitted to Congress by the Navy Department.

Up to date no reimbursement has been made, and as a consequence the money value of the property (\$330) has become a total loss to the appropriation for clothing of the Army, inasmuch as the money even if paid at this late day, could not be used in replacing articles.

There were sold during the last fiscal year to the Director of the Geological Survey, at cost prices, for cash, under the provisions of paragraph 689 of the Regulations, tents to the total value of \$232.05. This amount was placed to the credit of the appropriation for clothing and equipage.

TENTS FOR SUFFERERS FROM OVERFLOW OF THE MISSISSIPPI RIVER.

Congress by act approved March 31, 1890, appropriated the sum of \$25,000 for the purchase of tents for use of flood sufferers in the States of Arkansas, Mississippi, and Louisiana.

As the supply of tents procured from the appropriation for the support of the Army was inadequate to supply demands that were likely to arise, immediate steps were taken to purchase in open market at St. Louis, Mo., such number as could be procured.

There were purchased 2,198 tents, at a cost of \$18,042.30.

The following were issued by direction of the Secretary of War:

To the Governor of Louisiana	275
To the Governor of Mississippi	415
To the Governor of Arkansas	60
Total	750
Cost of transportation	\$1,992.93
Incidental expenses, such as agents, etc	210.95
Leaving on hand unexpended	4,753.82

Instructions have been given to collect, if possible, the tents which were distributed under the act of Congress referred to.

TABLE WARE AND KITCHEN UTENSILS.

Owing to the limited condition of the appropriation for clothing and equipage, it was found impracticable to purchase the articles of table ware and kitchen utensils to be provided to the Army under the requirements of paragraph 277 of the Regulations.

It was therefore decided to purchase them from the appropriation for regular supplies.

BAND INSTRUMENTS.

Arrangements having been made to supply musical instruments to the bands of the Army under the provisions of paragraph 240 of the Regulations, the question was submitted to the Secretary of War for a decision as to what particular bands were to be supplied with such instruments.

It was decided that under the law there was only one duly authorized band in the Army, the one at the West Point Military Academy.

Further action was therefore abandoned until Congress, in the act making appropriation for the support of the Army for the present fiscal year, provided in specific terms for the purchase of band instruments. The Secretary of War having decided that instruments may now be furnished, steps have been taken to supply them upon duly approved requisitions whenever made upon this office.

Congress by act of June 20, 1890, making appropriation for the support of the Military Academy for the present fiscal year, has made an appropriation of \$600 for the purchase and repair of band instruments at West Point, consequently none but bands strictly pertaining to the Army will be provided.

CHANGE IN SETTLEMENT OF SOLDIERS' CLOTHING ACCOUNTS.

It having been represented that one great cause of dissatisfaction and one that may account for some desertions in the Army, was due to the method of settling the clothing accounts of the enlisted men, caused by the stoppage of pay of recruits on account of clothing overdrawn during the first six months of their enlistment, a proposition to apportion the first year's money allowance of clothing, by giving the soldiers three-fourths of the annual allowance for the first six months and one-fourth of the annual allowance for the second six months, was favorably reported upon by the Quartermaster-General, and his suggestion to fix the exact amount was approved. As a consequence General Order No. 42, Headquarters of the Army, 1890, amending paragraph 1291 of the Regulations, was published, which, while it does not increase the first year's clothing allowance, either in money or in kind, divides the allowance in kind, by giving credit in money to the recruits for the articles they are likely to draw during their first six months' service. To illustrate:

A recruit of the infantry arm of the service at present may draw during the first six months' clothing to the value of \$57.67, and clothing to the value of \$10.40 during the second six months.

The recruit will thereby be enabled, at the end of his first six months enlistment, to draw his entire pay from the pay department, and not be subjected to reimburse from his first pay the money value of clothing overdrawn.

CLOTHING ALLOWANCE FOR INDIAN SCOUTS.

The question of fixing a more equitable clothing money allowance for Indian scouts having been brought to the attention of the Department, the Quartermaster-General recommended to the Secretary of War that a general order be published amending paragraph 577, as amended by General Order 38, Headquarters of the Army, 1890, so as to provide for the enlistment of such scouts for periods not exceeding six months, and that while in service they shall receive the pay and allowances of cavalry soldiers. In case of their reënlistment the allowance shall, however, be that of the second half year for enlisted men of cavalry, and in case of further reënlistments that of the subsequent years of a five years' service of cavalry soldiers.

This recommendation has been approved by the Secretary of War, and promulgated in General Order No. 74, Headquarters of the Army, current series.

FORAGE CAPS FOR FIELD OFFICERS.

The inspector-general of the division of the Missouri, having forwarded to this office sample of a cap which, in his opinion, would be preferable for field officers, in lieu of the present chasseur pattern, for the reasons that it would be more comfortable, affording greater ventilation, be a better protection to the eyes, more easily kept on the head,

more suitable for officers past middle age, giving them a more dignified appearance.

The sample, together with the standard cap for officers was sent to the chief quartermaster division of the Atlantic, with request to cause the same to be circulated among the officers at the various posts in the division for an expression of their opinion.

From reports thus far received it is ascertained that officers differ very much upon the advisability of making the proposed change. The general tendency of the reports would seem to be in favor of the adoption of a cap of a different pattern than that now in use.

MUSLIN SHIRTS.

As a further step in the direction of providing the enlisted men with clothing more suitable to the climate in which they are stationed, the Quartermaster-General directed the purchase for trial by troops in Arizona and Texas of 3,000 muslin shirts, with and without bosoms. A portion of each kind have been distributed for trial in these respective departments, in connection with 1,000 celluloid collars, which were procured with a view to ascertain their merits, if any, over the linen collars supplied by the Quartermaster's Department. No reports have as yet been received.

KNIT UNDERSHIRTS.

The subject of introducing knit undershirts of a lighter quality, having short sleeves, suitable for summer wear, has also been under consideration, and steps have been taken to procure 1,000. They cost 22½ cents each.

It is thought that they can be procured at still lesser rates if purchased in large quantities.

It is expected that they will supply a long felt want, as the undershirts heretofore supplied for all seasons of the year are too heavy in summer. The heavy shirts cost 50 cents each.

TRUMPETS.

Experiments to solve the question of supplying the Army with trumpets of uniform tone and workmanship are still in progress.

Samples of G trumpets, with F slides, have been procured and sent for trial to the commanding officers at Fort Leavenworth, Kans., Fort Riley, Kans., Washington Barracks, District of Columbia, and Fort Myer, Va., and it is expected that during the coming year final reports will bring about a satisfactory conclusion.

WATERPROOF OVERCOATS.

On December 2d last, the Quartermaster-General made recommendation that officers and enlisted men be permitted to wear waterproof overcoats when necessary in the field on fatigue and other duty, involving exposure to inclement weather.

The Major-General commanding the Army concurring, the Secretary approved the recommendation, resulting in the publication of General Order 89, Headquarters of the Army, 1889, which authorizes the wearing of such garments.

The depot quartermaster at Philadelphia, Pa., having been directed to procure suitable samples, two rubber coats of different texture were

selected, and orders given to purchase 150 of each kind, at a cost of \$2.85 and \$2.40 each, respectively. They have been distributed for trial in active service, to be issued at cost price to troops serving at Fort Monroe, Va., West Point, N. Y., Fort Leavenworth, Fort Riley, Fort Omaha, Fort Snelling and such posts in the division of the Pacific as may be preferred by the chief quartermaster of said division.

No reports upon their serviceability have thus far been received.

DRAWERS.

Instructions were also given to the manufacturing depots of Philadelphia, Jeffersonville, and San Francisco, Cal., to hereafter provide loops on the bands of drawers for the purpose of fastening them to the suspenders.

Specifications and new standard samples have been adopted.

COATS FOR CHAPLAINS.

Application having been made that post chaplains be permitted to wear for ordinary daily use a coat similar in cut to that worn by other officers in undress, with a few minor alterations, after consultation with the office of the inspector-general, the Secretary of War authorized chaplains to wear such a coat.

Its adoption was published to the Army in General Orders No. 38, headquarters of the Army, 1889.

LEGGINGS.

Complaint having been made that the cotton lacings provided with the leggings issued to the Army were not satisfactory, a number of porpoise lacings were purchased and sent to the Department of the Columbia, from whence the complaint arose, for issue.

As no complaints have reached this office from other departments it has been determined to continue the purchase of the leggings with lacings conforming to the existing standards.

CIVILIAN CLOTHING FOR ENLISTED MEN AT WEST POINT.

The Secretary of War having directed that the enlisted men of the artillery detachment at the United States Military Academy at West Point be clothed in other than the Army uniform, the brown canvas fatigue clothing was ordered to be issued to such men as were detailed as mechanics, laborers, and watchmen. Steps were taken to procure suitable civilian clothing in which to clothe them, but owing to the proposed legislation by Congress upon the status of the enlisted men no further action was taken.

Congress by act approved June 20, 1890, having provided that the enlisted men referred to be mustered out of the service as artillerymen and immediately reenlisted as Army service men of the Quartermaster's Department, the question as to uniforming the latter has again been brought to the attention of the Quartermaster-General and referred by him to the Secretary of War for decision, which has as yet not been rendered.

OVERCOATS AND TROUSERS OF LIGHT SHADE.

With view to absorb the large number of overcoats and trousers of kersey of light shade turned into depot from posts at the time the kersey of darker shade was adopted, issues have been made to recruits

entering the Army. A considerable number of garments have thus been disposed of.

The Secretary of War having decided, on January 24 last, that the recruits be hereafter furnished with clothing of the newest patterns, the issue of light shade overcoats and trousers has been discontinued. The latter garments which were on hand at the recruiting depots and rendezvous have been turned into the general depots.

There are now in store of this kind of clothing 2,830 overcoats and 13,219 pairs of trousers of all kinds, for which there is no present demand. In the interest of economy it would be well to keep the same in store for use in case of an emergency.

INFANTRY OVERCOATS WITH WHITE CAPE LININGS.

The facings of the dress coats of enlisted men of infantry being white, while the linings of the capes of overcoats are dark blue, the Quartermaster-General, to bring about uniformity, caused the manufacture of 8 overcoats having capes lined with white flannel. They were sent to several departments for trial in active service, and for an expression of opinion as to the advisability of making the proposed change.

From reports received it was ascertained that 3 officers had no preference, 44 reported against a change, and 7 expressed a desire for the adoption of white linings for infantry.

No further action has been taken in the matter.

SEAMLESS WOOLEN STOCKINGS.

Reports from the Army upon the adaptability of the seamless woolen stockings, of which a supply was procured during the last fiscal year, are to the effect that they are not as durable and warm as the present standard Shaker stocking, and it having been satisfactorily ascertained that the latter can be procured and suitable competition obtained, it has been determined to confine purchases hereafter to the existing standard.

BARRACK CHAIRS.

As reported in my last annual report, trials of barrack chairs with seats known as vulcanized fiber, indurated fiber, and perforated veneer, were then in progress. It has since been demonstrated that chairs with vulcanized fiber seats are the best adapted to the service, and the chairs hereafter manufactured will be provided with these seats exclusively. They cost \$1.08 each and are considered far superior to the chairs with rawhide seats.

It having been suggested that the model of the chair might further be strengthened by the insertion of additional iron rods, authority has been given to send one of these with each lot that may be issued on orders from this office.

SERVICE GUIDONS.

Under the regulations heretofore in force, silken guidons have exclusively been furnished to troops of cavalry and light batteries of artillery, costing \$7.50 and \$15.10 each, respectively.

The hard usage to which they are subjected in active service, soon renders them unserviceable. Recommendation has therefore been made to the Secretary of War to provide service guidons made of bunting,

conforming in every other respect to existing specifications, to be used for drills and on campaigns, and also to prohibit the use of silken guidons for other than occasions of ceremony. This recommendation has been approved and a general order issued to carry the foregoing into effect (General Orders 65, Headquarters of the Army, current series).

Requisitions are now being received and contract has been awarded for such number as may be needed during the present fiscal year. Their cost, without staffs, but with suitable cases, is \$2.23 each for cavalry, and \$4.80 each for light batteries.

BOOK OF SPECIFICATIONS.

During the last fiscal year the books containing the illustrations of each article of clothing and equipage supplied by the Quartermaster's Department, drawn on scale, and specifications conforming thereto, have been completed. Each officer of the Department has been furnished with a copy, and it will no doubt prove a valuable guide to all those whose duties are connected with procuring supplies for the Army. The work was prepared at the Philadelphia depot of the Quartermaster's Department, under the supervision of this office.

FURTHER APPROPRIATIONS.

It is estimated that the sum of \$1,300,000 is required for the purchase and manufacture of clothing and equipage for the Army during the next fiscal year, and I can not too strongly urge that every effort be made to secure from Congress an appropriation equal to the sum specified. The principal articles of clothing, such as woolen blankets, kersey for overcoats and trousers, woolen stockings, flannel for blouses, etc., of which the stock on hand is always limited, can not be procured in open market. It takes from two to three months before the same can be procured by the Department.

In case of an emergency, it would be impossible to provide even a small army with the necessary clothing; moreover, the militia of the States and Territories are constantly making requisitions for clothing supplies upon this Department. It has only been with the greatest difficulty that these requisitions have thus far been met. In several instances it has not been possible to furnish the supplies estimated for with that promptness and dispatch which circumstances would seem to require. There should be a reserve or working stock, sufficient to meet any reasonable and sudden demand that might arise.

The supplies available for issue are so meager as to almost impair the efficiency of the service. The necessity of increased appropriations is only too apparent.

In this connection I desire to call attention to the fact that of the appropriation for the last fiscal year, which amounted to \$1,150,000, the following items have been diverted:

Militia, District of Columbia	\$18,132.08
Indian prisoners of war	7,358.10
Prisoners' clothing, Alcatraz Island	2,078.74
Transfer to United States Marine Corps	330.00
Total	27,898.92

which amount represents a total loss to the clothing appropriation.

CLERICAL WORK.

The clerical force of this branch of the office consists of five clerks and one assistant messenger. The work has been kept up to date.

CONCLUSION.

In closing, I beg to call attention to the accompanying detailed statements, marked A to M inclusive, which give in a more detailed form the operations of the clothing supply branch, viz :

A.—Statement showing articles of clothing, and equipage and materials on hand at the issuing depots of the Quartermaster's Department, June 30 1889; the quantities purchased, manufactured, received from the posts, and depots, taken up, sold, transferred to general depots, expended, issued to the Army, and quantities remaining in depot June 30, 1890.

B.—Detailed statement of clothing, equipage, and materials purchased by the Quartermaster's Department, and paid for from the appropriation for clothing and equipage during the fiscal year ending June 30, 1890.

C.—Statement of amounts received and remitted by the Quartermaster's Department, on account of clothing and equipage, during the fiscal year ending June 30, 1890.

D.—Statement of remittances on account of clothing and equipage during the fiscal year ending June 30, 1890.

E.—Statement showing articles of clothing and equipage and materials issued to the militia of the States and Territories under the act of Congress amending section 1661 of the Revised Statutes during the fiscal year ending June 30, 1890, and money value of the same.

F.—Statement showing articles of clothing and equipage issued gratuitously to the militia of the District of Columbia, under the act of Congress of March 1, 1889, during the fiscal year ending June 30, 1890; also the money value of the property.

G.—Statement showing articles and value of quartermaster stores, fuel, forage, straw, etc., issued gratuitously to the militia of the District of Columbia, under the act of Congress of March 1, 1889, during the fiscal year ending June 30, 1890.

H.—Statement showing articles of clothing and equipage issued to Indian prisoners during the fiscal year ending June 30, 1890.

I.—Statement showing articles of clothing and equipage manufactured at the military prison at Fort Leavenworth, Kans., for the Quartermaster's Department, during the fiscal year ending June 30, 1890; also cost of material, labor, etc.

K.—Statement showing articles of clothing and equipage, and money value of the same, issued to the military prison at Fort Leavenworth, Kans., during the fiscal year ending June 30, 1890.

L.—Statement showing number and cost of articles of prisoners' clothing manufactured at the United States military prison, Fort Leavenworth, Kans., during the fiscal year ending June 30, 1890.

M.—Statement showing the number and cost of tents purchased under the act of Congress approved March 31, 1890, for use of flood sufferers in the States of Arkansas, Mississippi, and Louisiana; also the disposition of the tents and expenses attending their issues, during the fiscal year ending June 30, 1890.

Very respectfully,

JOHN F. RODGERS,

Captain and Military Storekeeper, U. S. Army.

The QUARTERMASTER-GENERAL, U. S. Army.

A.—Articles of clothing and equipage and material on hand at the issuing depots of the Quartermaster's Department June 30, 1889, the quantities purchased, manufactured, received from posts and depots, taken up, sold, transferred to general depots, expended, issued to the Army and the militia, and the quantities remaining in depots June 30, 1890.

Articles.	On hand June 30, 1889.	Purchased.	Manufactured.	Received from general depots.	Received from posts.	Gained.	Total received.	Sold.	Transferred to general depots.	Expended or dropped.	Issued to the militia.	Issued to the Army.	Total issued.	Remaining on hand June 30, 1890.
Helmets:														
Untrimmed.....number..	3,787	12,913		6,256	76		23,032	48	6,225	9	3,628	9,029	18,939	4,093
Cork.....do.....	3,650	4,150		3,950	147	71	11,968	135	3,950	43	1,323	5,229	10,680	1,288
Helmet hair plumes.....do.....	7,147			3,453	640		11,240	641	3,321	3	325	3,334	7,624	3,616
cords and bands.....do.....	3,830	4,500		4,238	187		12,755	10	3,360	3	314	2,890	6,577	6,178
top bases.....do.....	31,995			8,220	31		40,246	37	3,220	9	3,503	7,562	19,351	20,915
plume sockets.....do.....	11,245			3,968	62		15,275	40	3,668	3	365	2,758	6,834	3,441
spikes.....do.....	19,343			4,089	31		23,463	70	4,089	6	3,229	4,583	11,977	11,486
eagles.....do.....	30,612			6,370	1,037		38,019	44	7,020	18	3,511	7,300	17,893	20,126
scrolls and rings.....do.....	31,334			5,463	27		36,824	1	7,226	6	634	4,152	12,019	24,805
side buttons.....do.....	67,016			11,470	241		78,727	49	12,770	18	6,948	13,046	32,831	45,596
numbers.....do.....	104,380			2,950	1,199		108,529	2	3,750	6	2,355	9,886	15,999	92,530
devices.....do.....	8,264	1,000		725	41		10,030	89	7,705	3		1,448	2,245	7,785
chin straps.....do.....	12					15	27	7				20	27	
Forage caps.....do.....	22,347	37,255		31,930	475	45	92,052	210	32,570	1	9,970	29,444	72,195	19,857
Fur caps.....do.....	2,400	10,000		9,556	288		22,242	7	3,838			6,680	15,670	6,572
Canvas caps.....do.....	938			5,594	5,790	91	12,413		5,094			2,985	8,079	4,334
Campaign hats.....do.....	17,765	24,620		22,591	189		65,163	112	21,929		4	23,634	45,679	19,484
cords and tassels.....do.....	28,893			2,209	532		31,634	75	2,200		120	2,647	5,051	26,583
Forage cap crossed.....do.....	4,113	3,700		900	534		9,247	38	900	3	753	1,905	3,599	5,648
cannon.....do.....	3,107	3,000		5,700	43	3	17,853	120	5,100	1	597	6,144	11,062	5,891
sabers.....do.....	5,214	16,000		4,100	251		25,565	13	3,500	3	6,652	7,566	17,734	7,831
rifles.....do.....	59	1,000			56		1,115	2				384	386	429
castles.....do.....	586			370	123		1,089		370			26	636	753
shells and flames.....do.....	737			50	31		768	29	80			82	141	627
arcsents.....do.....	859	1,109			21		2,049	2	160			436	598	1,451
wreaths.....do.....	31,606				456		33,062				192	252	444	31,618
bugles.....do.....	142,830	40,000		9,200	11,086		203,116	377	7,700		10,681	19,518	38,286	164,730
numbers.....do.....	1,538	2,000		400			3,938		400		95	586	1,081	2,857
lyres.....do.....	125,396	60,136		16,900	9,328		211,760	474	4,400		13,627	19,329	37,830	173,930
letters.....do.....														
Overcoats:														
Kersey, made.....do.....	11,121		9,051	4,909	2,058	6	27,145	617	2,077		4,780	9,045	16,519	10,626
unmade.....do.....	1,802		1,288	751	251		4,092	20	600	121		1,098	1,839	2,253
Buffalo.....do.....	620			207	4		831	22	207			177	406	425
Rubber.....do.....		301					301		50			127	174	124
Lacings for leggins.....do.....		488					488				200	144	344	144

A.—Articles of clothing and equipage and material on hand at the issuing depots of the Quartermaster's Department, etc.—Continued.

780

REPORT OF THE SECRETARY OF WAR.

Articles.	On hand June 30, 1889.	Pur- chased.	Manu- fac- tured.	Received from general depots.	Received from posts.	Gained.	Total received.	Sold.	Trans- ferred to general depots.	Ex- pended or dropped	Issued to the militia.	Issued to the Army.	Total issued.	Remain- ing on hand June 30, 1890.
Overcoats:														
Canvas.....Number.....	2,179		416	673	330		3,598	14	673			345	1,032	2,566
Cape linings.....do.....	49		429		46		524	26				453	479	45
Uniform dress coats:														
Musicians', made.....do.....	887		330	388	383	48	1,986	69	360		56	305	790	1,196
unmade.....do.....			1				1					1	1	
Private and non-commissioned staff, made.....number.....	6,407		6,647	3,016	2,647	61	18,778	1,009	2,733	75	1,554	5,505	10,876	7,902
unmade.....do.....	1,866		845	289	926		3,026	70	289	249		989	1,597	2,329
Crescents.....do.....	1				4		5							5
Castles.....do.....	50				128		178	120					50	178
Shells and flames.....do.....	106				141		247	43				104	147	100
Blouses:														
Lined, made.....do.....	8,231		28,744	10,802	1,827	4	49,608	62	9,472	98	6,418	19,460	35,414	14,194
unmade.....do.....	3,868		18,795	8,468	624		31,755	56	8,278	2	185	19,398	28,015	3,740
Unlined, made.....do.....	2				5		7	5					5	2
unmade.....do.....								35	11,736		2	17,912	29,685	17,070
Canvas fatigue coats.....do.....	14,738		20,214	11,682	121		46,755					2,833	2,833	691
Summer sack coats.....do.....			3,026		498		3,524						2,833	691
Linen collars.....do.....	5,893	154,024		123,952	226		284,095	484	102,500	10		93,240	196,234	87,861
Stable frocks.....do.....	10,807		72	239	4,224		15,342	220	389		97	4,444	5,150	10,192
Overalls:														
Mounted.....pairs.....	8,869		5,590	1,173	3,768		20,400	68	984		97	9,110	10,259	10,141
Engineers'.....do.....	567				48		615	49					49	566
Trousers:														
Summer.....do.....			3,179		893		4,072					2,724	2,724	1,348
Mounted, made.....do.....	22,384		4,637	5,470	3,769		36,260	941	4,478	3	280	11,383	17,085	19,175
Foot, made.....do.....	24,792		23,929	11,767	5,227		65,711	365	8,531	3,503	5,832	29,270	47,501	18,210
Mounted, unmade.....do.....	5,471		10,181	4,851	646		21,149	87	5,297	30		9,904	15,268	5,881
Foot, unmade.....do.....	4,845		18,600	10,445	993		34,883	154	8,932	905	185	17,107	27,283	7,600
Canvas fatigue.....do.....	18,438		18,091	10,095	174		46,798	33	10,167		3	20,009	30,212	16,586
Linen.....do.....	656				168		824	1				304	305	519
Leggins, canvas.....do.....	5	20,194		7,480	239		27,898	59	6,080		1,310	15,759	23,208	4,690
Suspenders.....do.....	17,492	23,388		13,700	23		54,603	112	11,700			15,432	27,244	27,359
Shirts:														
Flannel, gray.....do.....	193						193						63	130
Flannel, dark blue, made.....do.....	73,132		16,738	16,995	840		107,705	138	16,995			30,487	47,620	59,085
unmade.....do.....	1,766		2		819		2,587	66		170		10	246	2,341
Undershirts.....do.....	57,300	51,629		31,040	815		140,784	78	27,150	1		57,514	84,743	56,041
Drawers, Canton flannel:														
Made.....pairs.....	75,544		42,373	32,230	364		150,511	85	32,230			68,592	100,907	49,604
Unmade.....do.....			640				640							640

A.—Articles of clothing and equipage and material on hand at the issuing depots of the Quartermaster's Department, etc.—Continued.

Articles.	On hand June 30, 1889.	Pur- chased.	Manu- fac- tured.	Received from general depots.	Received from posts.	Gained.	Total received.	Sold.	Trans- ferred to general depots.	Ex- pended or dropped	Issued to the militia.	Issued to the Army.	Total issued.	Remain- ing on hand June 30, 1890.
Pillows.....number..	4,450			1,500	40		5,990	73	1,500	70		2,837	4,480	1,510
Pillowcases.....do.....	863	19,127	10,050			1	30,041	71	153			27,378	27,602	2,439
Pillow sacks.....do.....	1,573			414	955	70	3,012	29	414	59		429	931	2,081
Bed sacks.....do.....	7,048			656	659	21	8,384	60	656		1,600	3,755	6,071	2,313
Bed sheets.....do.....	27,006			6,000	60		33,066	110	6,000			12,867	18,977	14,089
Mosquito bars.....do.....	7,482	4,000		3,060	557	1	15,100	46	2,560			4,220	6,828	8,274
Mosquito head nets.....do.....	250	1,101					1,351	1				576	577	774
Pots, iron.....do.....	932				40		972	4			50	41	95	877
Kettles, camp.....do.....	1,902	1,001		1,013	111		4,027	8	1,013		184	1,355	2,500	1,467
Pans, mess.....do.....	50,961			500	334		51,795	21	500		260	1,428	2,209	49,586
Axes.....do.....	2,424	2,999		1,910	175		7,508	7	1,810		88	4,340	6,245	1,263
Ax helves.....do.....	7,781	3,900		3,500	435	4	15,620	47	3,500	14	52	9,676	13,289	2,331
Ax slings.....do.....	818				37		855				10	29	39	816
Hatchets.....do.....	15,498				91		15,589	12		39	160	1,955	2,166	13,423
Hatchet helves.....do.....	16,317				125		16,442	2,192		63	280	3,814	6,349	10,093
Hatchet slings.....do.....	870				50		920				6	23	29	891
Spades.....do.....	13,693	50			282		14,025	544			32	997	1,573	12,452
Spade helves.....do.....	52						52			5			5	47
Spade slings.....do.....	68						68					14	14	54
Shovels.....do.....	2,631	3,900		1,700	62		7,693		1,700		84	3,621	5,355	2,338
Shovel handles.....do.....	56						56							56
Pickaxes.....do.....	7,236	250		300	134		7,920	32	300		10	1,587	1,929	5,991
Pickax helves.....do.....	6,780			1,500	303		8,583	54	1,500		30	3,526	5,110	3,473
Pickax slings.....do.....	77			35	23		135		35			22	57	78
Drums.....do.....	244	50		25	7		326		15		45	31	91	235
Drum heads:														
Batter.....do.....	664				73		737	24			20	136	180	557
Snare.....do.....	1,951	4			163		2,118	23			20	110	153	1,965
Drum slings.....do.....	84	50		25	27		186	28	25		15	7	75	111
Drum rods.....do.....	236	12			24	9	281				24	46	70	211
Drum books.....do.....	160						160			160			160	
Drum sticks.....pairs.....	4,091				21		4,111	159			25	7	191	3,920
Drum stick carriages.....number.....	2,353				84		2,437				11	1	12	2,425
Drum cords.....do.....					48	5	53	20				23	43	10
Drum snares.....sets.....	3,839				41		3,880	21				5	26	3,854
Drum cases.....number.....	56		35	20	9	10	130	47	20		7	8	77	53
Drum knee-rests.....do.....	3						9							9
Trumpets.....do.....	699	255		545	12		1,511	1	470	1	66	531	1,069	442
Trumpet mouthpieces.....do.....	52				2		54							54
Trumpet crooks.....do.....	13	250		275	56		594	14	225		6	119	364	230

Bugles.....do.....	2	4	14	20	3	4	12	8			
Cords and tassels, trumpet and bugle number.....do.....	1,473	1,000	1,015	3,687	131	915	126	769	1,941	1,746	
Fifes.....do.....	2,155		18	2,212	58	10	40	3	106	2,106	
Music pouches.....do.....	161	100	2	279	5	2	43	119	169	110	
Books:											
Company, letters sent.....do.....	168	150	150	468		150	10	199	359	109	
index.....do.....	249		135	385		135	10	148	293	92	
received.....do.....	282		103	386		103	10	138	251	135	
Company letters received, index, number.....do.....	292		105	397		105	2	10	133	250	147
Company order.....number.....do.....	50	350	209	613		209	1	45	812	567	46
Post, letters sent.....do.....	81	125	131	338		132	1	1	123	256	82
index.....do.....	115	75	129	322		119	2	1	120	242	80
received.....do.....	78	125	133	338		130	1	1	109	241	97
index.....do.....	120	50	129	300		126	1	1	97	224	76
order.....do.....	179	51	144	374		128	2		116	246	128
Regimental descriptive.....do.....	246			246						246	246
general order.....do.....	13		10	23			5		5	10	13
index.....do.....	7		2	9						9	9
letters sent.....do.....	72		10	82		10	1	1	16	28	54
letters sent, index, number.....do.....	86		10	96		10	2	1	16	29	67
letters received, number.....do.....	70		10	80		10	1	1	15	27	53
letters received, index, number.....do.....	83		10	93		10	1	1	14	26	67
order.....number.....do.....	47		15	62		25	1	12	38	24	24
Inspection.....do.....	29			29						29	29
Tents:											
Conical wall.....do.....	230	192	191	621		159		308	467	154	154
Sibley.....do.....	59		50	117				81	85	82	82
Hospital.....do.....	243	75	105	451	33	105	19	146	303	148	148
Wall.....do.....	1,112	366	541	2,134	28	461	241	650	1,380	754	754
Common.....do.....	3,254	86	1,010	5,073	102	610	475	1,164	2,351	2,722	2,722
Bell.....do.....	47			47						47	47
Shelter, halves.....do.....	31,711		13,000	45,029	4	13,000		10,235	23,239	21,790	21,790
Pyramid.....do.....	4			4						4	4
French wall.....do.....	2			2						2	2
common.....do.....	2			2						2	2
Talma, shelter.....do.....	65			65						65	65
Pattern.....do.....	3			3						3	3
with tripod, etc.....do.....	1			1						1	1
Marquee.....do.....	3	1		4				1	1	3	3
Conical wall, model.....do.....	1			1						1	1
Felt.....do.....	3			3						3	3
Tent flies:											
Hospital.....do.....	276	100	120	507	5	126	29	165	328	202	202
Wall.....do.....	1,025	590	569	2,273	21	481	341	630	1,473	800	800
French.....do.....	2			2						2	2
Pattern.....do.....	2			2						2	2

A.—Articles of clothing and equipage and material on hand at the issuing depots of the Quartermaster's Department, etc.—Continued.

Articles.	On hand June 30, 1889.	Pur- chased.	Manu- fac- tured.	Received from general depots.	Received from posts.	Gained.	Total received.	Sold.	Trans- ferred to general depots.	Ex- pended or dropped	Issued to the militia.	Issued to the Army.	Total issued.	Remain- ing on hand June 30, 1890.
Tent poles:														
Sibley..... number..	550	150		320	12		1,032		282			249	531	501
Shelter..... do.....	13,959			60	801	49	14,909					4,080	4,080	10,829
Hospital, upright..... do.....	827			60	265	89	1,242	327	60		38	193	618	624
ridge..... do.....	631			30	164	3	828	181	30		19	90	320	508
Wall, ridge..... do.....	2,014	300		700	21	47	3,082	30	600		239	444	1,313	1,769
upright..... do.....	4,478	600		1,420	35		6,533	68	1,220	6	478	883	2,755	3,778
Common, upright..... do.....	17,681			1,769	2,071		21,521	516	1,769		950	1,581	4,816	10,705
ridge..... do.....	9,845			887	1,087		11,819	316	887		475	866	2,534	9,285
Bell..... do.....	70						70							70
Pyramid..... do.....	4						4							4
Tent pins, all kinds..... do.....	301,639	75,527		142,110	7,753	52	527,081	1,205	139,110		22,286	199,422	302,023	165,058
Tent straps..... do.....	330	200		331	14		875	1	270	25		247	543	332
Tent slaps:														
Wooden..... do.....	14,874						14,874			500		100	600	14,274
Metal..... do.....	5,667	30,700		500			36,897			17,912		1,575	19,487	17,380
Tent rings	7,715			100	4		7,819		125	192		66	353	7,436
Sibley..... do.....	44			25			69					23	23	46
stoves..... do.....	539			104	54		697	6	104			179	289	408
pipe joints..... do.....	547	2,600		2,375	24	240	5,786		1,875			2,090	3,985	1,821
tripods..... do.....	1,105			127	10		1,242					257	354	853
chains..... sets.....	112	350		101	4	8	575		101	217		93	411	164
pole sockets..... number.....	127			50	4		181		50			76	126	55
Flags:														
Post..... do.....	114	87		122	1	4	328	7	122	8	11	161	309	19
Garrison..... do.....	79			50	3	7	139		50	1	1	10	62	77
Storm and recruiting..... do.....	171	325		269		4	769	4	278	17	9	414	722	47
Field hospital..... do.....	124	28			4		156	3		3	6	24	36	120
General hospital..... do.....	27	3					30			3		3	6	24
Colors:														
National..... do.....	2	17			10	6	35	6	2	3	11	4	26	9
Regimental..... do.....	1	10				17	28	7	1	4	4	2	18	10
Camp..... do.....	14			102	6	120	242	3	81		16	61	161	81
Guidons:														
Artillery and cavalry..... do.....	4	77		3		4	88	4	3	3	12	57	79	9
Ambulance..... do.....	5	28	2	3	3		41	5			6	26	37	4
Cases..... do.....	2						5					3	3	2
Standards..... do.....	1	1				4	6	4		1			5	1
Standard pikes..... do.....	1						1						1	1
Markers..... do.....	1	46			4		51			4	4	42	50	1
General guides..... do.....	1	30					31				20	10	30	1

WAR 90-VOL I-50

Streamers.....do.....	15					15														15
Signal flags.....do.....	17					17														17
Color cords and tassels.....do.....	150					153														150
-rings and belts.....do.....	100					108														26
-staffs.....do.....	561	42		105		1,068	727		83	17	13	43	101							971
Haliards:																				
Garrison and post.....do.....	171	150		126	21	475	12		145	1	14	100	332							143
Storm and recruiting.....do.....	2,195				10	2,205	3					24	34							2,171
Devices.....do.....	759					759				319			319							440
Stencils, complete.....sets.....	55			126	10	121	3					58	61							60
Stencil plates.....number.....	248					246			56		3	22	81							165
Company marking stamps.....do.....	1			1	2	12						9	9							3
Coin brooms.....do.....	15,663	7,088		23,283	16,748	61,782			21,548	376		26,586	48,510							13,272
Scrubbing brushes.....do.....	7,116	14,084		7,924	4	29,128			6,324	97		15,030	21,451							7,677
Alphabets:																				
1 inch.....sets.....	27				15	42						10	10							32
½ inch.....do.....	25			7		32	1		7			5	13							19
Numbers:																				
1 inch.....do.....	28			20		48			9			18	27							21
½ inch.....do.....	40			19		59			19			18	34							25
Barrack chairs.....number.....	805		3,953	1,600	13	6,369	2		1,600			4,151	5,753							616
Card holders.....do.....	1,518	3,000		2,100	550	7,185			2,100			3,236	5,336							1,849
Shoe files.....do.....	88					88														88
Camp washstands.....do.....	2					2														2
Hand litters.....do.....	289					289							54							235
Post council of administration books, number.....		100			1	101				4		12	16							85
Shirts, muslin.....number.....		3,000				3,000	1					1,356	1,357							1,643
Suits for Indian boys.....do.....		75				75							75							75
Collars, celluloid.....do.....		1,000				1,000						410	410							590
Whisk brooms.....do.....			6,024			6,024			6,000			12	6,012							12
Shirts for prisoners.....do.....			467			467						300	300							167
Coats for prisoners.....do.....			282			282						250	250							32
Trousers for prisoners.....pairs.....			301			301						250	250							51
Drawers for prisoners.....do.....			487			487						487	487							
Stockings for prisoners.....do.....			450			450						450	450							
Dippers.....number.....	126	3,690				3,816			6			2,261	2,267							1,549
Soup ladles.....do.....	198	2,886				3,084					48	2,250	2,298							786
Skimmers.....do.....	36	1,134				1,170					12	789	801							369
Dish pans.....do.....	180	2,424				2,604	1		6			1,437	1,444							1,160
Basting spoons.....do.....	108	2,676				2,784			5		24	2,350	2,379							405
Teaspoons.....do.....	36	18,090				18,126	6		70	7		18,037	18,120							6
Table spoons.....do.....	36	17,367			6	17,409	6		50	12		14,749	14,811							2,598
forks.....do.....	36	18,000				18,636	6		50	6		13,761	13,823							4,813
knives.....do.....	36	20,514				20,550	6		50	1		13,895	13,957							6,598
Bread knives.....do.....	72	5,280				5,352			6			1,437	1,443							3,909
Butcher knives.....do.....	54	4,014				4,068			6		12	1,412	1,430							2,638
Chopping bowls.....do.....	36	470				506						506	505							1
Sirup pitchers.....do.....	270	3,618				3,883			15			3,625	3,660							223
Coffee mills.....do.....	60	310				370			1			313	314							56
Meat saws.....do.....	54	528				582						582	582							
Scales and weights.....do.....	13	368				386			1			376	377							9

QUARTERMASTER-GENERAL.

A.—Articles of clothing and equipage and material on hand at the issuing depots of the Quartermaster's Department, etc.—Continued.

Articles.	On hand June 30, 1889.	Pur- chased.	Manu- fac- tured.	Received from general depots.	Received from posts.	Gained.	Total received.	Sold.	Trans- ferred to general depots.	Ex- pended or dropped	Issued to the militia.	Issued to the Army.	Total issued.	Remain- ing on hand June 30, 1890.
Pickle dishes number	24	4, 198					4, 222		14		200	3, 081	3, 295	927
Frying pans do	54	1, 546					1, 600				100	1, 500	1, 600	
Meat forks do	36	3, 198					3, 234		3		24	2, 128	2, 155	1, 079
choppers do	18	726					744		3		6	711	720	24
Carving sets do	72	1, 056					1, 128		4		12	862	878	250
Cleavers do	18	226				2	246			2		243	245	1
Sugar bowls do	36	3, 829					3, 865		2		67	3, 794	3, 863	2
Mustard spoons do	90	7, 353					7, 443		13		200	4, 453	4, 666	2, 777
Flour sieves do	18	558				1	577		1			332	345	232
Can openers do	7	3, 278					3, 285				12	2, 218	2, 230	1, 055
Graters do	22	1, 099					1, 121		3			646	649	472
Dinner plates do		11, 964				20	11, 984		30		1, 600	10, 250	11, 880	104
Soup plates do		13, 208				14	13, 222		110			13, 112	13, 222	
Meat plates do		1, 424				4	1, 428		13			1, 415	1, 428	
Cups do		14, 363				18	14, 381					14, 380	14, 380	1
Saucers do		14, 363					14, 363					14, 362	14, 362	1
Tumblers do		31, 218					31, 218		80			20, 409	20, 489	10, 729
Water pitchers do		2, 243					2, 243		10		200	1, 912	2, 122	121
Vegetable dishes do		7, 448				44	7, 492		20		200	7, 272	7, 492	
Salt cellars do		7, 601				3	7, 604		24	3	200	4, 552	4, 779	2, 825
Pepper boxes do		6, 538					6, 538		20		200	3, 498	3, 718	2, 820
Oyster bowls do		11, 440				22	11, 462		60			11, 402	11, 462	
Gravy boats do		4, 140				33	4, 173					4, 173	4, 173	
Mustard pots do		3, 836					3, 836		26		62	3, 464	3, 552	284
<i>Band instruments.</i>														
Altos number	1	51					52					48	48	4
Bassos or tubas do	2	36					38					22	22	16
Baritones do	1	19					20					19	19	1
Clarionets do	1	61				3	65					31	31	34
Cornets do	2	82					84					72	72	12
Trombones do	2	35					37					29	29	8
Piccolos do	8	4					12					12	12	
Flutes do	10	5					15					8	8	7
Base drums do	2	12					14					14	14	
Snare drums do							8					8	8	
Cymbals pairs	7	4					11					11	11	
Triangles number		5					5					5	5	
Heads, bass drum do		5					5					5	5	
Cords, bass drum do		1					1					1	1	
Wrenches do		1					1					1	1	

Reeds	do	216			10	226				226	226	
Bags	do	1	187			188				157	157	31
Cases	do	141			3	144				123	123	21
Pads	do	2,184				2,317				2,317	2,317	
Springs	do	542				542				534	534	8
Lyres	do	1				1				1	1	
<i>Materials.</i>												
Acid, oxalic	pounds	14				14			14		14	
Ammonia	gallons	1	4			5			5		5	
Augur bits	number	6				6					6	
Awls:												
Assorted	do	90	288			878			288		288	90
Sewing	do	4,431	8,640			18,071			8,784		8,784	4,237
Hafts	do	102				102					102	
Blades	do				144	144					144	
Bags, paper	do	18,000			5,000	23,000			18,500		18,500	4,500
Benzine	gallons	1				1			1		1	
Beeswax	pounds	5	1,000			1,005			953		953	52
Bits, gimlet	number	3				3					3	
Blades, cloth-cutting machine	do	30				30					30	
Blanks	do	30				30					30	
Blocks, foxing	do		12			12					12	
Boards, pattern	pounds	945	618			1,563			1,563		1,563	
Bolts:												
Chair	number	23		105		128				123	123	
Long	do	2	500			502				500	500	2
Books:												
Text	do	20				20					20	
Uniform, U. S. Army	do	2			4	6				4	4	2
Pass	do		600			600			600		600	
Scientific	do	5				5					5	
Boot crimping forms	do	952				952					952	
seam rubbers	do	2				2					2	
trees, automatic	do	30				30					30	
feet for	do	480				480					480	
Boxes:												
Pasteboard	do		1,300			1,300			1,300		1,300	
Packing	do		432	18		450		18			450	
Box bands	pairs	948				948					948	
Braid	yards	14,227	3,039		883	17,649			6,219	1,022	7,241	10,408
Bristles, sewing	pounds	13	18			31			18		18	13
Broom corn	do	2,524	38,000			38,524			37,082		37,082	1,442
handles	number	994	20,800			21,794			20,296		20,296	1,498
twine	pounds	26	358			384			272		272	112
wire	do		1,804			1,304			1,283		1,283	21
Brushes:												
Button	number	2				2					2	
Cloth	do	8				8					8	
Ink, flat	do	68				68					68	
round	do	202				202			5		5	198

QUARTERMASTER-GENERAL.

A.—Articles of clothing and equipage and material on hand at the issuing depots of the Quartermaster's Department, etc.—Continued.

Articles.	On hand June 30, 1889.	Pur- chased.	Manu- fac- tured.	Received from general depots.	Received from posts.	Gained.	Total received.	Sold.	Trans- ferred to general depots.	Ex- pended or dropped	Issued to the militia.	Issued to the army.	Total issued.	Remain- ing on hand June 30, 1890.
Brushes—Continued.														
Bristle, round..... number..	2	2					4							4
Stencil..... do.....	29						29							29
Dusting..... do.....	10	6					16							16
Marking..... do.....	58						58	13					13	45
Paint..... do.....	35						35		35				35	
Buckles..... do.....	59,369	88,396		14,683			162,448	1	10,183	76,811		4,500	91,495	70,953
Shoe, automatic..... do.....	63,100						63,100							63,100
Bunting..... yards..	100						100		45				45	55
Burlap..... do.....	3,389						3,389			2,675			2,675	714
Butchers' steels..... number..	1						1							1
Buttons:														
Coat, large..... do.....	211,968	498,528		135,648	720	22,464	869,328	720	130,608	866,016	720	15,624	743,688	125,640
small..... do.....	810	2,173		848			3,831	1	806	2,618	5	82	3,512	319
Rubber, large..... gross..	205			413			618			411			411	207
small..... do.....	805	820		505		225	2,355			1,249			1,249	1,106
Shirt and fly..... do.....	9,226	5,023		854		445	15,548		1,359	4,412		160	5,931	9,617
Suspender..... do.....	9,090	4,132		1,125		152	14,499	14	1,125	4,619			5,758	8,741
Stud..... do.....		78					78			78			78	
Overcoat..... do.....		100				10	110			71		38	109	1
Blouse..... do.....	809	1,869				160	2,838		678	375		12	1,060	1,778
Ivory..... do.....	20			260			280			109			109	171
Brown lasting..... do.....	94	50					144		48				48	96
Cases:														
Glass..... do.....	2						2							2
Shoe..... do.....	8						8			8			8	
Chair rungs..... do.....	40		110				150					150	150	
Seats..... do.....		4,000					4,000			8,951		15	3,966	34
Backs..... do.....	5						5			5			5	
Fronts..... do.....	6						6			6			6	
Crayons, tailors'..... boxes..	519	298		12			829			299			299	530
Chrome green..... pounds..	25						25			25			25	
Clamps..... number..	139						139							139
Cloth:														
Baling..... yards..	6,009	200		1,600			7,809		1,601	4,923			6,524	1,285
Dark blue ½..... do.....	9,419	20,916		1,261	494		32,090	277	860	16,049	2,286	4,402	23,874	8,216
Facing..... do.....	1,275	3,127		15			4,417	155	254	2,675	83	3	3,170	1,247
Italian..... do.....	1,918	4,609				50	6,577	17	3,873	953			4,843	1,734
Blanket..... do.....	1,809	1,556					3,365		1,265				1,265	2,100
Holders..... number..	4						4						4	4
Weights..... do.....	5						5							5

Clothing tickets.....do.	145,000	677,000				822,000		599,000			590,000	223,000
Cord.....yards	855	7,606			818	8,279		1,080		8,693	8,279	
Cotton.....pounds	1,210					1,210		274			274	936
Crimping breaks.....number	6					6						6
Crimp screws.....do.	769					769						769
Crispin hammers.....do.	150					150	59				59	91
Creasers.....do.	27					27						27
Cutters.....do.	12					12						12
Cuttings, all kinds.....pounds	19,778				77,946	97,724	78,859				78,859	19,365
Cutters' schedules.....number	950					950		650			650	300
morning reports.....do.	740					740		500			500	240
Dies.....do.	479					479						479
Diamond tool.....do.		1				1						1
Doeskin.....yards	69	573				642	629		9		638	4
Dressing, shoe.....gallons	12					12			12		12	
Drilling.....yards	2,053	61,252			3,093	82,940		3,093	68,369		71,462	11,478
Drills.....number	28					28	3				3	25
Duck:												
Cotton.....yards	4,553	182,308			54,610	244,785			120,900	104	121,004	123,781
Brown.....do.	5,251	55,265				59,705	1	24,686	26,150		50,817	8,888
White.....do.		164,235				164,235	189	54,610	86,204		105,093	59,232
Lining.....do.	35					35			22		24	11
Edge planes.....number	134					134	2					134
Emery:												
Powder.....pounds	20					20			3		3	17
Wheels.....number		2				2						2
Epsom salts.....pounds	48					48						48
Eyelets.....number	753,500					753,500			708,500		703,500	50,000
Eyes.....do.	58,448	88,272			4,656	151,376			141,687		141,687	9,689
Eyelet machine.....do.	4					4	2				2	2
hook machine.....do.	1					1	1				1	
Feather dusters.....do.	2	6				8						8
Flannel:												
Canton.....yards	38,990	90,802			3,753	137,474	88	3,753	100,715		7,700	112,256
Cape lining.....do.	2,939	11,525			53	14,517	2	300	14,123		40	14,465
Dark blue blouse.....do.	10,010	124,582			15,897	157,355	234	15,257	107,085	1,663	4,895	129,134
lining.....do.	13,016	60,234			9,233	90,191	10	7,472	74,491	705	3,796	86,474
shirting.....do.	3,009	63,596			3,127	73,180	32	1,726	19,554		1,253	22,565
Crimson lining.....do.	3					3						3
Flat irons.....number	2					2						2
Figures, steel.....do.	10					10						10
Files:												
For heel-filer.....do.	6					6						6
Assorted.....do.	204					204	40				40	164
Glue.....pounds		200				200			195		195	7
Goose irons.....number	7					7						7
Goose-iron stands.....do.	2					2						2
Grindstones.....do.		1				1						1
Grommets.....do.	49,750	24,180				73,930			14,414		14,414	59,516
Gum camphor.....do.	25					25			25		25	36
Tragacanth.....do.	55					55			17		17	35
Hammers, Hammond.....do.	46					46	4					42

QUARTERMASTER-GENERAL.

A.—Articles of clothing and equipage and material on hand at the issuing depots of the Quartermaster's Department, etc.—Continued.

Articles.	On hand June 30, 1889.	Pur- chased.	Man- ufac- tured.	Received from general depots.	Received from posts.	Gained.	Total received.	Sold.	Trans- ferred to general depots.	Ex- pended or dropped	Issued to the militia.	Issued to the Army.	Total issued.	Remain- ing on hand June 30, 1890.
Heel burnishers.....number..	10						10							10
Shaves.....do.....	514						514	50					50	564
Hooks.....do.....	37,427	118,512				19,476	175,415			175,415			175,415	
Hose, rubber.....feet..	12	20					32						6	26
Ink:														
Burnishing.....gallons..	186						186			66			66	120
Indelible.....bottles..	929			19			948		19	145		114	278	670
Indelible.....pints..	2						2			2			2	
Printing.....pounds..	1			1			2			1			1	1
Iron:														
Round.....do.....		6,747					6,747			6,700			6,700	47
Nuts.....do.....		240					240			240			240	
Shank.....number..	3						3							3
Jacks:														
Heeling.....do.....	1						1							1
Shoe.....do.....	194						194	19					19	115
Japanned slides.....do.....	1,349	499					1,848			420			420	1,428
Jeans, corset.....yards..	18,762	85,017		9,520			113,299	6	8,520	49,359	1,952	609	60,446	52,853
Kersey.....do.....	10,096	146,758		40	1,428	1,356	168,680	292		118,206	15,467	1,726	135,691	32,989
Knives:														
Skiving.....number..	62						62	3					3	59
Assorted.....do.....	546	36					582							582
Band.....do.....	5						5							5
Channel.....do.....		24					24			10			10	14
Heeling.....do.....	34						34							34
Stripping.....do.....	3						3							3
Lacing studs.....do.....	273,000	200,000					473,000			419,000			419,000	54,000
Laces, shoe.....pairs..	26,594	60,000					86,594	126		34,323			34,449	52,145
Lace, gold.....yards..	7,377						7,377	21		1,089			1,110	6,267
Lamps, microscope.....number..	1						1							1
Lamp-wicks.....do.....	432						432			216			216	216
kit.....do.....	64						64							64
Lampblack.....pounds..	7	10					17			6			6	11
Lasts.....pairs..	5,167						5,167							5,167
Iron.....do.....	9						9							9
Calf boot.....do.....	1						1							1
Lathe.....number..	1						1							1
Lay figures.....do.....	29						29							29
Lead pencils.....do.....	380						380			80			80	300
Leather:														
Counter.....pounds..	1,451	23,900					25,351	4		22,548			22,552	2,799

Russet.....	feet	56	101			157			139		139	18
Scrap.....	pounds					37,756	37,756				37,756	
Sole.....	do	1,290				1,290	1,290	87,756			1,290	
cropped.....	do	15,035	85,000			100,035	162		60,165		66,327	33,708
Wax upper.....	square feet	39,325	203,907			243,282	6		198,605		198,611	44,651
Pebble grain.....	do		28,000			28,000			23,880		23,880	4,120
Welt.....	pounds	1,723	13,600			15,323	8		8,101		8,109	7,214
Calf.....	do		420			420	11		316		316	94
Linon, white.....	yards	1,607				1,607	29				29	1,578
Line:												
Tent.....	pounds	13,033	9,120			22,153			5,465	812	6,217	15,936
Gilling.....	do	101	1,338			1,439			724		724	715
Linings.....	yards	800	74			874			2	872	874	
Lumber:												
Hickory.....	feet	504	32,000			32,504			31,621		31,621	883
Maple.....	do	385				385			385		385	
Pine.....	do		62,000			62,000			62,000		62,000	
Poplar.....	feet	2,492				2,492			2,492		2,492	
Machines:												
Band knife.....	number	1				1					1	1
Burnishing.....	do	2				2	1				1	
parts.....	do	3				3			3		3	
Button fastening.....	do	1				1					1	
Channeler.....	do	1				1					1	
parts.....	do	94	60			154			23		23	181
Cloth cutting.....	do	1				1					1	
Shrinking and finishing.....	do	2				2					2	
Measuring and examining.....	do	2				2					2	
Sponging.....	do	1				1					1	
Testing.....	do	2				2					2	
Feather edge.....	do	1				1					1	
Grommet setting.....	do	1				1					1	
Heel filing.....	do	1				1					1	
Heeler, parts.....	do	11	107			118			32		32	86
Leveling.....	do	2				2					2	
parts.....	do	2				2			2		2	
Leather measuring.....	do	1				1					1	
National wax thread.....	do	10				10					10	
parts.....	do	94				94			60		60	34
Stitching, parts.....	do	185	91			276			70		70	206
Rolling.....	do	1				1					1	
Sandpaper.....	do	1				1					1	
Sewing.....	do	30				30					30	
parts.....	do	454				454			60		60	394
Shank.....	do	1				1	1				1	
Side welt.....	do	1				1					1	
Skiving.....	do	7				7					7	
Sole cutting.....	do	1				1					1	
molding.....	do	1				1					1	
Sole splitting.....	do	1				1					1	
Strap-hole cutting.....	do	1				1					1	
Stripping.....	do	1				1					1	

QUARTERMASTER-GENERAL,

791

A.—Articles of clothing and equipage and material on hand at the issuing depots of the Quartermaster's Department, etc.—Continued.

792

REPORT OF THE SECRETARY OF WAR.

Articles.	On hand June 30, 1889.	Pur- chased.	Manu- fac- tured.	Received from general depots.	Received from posts.	Gained.	Total received.	Sold.	Trans- ferred to general depots.	Ex- pend- ed o dropped	Issued to the militia.	Issued to the Army.	Total issued.	Remain- ing on hand June 30, 1890.
Machines—Continued.														
Turning..... number..	2						2	1					1	1
Tying..... do.	4						4						4	4
Walt, parts..... do.	4						4			4			4	3
Magnifying glasses..... do.	3						3						3	1
Mallets..... do.	1						1						1	1
Measuring tables..... do.	1						1						1	1
straps..... do.	3						3			3			3	2
Marking paste..... boxes.	222						222					2	2	226
Microscopes..... number	4						4						4	4
Muslin..... yards..	22,908	87,116		2,399		5,126	67,549	6	2,400	52,662	60		55,128	12,421
Nails:														
Cut..... pounds.	2,475	3,900					6,375			2,425			2,425	3,950
American..... do.	815						815			815			815	1,285
Swede..... do.	1,370	3,700					5,070			3,785			3,785	2,064
Channel..... do.	2,436						2,436			372			372	200
Steel wire..... do.		200					200							45
Brass..... do.	45						45							45
head d..... number.		107,000					107,000			103,635		375	104,010	2,900
Wrought..... pounds.	1,125	1,200					2,325			1,260			1,260	1,075
Nail pullers..... number.	16						16	4		4			8	8
Naphthaline..... pounds.		4,988		50			5,038		50	2,470		34	2,554	2,484
Nappers..... number.	2						2							2
Needles:														
Assorted..... do.	79,733	210,000					289,733		37,500	160,035			197,535	92,198
Assorted..... papers.	2,219			1,500			3,719			1,562			1,562	2,157
Broom..... number.	11						11			1			1	10
Bagging..... do.	144						144							144
Harness..... gross.	23						23			4			4	19
Goodyear & McKay..... number.	3,609	2,500					6,109			5,425			5,425	735
Wax thread..... do.	3,456						3,456			144			144	3,312
W. and W..... do.	1,505	400					1,905			1,905			1,905	14
Nippers, wire..... do.	17						17	3					3	14
Oil cups..... do.	13	24					37							37
Oil:														
Mineral..... pounds.	1	150					150			95			95	55
Neatsfoot..... gallons.	1	120					121			51			51	70
Sperm..... do.	22						22			14			14	8
Lard..... do.	23						23			11			11	12
Linseed..... do.	20	60					80			60			60	
Lubricating..... do.		50					50			3			3	47

Stones	number	54	6			60					60
Paint	pounds	1	500			501				500	1
Padding	yards	15,571	54,915	8,224	6,671	85,591	6	8,224	71,496	79,936	5,655
Palms	number	29				29				2	27
Paper:											
Pattern	pounds	44	442	100		586			417		417
Petroleum	do	40,885	40,132	1,010	458	100	83,185	1,010	34,640	1,072	37,322
Wrapping	reams	310					810		173	10	188
Wrapping	quires	29					29		29		29
Sand molded	rolls	18					18		4		14
Sand molded	quires	34	200				234		120		120
Tissue	reams		25	10		5	40	10	27		37
Patterns	sets	3					3				3
Pegfloats	number	3					3				3
Pincers	do	459					459	123		122	337
Planes	do	2					2			2	
Pliers	do	26					26				26
Pots, sealing	do	2					2				2
Punches	do	26	4				30	2		3	27
tips for	do	6					6		4		2
Pntty	pounds	50					50		50		50
Rawhide:											
Seats	number	8	225				228		3	225	228
Thongs	do		225	50			275			275	
Sandpaper	quires		120				120		118		118
Rawhide mallets	number	71					71	10			10
Rings, galvanized iron	pounds	623	1,100				1,723		439		439
Rivets, shoe buckle	gross	783	139				922		860		860
Rope:											
Baling	pounds		1,995				1,995		1,940		1,940
Cotton	do	16	1,382				1,398		671		671
Manila	do	7,017	500				7,517		739		6,515
Rosin	do		290				290		265		265
Rye flour	do	2,317	100				2,417		1,917		1,917
Sadiron	number	1					1				1
Saws, circular	do	4					4				4
Saws	do	2					2				2
Scales:											
Silk	do	1					1				1
Testing	do	1					1				1
Counter	do	1					1				1
Scales and weights, chemists'	do	2					2				2
Scratch bones	do	12					12				12
Screws	gross	349	124				473		211	10	221
Screw-drivers	number	3					3				3
Screw wire	pounds	511	500				1,011	7	352		359
Seal	number	14					14		1		1
Sewing cuffs	do	9					9				9
presses	do	4					4				4
Shanks, steel	do		144				144	2	18		16
Shears	pairs	33					34	8			8
Sheepskin skivers	sq. feet	9,108					9,108				9,108

QUARTERMASTER-GENERAL.

A.—Articles of clothing and equipage and material on hand at the issuing depots of the Quartermaster's Department, etc.—Continued.

Articles.	On hand June 30, 1889.	Pur- chased.	Manu- fac- tured.	Received from general depots.	Received from posts.	Gained.	Total received.	Sold.	Trans- ferred to general depots.	Ex- pended or dropped	Issued to the militia.	Issued to the Army.	Total issued.	Remain- ing on hand June 30, 1890.
Shoe trees..... number	19						19							19
Silesia..... yards	10, 176	31, 074		13, 630		856	55, 236	4	11, 180	28, 367	80	2, 450	42, 031	13, 205
Silk:														
Measure..... number	3						3							3
Sewing..... spools	14, 427	1, 820		7, 056			23, 303	563		22, 423			22, 986	317
Sewing..... ounces	429	2, 256				840	3, 525	1	113	2, 040		29	2, 183	1, 342
Sewing..... yards	721, 907	108, 000					829, 907	140	33, 680	138, 740	1, 200		178, 760	651, 14
Twist..... do.		497, 140				5, 307	502, 447	20	222, 978	279, 029	420		502, 447	
Twist..... ounces	379	628				300	1, 307			911			911	396
Twist..... spools	6, 140			31, 854			37, 994			27, 330			27, 330	10, 664
Chevron..... pounds	6	7				5	18			12			12	6
Tester..... number	4						4							4
Size blocks..... do.	9						9							9
solder..... pounds	50						50			50			50	
Slick bones..... number	1						1							1
Sponge..... pounds	21	10					31			15			16	16
Squares..... number	3						3							3
Stamps:														
Steel..... do.	3	2					5	3					3	2
Rubber..... do.	16	1					17							17
Steel..... pounds	53						53			20			20	33
Stencils..... sets	12	5					17	10		2			12	5
Sticks:														
Pants..... number	1						1							1
Assorted..... do.	28	1					29							29
Yard..... do.	12						12							12
Emery..... do.	35						35			16			16	19
Stoves, gas..... do.	2						2							2
Tables:														
Cutters..... do.	28						28							28
Automatic boot tree..... do.	12						12							12
Tacks:														
Steel lasting..... gross	520						520			68			68	452
Swede lasting..... do.	1, 485	1, 820					3, 305			983			983	2, 322
Tinned..... papers	908	5					913			45			45	868
Holders..... number	12						12							12
Tags, shipping..... do.	5, 000	13, 000					18, 000			11, 100			11, 100	6, 900
Tape..... yards	6, 000	78, 288		25, 000		1, 420	110, 768		2, 500	78, 194			80, 694	80, 074
Tape measures..... number	8						8							8
Thread:														
Machine..... pounds	550	48		122			720			468			468	252

Cotton.....	spools	22,830	121,908	55,932	3,751	204,421	2	54,372	100,695	54	1,210	156,693	47,728
Linen.....	pounds	6,331	3,961	363	407	11,062	1	200	2,757	539		3,497	7,565
D. B. and W. B.....	do	272		75		847			155			155	192
Metalin.....	do	590	400			990	3		945			948	42
Silk.....	do	36				36	1		28			29	7
Shoe, hand.....	do	31	700			731	1		730			731	
Toggles.....	number	107,523	138,024	37,440		282,987		87,440	41,656			78,096	203,891
Trucks.....	do	1				1							1
Turpentine.....	gallons	4	10			14			8			8	6
Twine:													
Cotton.....	pounds	4,915	1,425			6,340			1,277	1		1,278	5,062
Heavy.....	do	400	1,000			1,400			1,400			1,400	
Flax.....	do	19	50			69			60			60	9
Hemp.....	do	130				130			69			69	61
Jute.....	do	100		112		212			156			156	56
Type, marking.....	sets	50				50							50
Vise, patent.....	number	4				4							4
Wadding.....	sheets	5,722	16,080		2,230	24,032			16,570			16,570	7,462
Waste cotton.....	pounds	1,740				1,740			314			314	1,426
Wax:													
Sewing.....	balls	6,575	10,000			16,575			8,737			8,737	7,838
Liquid.....	gallons	38				38			32			32	6
Machine.....	pounds	1,411	300			1,711			318			318	1,393
Sealing.....	do	1,160	75			1,235			903			903	332
Webbing:													
Cotton.....	yards	150	144			294	10		67			77	217
Linen.....	do	20,182		10,016	913	32,979	127	11,116	4,454	875	7,743	24,315	8,664
Welt trimmers.....	number	74				74							74
Wire.....	pounds	280				280			250			250	80
Wire box straps.....	feet		34,620			34,620			31,553			31,553	3,067
Zinc.....	pounds	153				153			153			153	

QUARTERMASTER-GENERAL.

B.—Detailed statement of articles of clothing, equipage, and materials purchased by the equipage, during the fiscal year

PHILADELPHIA, PA.

Articles.	Purchased under contract.			
	Name of contractor.	Date of contract.	Quantity delivered.	Cost.
Cloth:				
Dark blue coat	James C. Peck, New York	May 31, 1889	8,000 $\frac{1}{2}$ yards.....	\$17,801.68
Do	Henry T. Kent, Clifton Heights, Pa.	Feb. 27, 1890	4,000 yards.....	8,360.00
Dark blue coat, fine..	B. Y. Pipepy & Co., New York	May 27, 1889	2,004 $\frac{1}{2}$ yards.....	5,491.30
Dark blue coat, extra fine.				
Do				
Do				
Facing	Horstmann Bros. & Co., Philadelphia.	May 28, 1880	1,992 $\frac{3}{4}$ yards	5,259.87
Do	do	Nov. 15, 1889	500 yards	1,530.00
Do	do	Feb. 27, 1890	616 $\frac{1}{2}$ yards	1,711.56
Italian	W. G. Lehman, Philadelphia ..	June 8, 1889	4,005 $\frac{3}{4}$ yards.....	2,363.39
Blanket	B. Y. Pipepy & Co., New York.	May 27, 1889	1,556 $\frac{1}{2}$ yards.....	3,019.12
Baling				
Kersey:				
Sky-blue, heavy	B. Y. Pipepy & Co., New York.	May 27, 1889	60,149 $\frac{1}{2}$ yards.....	111,190.76
Do	James C. Peck, New York	May 31, 1889	10,068 $\frac{3}{4}$ yards.....	17,872.25
Do	Henry T. Kent, Clifton Heights, Pa.	July 22, 1889	25,000 yards.....	45,000.00
Do	do	Feb. 27, 1890	15,000 yards.....	24,375.00
Sky-blue, fine	Francis H. Smith, New York..	June 11, 1889	6,612 $\frac{3}{4}$ yards.....	14,217.41
Flannel:				
Blouse lining	Henry T. Kent, Clifton Heights, Pa.	June 1, 1889	10,092 $\frac{3}{4}$ yards.....	3,481.82
Do	B. Y. Pipepy & Co., New York.	May 27, 1889	20,000 yards.....	7,000.00
Do	do	Nov. 2, 1889	21,578 $\frac{3}{4}$ yards.....	8,307.72
Do	T. A. Ashburner, Philadelphia.	Mar. 29, 1890	9,999 yards.....	3,699.63
Canton	Wm. F. Bernstein, Philadelphia	May 31, 1889	50,000 yards.....	4,215.00
Dark blue, fine	B. Y. Pipepy & Co., New York	do	5,437 yards.....	9,378.82
Dark blue shirting ..	Henry T. Kent, Clifton Heights, Pa.	June 1, 1889	10,056 $\frac{1}{2}$ yards.....	10,006.21
Do	do	do	50,000 yards.....	50,375.00
Dark blue-blouse	do	do	6,000 yards.....	8,280.00
Do	B. Y. Pipepy & Co., New York.	May 27, 1889	18,000 yards.....	25,020.00
Do	James C. Peck, New York	May 31, 1889	6,000 yards.....	8,100.00
Do	Henry T. Kent, Clifton Heights, Pa.	Aug. 28, 1889	10,040 $\frac{1}{2}$ yards.....	13,529.74
Do	Wm. A. Wheeler, New York..	Nov. 5, 1889	3,671 $\frac{1}{2}$ yards.....	5,362.03
Do	Henry T. Kent, Clifton Heights, Pa.	Feb. 27, 1890	10,000 yards.....	12,300.00
Do	do	Apr. 21, 1890	15,000 yards.....	18,150.00
Cape lining	T. A. Ashburner, Philadelphia.	May 24, 1889	10,086 $\frac{1}{2}$ yards.....	10,080.55
Do	Henry T. Kent, Clifton Heights, Pa.	June 1, 1889	501 $\frac{1}{2}$ yards.....	576.44
Doeskin:				
Sky-blue	Francis H. Smith, New York.	June 29, 1889	573 $\frac{1}{2}$ yards.....	1,720.12
Do	Liberty Woolen Manufacturing Co., Liberty, Va.	Mar. 5, 1890	500 yards.....	1,250.00
Silesia:				
Black	John Welsh, Philadelphia	May 31, 1889	21,727 yards.....	2,253.08
Do				
Do				
Wadding:	Richard Lindner, New York..	June 14, 1889	15,120 sheets.....	518.62
Padding:				
Canvas	Wm. F. Bernstein, Philadelphia	May 31, 1889	19,930 $\frac{3}{4}$ yards.....	2,043.82
Do	Henry C. Harper, Philadelphia.	Feb. 27, 1890	2,500 yards.....	256.00
Black	John Welsh, Philadelphia	May 31, 1889	15,029 $\frac{3}{4}$ yards.....	1,079.12
Do				
Jeans:				
Corset.....	Henry C. Harper, Philadelphia.	June 13, 1889	28,481 yards.....	1,959.49
Do	T. A. Ashburner, Philadelphia	Aug. 21, 1889	9,433 $\frac{3}{4}$ yards.....	645.27
White	Wm. P. West, Philadelphia	June 8, 1889	20,000 yards.....	1,360.00
Do	T. A. Ashburner, Philadelphia	Aug. 21, 1889	8,520 yards.....	578.51
Drilling:				
Cotton	W. G. Lehman, Philadelphia..	June 8, 1889	31,111 yards.....	1,975.55
Do	Wm. F. Bernstein, Philadelphia.	Feb. 27, 1890	10,112 $\frac{3}{4}$ yards.....	809.02

Quartermaster's Department, and paid for from the appropriation for clothing and ending June 30, 1890.

PHILADELPHIA, PA.

Purchased in open market.				Total.	
From whom purchased.	Date of purchase.	Quantity purchased.	Cost.	Quantity.	Cost.
				12,000 ³ / ₈ yards	\$26,161.68
J. Rodman Hicks, Philadelphia.	July 16, 1889	119 ³ / ₈ yards	\$463.06	2,004 ¹ / ₂ yards	5,491.30
B. Y. Pippey & Co., New York.	do	94 ³ / ₈ yards	367.57		
do	Apr. 22, 1890	216 yards	944.64	459 ³ / ₈ yards	1,775.27
				3,108 ³ / ₈ yards	8,501.43
				4,005 ³ / ₈ yards	2,363.39
				1,556 ³ / ₈ yards	3,019.12
Wm. F. Bernstein, Philadelphia.	Apr. 22, 1890	2,000 yards	350.00	2,000 yards	350.00
				110,218 ³ / ₈ yards	198,438.01
				6,612 ³ / ₈ yards	14,217.41
				61,669 ³ / ₈ yards	22,489.17
				50,000 yards	4,215.00
				5,437 yards	9,378.82
				60,056 ³ / ₈ yards	60,381.21
				69,012 ³ / ₈ yards	90,741.77
				11,487 ³ / ₈ yards	10,656.99
				1,073 ³ / ₈ yards	2,970.12
John Welsh, Philadelphia.	Oct. 31, 1889	1,101 yards	114.17		
Harrington & Goodman, Philadelphia.	May 26, 1890	506 ³ / ₈ yards	63.28		
W. A. Squire, Philadelphia.	June 12, 1889	1,000 yards	108.75	24,334 ³ / ₈ yards	2,259.28
				15,120 sheets	518.62
				22,439 ³ / ₈ yards	2,299.82
John Welsh, Philadelphia.	Oct. 31, 1889	1,600 yards	119.65		
Harrington & Goodman, Philadelphia.	May 26, 1889	800 yards	64.00	17,429 ³ / ₈ yards	1,262.80
Henry C. Harper, Philadelphia.	July 22, 1889	9,975 yards	692.26		
				47,889 ³ / ₈ yards	3,297.02
				28,520 yards	1,938.51
				41,223 ³ / ₈ yards	2,784.57

B.—Detailed statement of articles of clothing, equipage, and materials

PHILADELPHIA, PA.—Continued.

Articles.	Purchased under contract.			
	Name of contractor.	Date of contract.	Quantity delivered.	Cost.
Duck, cotton:				
12-ounce.....	E. Stanley Gary, Baltimore..	June 4, 1889	54,000 yards	\$9,153.00
10-ounce.....	do	do	68,980 yards	8,786.44
8-ounce.....	do	do	12,053½ yards	1,289.75
Bleached, 6½ to 7 ounce.	T. A. Ashburner, Philadelphia	May 24, 1889	15,000 yards	1,987.50
Do	R. A. Robbins, New York	Aug. 24, 1889	7,800 yards	1,031.94
Unbleached, 6½ to 7 ounce.	T. A. Ashburner, Philadelphia	May 24, 1889	75,000 yards	8,767.40
Do	R. A. Robbins, New York	Aug. 24, 1889	55,190½ yards	6,440
Brown, 10-ounce.....	T. A. Ashburner, Philadelphia	May 24, 1889	10,006½ yards	1,695.00
Brown, 6½ to 7 ounce.	do	do	32,000 yards	4,088.40
Do	R. A. Robbins, New York	Nov. 2, 1889	25,000 yards	3,992.50
Do	W. F. Bernstein, Philadelphia	Feb. 27, 1890	5,000 yards	787.50
Gloves:				
White Berlin	B. Y. Pippet, New York	May 27, 1889	130,000 pairs	13,754.00
Do	do	Aug. 27, 1889	65,000 pairs	6,864.00
Do	do	Feb. 27, 1890	60,000 pairs	6,450.00
Blankets:				
Woolen	do	May 27, 1889	10,114	42,579.94
Do	Henry T. Kent, Clifton Heights, Pa.	Feb. 27, 1890	3,000	12,600.00
Cap lining	B. Y. Pippet & Co., New York	May 27, 1889	483	1,859.55
Woolen, sample.				
Do				
Caps:				
Forage	Horstmann Bros. & Co., Philadelphia.	May 28, 1889	18,168	11,536.68
Do	B. Y. Pippet & Co., New York	Aug. 27, 1889	4,109	2,424.31
Do	do	Jan. 13, 1890	4,978	3,073.91
Do	Horstmann Bros. & Co., Philadelphia.	Feb. 27, 1890	10,000	5,875.00
Suspenders	Wm. F. Bernstein, Philadelphia.	May 31, 1889	15,000 pairs	2,696.87
Do	do	Feb. 27, 1890	4,696 pairs	860.93
Stockings:				
Woolen	B. Y. Pippet & Co., New York	May 27, 1889	10,127 pairs	2,784.92
Do	J. E. Karelson, New York	June 11, 1889	10,000 pairs	2,691.67
Do	B. Y. Pippet & Co., New York	Feb. 27, 1890	10,035 pairs	3,161.02
Cotton	J. E. Karelson, New York	June 11, 1889	40,221 pairs	3,150.65
Do	W. F. Bernstein, Philadelphia	Aug. 24, 1889	69,814 pairs	5,435.02
Do	Rambo & Regar, Norristown, Pa.	Mch. 10, 1890	40,000 pairs	3,044.00
Collars:				
Linen	T. A. Ashburner, Philadelphia	May 24, 1889	100,024	4,201.00
Do	do	Aug. 21, 1889	42,000	1,764.00
Do	H. C. Harper, Philadelphia	Feb. 27, 1890	12,000	526.70
Celluloid				
Undershirts:				
Knit	Wm. F. Bernstein, Philadelphia.	May 31, 1889	27,857	12,920.08
Do	do	Aug. 24, 1889	11,000	5,428.50
Leggins:				
Canvas	Wm. H. Wiley & Son, Hartford, Conn.	June 6, 1889	4,997 pairs	2,748.35
Do	do	Aug. 27, 1889	15,197 pairs	8,358.35
Helmets:				
Cork	B. M. Whitlock, New York	June 6, 1889	2,000	1,580.00
Do	Chas. F. Lehman, Brooklyn	Aug. 26, 1889	1,600	1,216.00
Do	do	Mar. 6, 1890	1,000	743.75
Untrimmed	Horstmann Bros. & Co., Philadelphia.	May 28, 1889	4,506	6,308.40
Do	B. M. Whitlock, New York	Aug. 19, 1889	5,000	6,600.00
Do	do	Feb. 27, 1890	2,500	3,125.00
Hats:				
Campaign, drab	do	June 6, 1889	10,000	14,187.50
Do	do	Aug. 19, 1889	7,996	10,314.84
Do	Wm. H. Harbut, New York	Feb. 27, 1890	6,000	7,125.00
Gauntlets:				
Musk t	E. R. Lyon, New York	June 4, 1889	7,000 pairs	12,600.00
Do	J. R. Michael, New York	Aug. 24, 1889	6,002 pairs	11,103.76

QUARTERMASTER-GENERAL.

799

purchased by the Quartermaster's Department, etc.—Continued.

PHILADELPHIA, PA.—Continued.

Purchased in open market.				Total.	
From whom purchased.	Date of purchase.	Quantity purchased.	Cost.	Quantity.	Cost.
				54,000 yards	\$9,153.00
				68,989 yards	9,796.44
				12,053½ yards	1,289.75
				22,800 yards	3,019.44
				130,190½ yards	15,208.26
				10,006½ yards	1,695.06
				62,000 yards	8,818.40
				255,000 pairs	27,068.00
				13,114	55,179.94
				483	1,859.55
T. A. Ashburner, Philadelphia.	Mar. 27, 1890	60	\$96.00		
do	Apr. 26, 1890	100	160.00	160	256.00
				37,255	22,909.90
				19,696 pairs	3,557.80
				30,162 pairs	8,637.61
				150,035 pairs	11,629.67
				154,024	6,491.70
Celluloid Novelty Company, New York.	Mar. 26, 1890	1,000	120.00	1,000	120.00
				38,857	18,348.58
Wm. H. Wiley & Son, Hartford, Conn.	Mar. 15, 1890	1 pair	.55	20,195 pairs	11,107.25
				4,600	3,539.75
				12,006	16,033.40
				23,996	31,627.34
				13,002 pairs	23,703.70

QUARTERMASTER-GENERAL.

801

purchased by the Quartermaster's Department, etc.—Continued.

PHILADELPHIA, PA.—Continued.

Purchased in open market.				Total.	
From whom purchased.	Date of purchase.	Quantity purchased.	Cost.	Quantity.	Cost.
				10,000 pairs.	\$16,550.00
				4,400 pairs.	8,744.00
Charles Hewitt, Taunton, Mass.	June 29, 1889	9 pairs	\$11.00		
				29,136 pairs.	23,987.60
				80,934 pairs.	62,208.61
				3,691 pairs.	11,948.74
Robert C. Toy, Philadelphia.	Aug. 16, 1889	50	496.50	100	986.00
				325	910.00
Horstmann Bros. & Co, Philadelphia.	July 8, 1889	8	20.00		
do	July 17, 1889	4	10.00		
do	July 20, 1889	2	5.00		
do	Aug. 20, 1889	1	2.50		
do	Aug. 22, 1889	1	2.50		
do	Aug. 23, 1889	1	2.50		
do	Sept. 17, 1889	6	15.00		
do	Dec. 26, 1889	1	2.50		
do	Apr. 2, 1890	1	2.50		
do	Apr. 5, 1890	6	15.00		
do	May 7, 1890	2	5.00		
do	May 26, 1890	1	2.50	34	85.00
do	Apr. 5, 1890	6	28.50		
do	May 7, 1890	1	4.75		
do	May 26, 1890	2	9.50	9	42.75
Uhler & English, Philadelphia.	Aug. 16, 1889	150	358.65	150	358.85
Horstmann Bros. & Co., Philadelphia.	July 15, 1889	23	129.95		
do	July 17, 1889	9	50.85		
do	Aug. 20, 1889	2	11.30		
do	Nov. 12, 1889	3	16.95		
do	Nov. 13, 1889	3	16.95		
do	Nov. 15, 1889	1	5.65		
do	Nov. 18, 1889	2	11.30		
do	Nov. 25, 1889	2	11.30		
do	Nov. 30, 1889	1	5.65		
do	Dec. 2, 1889	8	45.20		
do	Dec. 14, 1889	2	11.30		
do	Dec. 21, 1889	1	5.65		
do	Dec. 26, 1889	1	5.65		
do	Dec. 27, 1889	1	5.65		
do	Dec. 31, 1889	1	11.30		
do	Jan. 27, 1890	3	16.95		
do	Feb. 7, 1890	1	2.65		
do	Mar. 4, 1890	1	5.65		
do	Apr. 14, 1890	1	5.65		
do	May 13, 1890	1	5.65		
do	May 20, 1890	2	11.30	70	395.50
do	May 22, 1890	1	3.00	1	3.00
C. A. Hart & Co., Philadelphia.	July 15, 1889	3	38.85		
do	July 17, 1889	3	38.85		
do	Aug. 20, 1889	1	12.95		
do	Aug. 30, 1889	1	12.95		
do	Nov. 27, 1889	1	12.95		
do	Jan. 25, 1890	2	25.90		
do	Mar. 31, 1890	1	12.95		

B.—Detailed statement of articles of clothing, equipage, and materials

PHILADELPHIA, PA.—Continued.

Articles.	Purchased under contract.			
	Name of contractor.	Date of contract.	Quantity delivered.	Cost.
Guidons—Continued.				
Artillery				
Do				
Artillery bunting ..				
Light artillery and cavalry (old style).				
Ambulance.....				
Do				
Do				
Do				
Do				
Do				
Do				
Do				
Do				
Do				
Do				
Do				
Guidon staffs.....				
Do				
Do				
Do				
Do				
Do				
Do				
Do				
Do				
Do				
Do				
Do				
Do				
Do				
Colors :				
Regimental, infantry				
Do				
Do				
Do				
Do				
Do				
Regimental, infantry (old style).				
Regimental, artillery (old style).				
National, infantry ..				
Do				
Do				
Do				
National, infantry (old style).				
National, artillery ..				
Do				
National, corps of cadets.				
National, headquarters Army of the Ohio.				
Cavalry standard.....				
Cavalry standard (old style).				
Color staffs.....				
Markers				
Do				
Do				
Do				
Do				
Do				
Do				
Do				
Do				
General guides.....				
Do				
Do				

purchased by the Quartermaster's Department, etc.—Continued.

PHILADELPHIA, PA.—Continued.

Purchased in open market.				Total.	
From whom purchased.	Date of purchase.	Quantity purchased.	Cost.	Quantity.	Cost.
C. A. Hart & Co., Philadelphia.	May 19, 1890	1	\$12.95		
do	June 13, 1890	1	12.95	14	\$181.30
Horstmann Bros. & Co., Philadelphia.	May 22, 1890	1	5.00	1	5.00
J. H. Wilson, Philadelphia.	Dec. 9, 1889	1	8.19	1	8.19
Horstmann Bros. & Co., Philadelphia.	July 15, 1889	6	10.50		
do	July 17, 1889	2	3.50		
do	July 20, 1889	5	8.75		
do	Aug. 23, 1889	2	3.50		
do	Sept. 17, 1889	6	10.50		
do	Dec. 26, 1889	1	1.75		
do	Apr. 2, 1890	2	3.50		
do	Apr. 5, 1890	6	10.50		
do	May 7, 1890	2	3.50		
do	May 26, 1890	2	3.50	34	59.50
C. A. Hart & Co., Philadelphia.	Dec. 17, 1889	7	15.05		
do	Dec. 21, 1889	1	2.15		
do	Dec. 26, 1889	1	2.15		
do	Dec. 27, 1889	1	2.15		
do	Jan. 10, 1890	1	2.15		
do	Jan. 25, 1890	3	10.75		
do	Feb. 7, 1890	1	2.15		
do	Mar. 4, 1890	1	2.15		
do	Mar. 31, 1890	1	2.15		
do	Apr. 14, 1890	5	6.45		
do	May 13, 1890	1	2.15		
do	May 19, 1890	1	2.15		
do	May 20, 1890	2	4.30	26	55.90
Horstmann Bros. & Co., Philadelphia.	Aug. 1, 1889	2	256.00		
do	Aug. 24, 1889	1	128.00		
do	Oct. 2, 1889	2	256.00		
do	Jan. 25, 1890	2	256.00		
do	Mar. 6, 1890	1	128.00		
do	May 31, 1890	1	128.00	9	1,152.00
J. H. Wilson, Philadelphia.	Dec. 9, 1889	1	62.68	1	62.68
Horstman Bros. & Co., Philadelphia.	Dec. 9, 1889	1	59.50	1	59.50
do	July 17, 1889	8	380.00		
do	Aug. 24, 1889	1	47.50		
do	Jan. 25, 1890	2	95.00		
do	Mar. 6, 1890	1	47.50		
do	May 31, 1890	1	47.50	13	617.50
do	Dec. 9, 1889	1	34.00	1	34.00
do	Aug. 20, 1899	1	47.50		
do	June 10, 1890	1	47.50	2	95.00
do	Dec. 21, 1889	1	47.50	1	47.50
J. H. Wilson, Philadelphia.	Feb. 24, 1890	1	135.00	1	135.00
C. A. Hart & Co., Philadelphia.	May 20, 1890	1	60.00	1	60.00
Horstmann Bros. & Co., Philadelphia.	Dec. 9, 1889	1	27.00	1	27.00
C. A. Hart & Co., Philadelphia.	Nov. 22, 1889	17	56.50	17	56.50
do	July 15, 1889	22	143.00		
do	July 17, 1889	4	26.00		
do	July 18, 1889	4	26.00		
do	July 26, 1889	4	26.00		
do	Nov. 11, 1889	4	26.00		
do	Feb. 1, 1890	4	26.00		
do	Mar. 6, 1890	4	26.00	46	299.00
do	July 15, 1889	6	41.10		
do	July 17, 1889	16	109.60		
do	Sept. 17, 1889	4	27.40		

B.—Detailed statement of articles of clothing, equipage, and materials

PHILADELPHIA, PA.—Continued.

Articles.	Purchased under contract.			
	Name of contractor.	Date of contract.	Quantity delivered.	Cost.
General guides.....				
Do.....				
Axes.....	Rowland A. Robbins, New York.	May 28, 1889	499.....	\$234. 53
Do.....	North Wayne Tool Company, Hollowell, Me.	June 1, 1889	500.....	235. 00
Do.....	Rowland A. Robbins, New York.	May 28, 1889	500.....	235. 00
Do.....	North Wayne Tool Company, Hollowell, Me.	June 1, 1889	500.....	\$235. 00
Ax helves.....				
Pickaxes.....	V. Stortz, New York.....	June 12, 1889	250.....	104. 17
Brushes, scrubbing.....	J. R. Michael, New York.....	June 8, 1889	10, 484.....	1, 782. 28
Buckles:				
Gilt.....	do.....	do.....	30 000.....	183. 33
White metal.....	do.....	do.....	20 000.....	122. 23
Do.....	Horstmann Bros. & Co., Philadelphia.	Aug. 27, 1889	6,400.....	38. 22
Shovels:				
Long handles.....	E. J. Griffith & Co., Norfolk, Va.	June 12, 1889	400.....	144. 00
Short handles.....	do.....	do.....	600.....	216. 00
Button toggles.....	Horstmann Bros. & Co., Philadelphia.	May 28, 1889	695 gross.....	57. 34
Do.....	W. F. Bernstein, Philadelphia.	Aug. 24, 1889	263½ gross.....	22. 13
Buttons:				
Bone, blouse.....				
Suspender, black.....	W. G. Lehman, Philadelphia.....	June 8, 1889	1,500 gross.....	69. 00
Suspender, white.....	H. C. Harper, Philadelphia.....	June 13, 1889	1,300 gross.....	74. 49
Suspender, bone.....	W. F. Bernstein, Philadelphia.....	May 31, 1889	800 gross.....	80. 00
Do.....	do.....	Aug. 24, 1889	312 gross.....	30. 42
Fly, black.....	W. G. Lehman, Philadelphia.....	June 8, 1889	1,000 gross.....	41. 00
Fly, white.....	Horstmann Bros. & Co., Philadelphia.	May 28, 1889	900 gross.....	46. 50
Fly, bone.....	W. F. Bernstein, Philadelphia.....	May 31, 1889	612 gross.....	43. 96
Do.....	do.....	Aug. 24, 1889	216 gross.....	18. 90
Lasting, brown.....	do.....	May 31, 1889	50 gross.....	11. 80
Vegetable Ivory.....	Horstmann Bros. & Co., Philadelphia.	May 28, 1889	695 gross.....	375. 30
Do.....	W. F. Bernstein, Philadelphia.	Aug. 24, 1889	260 gross.....	139. 75
Bone, stud.....				
Canvas, fatigue coat.....	Wm. F. Bernstein, Philadelphia.	May 31, 1889	800 gross.....	352. 64
Shirt.....	do.....	do.....	1,500 gross.....	441. 00
Canvas, overcoat.....	H. C. Harper, Philadelphia.....	June 13, 1889	100 gross.....	103. 25
White bone, with shank.....				
Uniform coat, large.....	Horstmann Bros. & Co., Philadelphia.	May 28, 1889	2,500 gross.....	4, 225. 00
Do.....	do.....	Aug. 27, 1889	174 gross.....	294. 06
Uniform coat, small.....	do.....	May 28, 1889	1,465 gross.....	1, 230. 60
Do.....				
Do.....				
Uniform coat, staff, large.....	do.....	Aug. 27, 1889	60 gross.....	169. 80
Tape, cotton:				
White.....	Wm. F. Bernstein, Philadelphia.	May 31, 1889	17,496 yards.....	54. 07
Brown.....	do.....	do.....	28,696 yards.....	88. 60
Silk:				
Black, sewing.....	H. C. Harper, Philadelphia.....	June 13, 1889	1,000 spools.....	293. 79
Do.....				
White, sewing.....	do.....	June 13, 1889	1,000 spools.....	47. 73
Yellow, sewing.....	Wm. F. Bernstein, Philadelphia.	May 31, 1889	920 spools.....	44. 08
Scarlet, sewing.....	do.....	do.....	200 spools.....	3. 15
Green, sewing.....	do.....	do.....	100 spools.....	1. 15
Twist.....	Horstmann Bros. & Co., Philadelphia.	May 28, 1889	3,502 spools.....	148. 83
Do.....	H. C. Harper, Philadelphia.....	June 13, 1889	510 ounces.....	202. 25
Do.....				

purchased by the Quartermaster's Department, &c.—Continued.

PHILADELPHIA, PA.—Continued.

Purchased in open market.				Total.	
From whom purchased.	Date of purchase.	Quantity purchased.	Cost.	Quantity.	Cost.
C. A. Hart & Co., Philadelphia.	Nov. 11, 1889	2.....	\$13.70		
do	Mar. 6, 1890	2.....	13.70	30.....	\$205.50
				1,999.....	939.53
Paul J. Field, Philadelphia.	Feb. 25, 1890	500.....	69.50	500.....	69.50
				250.....	104.17
				10,484.....	1,782.28
				30,000.....	183.33
				26,400.....	160.45
V. Stortz, New York	Oct. 31, 1889	500.....	170.00	900.....	314.00
do	do	800.....	284.00	1,400.....	500.00
				958½ gross.....	79.47
E. Wahe, Philadelphia	Nov. 21, 1889	1 gross.....	1.50	1 gross.....	1.50
				1,500 gross.....	69.00
				1,300 gross.....	74.49
				1,112 gross.....	110.42
				1,000 gross.....	41.00
				900 gross.....	46.50
				828 gross.....	67.86
				50 gross.....	11.80
E. Wahe, Philadelphia	Dec. 28, 1889	78 gross.....	97.50	955 gross.....	515.05
				78 gross.....	97.50
				800 gross.....	352.64
				1,500 gross.....	441.00
E. Wahe, Philadelphia	Jan. 7, 1890	113 gross.....	113.00	100 gross.....	103.25
				113 gross.....	113.00
Horstmann Bros. & Co. Philadelphia.	Jan. 21, 1890	103½ gross.....	89.01	2,674 gross.....	4,519.06
do	Mar. 11, 1890	300 gross.....	256.50		
do	Mar. 24, 1890	305 gross.....	263.82	2,173½ gross.....	1,839.93
				60 gross.....	169.80
				17,496 yards.....	54.07
				28,696 yards.....	88.68
W. F. Bernstein, Philadelphia.	Oct. 31, 1889	5,000 spools.....	56.93	1,000 spools.....	293.79
				5,000 spools.....	56.93
				1,000 spools.....	47.73
				920 spools.....	44.08
				280 spools.....	3.15
				100 spools.....	1.15
				3,502 spools.....	148.83
W. F. Bernstein, Philadelphia.	July 18, 1889	32,000 spools.....	211.20	510 ounces.....	202.28

B.—Detailed statement of articles of clothing, equipage, and materials

PHILADELPHIA, PA.—Continued.

Articles.	Purchased under contract.			
	Name of contractor.	Date of contract.	Quantity delivered.	Cost.
Silk:				
Twist				
Do				
Chevron, black	H. C. Harper, Philadelphia	June 13, 1889	400 ounces	\$155.00
Chevron, white	Wm. F. Bernstein, Philadelphia.	May 31, 1889	100 ounces	42.00
Sewing, assorted				
Cotton:				
Sewing	Wm. F. Bernstein, Philadelphia.	May 31, 1889	76,852 spools	2,220.58
Do	do	Aug. 24, 1889	160,76 spools	469.42
Basting	do	Feb. 27, 1890	7,200 spools	88.20
Thread:				
D. B. linen	J. R. Michael, New York	June 8, 1889	1,500 pounds	2,700.00
W. B. linen	do	do	1,248 pounds	2,246.40
W. B. No. 30	do	Aug. 24, 1889	363 pounds	290.40
W. B. No. 35	W. G. Lehman, Philadelphia	June 8, 1889	350 pounds	297.50
D. B. No. 35	do	do	290 pounds	246.50
Helmet cords and bands.	Edward Eicke, New York	Nov. 12, 1889	1,500	697.50
Do	do	Mar. 5, 1890	3,000	1,331.25
Helmet eagle devices.				
Cap letters	Horstmann Bros. & Co., Philadelphia.	Aug. 27, 1889	60,000	130.80
Cap numbers	do	do	40,000	87.20
Cap castles				
Cap wreaths				
Do				
Cap crossed sabers	Horstmann Bros. & Co., Philadelphia.	May 28, 1889	3,000	48.00
Do	do	Aug. 27, 1889	5,000	78.50
Cap crossed rifles	do	May 28, 1889	6,000	96.00
Do	do	Aug. 27, 1889	10,000	157.00
Cap crossed cannon	do	May 28, 1889	700	11.20
Do	do	Aug. 27, 1889	3,000	47.10
Brass grommets:				
No 2	Rowland A. Robbins, New York.	May 28, 1889	4,300	16.12
No 3	do	do	9,000	40.00
No 4	do	do	4,000	23.61
No. 5	Paul J. Field, Philadelphia	June 11, 1889	4,000	60.50
Rings, galvanized iron:				
$\frac{1}{2}$ -inch	Rowland A. Robbins, New York.	May 28, 1889	250 pounds	34.75
$\frac{3}{8}$ -inch	Uhler & English, Philadelphia	May 6, 1889	200 pounds	28.00
$\frac{1}{2}$ -inch	do	do	600 pounds	78.00
$\frac{3}{4}$ -inch	do	do	50 pounds	6.50
Mosquito bars	Chas. Kohlman, New York	do	4,000	2,600.00
Mosquito-bars attachments.				
Mosquito head-nets				
Do				
Metal tent slips:				
No. 1	Isaac Townsend, Philadelphia.	June 8, 1889	600	60.00
No. 2	do	do	2,100	168.00
No. 3	do	do	28,000	1,330.00
Tent poles:				
Wall	N. W. Cameron, St. Louis, Mo.	Feb. 27, 1890	300 sets	270.00
Conical	do	do	150	129.00
Tent-pole straps				
Tent pins, wall, 24-inch.	G. B. Carpenter & Co., Chicago.	Feb. 27, 1890	20,000	400.00
Tent chains	Paul J. Field, Philadelphia	June 11, 1889	150 sets	141.00
Do				
Tent stove pipe				
Line:				
Manilla	Uhler & English, Philadelphia.	June 6, 1889	9,120 pounds	1,435.48
Gilling	do	do	1,218 pounds	197.80
Rope:				
Cotton	do	do	1,382 pounds	210.62
Baling	do	do	1,995 pounds	137.65

purchased by the Quartermaster's Department, etc.—Continued.

PHILADELPHIA, PA.—Continued.

Purchased in open market.				Total.	
From whom purchased.	Date of purchase.	Quantity purchased.	Cost.	Quantity.	Cost.
W. F. Bernstein, Philadelphia.	Oct. 31, 1889	3,000 spools.....	\$20. 79		
do	May 26, 1890	1,000 spools.....	15. 00	36,000 spools.....	\$248. 99
Tissot & Schultz, New York	May 19, 1890	300 ounces.....	147. 00	700 ounces.....	302. 00
				100 ounces.....	42. 00
G. W. Ellis & Co., Philadelphia.	Oct. 14, 1889	6 pounds.....	54. 00	6 pounds.....	54. 00
Wm. F. Bernstein, Philadelphia.	Oct. 31, 1889	6,000 spools.....	178. 80		
Geo. A. Clark & Bro Philadelphia.	May 26, 1890	780 spools.....	27. 59	99,708 spools.....	2, 894. 10
Spencer B. Harper, Philadelphia.	May 17, 1889	6,000 spools.....	70. 00	13,200 spools.....	158. 20
				1,500 pounds.....	2, 700. 00
				1,248 pounds.....	2, 246. 40
				363 pounds.....	290. 40
				350 pounds.....	297. 50
				290 pounds.....	246. 50
J. H. Wilson, Philadelphia.	Aug. 16, 1889	1,000.....	20. 00	4,500.....	2, 028. 75
Horstman Bros. & Co., Philadelphia.	Mar. 19, 1890	136.....	1. 36	1,000.....	20. 00
				60,136.....	132. 16
J. H. Wilson, Philadelphia.	Aug. 21, 1889	1,000.....	175. 00	40,000.....	87. 20
do	Aug. 16, 1889	999.....	49. 95	1,000.....	175. 00
Horstmann Bros. & Co., Philadelphia.	Dec. 24, 1889	110.....	22. 00	1,109.....	71. 95
				8,000.....	126. 50
				16,000.....	253. 00
				3,700.....	58. 30
				4,300.....	16. 12
				9,000.....	40. 00
				4,000.....	23. 61
				4,000.....	60. 56
				250 pounds.....	34. 75
				200 pounds.....	26. 00
				600 pounds.....	78. 00
				50 pounds.....	6. 50
				4,000.....	2, 600. 00
W. F. Bernstein, Philadelphia.	May 24, 1890	98 pairs.....	34. 30	98 pairs.....	34. 30
S. Roebuck, New York	July 3, 1889	169.....	50. 70		
do	July 15, 1889	251.....	75. 30		
do	July 20, 1889	31.....	9. 30	451.....	135. 30
				600.....	60. 00
				2,100.....	168. 00
				28,000.....	1, 330. 00
				300 sets.....	270. 00
				150.....	129. 00
Chas. M. Bywater, Philadelphia.	Aug. 27, 1889	200.....	40. 00	200.....	40. 00
				20,000.....	400. 00
Robt. C. Toy, Philadelphia.	Aug. 16, 1889	100 sets.....	87. 00		
do	Feb. 25, 1890	100 sets.....	97. 00	350 sets.....	325. 00
Paul J. Field, Philadelphia.	Aug. 16, 1889	1,000 joints.....	119. 00	1,000 joints.....	119. 00
				9,120 pounds.....	1, 435. 43
				1,218 pounds.....	197. 80
				1,382 pounds.....	210. 62
				1,995 pounds.....	137. 65

B.—Detailed statement of articles of clothing, equipage, and materials

PHILADELPHIA, PA.—Continued.

Articles.	Purchased under contract.			
	Name of contractor.	Date of contract.	Quantity delivered.	Cost.
Twine:				
Blocking	Detre & Blackburn, Philadelphia.	June 8, 1889	1,000 pounds...	\$119.70
Cotton, 5 fold	Rowland A. Robbins, New York.	May 28, 1889	925 pounds.....	175.75
Braid, worsted	Horstmann Bros. & Co., Philadelphia.	..do	3,024 yards.....	29.40
Cord:				
Mohair, black.....	..do .....	..do	2,500 yards.....	137.50
Sky blue .....	.....	.....	.....	.....
Do .....	.....	.....	.....	.....
Dark blue.....	.....	.....	.....	.....
Do .....	.....	.....	.....	.....
Pillow cases	H. C. Harper, Philadelphia	June 13, 1889	10,004	1,163.47
Do	W. F. Bernstein, Philadelphia	Aug. 24, 1889	4,999	610.88
Do	H. C. Harper, Philadelphia.....	Feb. 27, 1890	6,000	717.00
Needles:				
Smith's best.....	W. F. Bergstein, Philadelphia	May 31, 1889	200,000	234.00
Glover's .....	.....	.....	.....	.....
Tickets, clothing size	Detre & Blackburn, Philadelphia.	June 8, 1889	500,000	100.00
Hooks and eyes:				
White	W. G. Lehman, Philadelphia.....	..do	41,040	92.39
Black	Horstmann Bros. & Co., Philadelphia.	May 28, 1889	50,112	26.06
Eyes, black	H. C. Harper, Philadelphia	June 13, 1889	20,736	4.91
Drums	R. Wurlitzer & Bro., Cincinnati.	June 6, 1889	50	324.50
Drum slings	Horstmann Bros. & Co., Philadelphia.	May 28, 1889	50	31.50
Trumpets:				
F	R. Wurlitzer & Bro., Cincinnati.	June 6, 1889	100	143.00
G with F slides .....	.....	.....	.....	.....
Do .....	.....	.....	.....	.....
Do .....	.....	.....	.....	.....
G with F crooks .....	.....	.....	.....	.....
Trumpet crooks .....	.....	.....	.....	.....
Trumpet cords and tassels	Edw. Eicke, New York.....	Nov. 12, 1889	1,000	520.00
Bugles, brass, officers' .....	.....	.....	.....	.....
Beeswax .....	.....	.....	.....	.....
Marking stamps .....	.....	.....	.....	.....
Do .....	.....	.....	.....	.....
Do .....	.....	.....	.....	.....
Ink pads .....	.....	.....	.....	.....
Do .....	.....	.....	.....	.....
Do .....	.....	.....	.....	.....
Metal numbers .....	.....	.....	.....	.....
Metal blocks .....	.....	.....	.....	.....
Stencil alphabets, $\frac{3}{4}$ -inch .....	.....	.....	.....	.....
Stencil numbers:				
1-inch .....	.....	.....	.....	.....
$\frac{3}{4}$ -inch .....	.....	.....	.....	.....
Muslin .....	.....	.....	.....	.....
Muslin, unbleached	John Welsh, Philadelphia	May 31, 1889	6,019 yards.....	442.40
Do .....	..do .....	..do	14,000 yards	1,078.00
Paper:				
Petroleum	A. G. Elliott & Co., Philadelphia.	June 8, 1889	40,132 pounds	1,039.42
Tissue .....	.....	.....	.....	.....
Pattern board .....	.....	.....	.....	.....

purchased by the Quartermaster's Department, etc.—Continued.

PHILADELPHIA, PA.—Continued.

Purchased in open market.				Total.	
From whom purchased.	Date of purchase.	Quantity purchased.	Cost.	Quantity.	Cost.
				1,600 pounds	\$119.70
				925 pounds	175.75
				3,024 yards	29.40
				2,500 yards	137.50
Horstmann Bros. & Co., Philadelphia.	Aug. 26, 1889	1,256 yards	\$25.12		
do	Mar. 3, 1890	1,600 yards	32.00	2,856 yards	57.12
do	Aug. 26, 1889	1,250 yards	25.00		
do	Mar. 3, 1890	1,000 yards	20.00	2,250 yards	45.00
				21,003	2,496.35
				200,000	234.00
W. F. Bernstein, Philadelphia.	Sept. 2, 1889	11 papers	1.10	11 papers	1.10
				500,000	109.00
				41,040	92.39
				50,112	26.06
				20,736	4.91
				50	334.50
				50	31.50
				100	143.00
R. Wurlitzer & Bro., Cincinnati.	Aug. 16, 1889	150	255.00		
R. C. Kretschmar, Philadelphia.	Dec. 28, 1889	1	2.00		
do	May 31, 1890	1	2.00	152	259.00
do	Mar. 16, 1890	6	13.20	6	13.20
R. Wurlitzer & Bro., Cincinnati, Ohio.	Aug. 16, 1889	250	100.00	250	100.00
				1,000	520.00
R. C. Kretschmar, Philadelphia.	Mar. 10, 1890	4	3.80	4	3.80
Pleasants & Woodworth, New York.	May 17, 1889	900 pounds	211.50	900 pounds	211.50
Peiffer Bros., Philadelphia	July 23, 1889	6	24.00		
do	Feb. 14, 1890	1	5.00		
do	May 21, 1890	1	5.00	8	34.00
S. H. Quint & Son, Philadelphia.	Aug. 3, 1889	4	.40		
Peiffer Bros., Philadelphia	Mar. 8, 1890	1	.25		
do	Mar. 12, 1890	1	.25	6	.90
S. H. Quint & Son, Philadelphia.	Aug. 3, 1889	1	.15	1	.15
do	do	2	.05	2	.05
do	do	1 set	.50	1 set	.50
Theo. Rey, Philadelphia	May 19, 1890	11 sets	2.20	11 set	2.20
S. H. Quint & Son, Philadelphia.	Aug. 3, 1889	1 set	.25	1	.25
Philip Conway, jr., Philadelphia.	Feb. 21, 1890	97½ yards	10.24	97½ yards	10.24
H. C. Harper, Philadelphia.	Mar. 29, 1890	5,000 yards	370.00	25,019 yards	1,893.40
				40,132 pounds	1,039.42
Armstrong, Craig & Co., Philadelphia.	Nov. 9, 1889	25 reams	16.25	25 reams	16.25
M. O. Raignel & Co., Philadelphia.	Oct. 3, 1889	618 pounds	77.25	618 pounds	77.25

B.—Detailed statement of articles of clothing, equipage, and materials

PHILADELPHIA, PA.—Continued.

Articles.	Purchased under contract.			
	Name of contractor.	Date of contract.	Quantity delivered.	Cost.
Aiguillettes and shoulder-knots.	Edw. Eicke, New York.....	June 4, 1889	400.....	\$418.50
Muslin rouches:				
Large.....	H. V. Allen & Co., New York	June 11, 1889	60.....	352.20
Small.....	do.....	do.....	40.....	210.80
Lyres.....				
Shipping tags.....				
Bedsteads, iron, with bunk bottoms.	Wm. F. Bernstein, Philadelphia.	May 31, 1889	500.....	1,585.00
Do.....	do.....	Aug. 24, 1889	500.....	1,585.00
Do.....	do.....	Feb. 27, 1890	1,500.....	4,830.00
Bedstead casters.....				
Do.....				
Do.....				
Bedstead corner castings.....				
Do.....				
Woven-wire bunk bottoms.	The Hartford Woven Wire Mattress Co., Hartford, Conn.	June 6, 1889	500.....	805.00
Do.....	do.....	Aug. 24, 1889	1,000.....	1,540.00
Do.....	do.....	Nov. 4, 1889	1,000.....	1,410.00
Do.....	do.....	Mar. 3, 1890	1,500.....	2,085.00
Card holders.....	Paul J. Field, Philadelphia.....	June 11, 1889	3,000.....	34.32
Books:				
Post council of administration.				
Company order.....	Detre & Blackburn, Philadelphia	June 8, 1889	150 }.....	163.00
Company letters sent.....	do.....	do.....	50 }.....	
Post order.....	J. W. Bond & Co., Baltimore.	Aug. 24, 1889	51 }.....	681.07
Post letters received.....	do.....	do.....	75 }.....	
Post letters sent.....	do.....	do.....	75 }.....	
Post letters received, index.	do.....	do.....	50 }.....	
Post letters sent, index.	do.....	do.....	75 }.....	
Company order.....	do.....	do.....	100 }.....	394.00
Post letters received.....	Detre & Blackburn, Philadelphia.	Mar. 5, 1890	50 }.....	
Post letters sent.....	do.....	do.....	50.....	
Company order.....	do.....	do.....	100.....	
Company letters sent.....	do.....	do.....	100.....	
Rosin.....				
Coats, rubber.....				
Do.....				
Do.....				
Japanned alides.....	Paul J. Field, Philadelphia...	June 11, 1889	499.....	14.97
Camp kettles.....				
Russet leather.....	Uhler & English, Philadelphia	June 6, 1889	101½ square feet.	18.22
Lacings for leggings.....				
Lacings for leggings, porpoise.				
Mittens, woolen.....	Wm. F. Bernstein, Philadelphia.	May 31, 1889	1,999 pairs.....	653.01
Do.....	do.....	Aug. 24, 1889	5,508 pairs.....	1,891.08
Naphthaline.....				
Frying pans.....				
Shirts, muslin.....	Philip Conway, Jr, Philadelphia.	Oct. 23, 1889	1,500.....	675.00
Do.....	do.....	do.....	1,500.....	630.09
Book corners.....				
Suits, civilian.....				
Guernsey, blue.....				
Jacket, knit.....				

QUARTERMASTER-GENERAL.

purchased by the Quartermaster's Department, etc.—Continued.

PHILADELPHIA, PA.—Continued.

Purchased in open market.				Total.	
From whom purchased.	Date of purchase.	Quantity purchased.	Cost.	Quantity.	Cost.
				400.....	\$418. 50
				60.....	352. 20
				40.....	210. 80
J. H. Wilson, Philadelphia.	Aug. 16, 1889	2, 000.....	\$55. 00	2, 000.....	55. 00
Pleasants & Woodworth, New York.	May 17, 1889	5, 000.....	3. 70	5, 000.....	3. 70
				2, 500.....	3, 000. 00
The Wire Web Bed Co., New Britain, Conn.	Oct. 12, 1889	36.....	1. 80		
Wm. F. Bernstein, Phila- delphia.	Mar. 19, 1890	72.....	3. 60		
do.....	Apr. 26, 1890	200.....	7. 50	308.....	12. 90
The Wire Web Bed Co., New Britain, Conn.	Oct. 12, 1889	36.....	5. 40		
	Dec. 21, 1889	24.....	4. 80	60.....	10. 20
				4, 000.....	5, 840. 00
				3, 000.....	34. 32
Detre & Blackburn, Phila- delphia.	July 15, 1889	103.....	317. 00	100.....	317. 00
				150.....	163. 00
				50.....	
				51.....	
				75.....	
				75.....	
				50.....	681. 57
				75.....	
				100.....	394. 00
				50.....	
				100.....	
Pleasants & Woodworth, New York.	May 17, 1889	240 pounds.....	2. 64	240 pounds.....	2. 64
American Rubber Co., Bos- ton, Mass.	Apr. 7, 1890	300.....	693. 75		
Rich. Levick's Son & Co., Philadelphia.	Feb. 20, 1890	1.....	2. 40		
D. P. Dieterich, Philadel- phia.	do.....	1.....	2. 85	302.....	690. 00
Paul J. Field, Philadelphia.	Aug. 16, 1889	1, 001.....	379. 38	490.....	14. 97
				1, 001.....	379. 38
				101½ square feet.....	18. 22
Wm. H. Wiley & Son, Hart- ford, Conn.	July 9, 1889	100 pairs.....	1. 35	100 pairs.....	1. 35
do.....	Jan. 6, 1890	144 pairs.....	4. 30	144 pairs.....	4. 30
				7, 507 pairs.....	2, 544. 09
French, Richards & Co., Philadelphia.	Aug. 16, 1889	4, 988 pounds.....	174. 58	4, 988 pounds.....	174. 58
Buehler, Bonbright & Co., Philadelphia.	July 18, 1889	100 pounds.....	35. 42	100.....	35. 42
				1, 500.....	675. 00
				1, 500.....	630. 00
Weaver Mailing Envelope and Box Co., Philadelphia.	Nov. 15, 1889	1, 000.....	3. 90	1, 000.....	3. 90
Wanamaker & Brown, Philadelphia.	May 7, 1890	3 suits.....	22. 35	3 suits.....	22. 35
do.....	do.....	1.....	1. 58	1.....	1. 58
do.....	do.....	1.....	1. 54	1.....	1. 54

B.—Detailed statement of articles of clothing, equipage, and materials

PHILADELPHIA, PA.—Continued.

Articles.	Purchased under contract.			
	Name of contractor.	Date of contract.	Quantity delivered.	Cost.
<i>Musical instruments.</i>				
Cymbals				
Do				
Cymbal bags				
Drums, bass				
Do				
Drumheads, bass				
Do				
Drum cords, bass				
Drumheads, snare				
Drum rods:				
Bass				
Snare				
Drum wrench, snare				
Flutes:				
Terz				
Do				
Concert				
Do				
Flute pads				
Do				
Lyre, for basso				
Piccobos				
Do				
Piccolo pads				
Do				
Clarionets:				
Eb				
Do				
Bb				
Do				
Clarinet pads				
Do				
Clarinet reeds				
Do				
Clarinet cases				
Trombones, slide				
Do				
Trombone springs				
Do				
Triangles				
Do				
Do				
Alto springs				
Do				
Baritone springs				
Do				
Basso springs				
Do				
Cornet springs				
Do				
Trombone springs				
Do				

QUARTERMASTER-GENERAL.

813

purchased by the Quartermaster's Department, etc.—Continued.

PHILADELPHIA, PA.—Continued.

Purchased in open market.				Total.	
From whom purchased.	Date of purchase.	Quantity purchased.	Cost.	Quantity.	Cost.
R. Wurlitzer & Bro., Cincinnati.	Oct. 17, 1889	2 pairs.....	\$38.30	.....	.....
Carl Fischer, New York...	Nov. 5, 1889	2 pairs.....	31.50	4 pairs.....	\$69.80
J. W. Pepper, Philadelphia.	Oct. 5, 1889	1.....	2.70	1.....	2.70
do.....	Oct. 17, 1889	10.....	103.40	.....	.....
do.....	Nov. 1, 1889	2.....	20.68	12.....	124.08
do.....	Oct. 3, 1889	1.....	2.10	.....	.....
do.....	Nov. 5, 1889	4.....	7.28	5.....	9.38
do.....	Oct. 3, 1889	1.....	.52	1.....	.52
do.....	Nov. 5, 1889	4.....	1.84	4.....	1.84
R. Wurlitzer & Bro., Cincinnati.	do.....	6.....	.90	6.....	.90
do.....	do.....	6.....	.75	6.....	.75
J. W. Pepper, Philadelphia.	Oct. 3, 1889	1.....	.20	1.....	.20
Carl Fischer, New York...	Oct. 17, 1889	1.....	54.00	.....	.....
J. W. Pepper, Philadelphia.	Nov. 5, 1889	1.....	26.40	2.....	80.40
do.....	Oct. 17, 1889	2.....	103.50	.....	.....
Henry Distin Manufacturing Co., Philadelphia.	Nov. 5, 1889	1.....	50.00	3.....	153.50
J. W. Pepper, Philadelphia.	Oct. 3, 1889	9 dozen.....	1.08	.....	.....
R. Wurlitzer & Bro., Cincinnati.	Oct. 23, 1889	10 dozen.....	.80	19 dozen.....	1.88
J. W. Pepper, Philadelphia.	Oct. 3, 1889	1.....	.50	1.....	.50
Henry Distin Manufacturing Co., Philadelphia.	Oct. 17, 1889	2.....	30.00	.....	.....
J. W. Pepper, Philadelphia.	Nov. 5, 1889	2.....	34.10	4.....	64.10
do.....	Oct. 3, 1889	8 dozen.....	.96	.....	.....
R. Wurlitzer & Bro., Cincinnati.	Oct. 23, 1889	20 dozen.....	1.60	28 dozen.....	2.56
J. W. Pepper, Philadelphia.	Oct. 17, 1889	12.....	276.00	.....	.....
do.....	Nov. 5, 1889	2.....	46.00	14.....	422.00
do.....	Oct. 17, 1889	17.....	391.00	.....	.....
do.....	Nov. 1, 1889	3.....	69.00	20.....	460.00
do.....	Oct. 3, 1889	50 dozen.....	6.00	.....	.....
R. Wurlitzer & Bro., Cincinnati.	Oct. 23, 1889	85 dozen.....	6.80	135 dozen.....	12.80
J. W. Pepper, Philadelphia.	Oct. 3, 1889	6 dozen.....	3.60	.....	.....
R. Wurlitzer & Bro., Cincinnati.	Oct. 23, 1889	12 dozen.....	7.20	18 dozen.....	10.80
Carl Fischer, New York...	do.....	29.....	42.05	29.....	42.05
do.....	Oct. 17, 1889	11.....	487.74	.....	.....
do.....	Nov. 1, 1889	2.....	88.68	13.....	576.42
do.....	Oct. 3, 1889	1½ dozen.....	.45	.....	.....
R. Wurlitzer & Bro., Cincinnati.	Oct. 23, 1889	2 dozen.....	.70	3½ dozen.....	1.15
J. W. Pepper, Philadelphia.	Oct. 3, 1889	2.....	2.24	.....	.....
R. Wurlitzer & Bro., Cincinnati.	Oct. 17, 1889	1.....	.75	.....	.....
do.....	Nov. 5, 1889	2.....	1.50	5.....	4.49
Carl Fischer, New York...	Oct. 3, 1889	5½ dozen.....	2.07	.....	.....
R. Wurlitzer & Bro., Cincinnati.	Oct. 23, 1889	5 dozen.....	1.75	10½ dozen.....	3.82
Carl Fischer, New York...	Oct. 3, 1889	5½ dozen.....	1.98	.....	.....
R. Wurlitzer & Bro., Cincinnati.	Oct. 23, 1889	2½ dozen.....	.87	8 dozen.....	2.85
Carl Fischer, New York...	Oct. 3, 1889	7½ dozen.....	2.70	.....	.....
R. Wurlitzer & Bro., Cincinnati.	Oct. 23, 1889	3½ dozen.....	1.17	10½ dozen.....	3.87
Carl Fischer, New York...	Oct. 3, 1889	6½ dozen.....	2.34	.....	.....
R. Wurlitzer & Bro., Cincinnati.	Oct. 23, 1889	5½ dozen.....	2.05	12½ dozen.....	4.39
do.....	do.....	2 dozen.....	.70	.....	.....
Carl Fischer, New York...	Oct. 3, 1889	1½ dozen.....	.45	3½ dozen.....	1.15

Detailed statement of articles of clothing, equipage, and materials

U. S. MILITARY PRISON, FORT LEAVENWORTH, KANS.

Articles.	Purchased under contract.			
	Name of contractor.	Date of contract.	Quantity delivered.	Cost.
Belt lacing	B. S. Richards, Leavenworth..	May 10, 1889	64 square feet..	\$12.80
Belts, leather spindle .....	.....	.....	.....	.....
Beltting, round leather	Whitcher & Emery, Boston ..	May 10, 1889	40 feet	4.40
Blocks, foxing	do	do	12	4.56
Brushes:				
Dusting	do	do	6	1.74
Feather	do	do	6	4.37
Round bristle	do	do	2	7.44
Chuck, combination	C. J. Field, Philadelphia	Nov. 26, 1889	1	39.50
Diamond tool	E. W. Crancer, Leavenworth ..	May 10, 1889	1	4.00
Drills	F. A. Miller, Leavenworth	July 10, 1889	6	3.60
Felt covers	G. A. Smith, Philadelphia	June 24, 1889	6	9.00
Grindstone	E. W. Crancer, Leavenworth ..	May 10, 1889	1	5.00
Hacksaw	Whitcher & Emery, Boston ..	do	1	1.85
Hose	do	do	20 feet	4.90
Knives:				
Hcel	do	do	24	4.80
Skiving	Laing & Maginnis, Philadel- phia.	do	12	1.40
Jack, for leveler .....	.....	.....	.....	.....
Oilers, zinc	E. W. Crancer, Leavenworth ..	May 10, 1889	12 .....	.60
Do	do	do	12 .....	.85
Parts for Tripp's skiver	Whitcher & Emery, Boston	do	2	1.74
Parts for McK. & B. heeler	G. A. Smith, Philadelphia	June 24, 1889	35	20.10
Do	J. K. Krieg & Co., New York ..	do	35	20.10
Do .....	.....	.....	.....	.....
Parts for G. & McK. channeler	Geo. A. Smith, Philadelphia	June 24, 1889	30	7.50
Do	J. K. Krieg & Co., New York ..	do	30	7.50
Part No. 16080 .....	.....	.....	.....	.....
Part G. & McK. stitcher	Geo. A. Smith, Philadelphia	June 24, 1889	46	35.58
Do	J. K. Krieg & Co., New York ..	do	45	39.87
Screw wrench	E. W. Crancer, Leavenworth ..	May 10, 1889	1 .....	.37
Size stick	Whitcher & Emery, Boston	do	1	1.96
Stamps, steel	do	Nov. 26, 1889	3	3.60
Stones, oil	do	May 10, 1889	6	4.74
Stove, oil	J. W. Crancer & Co., Leaven- worth.	May 26, 1889	1 .....	.65
Tack holders	G. A. Smith, Philadelphia	June 24, 1889	12	2.40
Wheels, emery	Whitcher & Emery, Boston	May 6, 1889	2	4.76
Buttons:				
Bright	Henry Bruns, Leavenworth	Nov. 21, 1889	3,150	2.73
Rubber	do	do	1,500	7.81
Japanned	Henry Estensan, Leavenworth ..	do	3,000	3.15
Buckles, japanned	do	do	300 .....	.90
Cloth, sheepsgrey	B. B. Wolfe, Leavenworth	do	1,800 yards	751.50
Drilling	do	do	337 yards	26.96
Do	Henry Bruns, Leavenworth	do	338 yards	27.04
Flannel:				
Canton	do	do	1,013 yards	126.63
Gray	B. Y. Pippet & Co., New York ..	do	1,575 yards	519.75
Jeans, lining	Henry Estensan, Leavenworth ..	do	600 yards	69.00
Needles:				
Machine	Henry Bruns, Leavenworth	do	6 dozen	1.50
Millwards	do	do	50 papers	1.88
Padding, canvas	Wm. Small, Leavenworth	do	75 yards	9.00
Tape, cotton	B. B. Wolfe, Leavenworth	do	200 yards	1.00
Thread	Rowland A. Robbins, New York.	do	1,800 spools	53.46
Yarn, woolen	Henry Bruns, Leavenworth	Nov. 21, 1889	113 pounds	100.57
Awls:				
Stabbing	Whitcher & Emery, Boston	May 10, 1889	1 gross .....	.94
Sewing	Laing & Maginnis, Philadel- phia.	do	60 gross	70.80
Closing	do	do	1 gross	1.10
Bristles, sewing	Whitcher & Emery, Boston	do	18 pounds	321.12
Laces, porpoise	Laing & Maginnis, Philadel- phia.	do	60,000 pairs	1,762.50
Leather:				
Calf, glove	Jas. Clark & Co., St. Louis	Feb. 11, 1890	95½ square feet ..	20.59
Do .....	.....	.....	.....	.....

QUARTERMASTER-GENERAL.

815

purchased by the Quartermaster's Department, etc.—Continued.

U. S. MILITARY PRISON, FORT LEAVENWORTH, KANS.

Purchased in open market.				Total	
From whom purchased.	Date of purchase.	Quantity purchased.	Cost.	Quantity.	Cost.
Jas. W. Brooks, Boston	Sept. 30, 1889	2	\$2.10	64 square feet	\$12.86
				2	2.10
				40 feet	4.40
				12	4.50
				6	1.74
				6	4.37
				2	7.44
				1	39.50
				1	4.00
				6	3.60
				6	3.00
				1	5.00
				1	1.85
				20 feet	4.90
				24	4.80
				12	1.40
A. Hobart, Boston	June 10, 1890	1	16.00	1	16.00
				24	1.45
				2	1.74
McK. and B. H. M. Association, Boston.	Sept. 30, 1889	1	11.22	71 parts	51.42
McK. & B. H. M. Ass'n, Boston.	Mar. 8, 1890	2	10.00	60 parts	15.00
				2 parts	10.00
				91 parts	75.45
				1	.37
				1	.96
				3	3.60
				6	4.74
				1	.65
				12	2.40
				2	4.76
				3,150	2.73
				1,500	7.81
				3,000	3.15
				300	.90
				1,800 yards	751.50
				675 yards	54.00
				1,013 yards	126.63
				1,575 yards	519.75
				600 yards	69.00
				6 dozen	1.50
				50 papers	1.88
				75 yards	9.00
				50 pieces	1.00
				1,800 spools	53.46
				113 pounds	100.57
				1 gross	.94
				60 gross	70.80
				1 gross	1.10
				18 pounds	321.12
				60,000 pairs	1,762.50
Edwards & Castle, Philadelphia.	June 30, 1890	97 square feet	19.40	192½ square feet	39.99

B.—Detailed statement of articles of clothing, equipage, and materials

U. S. MILITARY PRISON FORT LEAVENWORTH, KANS.—Continued.

Articles.	Purchased under contract.			
	Name of contractor.	Date of contract.	Quantity delivered.	Cost.
Leather—Continued.				
Calf, light.....	England & Bryan, Philadelphia.	Feb. 11, 1890	37 pounds.....	\$25.53
Calf, heavy.....	do	do	74½ pounds.....	43.21
Calf.....	do	May 26, 1890	116 pounds.....	74.94
Counter.....	do	May 10, 1889	11,800 pounds...	2,891.00
Do.....	American Oak Leather Co., Cincinnati.	do	12,000 pounds...	2,928.00
Grain.....	England & Bryan, Philadelphia.	do	14,000 square feet.	2,436.00
Do.....	do	do	14,000 square feet.	2,477.99
Sole.....	American Oak Leather Co., Cincinnati.	do	42,000 pounds...	12,915.00
Do.....	do	do	43,000 pounds...	13,244.00
Wax upper.....	England & Bryan, Philadelphia.	do	69,937 square feet.	9,861.12
Do.....	do	do	70,000 square feet.	9,730.00
Do.....	do	do	64,000 square feet.	8,768.00
Welt.....	do	do	13,600 pounds...	3,998.40
Nails, Swede.....	Whitcher & Emery, Boston.	do	3,700 pounds...	138.38
Needles:				
G. and McK.....	Laing & Maginnis, Philadelphia.	do	2,500.....	73.75
W. and W.....	do	do	400.....	5.00
Oil:				
Lubricating.....	Whitcher & Emery, Boston.	do	50 gallons.....	28.00
Mineral.....	G. A. Eddy, Leavenworth.	June 24, 1889	150 gallons.....	31.50
Neats foot.....	Whitcher & Emery, Boston.	May 10, 1889	120 gallons.....	75.00
Standard.....				
Rivets, tubular.....	Turner & Ray, Chicago.	Apr. 15, 1890	20,000.....	19.80
Sandpaper.....	E. W. Crancer, Leavenworth.	May 10, 1889	10 reams.....	24.50
Shanks, steel.....				
Studs, lacing.....				
Thread:				
Barbour's.....	Whitcher & Emery, Boston.	May 10, 1889	48 pounds.....	34.20
Metallin.....	do	do	400 pounds.....	460.00
Shoe.....	B. S. Richards, Leavenworth.	do	700 pounds.....	476.00
Twine flax.....	Whitcher & Emery, Boston.	do	50 pounds.....	8.94
Wax:				
Machine.....	do	do	800 pounds.....	11.25
Sewing.....	do	do	10,000 balls.....	34.50
Webbing, gaiter.....	Edwards & Castle, Philadelphia.	Feb. 11, 1890	12 pieces.....	1.60
Wire, brass screw.....				
Glue.....	Whitcher & Emery, Boston.	July 10, 1889	150 pounds.....	22.50
Do.....	do	Nov. 16, 1889	50 pounds.....	7.50
Iron, round.....	C. T. Brace, St. Louis.	July 10, 1889	4,500 pounds.....	108.00
Do.....	F. A. Miller, Leavenworth.	Nov. 26, 1889	1,497 pounds.....	43.41
Lumber, hickory.....	C. T. Brace, St. Louis.	July 10, 1889	24,000 feet.....	1,151.99
Do.....	do	Nov. 26, 1889	8,000 feet.....	380.00
Nuts, iron.....	do	July 10, 1889	180 pounds.....	12.15
Do.....	F. A. Miller, Leavenworth.	Nov. 26, 1889	60 pounds.....	3.90
Nails, furniture.....	C. T. Brace, St. Louis.	July 10, 1889	80,000.....	30.40
Do.....	do	Nov. 26, 1889	27,000.....	10.26
Sandpaper.....				
Do.....	J. W. Crancer, Leavenworth.	Nov. 26, 1889	30 gross.....	3.90
Seats:				
Indurated fiber.....	Geo. S. Winn, Portland, Me.	July 10, 1889	1,000.....	270.00
Do.....	do	Nov. 26, 1889	333.....	99.90
Rawhide.....	Richie, Crawford & Co. Philadelphia.	July 10, 1889	150.....	82.50
Do.....	do	Aug. 22, 1889	25.....	13.75
Do.....	do	May 23, 1890	50.....	30.00
Veneer.....	C. T. Brace, St. Louis.	July 10, 1889	1,000.....	85.00
Do.....	do	Nov. 26, 1889	333.....	28.31
Vulcanized fiber.....	E. H. Conklin, New York.	July 10, 1889	1,000.....	550.00
Do.....	do	Nov. 26, 1889	334.....	183.70
Thongs, rawhide.....	Richie, Crawford & Co., Philadelphia.	July 10, 1889	100.....	15.00

QUARTERMASTER-GENERAL.

817

purchased by the Quartermaster's Department, etc.—Continued.

U. S. MILITARY PRISON, FORT LEAVENWORTH, KANS.—Continued.

Purchased in open market.				Total.	
From whom purchased.	Date of purchase.	Quantity purchased.	Cost.	Quantity.	Cost.
				37 pounds.....	\$25.53
				74½ pounds.....	43.21
				116 pounds.....	74.94
				23,800 pounds.....	5,819.00
				28,000 square feet.....	4,913.99
				85,000 pounds.....	26,159.00
				203,937 square feet.....	28,359.12
				13,600 pounds.....	3,998.40
				3,700 pounds.....	138.38
				2,500.....	73.75
				400.....	5.00
				50 gallons.....	28.00
				150 gallons.....	31.50
				120 gallons.....	75.00
James W. Brooks, Boston	Sept. 30, 1889	2 gallons.....	\$1.95	2 gallons.....	1.95
				20,000.....	19.80
				10 reams.....	24.50
				1 gross.....	3.00
Edwards & Castle, Philadelphia.	June 30, 1890	1 gross.....	3.00		
The Lacing Stud Company, Boston.	Apr. 20, 1889	200,000.....	483.00	200,000.....	483.00
				48 pounds.....	34.20
				400 pounds.....	460.00
				700 pounds.....	476.00
				50 pounds.....	8.94
				300 pounds.....	11.25
				10,000 balls.....	34.50
				12 pieces.....	1.60
James W. Brooks, Boston	Aug. 22, 1889	500 pounds.....	298.40	500 pounds.....	298.40
				200 pounds.....	30.00
				5,997 pounds.....	151.41
				32,000 feet.....	1,531.99
				240 pounds.....	16.05
				107,000.....	40.66
E. W. Crancer, Leavenworth.	July 10, 1889	90 gross.....	13.50	120 gross.....	17.40
				1,333.....	369.90
				225.....	126.25
				1,333.....	113.31
				1,334.....	733.70

B.—Detailed statement of articles of clothing, equipage, and materials

U. S. MILITARY PRISON, FORT LEAVENWORTH, KANS.—Continued.

Articles.	Purchased under contract.			
	Name of contractor.	Date of contract.	Quantity delivered.	Cost.
Thongs, rawhide	Ritchie, Crawford & Co., Philadelphia.	Aug. 22, 1889	75.....	\$11.25
Do	do	May 23, 1890	50.....	10.00
Broomcorn	S. Bienenstok, St. Louis	May 10, 1889	36,000 pounds	1,485.00
Broom handles	do	do	20,000	325.00
Do	do	Nov. 26, 1889	800	13.60
Broom tacks	do	July 24, 1889	1 paper .....	.13
Do	do	Nov. 26, 1889	4 papers .....	.60
Broom twine	Whitcher & Emery, Boston	May 10, 1889	350 pounds	76.12
Do	S. Bienenstok, St. Louis	July 24, 1889	8 pounds	3.20
Broom wire	Whitcher & Emery, Boston	May 10, 1889	1,100 pounds	54.56
Do	S. Bienenstok, St. Louis	July 24, 1889	72 pounds	4.32
Do	M. A. Kelley, Leavenworth	Nov. 26, 1889	60 pounds	3.90
Do	do	do	36 pounds	2.70
Do	S. Bienenstok, St. Louis	do	36 pounds	2.70
Crayons	E. W. Crancer, Leavenworth	May 10, 1889	2 gross .....	.20
Lampblack	Whitcher & Emery, Boston	do	10 pounds	1.90
Lumber, pine	Peter Bubb, Leavenworth	June 24, 1889	40,000 feet	652.00
Do	R. Garrett & Co., Leavenworth	July 10, 1889	15,000 feet	242.25
Do	Peter Bubb, Leavenworth	Nov. 26, 1889	5,000 feet	74.00
Nails:				
Cut	E. W. Crancer, Leavenworth	May 10, 1889	4 kegs	8.80
Do	do	do	13 kegs	30.55
Do	do	do	5 kegs	12.50
Do	F. A. Miller, Leavenworth	July 10, 1889	8 kegs	19.60
Do	do	do	4 kegs	10.20
Do	J. W. Crancer & Co., Leavenworth	Nov. 26, 1889	3 kegs	9.30
Do	do	do	2 kegs	6.50
Wire	F. A. Miller, Leavenworth	do	1 keg	4.15
Do	J. W. Crancer & Co., Leavenworth	do	1 keg	4.15
Wrought	E. W. Crancer, Leavenworth	May 10, 1889	8 kegs	26.00
Do	F. A. Miller, Leavenworth	July 10, 1889	4 kegs	13.20
Screws	E. W. Crancer, Leavenworth	May 10, 1889	114 gross	35.34
Do	do	do	19,620 feet	52.07
Straps, wire box	C. T. Brace, St. Louis	July 10, 1889	329 pounds	17.27
Do	J. W. Crancer & Co., Leavenworth	Nov. 26, 1889	5,000 feet	14.50
Tags, shipping	Whitcher & Emery, Boston	May 10, 1889	5,000	4.40
Do	do	do	3,000	4.14
Turpentine	do	do	10 gallons	7.60
Wax, sealing	do	do	75 pounds	16.40

ST. LOUIS, MO.

Bed springs	Valentine Fath, St. Louis	Sept. 9, 1889	500.....	\$12.50
Iron bolts	Frank Shapleigh, St. Louis	do	500.....	1.95
Screws	do	do	10 gross	1.50
Wire, steel coppered	do	do	252 pounds	9.20

JEFFERSONVILLE, IND.

Sibley tent stovepipe joints	J. H. Welteroth, Williamsport, Pa.	Nov. 4, 1889	1,000.....	\$99.80
Wall tent pins, large	Jas. L. Stites, Milan, Ind	do	10,000	120.00
Shelter tent pins	Geo. B. Carpenter & Co., Chicago	do	10,000	140.00
Iron, round	W. B. Belknap & Co., Louisville	June 3, 1889	750 pounds	22.50

purchased by the Quartermaster's Department, etc.—Continued.

U. S. MILITARY PRISON, FORT LEAVENWORTH, KANS—Continued.

Purchased in open market.				Total.	
From whom purchased.	Date of purchase.	Quantity purchased.	Cost.	Quantity.	Cost.
.....
.....
.....	225	\$36. 25
.....	36,000 pounds.....	1,485. 00
.....
.....	20,800	338. 60
.....
.....	5 papers .....	. 73
.....
.....	358 pounds	79. 32
.....
.....
.....	1,304 pounds	68. 18
.....	2 gross .....	. 20
.....	10 pounds	1. 90
.....
.....
.....
.....	60,000 feet	968. 25
.....
.....
.....
.....
.....	39 kegs	97. 45
.....
.....	2 kegs	8. 30
.....
.....
.....	12 kegs	39. 20
.....	114 gross	35. 34
.....	19,620 feet	52. 97
.....	329 feet	17. 27
.....	5,000 feet	14. 50
.....
.....
.....	8,000	8. 54
.....	10 gallons	7. 60
.....	75 pounds	16. 40

ST. LOUIS, MO.

.....	.....	.....	.....	500	\$12. 50
.....	.....	.....	.....	500	1. 95
.....	.....	.....	.....	10 gross	1. 50
.....	.....	.....	.....	252 pounds	9. 20

JEFFERSONVILLE, IND.

.....	.....	.....	.....	1,000	\$99. 80
.....
.....	.....	.....	.....	10,000	120. 00
.....	.....	.....	.....	10,000	140. 00
.....
.....	.....	.....	.....	750 pounds	22. 50

B.—Detailed statement of articles of clothing, equipage, and materials

SAN FRANCISCO, CAL.

Articles.	Purchased under contract.			
	Name of contractor.	Date of contract.	Quantity delivered.	Cost.
Ammonia				
Axes	G. T. Hawley, San Francisco.	May 15, 1889	500.....	\$310. 00
Do				
Ax helves				
Do				
Beeswax				
Books:				
Pass				
Record				
Ledger				
Boxes:				
Large				
Small				
Brooms	R. W. Simpson, San Francisco.	May 15, 1889	8,400	1,301. 14
Brushes:				
Scrubbing	do.	do	3,600	647. 63
Marking				
Bunk bottoms				
Buckles:				
White	Horstmann Bros. & Co., Philadelphia, Pa.	May 15, 1889	20½ gross.....	18. 96
Yellow	do	do	201½ gross.....	201. 42
Buttons:				
Suspender, metal	do	do	1,120 gross	85. 40
Suspender, bone	do	do	100 gross.....	13. 00
Fly, metal	do	do	720 gross.....	43. 20
Fly, bone	do	do	75 gross.....	8. 25
Coats, privates', large	do	do	420 gross.....	756. 00
Coats, privates', small	do	do	300 gross.....	285. 00
Rubber, large	do	do	340 gross.....	187. 85
Rubber, small	do	do	480 gross.....	211. 20
Chalk, tailors'	J. R. Michael, New York	do	10 boxes.....	11. 00
Cloth:				
Dark blue, a. s.	B. Y. Pipey & Co., New York.	do	2,983½ yards.....	6,623. 91
Dark blue, fine quality	do	do	1,025½ yards.....	2,716. 57
Drilling	T. A. Ashburner, Philadelphia.	do	20,028 yards	1,968. 75
Duck:				
Brown	do	do	29,968½ yards.....	4,264. 56
Bleached	R. A. Robbins, New York	do	3,300 yards.....	517. 77
Unbleached	do	do	9,000 yards.....	1,314. 00
Ether				
Flannel:				
Dark blue, a. s.	San Francisco Pioneer Woolen Factory, San Francisco.	May 15, 1889	22,027½ yards.....	26,157. 35
Dark blue, fine	do	do	129½ yards	199. 10
Do	B. Y. Pipey & Co., New York.	do	2,011½ yard	3,419. 12
Canton	T. A. Ashburner, Philadelphia.	do	40,802½ yards.....	3,883. 45
Shirting	San Francisco Pioneer Woolen Factory, San Francisco	do	20,930½ yards.....	18,157. 10
Blouse lining	B. Y. Pipey & Co., New York.	do	10,064½ yards.....	3,874. 96
Cape lining	do	do	536½ yards	664. 95
Flour				
Grommets	Horstmann Bros. & Co., Philadelphia.	May 15, 1889	20 gross.....	24. 00
Gauntlets, leather	G. H. Farthing, San José, Cal.	Oct. 10, 1889	2,100 pairs	1,837. 50
Do	F. G. Conklin, San Francisco.	Oct. 15, 1889	1,034 pairs	930. 60
Gilling line	J. R. Michael, New York.....	May 15, 1889	120 pounds.....	72. 00
Hooks and eyes:				
Large	Horstmann Bros. & Co., Philadelphia.	do	120 gross.....	55. 20
Small	do	do	64 gross.....	10. 24
Hooks	do	do	6 gross.....	. 72

purchased by the Quartermaster's Department, etc.—Continued.

SAN FRANCISCO, CAL.

Purchased in open market.				Total.	
From whom purchased.	Date of purchase.	Quantity purchased.	Cost.	Quantity.	Cost.
Redington & Co., San Francisco.	Oct. 16, 1889	4 quarts	\$5.60	4 quarts	\$5.60
Hawley Bros. & Co., San Francisco.	Oct. 31, 1889	500	325.00	1,000	635.00
.....do.....	.....do.....	1,000	170.00	.....	.....
Valentine Stortz, New York	Aug. 6, 1889	2,400	412.80	340	582.80
F. J. Bass & Co., San Francisco.	Oct. 16, 1889	100 pounds.....	25.00	100 pounds.....	25.00
H. S. Crocker & Co., San Francisco.	Dec. 17, 1889	50 dozen	42.50	50 dozen	42.50
.....do.....	Oct. 26, 1889	4	42.00	4	42.00
.....do.....	.....do.....	1	20.00	1	20.00
Truckee Lumber Co., San Francisco.	Oct. 16, 1889	290	406.00	290	406.00
.....do.....	.....do.....	278	347.50	278	347.50
.....do.....	.....do.....	.....	.....	8,400	1,301.14
C. A. Klinkner & Co., San Francisco.	Oct. 28, 1889	6 .....	.90	3,600	647.63
W. A. Schrock, San Francisco.	Dec. 17, 1889	100	175.00	6 .....	.90
.....do.....	.....do.....	.....	.....	.....	.....
.....do.....	.....do.....	.....	.....	222 $\frac{1}{2}$ gross	220.38
.....do.....	.....do.....	.....	.....	.....	.....
.....do.....	.....do.....	.....	.....	1,120 gross	85.40
.....do.....	.....do.....	.....	.....	100 gross	13.00
.....do.....	.....do.....	.....	.....	720 gross	43.20
.....do.....	.....do.....	.....	.....	75 gross	8.25
.....do.....	.....do.....	.....	.....	420 gross	756.00
.....do.....	.....do.....	.....	.....	.....	.....
.....do.....	.....do.....	.....	.....	300 gross	285.00
.....do.....	.....do.....	.....	.....	.....	.....
.....do.....	.....do.....	.....	.....	340 gross	187.85
.....do.....	.....do.....	.....	.....	480 gross	211.20
.....do.....	.....do.....	.....	.....	10 boxes	11.00
.....do.....	.....do.....	.....	.....	.....	.....
.....do.....	.....do.....	.....	.....	2,983 $\frac{1}{2}$ yards	6,623.91
.....do.....	.....do.....	.....	.....	1,025 $\frac{1}{2}$ yards	2,716.57
.....do.....	.....do.....	.....	.....	.....	.....
.....do.....	.....do.....	.....	.....	20,028 yards	1,988.75
.....do.....	.....do.....	.....	.....	.....	.....
.....do.....	.....do.....	.....	.....	29,968 $\frac{1}{2}$ yards	4,264.56
.....do.....	.....do.....	.....	.....	3,800 yards	517.77
.....do.....	.....do.....	.....	.....	9,000 yards	1,314.00
.....do.....	.....do.....	.....	.....	2 pounds	1.50
Redington & Co., San Francisco.	Oct. 16, 1889	2 pounds	1.50	.....	.....
.....do.....	.....do.....	.....	.....	22,027 $\frac{1}{2}$ yards	26,157.35
.....do.....	.....do.....	.....	.....	.....	.....
.....do.....	.....do.....	.....	.....	2,140 $\frac{1}{2}$ yards	3,618.22
.....do.....	.....do.....	.....	.....	40,802 $\frac{1}{2}$ yards	3,888.45
.....do.....	.....do.....	.....	.....	20,930 $\frac{1}{2}$ yards	18,157.10
.....do.....	.....do.....	.....	.....	.....	.....
.....do.....	.....do.....	.....	.....	10,064 $\frac{1}{2}$ yards	3,874.96
.....do.....	.....do.....	.....	.....	536 $\frac{1}{2}$ yards	664.95
Hawley Bros. Hardware Co., San Francisco.	Oct. 26, 1889	100 pounds.....	2.50	100 pounds.....	2.50
.....do.....	.....do.....	.....	.....	20 gross	24.00
.....do.....	.....do.....	.....	.....	.....	.....
.....do.....	.....do.....	.....	.....	3,134 pairs	2,768.10
.....do.....	.....do.....	.....	.....	120 pounds.....	72.00
.....do.....	.....do.....	.....	.....	.....	.....
.....do.....	.....do.....	.....	.....	120 gross	55.20
.....do.....	.....do.....	.....	.....	.....	.....
.....do.....	.....do.....	.....	.....	70 gross	10.96

B.—Detailed statement of articles of clothing, equipage, and materials

SAN FRANCISCO, CAL.—Continued.

Articles.	Purchased under contract.			
	Name of contractor.	Date of contract.	Quantity delivered.	Cost.
Hectograph compound ..				
Italian cloth	R. A. Robbins, New York	May 15, 1889	603 yards	\$406.90
Ink pads				
Jeans, corset				
Knives, cutters				
Kersey:				
As	B. Y. Pippey & Co., New York	May 15, 1889	25,034 $\frac{1}{2}$ yards ..	47,065.09
Fine quality	Golden Gate Woolen Manufacturing Co., San Francisco	do	2,161 $\frac{1}{2}$ yards	4,561.55
Lumber				
Marlin				
Muslin:				
36-inch	J. R. Michael, New York	May 15, 1889	7,000 yards	630.00
38-inch	do	do	5,000 yards	500.00
Needles	Horstmann Bros. & Co., Philadelphia	do	10,000	14.00
Oil:				
Sewing machine				
Linseed				
Ocher				
Padding:				
Canvas				
Black	T. A. Ashburner, Philadelphia	May 15, 1889	11,998 $\frac{1}{2}$ yards	1,047.49
Paper, pattern	J. R. Michael, New York	do	442 pounds	57.46
Punches				
Pins, tent:				
Large	Ames & Detrick, San Francisco	May 15, 1889	6,101	274.54
Small	do	do	24,000	720.00
Shelter	do	do	6,426	192.78
Rosin				
Rope				
Stockings, woolen	S. F. Pioneer Woolen Factory, San Francisco	May 15, 1889	81,704 pairs	7,450.44
Do	A. E. Karelson, New York	Oct. 10, 1889	9,999 pairs	2,999.70
Silesia	T. A. Ashburner, Philadelphia	May 15, 1889	7,739 $\frac{1}{2}$ yards	837.41
Shirts, knit, under	Gilbert & Walrath, Little Falls, N. Y.	do	12,672	5,920.00
Stovepipe, Sibley				
Sponge				
Stamps, rubber				
Shovels:				
Long-handle	Hawley Bros. Hardware Co., San Francisco	May 15, 1889	500	390.00
Short-handle	do	do	500	415.00
Silk:				
Sewing, colors	J. R. Michael, New York	do	264 ounces	139.92
Twist	do	do	240 ounces	115.20
Sewing, black	do	do	120 ounces	57.66
Chevron	do	do	65 ounces	31.20
Do	do	do	24 ounces	12.72
Spades				
Soap				
Scrapers, box				
Stencils				
Twine	Ames & Detrick, San Francisco	May 15, 1889	500 pounds	105.00
Thread:				
Linen	J. R. Michael, New York	do	50 pounds	139.00
Do	do	do	130 pounds	119.60
Do	do	do	30 pounds	63.70
Cotton	do	do	630 dozen	321.30
Basting	do	do	120 dozen	21.60

purchased by the Quartermaster's Department, etc.—Continued.

SAN FRANCISCO, CAL.—Continued.

Purchased in open market.				Total.	
From whom purchased.	Date of purchase.	Quantity purchased.	Cost.	Quantity.	Cost.
H. S. Crocker & Co., San Francisco.	Oct. 26, 1889	20 pounds		20 pounds	\$20.00
C. A. Klinkner & Co., San Francisco.	Oct. 26, 1889	5	\$5.00	603 yards	406.90
John Welsh, New York.	.....do.....	5,457½ yards	442.05	5,457½ yards	442.05
Hawley Bros. Hardware Co., San Francisco.	.....do.....	3	13.50	3	13.50
.....	.....	.....	.....	25,034½ yards	47,065.09
.....	.....	.....	.....	2,161½ yards	4,561.55
Truckee Lumber Co., San Francisco.	Dec. 10, 1889	2,000 feet	55.00	2,000 feet	55.00
Hawley Bros. Hardware Co., San Francisco.	Oct. 26, 1889	503 pounds	80.48	503 pounds	80.48
.....	.....	.....	.....	7,000 yards	630.00
.....	.....	.....	.....	5,000 yards	500.00
.....	.....	.....	.....	10,000	14.00
Redington & Co., San Francisco.	Oct. 16, 1889	1 quart .....	.50	1 quart .....	.50
F. J. Bass & Co., San Francisco.	.....do.....	60 gallons	43.50	60 gallons	43.50
Whittier, Fuller & Co., San Francisco.	.....do.....	500 pounds	20.00	500 pounds	20.00
W. P. West, New York	Aug. 6, 1889	3,000 yards	342.00	3,000 yards	342.00
.....	.....	.....	.....	11,998½ yards	1,047.49
.....	.....	.....	.....	442 pounds	57.46
Hawley Bros. Hardware Co., San Francisco.	Feb. 12, 1890	4 .....	.50	4 .....	.50
.....
.....	.....	.....	.....	36,527	1,187.32
F. J. Bass & Co., San Francisco.	Oct. 16, 1889	50 pounds .....	.75	50 pounds .....	.75
Hawley Bros., San Francisco.	Feb. 12, 1890	500 pounds	80.00	500 pounds	80.00
.....
.....	.....	.....	.....	41,703 pairs	10,450.14
.....	.....	.....	.....	7,739½ yards	837.41
.....
.....	.....	.....	.....	12,672	7,920.00
W. W. Montague & Co., San Francisco.	Nov. 14, 1889	600 joints	84.00	600 joints	84.00
Redington & Co., San Francisco.	Mar. 11, 1889	10 pounds	25.00	10 pounds	25.00
C. A. Klinkner & Co., San Francisco.	.....do.....	1 pound	8.00	1 pound	8.00
.....	.....	.....	.....	500	390.00
.....	.....	.....	.....	500	415.00
.....	.....	.....	.....	264 ounces	139.92
.....	.....	.....	.....	240 ounces	115.20
.....	.....	.....	.....	120 ounces	57.60
.....	.....	.....	.....	89 ounces	43.92
Hawley Bros. Hardware Co., San Francisco.	Oct. 31, 1889	50	41.00	50	41.00
.....do.....	Oct. 26, 1889	100 pounds	8.00	100 pounds	8.00
.....do.....	.....do.....	6	4.50	6	4.50
C. A. Klinkner & Co., San Francisco.	.....do.....	5	10.00	5	10.00
.....	.....	.....	.....	500 pounds	105.00
.....
.....	.....	.....	.....	210 pounds	327.30
.....	.....	.....	.....	630 dozen	321.30
.....	.....	.....	.....	120 dozen	21.60

B.—Statement of articles of clothing, equipage, and materials

SAN FRANCISCO, CAL.—Continued.

Articles.	Purchased under contract.			
	Name of contractor.	Date of contract.	Quantity delivered.	Cost.
Tape	Horstmann Bros. & Co., Philadelphia.	do	84 gross	\$50.40
Tickets, clothing .....	.....	.....	.....	.....
Tags, shipping .....	.....	.....	.....	.....
Tape	J. R. Michael, New York	May 15, 1889	960 sheets	57.60
Wadding .....	.....	.....	.....	.....

DIVISION OF THE MISSOURI

Lumber	J. A. Smith, Chamberlain, S. Dak.	Feb. 20, 1890	1,700 yards	} \$33.90
Nails	do	do	20 pounds	
Lumber	A. D. Marriote, Pierre, S. Dak.	May 15, 1890	Lot	} 59.22
Nails	do	do .....	.....
Rope, manilla: Three-eighths inch .....	.....	.....	.....	.....
One-fourth inch .....	.....	.....	.....	.....
Dinner plates .....	.....	.....	.....	.....
Soup plates .....	.....	.....	.....	.....
Meat plates .....	.....	.....	.....	.....
Cups and saucers .....	.....	.....	.....	.....
Dippers .....	.....	.....	.....	.....
Soup ladles .....	.....	.....	.....	.....
Skimmers .....	.....	.....	.....	.....
Tumblers .....	.....	.....	.....	.....
Water pitchers .....	.....	.....	.....	.....
Vegetable dishes .....	.....	.....	.....	.....
Dishpans .....	.....	.....	.....	.....
Basting spoons .....	.....	.....	.....	.....
Tablespoons .....	.....	.....	.....	.....
Teaspoons .....	.....	.....	.....	.....
Table forks .....	.....	.....	.....	.....
Table knives .....	.....	.....	.....	.....
Bread knives .....	.....	.....	.....	.....
Butcher knives .....	.....	.....	.....	.....
Chopping bowls .....	.....	.....	.....	.....
Salt cellars .....	.....	.....	.....	.....
Pepper boxes .....	.....	.....	.....	.....
Sirup pitchers .....	.....	.....	.....	.....
Coffee mills .....	.....	.....	.....	.....
Meat saws .....	.....	.....	.....	.....
Scales and weights .....	.....	.....	.....	.....
Bowls:	.....	.....	.....	.....
Fruit .....	.....	.....	.....	.....
Sugar .....	.....	.....	.....	.....
Pickle dishes .....	.....	.....	.....	.....
Frying pans .....	.....	.....	.....	.....
Meat forks .....	.....	.....	.....	.....
Meat choppers .....	.....	.....	.....	.....
Carving sets .....	.....	.....	.....	.....
Cleavers .....	.....	.....	.....	.....
Gravy boats .....	.....	.....	.....	.....
Mustard pots .....	.....	.....	.....	.....

purchased by the Quartermaster's Department, etc.—Continued.

SAN FRANCISCO, CAL.—Continued.

Purchased in open market.				Total.	
From whom purchased.	Date of purchase.	Quantity purchased.	Cost.	Quantity.	Cost.
				84 gross.....	\$50.40
H. S. Crocker & Co., San Francisco.	Oct. 16, 1889	177,000.....	\$73.00	177,000.....	73.00
..do.....	..do.....	5,000.....	20.00	5 000.....	20.00
..do.....	Mar. 11, 1890	20,000 yards....	130.00	20 000 yards....	130.00
				960 sheets.....	57.60

DIVISION OF THE MISSOURI.

				(1,700 yards.....	} 33.90
				20 pounds.....	
				Lot.....		59.22
James Morton & Son, Omaha, Nebr.	July 20, 1889	62 pounds.....	10.85	62 pounds.....	10.85
..do.....	..do.....	25 pounds.....	3.75	25 pounds.....	3.75
B. C. Clark & Co., Leavenworth, Kans.	Sept. 30, 1889	100.....	6.08	100.....	6.08
..do.....	..do.....	100.....	6.08	100.....	6.08
..do.....	..do.....	10.....	2.80	10.....	2.80
..do.....	..do.....	100.....	11.25	100.....	11.25
J. W. Crancer & Co., Leavenworth, Kans.	..do.....	8.....	2.40	8.....	2.40
B. C. Clark & Co., Leavenworth, Kans.	..do.....	8.....	2.72	8.....	2.72
J. W. Crancer & Co., Leavenworth, Kans.	..do.....	3.....	.24	3.....	.24
J. H. E. Wiegant, Leavenworth, Kans.	..do.....	100.....	4.17	100.....	4.17
B. C. Clark & Co., Leavenworth, Kans.	..do.....	12.....	4.08	12.....	4.08
..do.....	..do.....	40.....	9.20	40.....	9.20
J. W. Crancer & Co., Leavenworth, Kans.	..do.....	5.....	1.75	5.....	1.75
..do.....	..do.....	12.....	.50	12.....	.50
..do.....	..do.....	90.....	39.33	90.....	39.33
..do.....	..do.....	90.....	42.30	90.....	42.30
..do.....	..do.....	90.....	1.50	90.....	1.50
..do.....	..do.....	5.....	1.75	5.....	1.75
..do.....	..do.....	2.....	1.00	2.....	1.00
J. H. E. Wiegant, Leavenworth, Kans.	..do.....	100.....	23.60	100.....	23.60
..do.....	..do.....	18.....	6.00	18.....	6.00
..do.....	..do.....	18.....	.80	1.....	.80
J. W. Crancer & Co., Leavenworth, Kans.	..do.....	1.....	1.15	1.....	1.15
..do.....	..do.....	1.....	2.50	1.....	2.50
B. C. Clark & Co., Leavenworth, Kans.	..do.....	90.....	7.20	90.....	7.20
..do.....	..do.....	10.....	2.40	10.....	2.40
J. H. E. Wiegant, Leavenworth, Kans.	..do.....	12.....	1.43	12.....	1.43
J. W. Crancer & Co., Leavenworth, Kans.	..do.....	8.....	2.00	8.....	2.00
..do.....	..do.....	8.....	.80	8.....	.80
..do.....	..do.....	1.....	6.00	1.....	6.00
..do.....	..do.....	2.....	2.00	2.....	2.00
..do.....	..do.....	1.....	1.00	1.....	1.00
B. C. Clark & Co., Leavenworth, Kans.	..do.....	18.....	2.70	18.....	2.70
J. H. E. Wiegant, Leavenworth, Kans.	..do.....	18.....	2.25	18.....	2.25

REPORT OF THE SECRETARY OF WAR.

B.—Statement of articles of clothing, equipage, and materials

DIVISION OF THE MISSOURI—Continued.

Articles.	Purchased under contract.			
	Name of contractor.	Date of contract.	Quantity delivered.	Cost.
Mustard spoons
Can openers
Graters

DIVISION OF THE ATLANTIC.

Castings for iron bed-stands.
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purchased by the Quartermaster's Department, etc.—Continued.

DIVISION OF THE MISSOURI—Continued.

Purchased in open market.				Total.	
From whom purchased.	Date of purchase.	Quantity purchased.	Cost.	Quantity.	Cost.
J. H. E. Wiegant, Leavenworth, Kans.	Sept. 30, 1889	18.....	\$0.36	18.....	\$0.36
J. W. Crancer & Co., Leavenworth, Kans.	....do	1.....	.15	1.....	.15
B. C. Clark & Co., Leavenworth, Kans.	....do	4.....	.32	4.....	.32
J. W. Crancer & Co., Leavenworth, Kans.	....do	3.....	.15	3.....	.15

DIVISION OF THE ATLANTIC.

Wire Web Bed Co., New Britain, Conn.	Jan. 15, 1890	10 sets.....	8.00	10 sets.....	8.00
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C.—Amount received and remitted by the Quartermaster's Department on account of clothing and equipage, during the fiscal year ending June 30, 1890.

Appropriated by Congress.....	\$1,150,000.00	Remitted for purchase and manufacture of clothing and equipage. Paid on account of Treasury settlement.	\$1,391,071.32
Received from issues of clothing and equipage made to the militia of the States and Territories.	162,663.28		.92
Received from other sources.....	72,680.17	Balance in Treasury and due on contracts not yet complete.	271.21
Total	1,391,343.45	Total	1,391,343.45

D.—Remittances on account of clothing and equipage during the fiscal year ending June 30, 1890.

Division of the Atlantic.....	\$354.00	St. Louis depot.....	\$8,878.00
Department of the Missouri.....	243.96	San Francisco depot.....	220,109.54
Department of Texas.....	35.00	West Point, N. Y.....	3.00
Department of the Platte.....	85.20	Willets Point, N. Y.....	30.00
Department of Dakota.....	1,974.90	U. S. Military Prison, Fort Leavenworth, Kans.....	88,646.20
Department of Arizona.....	1.00	Total.....	1,391,071.32
New York depot.....	50.00		
Philadelphia depot.....	918,881.33		
Jeffersonville depot.....	151,779.19		

E.—Articles of clothing, equipage and materials issued to the militia of the States and Territories under the act of Congress amending section 1661 of the Revised Statutes during the fiscal year ending June 30, 1890, and money value of the same.

States and Territories.	Aigulletes and shoulder knots.	Axes.		Blankets.		Blouses.		Books, Company.	Brassards.	Buttons, coat.	Camp kettles.	Canvas clothing.			
		With helms, No.	Slings.	Wool.	Wool.	Number.	Trimnings, sets.					Coats.	Trousers, pairs.	Mittens, pairs.	
Alabama.....															
Alaska.....															
Arizona.....							126								
Colorado.....															
Connecticut.....						700									
Delaware.....				450	400										
Idaho.....	3					56		1		900					
Illinois.....						1,250									
Indiana.....															
Iowa.....							116								
Kansas.....						250	500				20				
Kentucky.....							50								
Louisiana.....	18			2					12				2	2	2
Maine.....															
Maryland.....															
Michigan.....					550		370								
Minnesota.....															
Mississippi.....							375	80							
Missouri.....	46	22	10	327	484	964	70				84				
Nevada.....							19								
New Hampshire.....							1,200								
New Jersey.....															
North Carolina.....						1									
Ohio.....															
Pennsylvania.....				400											
South Carolina.....							30								
Tennessee.....							631								
Virginia.....						100	50								
West Virginia.....						50									
Wyoming.....							56								
Total.....	67	22	10	1,179	2,535	5,793	150	1	12	900	104	2	2	2	2

E.—Articles of clothing, equipage, and materials issued to the militia of the States and Territories under the act of Congress amending section 1661 of the Revised Statutes during the fiscal year ending June 30, 1890, and money value of the same.

States and Territories.	Chevrons.		Cloth.			Uniform dress coats.		Colors, flags, etc.						
	Cloth, pairs.	Gold lace, pairs.	D. B. yards.	Facing, yards.	Italian, yards.	Number.	Facings, sets.	Markers.	Camp colors.	National colors.	Reg't'l colors.	Color belts and slings.	Garrison flags.	Post flags.
Alabama														1
Alaska														1
Arizona		54												
Colorado														
Connecticut														
Delaware														
Idaho	44	15	35	5		57				1		1		1
Illinois	438													
Indiana	116		775			625								
Iowa	342								8	6		6		2
Kansas	141									2	2	4		
Kentucky	204													1
Louisiana	113								8					
Maine														
Maryland	62	62	631	50								2		
Michigan	4	129												
Minnesota														1
Mississippi	122													
Missouri	280	115	134	3		420		4			1	1		1
Nevada	64	24				189								
New Hampshire														
New Jersey														
North Carolina	136		1,238½		328		657			4				
Ohio														
Pennsylvania														1
South Carolina	102	22	10			436								
Tennessee	137													
Virginia														
West Virginia	62		188	10		280								
Wyoming	9													
Total	2,376	421	2,891½	68	953	1,482	657	4	16	13	3	14	1	8

E.—Articles of clothing, equipage, and materials issued to the militia of the States and Territories under the act of Congress amending section 1661 of the Revised Statutes during the fiscal year ending June 30, 1890, and money value of the same.

States and Territories.	Colors, flags, etc.					Drums.					Flannel.			
	Storm and Rec. flags.	Field hospital flags.	Halliards.	General guides.	Guidons.	Cavalry standard.	Number.	Cases.	Slings.	Sticks, pairs.	Stick carriages.	Fifes.	D. B. blouse, yards.	Blouse lining, yards.
Alabama	1		1											
Alaska			1											
Arizona							2							
Colorado													738	
Connecticut														
Delaware														
Idaho			1				1		2	2			10	10
Illinois														
Indiana														
Iowa		8	2											
Kansas					2									
Kentucky							12					12		
Louisiana	3	6	3	4	6		6	6	6	6	6	6		
Maine														
Maryland													559	455
Michigan														
Minnesota			1											
Mississippi													140	
Missouri							9		2			8	125½	40
Nevada														
New Hampshire														
New Jersey														
North Carolina					1								110½	
Ohio														
Pennsylvania	1													
South Carolina														
Tennessee														
Virginia					2	1								
West Virginia							3					2	10	
Wyoming														
Total	5	14	9	4	11	1	33	6	10	8	6	28	1,692½	505

E.—Articles of clothing, equipage, and materials issued to the militia of the States and Territories under the act of Congress amending section 1661 of the Revised Statutes during the fiscal year ending June 30, 1890, and money value of the same.

States and Territories.	Forage caps.							Berlin gloves, pairs.	Hats (campaign).		Hatchets.			
	Number.	Bugles.	Crossed cannon.	Crossed rifles.	Crossed sabers.	Letters.	Lyres.		Numbers.	Number.	Cords and tassels.	Number.	Helves.	Slings.
Alabama														
Alaska														
Arizona	126			126		126		126	1,008					
Colorado														
Connecticut														
Delaware	100							100						
Idaho	62		70			50	15	50	170					
Illinois	2,750		300					2,000						
Indiana	600		100	600		700		700						
Iowa														
Kansas	138	164				800		500						
Kentucky	350													
Louisiana	98			100	120					4	120	6	6	6
Maine														
Maryland														
Michigan	1,400			2,000		6,600		2,000						
Minnesota														
Mississippi	456		132	316		448		448						
Missouri	1,068	6	39	765		665	80	635			24	24		
Nevada	129			69										
New Hampshire														
New Jersey														
North Carolina	718			677	40	1,354		2,718						
Ohio														
Pennsylvania														
South Carolina	30													
Tennessee	650			340		970		400						
Virginia	50													
West Virginia														
Wyoming	56	2		54		56		56	56					
Total	8,781	172	641	5,047	160	11,769	95	9,733	1,234	4	120	30	30	6

E.—Articles of clothing, equipage, and materials issued to the militia of the States and Territories under the act of Congress amending section 1661 of the Revised Statutes during the fiscal year ending June 30, 1890, and money value of the same.

States and Territories.	Helmets.											Jeans corset, yards.	Kersey, yards.	Leggins, pairs.		
	Cork.	Trimmed.	Untrimmed.	Cords and bands.	Eagles.	Hair plumes and sockets.	Numbers.	Chin straps.	Scrolls and rings, pairs.	Side buttons, pairs.	Spikes.				Top bases.	
Alabama.....																
Alaska.....																
Arizona.....																
Colorado.....																
Connecticut.....																
Delaware.....																
Idaho.....	3	100														450
Illinois.....		44							10							
Indiana.....													310	625		
Iowa.....																
Kansas.....																50
Kentucky.....																
Louisiana.....																
Maine.....																
Maryland.....																
Michigan.....		680													442	
Minnesota.....							2,000									
Mississippi.....	7															110
Missouri.....		546	40	40	40	40										119½
Nevada.....		717							40	40	40	40				
New Hampshire.....				108												
New Jersey.....																
North Carolina.....													1,642	1,476½		
Ohio.....																12,000
Pennsylvania.....																
South Carolina.....	79	174			52		205	20				52	52			
Tennessee.....																
Virginia.....		279														
West Virginia.....																120
Wyoming.....																
Total.....	89	2,520	40	148	92	43	2,245	20	50	40	92	92	1,952	15,927½		500

E.—Articles of clothing, equipage, and materials issued to the militia of the States and Territories under the act of Congress amending section 1661 of the Revised Statutes during the fiscal year ending June 30, 1890, and money value of the same.

States and Territories.	Mess pans.	Music ponches.	Overalls, pairs.	Overcoats.		Pickaxes.		Ponchos.	Shovels.	Spades.	Stable frocks.	Tents.					
				Number.	Patterns.	Number.	Helves.					Common.	Hospital.	Wall.	Poles.		
Alabama.....																45	
Alaska.....																	
Arizona.....																	
Colorado.....																	
Connecticut.....																	
Delaware.....						20	20					10	2			4	
Idaho.....		3		17													
Illinois.....																	
Indiana.....												200	3		40	5	
Iowa.....				1,595													
Kansas.....								700									
Kentucky.....				134												20	
Louisiana.....			2					2			2						
Maine.....				550													
Maryland.....																	
Michigan.....												40	1		54		
Minnesota.....															3		
Mississippi.....																	
Missouri.....	120	40	30	704		10	10	105	14	12	30	150	1		21		
Nevada.....																	
New Hampshire.....																	
New Jersey.....																	
North Carolina.....														75		10	
Ohio.....				4	2												
Pennsylvania.....																	
South Carolina.....																	
Tennessee.....																	
Virginia.....				100													
West Virginia.....																8	
Wyoming.....																	
Total.....	120	43	32	3,104	2	30	30	807	14	12	32	475	7		205	5	

E.—Articles of clothing, equipage and materials issued to the militia of the States and Territories under the act of Congress amending section 1661 of the Revised Statutes during the fiscal year ending June 30, 1890, and money value of the same.

States and Territories.	Tents.		Trousers.				Trumpets.				Cost of—		
	Pins.	Fifes.	Kersey pairs.	Stripes, pairs.	Trimnings, sets.	Linen, pairs.	Number.	Cords and tassels.	Crooks.	Iron pots.	Packing, mate- rial, labor, etc.	Clothing, equi- page, and mate- rials.	Total.
Alabama.....										\$10.81	\$940.33	\$960.14	
Alaska.....										8.21	32.30	35.51	
Arizona.....			126	55			3	2		15.04	1,224.60	1,239.73	
Colorado.....										17.50	2,809.40	2,826.90	
Connecticut.....										47.00	947.00	994.00	
Delaware.....										58.89	940.40	999.29	
Idaho.....			110	34			2	2		17.04	1,701.50	1,718.54	
Illinois.....			1,250	924						93.61	11,430.11	11,523.72	
Indiana.....	2,500			170	500					92.83	6,738.55	6,831.38	
Iowa.....	750							54		124.07	19,484.03	19,608.10	
Kansas.....			128	231						18.82	2,612.75	2,631.57	
Kentucky.....			500	192						71.24	7,216.23	7,287.47	
Louisiana.....			50			1	12	18	6	14.08	592.06	606.14	
Maine.....										38.72	6,528.50	6,567.22	
Maryland.....							8	8		22.08	3,459.88	3,481.96	
Michigan.....			440							149.15	9,771.79	9,920.94	
Minnesota.....										3.43	72.69	76.12	
Mississippi.....			375	122	80					35.20	3,612.58	3,645.78	
Missouri.....			1,038	317	70		28	29	50	378.67	27,830.74	28,209.41	
Nevada.....			189	24						17.00	2,527.45	2,544.45	
New Hampshire.....	10									20.88	4,764.00	4,784.88	
New Jersey.....										3.52	97.00	100.52	
North Carolina.....				717						96.83	8,263.43	8,360.26	
Ohio.....										127.28	22,277.06	22,404.34	
Pennsylvania.....										8.00	464.75	472.75	
South Carolina.....			436	111						48.91	5,527.24	5,576.15	
Tennessee.....			632	169						35.88	4,653.38	4,689.26	
Virginia.....						50				19.06	2,000.50	2,019.56	
West Virginia.....			380	144			2	2		42.39	4,898.34	4,940.73	
Wyoming.....			56	9			2	2		4.89	442.89	447.78	
Total.....	3,250	10	5,710	3,219	650	51	57	118	6	50	1,643.03	168,061.57	169,704.60

F.—Articles of clothing and equipage issued gratuitously to the militia of the District of Columbia under the act of Congress of March 1, 1889, during the fiscal year ending June 30, 1890; also the money value of the property.

Articles.	Quantity.	Value.	Articles.	Quantity.	Value.
Aiguillettes and shoulder knots.....	10	\$10.50	Drum-stick carriages.....	4	\$0.92
Ax helves.....	36	6.48	Fifes.....	4	.68
Bed sacks.....	1,600	944.00	Gauntlets, leather...pairs..	60	60.00
Blankets:			Halliards.....	1	1.36
Rubber.....	600	678.00	Hatchets and helves.....	100	44.00
Wool.....	600	2,526.00	Hatchet helves.....	120	4.80
Blouses.....	822	2,703.39	Helmets:		
Books.....	4	7.40	Cork.....	1,524	1,203.96
Boots.....pairs.....	90	310.50	Untrimmed.....	10	14.00
Brushes, scrubbing.....pairs.....	24	4.08	Helmet cords and bands.....	10	4.80
Caps, forage.....	655	419.20	Helmet eagles.....	10	.40
Caps, forage, bugles.....	20	.40	Helmet plumes.....	10	3.80
Caps, forage, letters.....	1,500	15.00	Helmet plume sockets.....	50	8.00
Caps, forage, numbers.....	1,000	10.00	Helmet side buttons...pairs..	25	.25
Chevrons:			Leggins.....do.....	450	247.50
Cloth.....pairs.....	251	133.98	Mess pans.....	200	50.00
Gold lace.....do.....	21	55.61	Overcoats.....	523	6,206.68
Coats, uniform dress.....	31	249.83	Overalls.....pairs.....	65	37.70
Drums.....	4	25.96	Stable frocks.....	65	46.80
Drum heads:			Stencils.....sets.....	3	3.15
Batter.....	20	11.00	Trousers.....pairs.....	660	2,017.64
Snare.....	20	9.60	Trouser stripes.....do.....	225	36.99
Drum rods.....	24	7.20	Trumpets.....	4	5.72
Drum slings.....	4	2.52	Trumpet cords and tassels..	4	1.84
Drum sticks.....pairs.....	4	.44	Total.....		18,132.08

G.—Articles and value of quartermaster's stores, fuel, forage, straw, etc., issued gratuitously to the militia of the District of Columbia under the act of Congress of March 1, 1839, during the fiscal year ending June 30, 1890.

Articles.	Quantity.	Value.	Articles.	Quantity.	Value.
Hard wood.....cords..	24	\$137.28	Legal cap paper.....reams..	2	\$7.24
Kindling wood.....d6...	3	16.41	Foolscap paper.....do.....	1	3.84
Anthracite coal.....pounds..	10,960	44.90	Note paper.....do.....	3	47.86
Oats.....do.....	9,216	158.40	Envelopes.....do.....	14,000	50.55
Hay.....do.....	10,752	118.27	Inkstands.....do.....	6	.48
Straw.....do.....	26,877	268.77	Rulers.....do.....	3	.24
Mineral oil.....gallons..	12	2.16	Sponges and cups.....do.....	3	.29
Lanterns.....do.....	12	5.88	Hubber bands.....gross..	12	3.78
Escort wagons.....do.....	2	199.00	Letter-copy books.....do.....	2	4.98
Harness:			Erasers.....do.....	6	.74
Ambulance.....D. S.....	2	70.72	Paper fasteners.....boxes..	6	1.11
Cart.....S. S.....	4	63.72	Black ink.....bottles..	12	2.25
Carts.....do.....	4	143.96	Red ink.....do.....	12	1.50
Whips.....do.....	6	4.22	Mucilage.....do.....	2	.63
Axle grease.....cans.....	12	2.85	Blotting paper.....sheets..	50	1.84
Harness oil.....do.....	6	2.97	Oiled paper.....do.....	10	1.75
Nails.....pounds.....	300	5.85	Lead pencils.....do.....	66	2.60
Paulins.....do.....	2	51.44	Penholders.....do.....	24	.44
Dinner plates.....do.....	1,600	117.33	Steel pens.....gross.....	1	1.00
Vegetable dishes.....do.....	200	45.82	Sealing wax.....pound..	2	.09
Pepper boxes.....do.....	200	8.17	Baskets.....do.....	2	1.90
Salt cellars.....do.....	200	8.17	Call bells.....do.....	2	.86
Sugar bowls.....do.....	200	51.67	Paper clips.....do.....	2	.14
Mustard pots.....do.....	200	17.33	Paper cutters.....do.....	4	.36
Pickle dishes.....do.....	200	98.82	Steel erasers.....do.....	4	1.04
Mustard spoons.....do.....	200	2.50	Eyelet machines.....do.....	1	1.66
Water pitchers.....do.....	200	109.67	Letter scale.....do.....	1	3.00
Basting spoons.....do.....	24	1.68	Paper weights.....do.....	4	.80
Skimmers.....do.....	12	.75	Shears.....pairs.....	2	2.70
Meat forks.....do.....	24	2.16	Correspondence cards.....do..	500	1.13
Can-openers.....do.....	12	1.50	Writing tablets.....do.....	50	5.50
Flour sieves.....do.....	12	1.44	Desk baskets.....do.....	2	1.40
Butcher knives.....do.....	12	3.58	Card-board.....sheets..	12	.90
Carving sets.....do.....	12	19.86	Pyramids of pins.....do.....	12	.78
Meat choppers.....do.....	6	41.40	Desk pads.....do.....	3	1.86
Soup ladles.....do.....	48	2.90	Binders.....do.....	6	4.44
Packing.....do.....		61.96	Indelible pencils.....do.....	24	3.60
Iron rakes.....do.....	58	10.00			
Blank-books.....do.....	3	1.79			
Letter paper.....reams..	8	16.56	Total.....do.....		1,995.14

H.—Articles of clothing and equipage issued to Indian prisoners during the fiscal year ending June 30, 1890.

Articles.	Quantity.	Articles.	Quantity.
Trousers:		Suits:	
Canvas.....pairs.....	91	Boys'.....number.....	139
Mounted, o. p.....do.....	24	Boys' duck.....do.....	67
Light, o. p.....do.....	180	Dark blue.....do.....	112
Duck.....do.....	85	Gray.....do.....	32
Suspenders.....do.....	83	White, men's.....do.....	181
Drawers.....do.....	357	Undershirts:	
Assorted.....do.....	886	Men's.....do.....	350
Muslin, girls'.....do.....	38	Women's.....do.....	612
Stockings:		Children's.....do.....	476
Woolen.....do.....	193	Shirt-waists, boys'.....do.....	199
Cotton.....do.....	236	Cotton comforters.....do.....	351
Women's.....do.....	703	Shawls.....do.....	200
Children's.....do.....	697	Overcoats.....do.....	36
Shoes:		Blankets, wool.....do.....	10
Campaign, H. S.....do.....	68	Bed sheets.....do.....	12
Campaign, M. S.....do.....	7	Mattresses.....do.....	6
Barrack.....do.....	48	Mattress covers.....do.....	4
Field.....do.....	223	Pillows.....do.....	13
Women's.....do.....	478	Pillow cases.....do.....	10
Children's.....do.....	248	Pillow sacks.....do.....	24
Infants'.....do.....	15	Mosquito bars.....do.....	94
Post.....do.....	31	Axes.....do.....	24
Hats:		Ax helves.....do.....	166
Campaign, drab.....number.....	28	Hatchets.....do.....	20
Campaign, black.....do.....	104	Pickax helves.....do.....	12
Straw.....do.....	122	Corn brooms.....do.....	303
Felt, boys'.....do.....	60	Needles.....do.....	5,352
Forage caps.....do.....	11	Buttons.....do.....	5,418
Coats:		Bed sacks.....do.....	383
Canvas, fatigue.....do.....	90	Cotton.....do.....	1,636
Uniform, o. p.....do.....	68	Flannel, red.....yards.....	4,745½
Sack, duck.....do.....	83	Calico.....do.....	4,298
Blouses, o. p.....do.....	136	Muslin.....do.....	620

Estimated value \$7,358.10.

I.—Articles of clothing and equipage manufactured at the Military Prison, Fort Leavenworth, Kans., for the Quartermaster's Department during the fiscal year ending June 30, 1890, also cost of materials, labor, etc.

Articles.	Number made.	Material.	Prison labor.	Civilian labor.	Royalty.	Total.
Boots:						
Brass-screwed.....pairs.....	2,056	\$4,250.66	\$325.25	\$124.37	\$6.46	\$4,706.74
Mounted, partly machine-sewed bottoms.....pairs.....	3,579	9,913.68	1,203.50	211.67	110.02	11,438.87
Shoes:						
Campaign, partly machine-sewed bottoms.....pairs.....	31,282	53,724.42	5,063.75	2,066.62	1,005.92	61,860.71
Brass-screwed.....do.....	1,363½	1,895.80	138.75	92.24	8.57	2,230.46
Corn brooms.....number.....	20,916	1,850.95	510.00			2,360.95
Barrack chairs:						
Vulcanized fiber seats.....do.....	1,334	1,337.12	108.41			1,445.53
Indurated fiber seats.....do.....	1,299	939.90	108.33			1,048.23
Perforated veneer seats.....do.....	1,318	706.99	110.26			817.25
Total		74,719.62	7,568.25	2,494.90	1,125.97	85,908.74

Value of scrap leather sold during the fiscal year on account of shoes.....\$637.80

Value of scrap leather sold during the fiscal year on account of boots.....

I.—Articles of clothing and equipage manufactured at the Military Prison, Fort Leavenworth, Kans., etc.—Continued.

Average cost of—	Prison labor.	Material, royalty, and civilian labor.	Total.
Boots:			
Brass-screwed per pair..	\$0. 16	\$2. 13	\$2. 29
Mounted, partly machine-sewed bottoms do..	. 34	2. 86	3. 20
Shoes:			
Campaign, partly machine-sewed bottoms do..	. 16	1. 62	1. 98
Brass-screwed do..	. 10	1. 53	1. 63
Corn brooms each..	. 02	. 09	. 11
Barrack chairs:			
Vulcanized fiber seats do..	. 08	1. 00	1. 08
Undurated fiber seats do..	. 08	. 73	. 81
Perforated veneer seats do..	. 08	. 54	. 62

K.—Articles of clothing and equipage, and money value of the same, issued to the Military Prison at Fort Leavenworth, Kans., during the fiscal year ending June 30, 1890.

Articles.	Quantity.	Price.	Amount.
Boots:			
Brass-screwed pairs..	47	\$2. 21	\$103. 87
Cavalry sewed do..	47	3. 45	162. 15
Shoes:			
Campaign, sewed do..	254	2. 11	535. 94
Campaign, brass-screwed do..	1	2. 48	2. 48
Brass-screwed do..	87	1. 68	146. 16
Field do..	7, 506	1. 03	7 731. 18
Hats, campaign number..	3, 000	. 65	1, 950. 00
Brooms:			
Corn do..	1, 038	. 13	134. 94
Whisk do..	12	. 04	. 48
Total			10, 767. 20

L.—Number and cost of articles of prisoners' clothing manufactured at the U. S. Military Prison, Fort Leavenworth, Kans., during the fiscal year ending June 30, 1890.

Articles.	Number made.	Cost.		
		Of material.	Of labor.	Total.
Coats	282	\$538. 17	\$141. 00	\$679. 17
Trousers pairs..	301	350. 47	150. 50	500. 97
Shirts	467	535. 56	56. 50	592. 06
Drawers pairs..	487	135. 22	48. 50	183. 72
Stockings, wool do..	450	100. 57	22. 25	122. 82
Total		1, 659. 99	418. 75	2, 078. 74

M.—Number and cost of tents purchased under the act of Congress approved March 31, 1890, for use of flood sufferers in the States of Arkansas, Mississippi, and Louisiana, also the disposition of the tents and expenses attending their issue during the fiscal year ending June 30, 1890.

	Number.	Cost.	Amount.
Appropriated			\$25, 000. 00
Purchased and cost	2, 198	\$18, 042. 30	
Issued to governor of—			
Louisiana	275		
Mississippi	415		
Arkansas	60		
	750		
Cost of transportation		1, 992. 93	
Incidental expenses		210. 95	20, 246. 18
Remaining on hand	1, 448		4, 753. 82

9.—*Report of Capt. W. S. Patten, Assistant Quartermaster U. S. Army, of the operations of the reservation branch during the fiscal year ending June 30, 1890.*

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE,
Washington, D. C., September 17, 1890.

GENERAL: I have the honor to submit a report of the operations of the reservation branch of this office for the fiscal year ending June 30, 1890.

To this branch was assigned the duty of collecting, recording, and filing complete title papers of all lands under charge of the War Department, purchased or appropriated for barracks, posts, cantonments, or other military uses, except such as are designed for permanent military fortifications, or for armories, arsenals, and ordnance depots; also collecting and compiling such information in regard to each reservation and station, and of all buildings or structures thereon in the custody of the Quartermaster's Department as might be considered particularly useful or interesting as a permanent record for future reference, and conducting all correspondence and keeping the necessary records in connection therewith. On my assignment to duty in charge of the branch, in December last, other work was assigned thereto, as follows: All matters relating to water-works and water supply, sewers, sewerage, baths, laundries and laundry, and other plumbing sanitation as applied to use of water, plumbing latrines, water-closets, etc., fire protections, reservoirs, and cisterns, military post records, maps, topography, and surveys which had been assigned to the barracks and quarters branch, and lighting and heating, previously assigned to regular supply branch.

At the close of the last fiscal year proceedings in court were pending for the possession of the land purchased at Sault de Ste. Marie, Mich., for a new site for Fort Brady. In pursuance of the act of Congress of July 8, 1886 (General Order 52, Adjutant-General's Office, July 19, 1886), the suit was decided in favor of the Government, payment has been made, and the title papers have been recorded and filed in this office.

The question of the purchase of about 101 acres of land adjoining or near the post of Madison Barracks, N. Y., for a rifle-range and for drill and camping purposes, for which the sum of \$7,000 was appropriated by act of March 2, 1889, Army bill (General Order No. 26, Adjutant-General's Office, March 19, 1889), has not been determined, the papers having recently been returned to this office by the War Department with instructions to hold until called up by the Secretary of War.

On December 17, 1889, the Secretary of War authorized the inviting of proposals for land in Campbell County, Ky., for a rifle-range, in connection with the new post near Newport, payment to be made from a balance on hand of the \$60,000 appropriated by act of March 3, 1887 (General Order No. 26, Adjutant-General's Office, March 22, 1887).

Proposals were invited accordingly and submitted to the Secretary of War, who, on June 6, 1890, directed that an offer of the approximate amount of \$11,950 be made to Carrie M. Taliaferro for about 175 acres of land. The offer was made to and accepted by her and the title papers are now being gathered, preliminary to the completion of the purchase.

The sundry civil bill of October 2, 1888 (General Order No. 79, Adjutant-General's Office, October 12, 1888), appropriated the sum of \$3,000

for the purchase of certain lands adjoining the reservation of Fort Meade, S. Dak., known as the McMillan addition, for the purpose of obtaining a water supply for the post. This purchase has been completed, the deed recorded and filed in this office with the other title papers, and provision has been made for a complete water system.

The act of July 23, 1888 (General Order No. 60, Adjutant-General's Office, August 4, 1888), authorized the Secretary of War to sell the reservation in Nebraska, known as Fort Omaha, and to purchase a new site of not less than 320 nor more than 640 acres within a distance of 10 miles of the limits of the city of Omaha. Under the provisions of this act 502.59 acres have been purchased of Mr. H. T. Clarke, and 43.08 acres acquired by condemnation proceedings against Henry Zucher.

In connection with the purchase of this tract of land Mr. Clarke and wife have executed a deed to the United States, granting right of way for a sewer to the Papillon River across the northwest quarter of section 11, township 13, range 13, in Sarpy County, Nebr.

The act of March 2, 1889, Army bill (General Order No. 26, Adjutant-General's Office, March 19, 1889), appropriated the sum of \$150,000 for the purchase of 225 acres of land on the Hudson River directly south of the reservation of West Point, N. Y., belonging to the estate of Edward V. Kinsley, deceased, or so much thereof as the Secretary of War might deem necessary for the purposes of the Military Academy. The purchase of the 225 acres has been completed, the deeds recorded and filed in this office with the other title papers.

The Army bill of March 2, 1889 (General Order No. 26, Adjutant-General's Office, March 19, 1889), also appropriated \$17,000 for the purchase of sections 47, 53, 55, and 67, in block A 5, of the subdivision of the Houston and Great Northern Railroad Company, as a site for Fort Elliott, Tex. The purchase of this tract of land (2,560 acres) has been completed and the title papers filed in this office. The abandonment of the post has since been authorized by the Secretary of War with the view, it is understood, of transferring the reservation to the Interior Department for disposition under the act of July 5, 1884.

By act approved May 21, 1890 (Public No. 125), the Secretary of War was authorized to sell

all that certain parcel of ground, belonging to the United States, situate in the city of Pittsburgh, Pa., at the north west corner of Penn avenue and Garrison alley, in the Fourth ward of said city, fronting 100 feet on the west side of Penn avenue and extending northwardly, preserving the same width, to low-water line of the Allegheny River, etc.

This property constitutes a portion of what was originally Fort Fayette. By act of Congress approved August 2, 1813, all of the property owned at this place by the United States was authorized to be disposed of by public sale, and all was so disposed of excepting the portion above described.

By act approved June 25, 1890 (Public No. 177), the Duluth and Manitoba Railroad Company was authorized, subject to certain restrictions, to build its road across the Fort Pembina military reservation in North Dakota.

The condition of affairs in regard to military reservations in Texas is unlike that in any other section. The Government owns the sites of Forts Bliss, Clark, Hancock, McIntosh, Ringgold, and San Antonio. At Fort Davis 300 acres are owned and 640, on which the post is situated, are held under lease with John James, dated November 29, 1867, for fifty years, at \$900 per annum. At Del Rio 407.93 acres are owned

by the United States, and 2,391.5 on which most of the buildings are located, are held under lease with John Twohig and the Beauregard heirs, at \$239.15 per annum.

At Fort Elliott 2,560 acres have recently been purchased by the United States and 2,240 acres are leased from the State of Texas for five years from December 31, 1889, at 4 cents per acre per annum, payable yearly in advance. As stated elsewhere this post has since been recommended for abandonment. The site at Eagle Pass, part of old Fort Duncan, containing 62.94 acres, is leased of John Twohig, at \$900 per annum. Mr. Twohig has offered to sell this ground to the United States for \$20,000 and that amount was asked of Congress in the annual estimate for current fiscal year, but as yet no appropriation has been made. The camp at Pena, Colo., section number 400 as shown by the official survey of the State, is leased from year to year of M. Half and brother, at \$600 per annum.

Santa Maria, a subpost of Fort Brown, is leased of L. J. Hynes, at \$150 per annum. Camp Langtry, a subpost of Fort Clark, covering parts of surveys 619, 620 and 621, County of Presidio, is leased from C. Torres, at \$100 per annum. No rent is paid for the camps at Nevill's Springs and at Edinburgh, subposts of Fort Clark and Ringgold, respectively. Fort Brown is still held as it has been since 1846, without the payment of rent or taxes. The sum of \$160,000 was appropriated by act of March 3, 1885 (General Order No. 32, Adjutant-General's Office, March 20, 1885), to enable the Secretary of War to acquire a valid title for the United States to the land, and to pay and extinguish all claims for use and occupancy. The House Committee on Military Affairs subsequently requested the Secretary of War to withhold payment pending an investigation, and the purchase has not been completed. It is understood, however, that suit is now pending in the Court of Claims to compel payment by the War Department.

General orders affecting military reservations have been published during the year as follows:

General Order No. 67, Adjutant-General's Office, July 26, 1889, transfers the reservation of Fort McDermit, Nev., declared by Executive order of October 4, 1870, and modified by Executive order of November 22, 1878, to the Interior Department for disposition under provisions of the act of July 5, 1884.

General Order No. 73, Adjutant-General's Office, September 23, 1889, by authority of the President, dated September 16, 1889, enlarges the wood reservation of Fort Meade, N. Dak., by the addition of 3 square miles.

General Order No. 81, Adjutant-General's Office, November 6, 1889, transfers the reservation of Fort Hays, Kans., declared by the President, September 11, 1868, and reduced by authority of an act of Congress approved June 11, 1884, to the Interior Department for disposition, under the act of July 5, 1884.

General Order No. 9, Adjutant-General's Office, January 20, 1890, by authority of the President, dated November 25, 1889, transfers the reservation of Fort Lyon, Colo., declared by the President, September 1, 1868, to the Interior Department for disposition, under the act of July 5, 1884.

General Order No. 23, Adjutant-General's Office, March 8, 1890, by authority of the President of February 27, 1890, transfers the reservation of Fort Seldon, N. Mex., declared by the President, November 28, 1870, to the Interior Department for disposition under the act of July 5, 1884. This order is modified, however, by General Order No. 44,

Adjutant-General's Office, April 11, 1890, by transferring the reservation to the Interior Department for school purposes, under provisions of act of July 31, 1882.

General Order No. 25, Adjutant-General's Office, March 11, 1890, publishes act of Congress approved March 1, 1890, authorizing the Secretary of War to sell the military reservation known as Fort Bliss, near the city of El Paso, etc., to select and acquire title to not less than 1,000 acres within a distance of 10 miles of the limits of the city of El Paso, and to construct thereon a post to be known as Fort Davis, and appropriates \$150,000 to enable the Secretary of War to comply with foregoing provisions. A board of officers has been appointed by the War Department to select a site, but as yet no definite action has been taken.

General Order No. 39, Adjutant-General's Office, April 2, 1890, by authority of the President of March 13, 1890, further enlarges the reservation of Fort Douglas, Utah, declared by Executive order of September 3, 1867, and enlarged by act approved March 3, 1887.

General Order No. 43, Adjutant-General's Office, April 10, 1890, directs the withdrawal of the troops from the following posts, as soon as it can be done with due regard to economy, to wit: Fort Maginnis, Mont., Fort Bridger, Wyo., Fort Sidney, Nebr., Fort Crawford, Colo., Little Rock Barracks, Ark., Fort McDowell, Ariz., Fort Thomas, Ariz., and Fort Verde, Ariz., and also directs department commanders to report when the posts can be abandoned with a view to their transfer to the Interior Department.

General Order No. 60, Adjutant-General's Office, June 10, 1890, by authority of the President of May 28, 1890, transfers the reservation of Fort Laramie, Wyo., declared by the President June 28, 1869, enlarged by the Executive orders of April 2, 1872, and reduced by act of Congress approved August 14, 1876; also the wood and timber reservation of said Fort Laramie, declared by Executive orders of February 9, 1881, to the Interior Department for disposition under the act of July 5, 1884.

General Order No. 69, Adjutant-General's Office, June 27, 1890, publishes act approved June 13, 1890 (Army bill), appropriating \$16,500 for purchase of land for target ranges at Fort McPherson, Ga.

The Fort Klamath reservation was turned over to the Interior Department by Executive order of May 4, 1886, but at the request of the Secretary of War the Interior Department suspended action looking to the disposal of land and improvements. As the post has now been abandoned it is presumed that disposition thereof will be made as provided in act of July 5, 1884.

Attention is invited to statements A, B, and C, accompanying this report.

A shows the expenditures that have been authorized for water, sewerage, plumbing, etc., chargeable to Army Transportation.

B shows expenditures authorized for lighting, heating, etc., chargeable to the appropriation for Regular Supplies.

C is an alphabetical list of military reservations showing location, size, how occupied, accommodations for officers, men, etc., on June 30, 1890.

Respectfully,

WM. S. PATTEN,

Captain and Assistant Quartermaster U. S. Army.

The QUARTERMASTER-GENERAL, U. S. ARMY.

A.—Expenditures authorized for water, sewerage, plumbing, etc., chargeable to the appropriation for Army transportation for 1889-'90.

Station.	Amount.	Station.	Amount.
<i>Division of the Atlantic.</i>		<i>Department of the Missouri—Cont'd.</i>	
Fort Warren, Mass.....	\$11,524.15	Fort Sill, Ind. T.....	\$382.57
Governor's Island, N. Y. H.....	766.86	Fort Lewis, Colo.....	1,875.98
Fort Monroe, Va.....	11,013.46	Fort Supply, Ind. T.....	1,802.35
Fort Schuyler, N. Y.....	346.05	Total.....	40,011.78
Fort Hamilton, N. Y. H.....	1,753.40	<i>Department of Texas.</i>	
St. Francis Barracks, Fla.....	879.74	San Antonio, Tex.....	1,202.15
Fort Wadsworth, N. Y. H.....	1,429.95	Fort McIntosh, Tex.....	4,697.02
Fort Preble, Me.....	4,707.33	Fort Brown, Tex.....	1,124.52
Madison Barracks, N. Y.....	370.45	Fort Davis, Tex.....	744.93
New post near Newport, Ky.....	15,974.65	Fort Ringgold, Tex.....	1,757.28
Fort Niagara, N. Y.....	2,245.11	Fort Bliss, Tex.....	460.63
Jackson Barracks, La.....	1,359.12	Fort Clark, Tex.....	800.42
Fort Wayne, Mich.....	4,170.98	Fort Hancock, Tex.....	1,220.11
Washington Barracks, D. C.....	749.57	Eagle Pass, Tex.....	40.20
Newport Barracks, Ky.....	21.09	Total.....	12,136.66
Fort McClary, Me.....	4.00	<i>Department of Arizona.</i>	
Fort McPherson, Ga.....	12,893.37	Fort Marey, N. Mex.....	795.17
Fort Trumbull, Conn.....	337.98	Fort Apache, Ariz.....	1,097.02
Mount Vernon Barracks, Ala.....	927.75	Whipple Barracks, Ariz.....	1,502.44
Fort Barranca, Fla.....	575.00	Fort Lowell, Ariz.....	794.21
Fort McHenry, Md.....	170.03	Fort Huachuca, Ariz.....	623.06
Fort Myer, Va.....	2,309.82	San Diego Barracks, Cal.....	78.30
Fort Adams, R. I.....	4,307.42	Fort Verde, Ariz.....	187.73
Fort St. Philip, Fla.....	254.25	Fort Bayard, N. Mex.....	455.89
Plattsburgh Barracks, N. Y.....	207.50	Fort Wingate, N. Mex.....	9,388.25
Fort Mackinac, Mich.....	445.84	Fort Selden, N. Mex.....	2,508.83
Fort Porter, N. Y.....	229.31	Fort Thomas, Ariz.....	499.66
Fort Ontario, N. Y.....	58.78	Total.....	17,930.56
Hot Springs, Ark.....	90.10	<i>Department of California.</i>	
Total.....	80,122.86	Benicia Barracks, Cal.....	375.87
<i>Department of Dakota.</i>		Alcatraz Island, Cal.....	51.20
Fort Assinaboine, Mont.....	145.41	Fort Mason, Cal.....	476.81
Fort Randall, S. Dak.....	7.99	Angel Island, Cal.....	455.10
Fort Pembina, N. Dak.....	1,714.36	Presidio of San Francisco, Cal.....	527.40
Fort Keogh, Mont.....	11,183.61	Fort Gaston, Cal.....	421.50
Fort Buford, S. Dak.....	863.83	Total.....	2,307.88
Fort Meade, S. Dak.....	4,381.47	<i>Department of the Columbia.</i>	
Fort Snelling, Minn.....	15,154.17	Vancouver Barracks, Wash.....	182.20
Fort Custer, Mont.....	1,272.43	Fort Sherman, Idaho.....	1,967.84
Fort Missoula, Mont.....	441.39	Fort Townsend, Wash.....	997.30
Fort Bennett, N. Dak.....	10.10	Fort Walla Walla, Wash.....	5,811.20
Fort Totten, N. Dak.....	56.18	Fort Canby, Wash.....	412.52
Fort Shaw, Mont.....	140.83	Fort Spokane, Wash.....	4,014.66
Fort Sully, S. Dak.....	9,589.06	Boisé Barracks, Idaho.....	3,583.00
Fort Yates, N. Dak.....	244.65	Total.....	16,908.52
Total.....	45,205.48	<i>Independent posts.</i>	
<i>Department of the Platte.</i>		Jefferson Barracks, Mo.....	3,706.29
Fort D. A. Russell, Wyo.....	25,276.38	David's Island, N. Y.....	17,767.94
Fort Niobrara, Nebr.....	819.83	Columbus Barracks, Ohio.....	1,652.80
Fort Douglas, Utah.....	29.05	Schuylkill Arsenal, Philadelphia.....	30.00
Fort Sidney, Nebr.....	26.70	Jeffersonville Depot, Ind.....	450.86
Fort Omaha, Nebr.....	1,253.90	St. Louis Clothing Depot, Mo.....	80.00
Fort Bridger, Wyo.....	421.01	Total.....	23,717.89
Fort Laramie, Wyo.....	15.05	<i>Aggregate.....</i>	
Fort McKinney, Wyo.....	625.00		276,235.70
Fort Robinson, Nebr.....	427.20		
Total.....	28,894.12		
<i>Department of the Missouri.</i>			
Fort Sheridan, Ill.....	5,791.95		
Little Rock Barracks, Ark.....	45.00		
Fort Logan, Colo.....	7,271.80		
Fort Riley, Kans.....	21,276.47		
Fort Reno, Ind. T.....	4,446.82		
Fort Gibson, Ind. T.....	211.20		
Fort Leavenworth, Kans.....	6,407.59		

B.—Expenditures authorized for lighting, heating, etc., chargeable to the appropriation for regular supplies for 1889-'90.

Station.	Amount.	Station.	Amount.
Madison Barracks, N. Y	\$387.37	San Antonio, Tex.....	\$4,402.64
Newport, Ky	5,073.42	Fort Thomas, Ariz.....	118.65
Jackson Barracks, La.....	3.50	Fort Walla Walla, Wash.....	60.00
Fort Porter, N. Y.....	238.95	David's Island, N. Y. H.....	708.00
Fort Monroe, Va.....	968.49	Columbus Barracks, Ohio.....	2,507.20
Fort Snelling, Minn.....	360.00	Jefferson Barracks, Mo.....	8,891.00
St. Paul, Minn.....	23.88	Philadelphia depot, Pa.....	177.24
Fort Yates, S. Dak.....	513.68	New York City.....	650.00
Fort Sheridan, Ill.....	870.00	Chicago, Ill.....	5.00
Fort Riley, Kans.....	11,320.40		
Fort Leavenworth, Kans.....	2,596.10	Total.....	39,875.52

C.—Military reservations showing location, size, how occupied, etc., on June 30, 1890.

A. Lincoln, Fort, N. Dak.—Latitude 46° 47'; longitude 100° 50'. On the Missouri River 6½ miles from Mandan, on Northern Pacific Railroad and 9 miles from Bismarck. Contains 23½ square miles. Present garrison, 2 companies infantry. Accommodations for 11 officers and 210 men. At late ordnance depot, 1 additional set of quarters and barrack accommodations for 17 men. Water supply pumped from Missouri River. Surface drainage. No sewer system. Recommended for abandonment, but suspended until further orders.

Adams, Fort, R. I.—Latitude 41° 28'; longitude 71° 22'. Brenton's Point, 3 miles from Newport. Contains 138½ acres. Present garrison, headquarters and 4 batteries of artillery. Accommodations for 30 officers and 186 men. Five sets casemate's quarters occupied by officers, 1 barrack building and 5 casemates and 5 companies troops. Water supply from Newport City water-works. Sewer system.

Alcatraz Island, Cal.—Latitude 37° 49'; longitude 122° 27'. On San Francisco Bay, 1½ miles northeast from the city of San Francisco. Reservation, the whole island, about 12 acres. Present garrison, 2 batteries artillery. Accommodations for 11 officers and 112 men. Water supply pumped by steam power. Natural drainage.

Angel Island, Cal.—Latitude 37° 48'; longitude 122° 28'. In the Bay of San Francisco, 5 miles northeast from the city. Reservation, the entire island, about 640 acres. Present garrison, headquarters and 5 companies of infantry. Accommodations for 13 officers and 120 men. Water supply from springs, conducted by gravity to reservoirs whence distribution is made to all parts of the post.

Apache, Fort, Ariz.—Latitude 33° 40'; longitude 109° 55'. On White Mountain River, in Apache County, 90 miles from Holbrook, on Atlantic and Pacific Railroad, and 339 miles from Prescott. Reservation, 7,421 acres. Present garrison, headquarters and 5 troops cavalry. Accommodations for 23 officers and 273 men. Water supply pumped from east fork of White River to a reservoir and distributed by pipes. Partial sewer system.

Assiniboine, Fort, Mont.—Latitude 48° 30'; longitude 109° 45'. On Beaver Creek, 1¼ miles from station of same name on St. Paul, Minneapolis, and Manitoba Railroad, and 209 miles from Helena. Reservation about 704,000 acres. Present garrison, 3 troops cavalry and headquarters and 7 companies infantry. Accommodations for 35 officers and 380 men. Water supply from Beaver Creek, forced by steam power into a distributing tank. No sewer system; natural drainage; night soil removed by scavengers.

Barrancas, Fort, Fla.—Latitude 30° 19'; longitude 87° 16'. On north side of Pensacola Harbor, 9 miles southwest of Pensacola. Reservation contains about 2,500 acres. Present garrison, 2 batteries artillery and 1 company infantry. Accommodations for 11 officers and 211 men; 1 barrack building designed for 4 companies. Water supply from well and cisterns very deficient, new system under consideration. No sewer system.

Bayard, Fort, N. Mex.—Latitude 32° 47'; longitude 108° 11'. Nine miles from Silver City, on Silver City, Deming and Pacific Railroad. Reservation, 13 square miles and 520 acres. Present garrison, headquarters, 3 companies infantry and 3 troops cavalry. Accommodations for 19 officers and 305 men. Water supply pumped from springs to reservoir and distributed through iron pipes by gravity. Sewer system.

Benecia Barracks, Cal.—Latitude 38° 2'; longitude 122° 7'. Near Benecia, Cal. Reservation 98.78 acres. Present garrison, 2 companies infantry. Accommodations for 8 officers and 136 men. Water supply from Benecia Water Company; natural drainage.

Bennett, Fort, S. Dak.—Latitude 44° 43'; longitude 100° 39'. On the Missouri River,

7 miles above Fort Sully and 32 miles from Pierre, Dak., on the Chicago, and North-western Railroad. On Indian Reservation. Present garrison, 1 company infantry. Accommodations for 4 officers and 36 men. Water supply hauled from Missouri River by water wagons; no sewer system.

Bidwell, Fort, Cal.—Latitude $41^{\circ} 52'$; longitude $120^{\circ} 6'$. In Surprise Valley, 193 miles from Reno, Nev., on Central Pacific Railroad, 452 miles from San Francisco, and 8 miles from the Oregon line, and same distance from the Nevada line. Reservation, 3,091 acres. Present garrison, 1 company of cavalry. Accommodations for 8 officers and 70 men. Water supply from a mountain stream distributed by gravity. Natural drainage. Post recommended for abandonment.

Bliss, Fort, Tex.—Latitude $31^{\circ} 44'$; longitude $106^{\circ} 29'$. On the Rio Grande, $1\frac{1}{2}$ miles above El Paso, on the Atchison, Topeka and Santa F6 Railroad. Reservation, 134.85 acres. Present garrison headquarters and 2 companies of infantry. Accommodations for 7 officers and 131 men. Water supply from El Paso City water-works. Sewer system.

Boisé Barracks, Idaho.—Latitude $42^{\circ} 32'$; longitude $116^{\circ} 10'$. On the Bois6 River adjoining Bois6 City, and 36 miles from Idaho City. Reservation, 640 acres. Present garrison, 1 troop cavalry and 1 company infantry. Accommodations for 6 officers and 116 men. Water supply from reservoir fed by springs distributed through iron pipes by gravity. Sewer system.

Bowie, Fort, Ariz.—Latitude $32^{\circ} 10'$; longitude $109^{\circ} 23'$. In Apache Pass, 12 miles from Bowie Station on the Southern Pacific Railroad. Reservation, 36 square miles or 23,040 acres. Present garrison, 3 troops cavalry. Accommodations for 8 officers and 133 men. Water supply from Bear Springs pumped by steam power to reservoir and distributed by gravity. Sewer system.

Brady, Fort, Mich.—Latitude $46^{\circ} 30'$; longitude $84^{\circ} 20'$. Within limits of city of Sault de Ste. Marie, on right bank of St. Mary's River. Reservation, $26\frac{1}{2}$ acres. Present garrison, 2 companies of infantry. Accommodations for 7 officers and 50 men. Water supply from Sault de Ste. Marie water-works. Act of July 8, 1886, authorized sale of Fort Brady and appropriated \$120,000 for a new post. Site of 75 acres purchased. Buildings not yet erected.

Bridger, Fort, Wyo.—Latitude $41^{\circ} 18'$; longitude $110^{\circ} 32'$. On Black Fork of Green River, 10 miles from Carter Station on the Union Pacific Railroad, and 137 miles from Ogden, Utah. Reservation, 16 square miles. Present garrison, 5 companies of infantry. Accommodations for 14 officers and 185 men. Water pumped from Black Fork into a distributing tank. Natural drainage. Post recommended for abandonment.

Brown, Fort, Tex.—Latitude $25^{\circ} 53'$; longitude $97^{\circ} 21'$. On the Rio Grande, adjoining the city of Brownville. Reservation, $358\frac{1}{2}$ acres, owned by private parties. Occupied and used by the United States since March, 1846, without payment of rent or taxes. Appropriation for purchase at \$160,000. Payment suspended by authority of resolution of Congress. Suit pending in Court of Claims to compel payment. Present garrison, 2 troops of cavalry and 1 company of infantry. Accommodations for 16 officers and 480 men. Water supply pumped from Rio Grande into distributing tanks. No sewer system. Open drains.

Buford, Fort, N. Dak.—Latitude $47^{\circ} 59'$; longitude $103^{\circ} 58'$. On the Missouri River, 2 miles below the mouth of the Yellowstone, on the line of the St. Paul, Minneapolis and Manitoba Railroad, 665 miles from St. Paul. Reservation, about 506,042 acres. Present garrison, 1 troop of cavalry and headquarters, and 3 companies of infantry. Accommodations for 21 officers and 227 men. Water supply pumped from the Missouri River into an elevated tank and distributed by iron pipes. Partial sewer system.

Canby, Fort, Wash.—Latitude $46^{\circ} 17'$; longitude $124^{\circ} 3'$. At the mouth of the Columbia River, on the north bank, 14 miles from Astoria, 7 miles from Fort Stevens, Oregon, 112 miles from Portland, Oregon, and 130 miles from Fort Vancouver. Reservation, 588.2 acres. Present garrison, 2 batteries of artillery. Accommodations for 7 officers and 62 men. Water supply from springs pumped to reservoir and distributed by gravity. Sewer system.

Carroll, Fort, Md.—Latitude $39^{\circ} 15'$; longitude $76^{\circ} 35'$. Six and one-half miles from Baltimore. Reservation, 4 acres. Not garrisoned. In charge of ordnance sergeant.

Caswell, Fort, N. C.—Latitude 34° ; longitude $78^{\circ} 1'$. Oak Island, North Carolina, 2 miles from Southport and 24 miles from Wilmington. Reservation, about 2,325 acres. Not garrisoned. In charge of ordnance sergeant.

Clark, Fort, Tex.—Latitude $29^{\circ} 17'$; longitude $100^{\circ} 25'$. On Las Moras Creek, adjoining the town of Brockettville, 9 miles from Spofford Junction on Galveston, Harrisburgh and San Antonio Railroad, and 143 miles from San Antonio. Reservation, 3,963.2 acres. Present garrison, 2 troops cavalry, headquarters, and 10 companies infantry. Accommodations for 34 officers and 505 men. Water supply from Las Moras Springs pumped into tanks and distributed by iron pipes. Partial sewer system.

Clark's Point, Mass..—Latitude $41^{\circ} 35'$; longitude $90^{\circ} 54'$. Four miles from New Bedford. Reservation, 60 acres. Not garrisoned. In charge of ordnance sergeant.

Clinch, Fort, Fla..—Latitude $30^{\circ} 41'$; longitude $81^{\circ} 28'$. On Amelia Island, Florida, 3 miles from Fernandina. Reservation, 400 acres; not garrisoned. In charge ordnance sergeant.

Columbus Barracks, Ohio.—Latitude $39^{\circ} 57'$; longitude $82^{\circ} 59'$. Reservation, 77 acres, 3 roads, 8 perches. Recruiting depot. Accommodations for 15 officers and 775 men. Water supply, Columbus City water-works. Sewer system.

Columbus, Fort, N. Y. H. (Governor's Island).—Latitude $40^{\circ} 42'$; longitude $74^{\circ} 9'$. At junction of North and East Rivers, 1,066 yards from city of New York. Contains about $65\frac{1}{2}$ acres. Present garrison, 3 batteries of artillery. Fort Columbus will accommodate 9 officers and 3 small companies. Governor's Island (Headquarters Division of Atlantic) has accommodations for 18 officers. Water supply from Brooklyn City water-works. Sewer system.

Constitution, Fort, N. H.—Latitude $43^{\circ} 4'$; longitude $70^{\circ} 49'$. On Great Island, New Hampshire, 3 miles from Portsmouth. Reservation $3\frac{1}{2}$ acres. Not garrisoned.

Crawford, Fort Colo.—Latitude $38^{\circ} 23'$; longitude $107^{\circ} 50'$. On the Uncompahgre River, near Uncompahgre Station, on the Denver and Rio Grande Railroad, 8 miles from Montrose and 390 miles from Salt Lake City. Reservation 8.55 square miles. Present garrison, 2 companies of infantry. Accommodations for 8 officers and 112 men. Water supply pumped from a well to tanks and hauled a mile in water-wagons. Surface drainage. Post recommended for abandonment.

Cummings, Fort, N. Mex.—Latitude $32^{\circ} 27'$; longitude $107^{\circ} 35'$. Situated in Grant County, N. Mex., 5 miles from Florida, on Atchinson, Topeka and Santa Fé Railroad. Reservation, 36 square miles. Not garrisoned.

Custer, Fort, Mont.—Latitude $45^{\circ} 44'$; longitude $107^{\circ} 31'$. On the Big Horn River, 32 miles from Custer Station, on the Northern Pacific Railroad. Reservation, 36 square miles. Custer battle-field 1 square mile. Present garrison, headquarters 5 troops of cavalry and 2 companies infantry. Accommodations for 22 officers and 412 men. Water pumped from Little Big Horn River by steam power to an elevated tank and distributed by a system of iron pipes. Natural drainage. Partial sewer system.

D. A. Russell, Fort, Wyo.—Latitude $41^{\circ} 8'$; longitude $104^{\circ} 50'$. On Crow Creek, 3 miles west of Cheyenne. Post reservation, 4,512 acres. Hay reserve, 2,540.64 acres. Present garrison, headquarters and 8 companies infantry. Accommodations for 33 officers and 384 men. Water pumped from wells. Act approved March 2, 1889, appropriated \$94,500 for a new water system, now under construction. Partial sewer system.

David's Island, N. Y.—Latitude $40^{\circ} 53'$; longitude $73^{\circ} 48'$. At the southwestern extremity of Long Island Sound, $1\frac{1}{2}$ miles from New Rochelle, Westchester County, N. Y., 22 miles from New York City. Reservation, the entire Island, about $86\frac{1}{2}$ acres. Recruiting depot. Accommodations for 11 officers and 634 men. Water supply from New Rochelle water-works. System of underground drains.

Davis, Fort, Tex.—Latitude $30^{\circ} 36'$; longitude $103^{\circ} 36'$. In Jeff Davis County, Tex., in a pass of the Apache Mountains, 22 miles from Marfa, on the Galveston, Harrisburgh and San Antonio Railroad. Reservation, 300 acres, owned by the United States; 640 acres leased. Present garrison, 6 companies of infantry. Accommodations for 19 officers and 296 men. Water pumped from Limpia Creek to tanks and distributed through a system of iron pipes. Sewer system.

Delaware, Fort, Del.—Latitude $39^{\circ} 35'$; longitude $76^{\circ} 34'$. On Pea Patch Island, Delaware, $1\frac{1}{2}$ miles from Delaware City and 42 miles from Philadelphia. Reservation about 90 acres. Not garrisoned. In charge of ordnance sergeant.

Del Rio, Camp, Tex.—Latitude $29^{\circ} 22'$; longitude $100^{\circ} 46'$. On Galveston, Harrisburgh and San Antonio Railroad, 1 mile from the station. Reservation, 407.93 acres, owned by the United States; 2,391 leased. Not garrisoned. Accommodations for 4 officers and 40 men. (Estimated.)

Douglas, Fort, Utah.—Latitude $40^{\circ} 46'$; longitude $111^{\circ} 56'$. East of and overlooking Salt Lake City. Reservation, 4 square miles, less 151 acres surrendered by act of Congress. Present garrison, 1 battery of artillery and headquarters and 7 companies of infantry. Accommodations for 27 officers and 294 men. Water supply piped by gravity to reservoir at post and distributed through iron pipes. Sewer system.

Ducheme, Fort, Utah.—Latitude $40^{\circ} 16'$; longitude $109^{\circ} 52'$. On the Uintah River, 86 miles from Price Station, on the Denver and Rio Grande Railroad. Reservation, provisional, 6 square miles, within the limits of the Uintah Indian Reservation. Present garrison, 2 troops cavalry and 4 companies infantry. Accommodations for 19 officers and 270 men. Plans and estimates for water and sewer systems have been submitted to this office. Water supplied by water-wagon.

Dutch Island, R. I.—Latitude $41^{\circ} 30'$; longitude $71^{\circ} 24'$. Five miles from Newport. Reservation, 75 acres. Not garrisoned.

Elliott, Fort, Tex.—Latitude $35^{\circ} 31'$; longitude $100^{\circ} 27'$. In the Pan Handle of

Texas, 19 miles from Miami, on the Southern Kansas Railroad. Reservation owned by the United States 2,560 acres, and 2,240 acres leased from State of Texas. Present garrison, 2 troops of cavalry and 1 company of infantry. Estimated capacity of post 13 officers and 120 men. Recommended for abandonment.

Eagle Pass, Tex.—Latitude $28^{\circ} 42'$; longitude $100^{\circ} 30'$. In Maverick County, part of old Fort Duncan Reservation, 62.94 acres, leased. Present garrison, 1 troop of cavalry. Accommodations for 8 officers and 40 men. (Estimated.)

Finn's Point, N. J.—Latitude $39^{\circ} 32'$; longitude $75^{\circ} 45'$. On the Delaware River, 7 miles from Salem, N. J. Reservation, 104.35 acres. Not garrisoned.

Foots, Fort, Md.—Latitude $38^{\circ} 48'$; longitude $77^{\circ} 41'$. On the Potomac River, 9 miles from Washington. Reservation, about $66\frac{1}{2}$ acres. Not garrisoned. In charge of ordnance sergeant.

Gaines, Fort, Ala.—Latitude $30^{\circ} 15'$; longitude $88^{\circ} 4'$. On Dauphin Island, Alabama, 30 miles from Mobile. Retervation about 983.9 acres. Not garrisoned. In charge of ordnance sergeant.

Gaston, Fort, Cal.—Latitude $41^{\circ} 4'$; longitude $123^{\circ} 37'$. In Hoopa Valley, Humboldt County, 40 miles from Arcata and 324 miles from San Francisco. Reservation, $451\frac{1}{2}$ acres. Present garrison, 1 company of infantry. Accommodations for 4 officers and 38 men. Water supply from a mountain stream by iron pipes, distributed by gravity. Natural drainage. Post recommended for abandonment.

Gibson, Fort, Ind. T.—Latitude $25^{\circ} 48'$; longitude $95^{\circ} 15'$. On the east branch of Grand River, adjoining the town of Fort Gibson and 1 mile from station of the Kansas and Arkansas Valley Railroad. Reservation, 5,541 acres. Present garrison, 1 company of infantry. Accommodations for 7 officers and 50 men. Water supply hauled in water-wagons from Grand River. Cisterns at post. No sewer system, open drains.

Goose Island, Wash.—Latitude $48^{\circ} 31'$; longitude $122^{\circ} 58'$. In the Strait of San Juan de Fuca.

Gorges, Fort, Me.—Latitude $43^{\circ} 39'$; longitude $70^{\circ} 13'$. Hog Island, Portland Harbor, Maine, 2 miles from Portland. Reservation about $1\frac{1}{2}$ acres. Not garrisoned. In charge of ordnance sergeant.

Grant, Fort, Ariz.—Latitude $32^{\circ} 37'$, longitude $109^{\circ} 45'$. In Pima County, 27 miles from Wilcox, on the Southern Pacific Railroad. Reservation, 42,341 acres. Present garrison, 3 troops of cavalry and 4 companies of infantry. Accommodations for 17 officers and 284 men. Water supply piped from reservoir fed by streams. Sewer system.

Griswold, Fort, Conn.—Latitude $41^{\circ} 22'$; longitude $81^{\circ} 8'$. Groton Heights, 1 mile from New London. Reservation, 14 acres. Not garrisoned. In charge of ordnance sergeant.

Hamilton, Fort, N. Y.—Latitude $40^{\circ} 37'$; longitude $74^{\circ} 1'$. On shore of Long Island, $5\frac{1}{2}$ miles south of New York City, commanding the Narrows. Reservation, 98 acres. Present garrison, headquarters and 4 companies artillery. Accommodations for 19 officers and 221 men. Two officers and 2 batteries and band quartered in case-mates. Water supply from Brooklyn City water-works. Sewer system.

Hancock, Fort, Tex.—Latitude $31^{\circ} 20'$; longitude $105^{\circ} 55'$. Situated on the Rio Grande, 54 miles southeast of El Paso and $1\frac{1}{2}$ miles from Hancock Station, on the Southern and Texas Pacific Railroad. Reservation, 469.2 acres. Present garrison, 1 company of infantry. Accommodations for 4 officers and 52 men. Water supply pumped from a well into settling tanks and distributed by iron pipes. Tile drains leading to cesspools; no other sewerage.

Hot Springs, Ark.—Latitude $34^{\circ} 31'$; longitude 93° . Reserved by the President November 17, 1880. Area, 6,765 acres, being square or block No. 94 in subdivision of Hot Springs.

Huachuca, Fort, Ariz.—Latitude $31^{\circ} 33'$; longitude $110^{\circ} 16'$. In Cochise County, 7 miles from Huachuca Siding, on the New Mexico and Arizona Railroad. Reservation, 70 square miles. Present garrison, 4 troops cavalry and 2 companies infantry. Accommodations for 16 officers and 170 men. Water supply piped from springs 3 miles distant to distributing reservoirs. Sewer system.

Independence, Fort, Mass.—Latitude $42^{\circ} 21'$; longitude 71° . On Castle Island, Boston Harbor, 3 miles from Boston. Reservation, 12 acres. Not garrisoned.

Jackson Barracks, La.—Latitude $29^{\circ} 57'$; longitude 90° . On the east bank of the Mississippi River, 3 miles below the center of the city of New Orleans. Reservation, 87.87 acres. Present garrison, 1 company of infantry and 1 of artillery. Accommodations for 12 officers and 96 men. Four barracks buildings accommodate 24 men each. Water supply pumped from the Mississippi River. Surface drainage by brick-lined drains.

Jackson, Fort, La.—Latitude $29^{\circ} 21'$, longitude $89^{\circ} 26'$. Seventy-three miles from New Orleans. Reservation, 740.97 acres. Not garrisoned.

Jefferson Barracks, Mo.—Latitude $38^{\circ} 28'$; longitude $90^{\circ} 17'$. In South St. Louis, on the Mississippi River. Reservation, 1,379.06 acres, with 118 15 acres in adverse

possession by different parties. Recruiting depot. Accommodations for 11 officers and 440 men. Water supply from St. Louis water-works. Sewer system.

Jefferson, Fort, Fla.—Latitude $24^{\circ} 33'$; longitude $82^{\circ} 52'$. Garden Key, 71 miles from Key West. Reservation, 5 acres. Not garrisoned. In charge of ordnance sergeant.

Johnston, Fort, N. C.—Latitude 34° ; longitude $78^{\circ} 5'$. Twenty-six miles from Wilmington. Reservation, 43,560 square feet. Not garrisoned.

Keogh, Fort, Mont.—Latitude $46^{\circ} 23'$; longitude $105^{\circ} 57'$. On the Northern Pacific Railroad. Reservation about 90 square miles. Present garrison, 3 troops cavalry and headquarters and 7 companies infantry. Accommodations for 27 officers and 280 men. Water supply pumped from a well near the Yellowstone River and distributed through iron pipes by direct pressure. Partial sewer system.

Key, West Barracks, Fla.—Latitude $24^{\circ} 33'$; longitude $81^{\circ} 48'$. Reservation, 22.79 acres. Not garrisoned. In charge of ordnance sergeant.

Knox, Fort, Me.—Latitude $44^{\circ} 34'$; longitude $68^{\circ} 48'$. In Hancock County, $\frac{1}{2}$ mile from Bucksport. Reservation, 150 acres. Not garrisoned. In charge of ordnance sergeant.

Lafayette, Fort, N. Y. H.—Latitude $40^{\circ} 37'$; longitude $74^{\circ} 2'$. Six miles from Brooklyn. Reservation, about 2 acres. Not garrisoned.

Leavenworth, Fort, Kans.—Latitude $39^{\circ} 21'$; longitude $94^{\circ} 55'$. On the Missouri River, above and adjoining Leavenworth City. Post reservation about 5,960 acres; timber reservation across the river of about 939 acres. Present garrison, 1 battery of artillery, 4 troops of cavalry, headquarters and 5 companies of infantry. Accommodations for 75 officers and 572 men. Water supply, Fort Leavenworth Water Company.

Lewis, Fort, Colo.—Latitude $37^{\circ} 1'$; longitude $108^{\circ} 1'$. On Rio de la Plata River, in La Plata County, 12 miles west of Durango, on the Denver and Rio Grande Railroad. Reservation, 47.4 square miles. Present garrison, 2 troops cavalry and 3 companies infantry. Accommodations for 21 officers and 482 men. Water supply raised from La Plata River by steam pump to reservoir and distributed by iron pipes. Surface drainage, except partial underground sewer system for hospital.

Little Rock Barracks, Ark.—Latitude $34^{\circ} 43'$; longitude $92^{\circ} 10'$. Within the limits of city of Little Rock. Reservation, 36.01 acres. Present garrison 2 companies of infantry. Accommodations for 9 officers and 120 men. Water supply from city water-works. Sewer system. Post recommended for abandonment.

Livingston, Fort, La.—Latitude $29^{\circ} 15'$; longitude 90° . On Grand Terre Island, 95 miles from New Orleans. Reservation, 610 acres. Not garrisoned. In charge of ordnance sergeant.

Logan, Fort, Colo.—Latitude $39^{\circ} 40'$; longitude $105^{\circ} 1'$. On Bear Creek, $7\frac{1}{2}$ miles south of Denver. Reservation, 640 acres. Present garrison, headquarters and 6 companies of infantry. Accommodations for 24 officers and 348 men (when all buildings under construction are completed). Water supply pumped from an artesian well to a reservoir and distributed through iron pipes. Sewer system.

Lowell, Fort, Ariz.—Latitude $32^{\circ} 17'$; longitude $110^{\circ} 48'$. On Rillitto Creek, 7 miles from Tucson on Southern Pacific Railroad. Reservation, 51,631.36 acres. Present garrison, headquarters and 3 troops of cavalry. Accommodations for 8 officers and 102 men. One barrack building used as post canteen; if used as quarters will accommodate 12 men. Water raised by steam-pump from well to a distributing reservoir. Sewer system.

McPherson, Fort, Ga.—Latitude $33^{\circ} 48'$; longitude $84^{\circ} 31'$. Situated south of and 4 miles from the center of the city of Atlanta. Reservation, 236.41 acres. Present garrison, headquarters and 4 batteries artillery. Accommodations for 14 officers and 194 men; additional quarters for officers and men under construction. Water supply pumped from artesian well to elevated tank and distributed by system of iron pipes. New well being sunk to increase supply. Sewer system.

Maclinac, Fort, Mich.—Latitude $45^{\circ} 51'$; longitude $84^{\circ} 41'$. On Mackinac Island in the Straits of Mackinac, overlooking the village of Mackinac. Military reservation proper, 103.41 acres. National park under the immediate control of the military authorities, 821 acres. Present garrison, 2 companies infantry. Accommodations for 7 officers and 134 men. Water supply pumped from springs to reservoir and distributed by iron pipes. Sewer system.

Macomb, Fort, La.—Latitude $30^{\circ} 5'$; longitude $89^{\circ} 51'$. One and one-half miles from Chef Mentuer. Reservation, 1,364.71 acres. Not garrisoned. In charge of ordnance sergeant.

Macon, Fort, N. C.—Latitude $30^{\circ} 41'$; longitude $76^{\circ} 40'$. Two miles from Morehead City. Reservation, $1\frac{1}{2}$ square miles. Not garrisoned. In charge of ordnance sergeant.

Madison Barracks, N. Y.—Latitude $43^{\circ} 57'$; longitude $76^{\circ} 15'$. On the south shore of Black River Bay, about 10 miles from Lake Ontario, at the town of Sackett's Harbor. Reservation, $39\frac{1}{2}$ acres. Present garrison, headquarters and 5 companies

infantry. Accommodations for 18 officers and 230 men; 2 barrack buildings. Water supply pumped from the bay. Sewer system.

Maginnis, Fort, Mont.—Latitude 47° 1'; longitude 109° 10'. On Ford's Creek, 90 miles from Big Sandy Station, on the Northern Pacific Railroad, and 53 miles from Rocky Point steamboat landing on Missouri River. Reservation, 59 square miles. Present garrison, 1 troop cavalry. Accommodations for 13 officers and 184 men. One barrack building in use for post canteen; two barrack buildings used to quarter troops. Water supplied by wells and water-wagon. Surface drainage. Post recommended for abandonment.

Marcy, Fort, N. Mex.—Latitude 35° 41'; longitude 105° 57'. Situated in the town of Santa Fé. Reservation about 17½ acres. Present garrison, headquarters and 2 companies infantry. Accommodations for 9 officers and 123 men. Water supply from Santa Fé Water and Improvement Company. Partial sewer system.

Marion, Fort, Fla.—Latitude 29° 53'; longitude 81° 17'. Situated in the town of St. Augustine, Fla. Reservation about 22½ acres. Not garrisoned.

Mason, Fort, Cal.—Latitude 37° 1'; longitude 122° 20'. At Point San José, or Black Point, on San Francisco Bay, within the limits of the city of San Francisco. Reservation, 55½ acres. Present garrison, 1 company artillery. Accommodations for 6 officers and 54 men. Water supply from the Spring Valley Water Company. Sewer system.

McClary, Fort, Me.—Latitude 43° 5'; longitude 70° 45'. On Kittery Point, Maine, 4½ miles from Portsmouth, N. H. Reservation, 15 acres. Not garrisoned. In charge of ordnance sergeant.

McDowell, Fort, Ariz.—Latitude 33° 40'; longitude 111° 40'. On the Rio Verde River, in Maricopa County, 32 miles from Phoenix, on Missouri Pacific Railroad. Reservation, 24,750 acres. Troops withdrawn. Accommodations for 9 officers and 120 men. Post recommended for abandonment.

McHenry, Fort, Md.—Latitude 30° 15'; longitude 76° 35'. On Whetstone Point, in the city of Baltimore. Reservation, 34½ acres. Present garrison, 3 batteries of artillery. Accommodations for 13 officers and 125 men; 3 sets of quarters within and 10 sets without the fort; 1 additional building could be fitted up as quarters; 1 additional building could be fitted up as barracks. Water supply from Baltimore City water-works. Sewer system.

McIntosh, Fort, Tex.—Latitude 27° 30'; longitude 99° 29'. Will County, on the Rio Grande, 1½ miles from Lareda. Reservation about 208 acres. Present garrison, 1 troop of cavalry and 2 companies of infantry. Accommodations for 10 officers and 186 men. Water pumped from well on river bank to an elevated tank and distributed through iron pipes. Surface drainage.

McKinney, Fort, Wyo.—Latitude 44° 23'; longitude 106° 46'. On Clear Fork of Powder River, at base of Big Horn Mountains, 148 miles from Douglas City, on Fremont, Elkhorn and Missouri Valley Railroad. Reservation, 39 square miles. Present garrison, 1 company infantry and 2 companies cavalry. Accommodations for 20 officers 378 and men. Water pumped into a tank and distributed by pipes. Surface drainage. Post recommended for abandonment.

Meade, Fort, S. Dak.—Latitude 44° 25'; longitude 103° 28'. In Meade County, 2½ miles from Sturgis, on the Fremont, Elkhorn and Missouri Valley Railroad. Post reservation about 12½ square miles. Wood and timber reservation of 27,293 acres. Small addition to reservation purchased in 1889 for increasing water supply. Present garrison, headquarters and 6 troops cavalry and 4 companies infantry. Accommodations for 24 officers and 407 men. Water pumped from Bear Butte Creek to a reservoir and distributed by iron pipes. Surface drainage.

Mifflin, Fort, Pa.—Latitude 39° 53'; longitude 75° 13'. On Mud Island, Delaware River, 3 miles from Philadelphia. Reservation about 317 acres. Not garrisoned. In charge of ordnance sergeant.

Missoula, Fort, Mont.—Latitude 46° 50'; longitude 114° 50'. On Bitter Root River, 4 miles from Missoula, on the Northern Pacific Railroad. Reservation, 640 acres and 560 acres not reserved, held by military occupancy. Present garrison, headquarters and 4 companies infantry. Accommodations for 13 officers and 171 men. Water supply pumped from Bitter Root River and distributed through pipes by direct pressure or from a tank. Surface drainage.

Mojave, Fort, Ariz.—Latitude 35° 2'; longitude 114° 36'. On the Colorado River, 25 miles from "The Needles." On the Atlantic and Pacific Railroad. Reservation, 5,582½ acres. Troops withdrawn. Accommodations for 4 officers and 41 men. Water pumped from river by steam-power and distributed by pipes. Surface drainage.

Monroe, Fort, Va.—Latitude 37°; longitude 76° 18'. Situated at Old Point Comfort, commanding the entrance to Hampton Roads. Reservation about 267 acres. Present garrison, 6 batteries artillery. Accommodations for 46 officers and 304 men. Water supply pumped from a system of driven wells. Sewer system constructed by engineers considered defective. Act of March 2, 1889, appropriated \$25,000 for a new sewer system.

Montgomery, Fort, N. Y.—Latitude 45°; longitude 73° 20'. Situated on Rouse's Point, N. Y., 191 miles from Albany, N. Y. Reservation, 600 acres. Not garrisoned. In charge of ordnance sergeant.

Morgan, Fort, Ala.—Latitude 30° 14'; longitude 88°. Situated on Mobile Point, 30 miles from Mobile. Reservation, 322.42 acres. Not garrisoned. In charge of ordnance sergeant.

Moultrie, Fort, S. C.—Latitude 32° 45'; longitude 79° 51'. On Sullivan's Island, 5 miles from Charleston. No reservation; 4 acres held. Not garrisoned. In charge of ordnance sergeant.

Mount Vernon Barracks, Ala.—Latitude 31° 12'; longitude 88° 2'. At the town of Mount Vernon, 28 miles north of Mobile. Reservation about 2,160 acres. Present garrison, 2 companies infantry. Accommodations for 10 officers and 110 men. Water supply raised by steam pump from reservoir fed by springs and distributed by iron pipes. Sewer system.

Myer, Fort, Va.—Latitude 38° 53'; longitude 77° 3'. On Arlington Heights, 4 miles from the Capitol Building, Washington. Reservation for the post 186 acres, a portion of the Arlington estate, the area of which is 1,073.4 acres. Present garrison, 2 troops of cavalry. Accommodations for 10 officers and 143 men. Sewer system. Water supply from a system of driven wells.

Newport Barracks, Ky.—Latitude 39° 5'; longitude 84° 29'. On the south bank of the Ohio River, at the junction of the Licking River, in the city of Newport. Reservation about 6 acres. Present garrison, 1 company infantry. Accommodations for 4 officers and 39 men; originally quarters for 10 officers and 2 companies of infantry. Sale of old post authorized by Congress. Water supply, Newport City water-works. Sewer system. Act approved March 3, 1877, authorized sale of the old reservation, and appropriated \$60,000 for a site and \$100,000 for buildings for a new post, now under construction. Three single and 3 double sets officers' quarters; 2 artillery barracks and 3 sets non-commissioned staff quarters completed.

Niagara, Fort, N. Y.—Latitude 43° 18'; longitude 79° 8'. On the Niagara River at its junction with Lake Ontario, 14 miles below Niagara Falls, and 36 miles from Buffalo, N. Y. Reservation, 283 acres. Present garrison, 2 companies infantry. Accommodations for 9 officers and 100 men. Water supply pumped from the Niagara River and distributed through a system of iron pipes. Drainage into Niagara River from each building.

Niobrara, Fort, Nebr.—Latitude 42° 53'; longitude 100° 46'. On the Niobrara River, 4½ miles from Valentine, on the Fremont, Elkhorn and Missouri Valley Railroad. Reservation, 54 square miles, 452 acres. Present garrison, 2 troops cavalry and headquarters and 6 companies infantry. Accommodations for 25 officers and 340 men. Water pumped from a dam or reservoir to tanks and distributed by pipes. Partial system of sewerage.

Oklahoma Station, Ind. T.—Latitude 35° 27'; longitude 97° 30'. On Southern Kansas Branch of Atchison, Topeka and Santa Fé Railroad, 32 miles from Fort Reno. Reservation, 160 acres. Present garrison, 2 companies infantry.

Omaha, Fort, Nebr.—Latitude 41° 20'; longitude 96°. Four miles from the city of Omaha. Reservation, 82.50 acres. Present garrison, headquarters and 10 companies infantry. Accommodations for 26 officers and 391 men. Water supply from Omaha City water-works. Partial sewer system. Act of July 23, 1888, authorized sale of Fort Omaha and purchase of a new site of not less than 320 nor more than 640 acres, and appropriated \$200,000 for the new post, not more than one-third of which shall be expended for the site. A site of about 546 acres has been acquired. Buildings not yet erected.

Omaha Depot, Nebr.—Latitude 41° 20'; longitude 96°. In Omaha City. Reservation, 5 acres.

Oswego, Fort, N. Y.—Latitude 43° 27'; longitude 76° 30'. On the Oswego River, at its junction with Lake Ontario, adjoining the city of Oswego. Reservation about 76 acres. Present garrison, 1 company infantry. Accommodations for 4 officers and 29 men. Water supply from Oswego water-works. Sewer system.

Pembina, Fort, N. Dak.—Latitude 48° 57'; longitude 97° 12'. On the Red River of the North, 1½ miles from Pembina, on the Northern Pacific Railroad. Reservation about 1,920 acres. Present garrison, 2 companies infantry. Accommodations for 7 officers and 100 men. Water supply pumped to tank and distributed through iron pipes. Surface drainage.

Pena Colorado, Camp, Tex.—Latitude 30° 15'; longitude 103° 13'. In Presidio County, on Galveston, Harrisburgh and San Antonio Railroad, 4 miles from Marathon. Reservation rented by the United States. Present garrison, 1 troop cavalry. Accommodations for 4 officers and 30 men.

Phoenix, Fort, Mass.—Latitude 41° 38'; longitude 70° 55'. At Fort Point, Mass. Reservation, 2 acres. Not garrisoned. In charge of ordnance sergeant.

Pickens, Fort, Fla.—Latitude 30° 19'; longitude 87° 17'. On Santa Rosa Island, 10

miles from Pensacola. Reservation all of Santa Rosa Island (unsurveyed). Not garrisoned.

Pike, Fort, La.—Latitude $30^{\circ} 11'$; longitude $89^{\circ} 38'$. On Petites Coquille Island, 7 miles from Lake Catherine Station, on the Louisville and Nashville Railroad. Reservation, all the public land within 1,200 yards of post. Not garrisoned. In charge of ordnance sergeant.

Pittsburgh, Pa.—Latitude $40^{\circ} 32'$; longitude $80^{\circ} 5'$. Reservation part of old site of Fort Fayette. Fronts over 100 feet on Penn street, running back to the Allegheny River. Sale authorized by act of May 21, 1890. (Public, No. 125.)

Pilot Butte, Camp, Wyo.—Latitude $41^{\circ} 12'$; longitude 111° . Rock Springs, Wyo. No reservation. Present garrison, 2 companies infantry. Accommodations for 6 officers and 80 men. Buildings belonging to the Union Pacific Railroad Company.

Plattsburgh Barracks, N. Y.—Latitude $44^{\circ} 41'$; longitude $73^{\circ} 25'$. On west shore of Lake Champlain at the town of Plattsburgh. Reservation about 173 acres. Present garrison, 1 company of infantry. Accommodations for 4 officers and 54 men. Water supply, Plattsburgh water-works. Sewer system.

Popham, Fort, Me.—Latitude $43^{\circ} 50'$; longitude $69^{\circ} 55'$. On Hunniwell's Point, 10 miles from Bath. Reservation, $2\frac{1}{2}$ acres. In charge of ordnance sergeant.

Poplar River, Camp, Mont.—Latitude $48^{\circ} 6'$; longitude $105^{\circ} 12'$. Situated at Montana, Poplar River station of St. Paul, Minneapolis and Manitoba Railroad. On Indian reservation. Present garrison, 2 companies infantry.

Porter, Fort, N. Y.—Latitude $42^{\circ} 53'$; longitude $78^{\circ} 52'$. On the right bank of the Niagara River, within the limits of the city of Buffalo. Reservation about $2\frac{3}{4}$ acres, only about one-half of which is used exclusively for the purposes of the post. Present garrison, 2 companies of infantry. Accommodations for 9 officers and 193 men. Water supply, Buffalo city water-works. Sewer system.

Preble, Fort, Me.—Latitude $43^{\circ} 3'$; longitude $70^{\circ} 14'$. On the east side of Portland Harbor, at Spring Point, 1 mile from the city. Reservation, about 24 acres. Present garrison, 1 battery artillery. Accommodations for 4 officers and 35 men. One double set of quarters might accommodate 2 unmarried officers, making a total of 5. The three barrack buildings, if available for occupancy of troops, would accommodate 80 men. Water supply pumped from springs. Sewer system.

Presidio of San Francisco, Cal.—Latitude $37^{\circ} 47'$; longitude $122^{\circ} 26'$. In the northwestern suburbs of San Francisco. Reservation, 1,382.22 acres. Present garrison, headquarters, 6 batteries of artillery, 2 troops cavalry, and 2 companies of infantry. Accommodations for 56 officers and 505 men. Water supply from the Spring Valley Water Company, pumped by steam power and wind-mills to reservoir. Sewer system.

Pulaski, Fort, Ga.—Latitude $32^{\circ} 2'$; longitude $80^{\circ} 34'$. On Cocks spur Island, 14 miles from Savannah. Reservation not surveyed. In charge of ordnance sergeant.

Randall, Fort, S. Dak.—Latitude $43^{\circ} 1'$; longitude $98^{\circ} 33'$. On the Missouri River, 24 miles from Armour and 45 miles from Springfield, on the Chicago, Milwaukee and St. Paul Railroad. Reservation, about 144 square miles. Present garrison, 2 companies of infantry. Accommodations for 14 officers and 206 men. Water for domestic purposes pumped from the river and distributed by water wagons. Water for other purposes supplied from artesian well. Surface drainage.

Reno, Fort, Ind. T.—Latitude $35^{\circ} 35'$; longitude $98^{\circ} 1'$. On the north fork of the Canadian River, 32 miles from Oklahoma Station on the Atchison, Topeka and Santa F6 Railroad. Reservation, 9,493 acres, and wood reserve of 9 square miles. Present garrison, headquarters, and 1 company infantry. Accommodations for 18 officers and 338 men. Three additional officers may be accommodated by assigning 4 officers to quarters No. 9. Water supply pumped from North Fork into wooden tanks and distributed through iron pipes. Sewer system.

Riley, Fort, Kans.—Latitude $39^{\circ} 4'$; longitude $96^{\circ} 47'$. On Kansas River, $3\frac{1}{4}$ miles from Junction City on the Missouri, Kansas and Texas Railroad. Reservation, 19,899.22 acres. Present garrison, headquarters, and 8 troops cavalry, 2 batteries artillery, and 3 companies infantry. Accommodations for 44 officers and 1,116 men. Additional quarters for 6 officers under construction. Water pumped from well to reservoir and distributed by a system of iron pipes. Sewer system.

Ringgold, Fort, Tex.—Latitude $26^{\circ} 23'$; longitude $98^{\circ} 47'$. On the Rio Grande River, 23 miles from San Miguel, on Mexican National Railroad. Reservation, 350 acres. Present garrison, 2 companies infantry and 1 troop cavalry. Accommodations for 9 officers and 148 men (estimated). Water supply is pumped from river to reservoirs and distributed through pipes. Sewer system.

Robinson, Fort, Nebr.—Latitude $42^{\circ} 40'$; longitude $103^{\circ} 28'$. On White River, on line of Fremont, Elkhorn and Missouri Valley Railroad. Post reserve, 20 square miles. Wood and timber reserve, 16 square miles. Present garrison, headquarters, 4 troops cavalry and 4 companies infantry. Accommodation for 25 officers and 505 men. Water pumped to an elevated tank and distributed by iron pipes. Sewer system.

Red Bank, N. J.—East shore Delaware River, below Philadelphia. Reserve, 100 acres.

San Antonio, Tex.—Latitude $29^{\circ} 27'$; longitude $98^{\circ} 28'$. Bexar County, 1 mile north of San Antonio. Reservation, 472.21 acres. Present garrison, 4 troops cavalry, 1 battery artillery, headquarters and 6 companies infantry. Accommodations for 25 officers and 700 men. Additional quarters for 15 officers at department headquarters. Water supply, San Antonio Water Company. Drainage by means of a system of vitrified pipes.

St. Louis Arsenal, Mo.—Latitude $38^{\circ} 28'$; longitude $90^{\circ} 17'$. In city of St. Louis, on the Missouri River. Reservation, 31.8 acres. St. Louis clothing depot. Water supply from city of St. Louis water-works.

San Carlos, Ariz.—Latitude $33^{\circ} 10'$; longitude $110^{\circ} 25'$. On the Gila River, within the limits of the White Mountain Indian Reservation, 106 miles from Wilcox on the Southern Pacific Railroad. Present garrison, 2 troops of cavalry and 3 companies of infantry. Officers quartered in framed tents. Enlisted men in tents. Water supply hauled 1 mile from a well and distributed by water wagons. Natural drainage.

San Diego Barracks, Cal.—Latitude $32^{\circ} 43'$; longitude $117^{\circ} 9'$. In city of San Diego, Cal. Reservation, 2 blocks, 200 by 300 each, and wharf lot, 75 by 1,000. Present garrison, 1 company of infantry; barrack accommodations for 40 men. Officers' quarters rented in San Diego. Water supply from San Diego Water Company. Sewer system connected with city sewers.

Sandy Hook, N. J.—Latitude $40^{\circ} 25'$; longitude $74^{\circ} 1'$. Reservation, about 1,366 acres. In charge of ordnance sergeant.

San Juan Island, Wash.—Latitude $48^{\circ} 37'$; longitude 123° . Reservation about 640 acres.

San Pedro, Cal.—Latitude $33^{\circ} 40'$; longitude $118^{\circ} 40'$. In San Pedro Bay. Reservation, 44.25 acres, more or less.

Scammel, Fort, Me.—Latitude $43^{\circ} 39'$; longitude $79^{\circ} 13'$. In Portland Harbor. Reservation, 11 acres. In charge of ordnance sergeant.

Schuyler, Fort, N. Y.—Latitude $40^{\circ} 49'$; longitude $73^{\circ} 48'$. On Throgg's Neck, $3\frac{1}{2}$ miles from Westchester and 17 miles from New York City. Reservation, 52 acres. Present garrison, 2 batteries of artillery. Accommodations for 9 officers and 60 men. One set of quarters needs repairs to be made available. Water supply raised from wells by pumps. Artesian well being sunk. Sewer system.

Sevall, Fort, Mass.—Latitude $42^{\circ} 30'$; longitude $70^{\circ} 33'$. Situated $1\frac{1}{2}$ miles from Marblehead. Reservation, small tract and in litigation. Not garrisoned.

Shaw, Fort, Mont.—Latitude $47^{\circ} 30'$; longitude $111^{\circ} 48'$. On the Sun River, 24 miles from Great Falls, on the Montana Central Railroad. Reservation, about 29,843 acres. Present garrison, 4 companies infantry. Accommodations, 13 officers and 132 men. Water supply pumped from Sun River into a tank and hauled to posts in wagons. No sewer system.

Sheridan Camp, Wyo.—Latitude $42^{\circ} 51'$; longitude $102^{\circ} 39'$. On Beaver Creek, 8 miles from Cinnabar, on Yellowstone Park line of Northern Pacific Railroad. Reservation, 25 square miles. Present garrison, 2 troops cavalry. Accommodations for 2 officers and 40 men (estimated).

Sheridan, Fort, Ill.—Latitude $42^{\circ} 14'$; longitude $89^{\circ} 30'$. On Lake Michigan, 25 miles north of Chicago. Reservation, 632 $\frac{1}{2}$ acres. Present garrison, 2 companies infantry. Post under construction. Accommodations completed for 8 officers and 2 companies of infantry. Water supply pumped from Lake Michigan into reservoir and distributed by a system of iron pipes. Sewer system.

Sherman, Fort, Idaho.—Latitude $47^{\circ} 42'$; longitude $116^{\circ} 38'$. On Cœur d'Alene Lake, at its outlet, Spokane River, one-half mile from the Cœur d'Alene branch of Northern Pacific Railroad. Reservation, 640 acres. Present garrison, headquarters, 1 troop cavalry, and four companies infantry. Accommodations for 18 officers and 229 men. Water supply pumped from Spokane River. No sewer system.

Ship Island, Miss.—Latitude $30^{\circ} 20'$; longitude $89^{\circ} 7'$. Situated 15 miles from Biloxi. Not garrisoned.

Sidney, Fort, Nebr.—Latitude $41^{\circ} 9'$; longitude $102^{\circ} 58'$. On Lodge Pole Creek, adjoining the town of Sidney, Cheyenne County, on the Union Pacific Railroad. Post reservation, 1 square mile. Timber reservation, 5 square miles. Present garrison, headquarters and 5 companies infantry. Accommodations for 15 officers and 200 men. Water supply from a well to a tank and distributed by iron pipes. Surface drainage. Post recommended for abandonment.

Sill, Fort, Ind. T.—Latitude $34^{\circ} 40'$; longitude $98^{\circ} 23'$. On Medicine Bluff Creek, 65 miles from Henrietta, Tex., on the Denver and Fort Worth Railroad, on Indian lands, 36 square miles reserved. Present garrison, 6 troops cavalry and 1 company infantry. Accommodations for 20 officers and 312 men. Water supply raised by steam-pump from a reservoir fed by springs, and distributed from tanks by a system of pipes.

Snelling, Fort, Minn.—Latitude $44^{\circ} 53'$; longitude $93^{\circ} 11'$. At the junction of the

Minnesota and Mississippi Rivers, 6 miles from St. Paul and 8 miles from Minneapolis by the course of the river. Reservation, 1,531.21 acres. Present garrison, headquarters and 6 companies infantry. Accommodations for 31 officers and 400 men (when barracks under construction are completed). Water supply pumped from river by steam pump, and distributed from reservoir by system of iron pipes. Sewer system.

Spokane, Fort, Wash.—Latitude $47^{\circ} 50'$; longitude $118^{\circ} 18'$. On the Spokane River, three-fourths of a mile from its junction with the Columbia, near Miles, Wash., and 50 miles from Sprague on Northern Pacific Railroad. Reservation, 640 acres. Present garrison, 5 companies infantry. Accommodations for 19 officers and 201 men. Double sets quarters being constructed. Water supply pumped from Spokane River. Sewer system.

Stanton, Fort, N. Mex.—Latitude $33^{\circ} 29'$; longitude $105^{\circ} 28'$. On the Rio Bonito River, Lincoln County, 8 miles from Lincoln and 120 miles from Carthage, on Atchison, Topeka and Santa Fé Railroad. Reservation, 16 square miles. Present garrison, 2 troops cavalry and 1 company infantry. Accommodations for 13 officers and 231 men; additional barrack building used as canteen and amusement hall has accommodations for 53 men. Water supply pumped from a deep well and distributed from a reservoir by iron pipes. Partial sewer system.

Stevens, Fort, Oregon.—Latitude $46^{\circ} 31'$; longitude $125^{\circ} 1'$. On Point Adams, Columbia River. Reservation, 640 acres. Not garrisoned.

St. Francis Barracks, Fla.—Latitude $29^{\circ} 53'$; longitude $81^{\circ} 17'$. Southeast of and adjoining St. Augustine, Fla., near the Matanzas River; railroad station St. Augustine. Reservation proper, about $5\frac{1}{2}$ acres. Present garrison, 2 batteries of artillery. Accommodations for 9 officers and 53 men. Water supply raised from an artesian well by hydraulic ram. Sewer system.

St. Philip, Fort, La.—Latitude $29^{\circ} 25'$; longitude $89^{\circ} 30'$. Reservation, 640 acres. Situated 73 miles from New Orleans. Not garrisoned. In charge of ordnance sergeant.

Sully, Fort, S. Dak.—Latitude $44^{\circ} 20'$; longitude $100^{\circ} 10'$. On the Missouri River, 25 miles from Pierre, on the Chicago and Northwestern Railroad. Reservation about 27,000 acres. Present garrison, 4 companies infantry. Accommodations for 13 officers and 158 men. Water supply pumped from a well to a reservoir, and distributed through iron pipes. Surface drainage.

Sumter, Fort, S. C.—Latitude $32^{\circ} 45'$; longitude $79^{\circ} 51'$. In Charleston Harbor, 5 miles from Charleston. Reservation about 125 acres. Not garrisoned. In charge of ordnance sergeant.

Supply, Fort, Ind. T.—Latitude $36^{\circ} 30'$; longitude $99^{\circ} 30'$. Fifteen and three-fourths miles from Woodward, on the Southern Kansas Railroad. Post reservation, 36 square miles. Wood and water reservation, 27 square miles. All on Indian lands. Present garrison, headquarters and 3 troops cavalry, and 1 company infantry. Accommodations for 17 officers and 245 men. Water supply and sewer system under construction.

Taylor, Fort, Fla.—Latitude $24^{\circ} 33'$; longitude $81^{\circ} 49'$. Near Whitehead's Point. Reservation about 200 acres. In charge of ordnance sergeant.

Thomas, Fort, Ariz.—Latitude $32^{\circ} 51'$; longitude $109^{\circ} 48'$. On the Gila River, 35 miles west of San Carlos. Reservation, 10,487 acres. Troops withdrawn. Accommodations for 11 officers and 96 men. Recommended for abandonment.

Totten, Fort, N. Dak.—Latitude $47^{\circ} 59'$; longitude 99° . On Devil's Lake, 14 miles from Devil's Lake Station, on the St. Paul, Minneapolis and Manitoba Railroad, and 16 miles from Minnewaukon, on the Jamestown Branch of the Northern Pacific Railroad. Reservation, 11.19 square miles. Present garrison, 2 companies infantry. Accommodations for 15 officers and 208 men. Water supply from a spring pumped by steam-power into a tank, and distributed through iron pipes. Surface drainage.

Townsend, Fort, Wash.—Latitude $48^{\circ} 7'$; longitude $122^{\circ} 44'$. At the entrance to Puget Sound, 3 miles from Port Townsend. Reservation, 615.1 acres. Present garrison, 1 company infantry. Accommodations for 5 officers and 78 men. One additional set quarters used for post canteen. Water supply pumped from springs by steam-power. Natural drainage.

Trumbull, Fort, Conn.—Latitude $41^{\circ} 21'$; longitude $72^{\circ} 6'$. On the right bank of the Thames River, $1\frac{1}{2}$ miles below the city of New London. Reservation, $13\frac{1}{2}$ acres. Present garrison, 1 battery of artillery. Accommodations for 8 officers and 67 men. Water supply from New London city water-works. Sewer system.

Union, Fort, N. Mex.—Latitude $35^{\circ} 54'$; longitude $105^{\circ} 9'$. In Moro County, 9 miles from Watrous, on the Atchison, Topeka and Santa Fé Railroad. Post reservation of $51\frac{1}{2}$ square miles. Timber reservation of 53 square miles. Within the limits of the Moro grant, for which a land patent was issued to claimants in 1876. Present garrison, 1 troop cavalry and 2 companies infantry. Accommodations for 30 officers and 349 men; additional accommodations at arsenal for 3 officers and 1 troop of cavalry.

Water supply pumped by steam power. Natural drainage. Post recommended for abandonment.

Vancouver Barracks, Wash.—Latitude $45^{\circ} 40'$; longitude $125^{\circ} 32'$. On the north bank of the Columbia River, 18 miles by water and 6 miles in a direct line from Portland. Steam-boat landing at Vancouver. Reservation, 640 acres. Present garrison, 1 troop cavalry, headquarters and 8 companies infantry. Accommodations for 23 officers and 470 men; additional accommodations for 14 officers at department headquarters and depot. Water supply pumped from an artesian well to a reservoir and distributed by gravity. Sewer system.

Verde, Fort, Ariz.—Latitude $34^{\circ} 32'$; longitude 112° . Yavapai County on the Rio Verde, 45 miles from Prescott, on the Prescott and Arizona Railroad. Reservation, 9,293 acres. Garrison withdrawn. Accommodations for 7 officers and 77 men. Post recommended for abandonment.

Wadsworth, Fort, N. Y. H.—Latitude $40^{\circ} 37'$; longitude $74^{\circ} 3'$. On Staten Island, commanding the Narrows, entrance to New York Harbor. Reservation about 100 acres. Present garrison, 3 batteries of artillery. Accommodations for 17 officers and 200 men. Water supply from springs pumped to a distributing reservoir. Sewer system.

Walla Walla, Fort, Wash.—Latitude $46^{\circ} 6'$; longitude $118^{\circ} 24'$. Adjoining the town of Walla Walla. Reservation about 613 acres. Present garrison, headquarters and 5 troops of cavalry. Accommodations for 17 officers and 234 men. Water supply from springs distributed by gravity. Sewer system.

Warren, Fort, Mass.—Latitude $42^{\circ} 19'$; longitude $70^{\circ} 59'$. On George's Island in Boston Harbor, 7 miles from Boston. Reservation, the whole island, about 18 acres. Present garrison, 2 batteries artillery. Accommodations for 10 officers and 72 men. All enlisted men quartered in casemates; 10 dormitories in all, accommodating 12 men each; only 6 rooms are available as dormitories at present. Water supply, new system under construction; pumped from wells. Sewer system.

Washakie, Fort, Wyo.—Latitude $42^{\circ} 59'$; longitude $108^{\circ} 54'$. On the Little Wind River, 147 miles from Rawlins, on the Union Pacific Railroad. Reservation, 1,405 acres on Indian lands. Present garrison, 1 troop cavalry and 1 company infantry. Accommodations for 6 officers and 122 men. Water pumped to tank by steam-power and distributed by iron pipes. No sewer system.

Washington Barracks, D. C.—Latitude $38^{\circ} 53'$; longitude $77^{\circ} 3'$. On Greenleaf's Point, D. C. Reservation about 69 acres. Present garrison, headquarters and 6 batteries artillery. Accommodations for 26 officers and 504 men. Water supply, Washington city water-works, owned by United States. Sewer system.

Washington, Fort, Md.—Latitude $38^{\circ} 43'$; longitude $77^{\circ} 6'$. On the Potomac River, 13 miles from Washington, D. C. Reservation about 50 acres. In charge of ordnance sergeant.

Wayne, Fort, Mich.—Latitude $42^{\circ} 23'$; longitude $82^{\circ} 58'$. On Detroit River, $3\frac{1}{2}$ miles from City Hall in Detroit. Reservation about 63 acres. Present garrison, headquarters and 4 companies of infantry. Accommodations for 15 officers and 120 men. Water supply from Detroit city water-works. Sewer system.

West Point, N. Y.—Latitude $41^{\circ} 23'$; longitude $74^{\circ} 41'$. On the west bank of the Hudson River, 51 miles above New York City. Reservation 2,330 acres. United States Military Academy. Accommodations for 56 officers and 196 men. Water supply piped from springs by gravity, and distributed from reservoir through iron pipes. Sewer system. Present garrison, E, Engineer Battalion and detachments.

Winfield Scott Fort, Cal.—Latitude $37^{\circ} 49'$; longitude $122^{\circ} 48'$. Golden Gate, San Francisco, Cal. Reservation; on the Presidio. Not garrisoned.

Whipple Barracks, Ariz.—Latitude $34^{\circ} 29'$; longitude $112^{\circ} 30'$. One mile from Prescott, Ariz. Reservation about 1,730 acres. Present garrison, 1 troop cavalry, headquarters and 6 companies infantry. Accommodations for 16 officers and 166 men. Water supply pumped from a well on Granite Creek to a reservoir, and distributed by iron pipes. Sewer system.

Willets Point, N. Y.—Latitude $40^{\circ} 47'$; longitude $73^{\circ} 47'$. On the East River, near Whitestone, Queens County, 17 miles from New York City. Reservation about 136.35 acres. Engineer station. Accommodations for 30 officers and 294 men. Water supply from Flushing Village water-works. Sewer system. Headquarters A, B, C, and D Engineer Battalion.

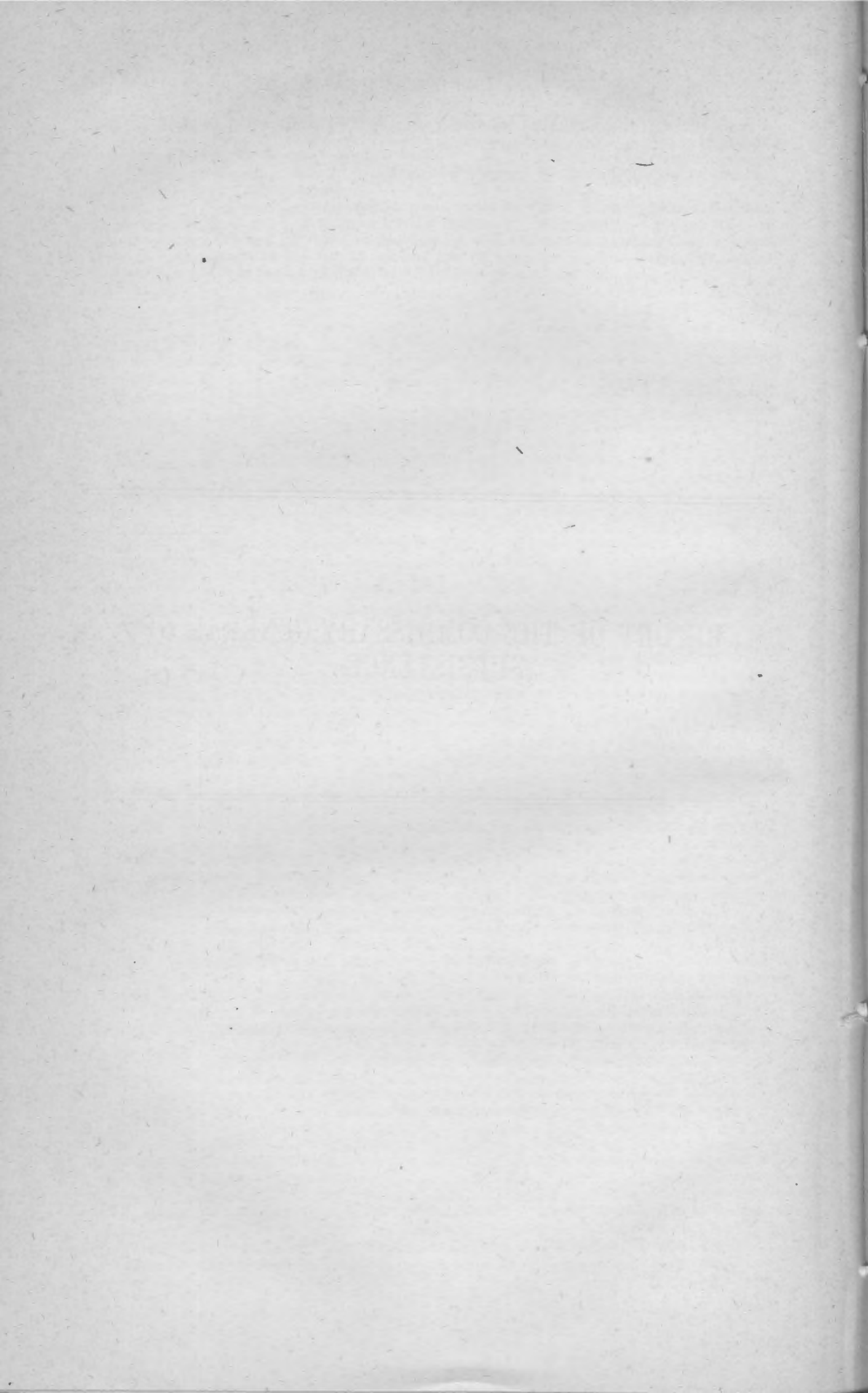
Wingate Fort, N. Mex.—Latitude $35^{\circ} 30'$; longitude $108^{\circ} 27'$. Situated on Bear Spring, 3 miles from Wingate on the Atlantic and Pacific Railroad. Reservation 130 square miles. Present garrison, headquarters, and 6 companies cavalry and 1 company infantry. Accommodations for 21 officers and 416 men. Water supply pumped from Bear Spring to a reservoir and distributed by iron pipes. Sewer system.

Winthrop, Fort, Mass.—Latitude $42^{\circ} 21'$; longitude $70^{\circ} 1'$. On Governor's Island, Boston Harbor, 2 miles from Boston. Reservation about 60 acres. Not garrisoned. In charge of ordnance sergeant.

Wood Fort, N. Y.—Latitude $40^{\circ} 41'$; longitude $74^{\circ} 11'$. On Bedloe's Island, in New York Harbor. Reservation about 12 acres. Present garrison 1 company infantry. Accommodations for 2 officers and 33 men. To be turned over to Treasury Department for an immigrant station, by executive orders. Water supply, 4 cisterns and an artesian well. Sewer system.

Yates, Fort, N. Dak.—Latitude $46^{\circ} 11'$; longitude $100^{\circ} 34'$. Standing Rock, N. Dak., 58 miles from Mandan, on Northern Pacific Railroad. Reservation, 1 square mile, on Indian lands. Present garrison, headquarters, and 4 companies infantry and 2 troops cavalry. Accommodations for 19 officers and 261 men. Water pumped by steam-power from wells to tank and distributed by iron pipes. Surface drainage.

REPORT OF THE COMMISSARY-GENERAL OF
SUBSISTENCE.



REPORT

OF THE

COMMISSARY-GENERAL OF SUBSISTENCE.

WAR DEPARTMENT,
OFFICE COMMISSARY-GENERAL OF SUBSISTENCE,
Washington, D. C., October 8, 1890.

SIR: I have the honor to submit the following report of the operations of the Subsistence Department for the fiscal year ending June 30, 1890:

RESOURCES AND EXPENDITURES.

The following statement exhibits the aggregate fiscal resources and expenditures of the Department for the year mentioned and the balances at the close of the fiscal year:

RESOURCES.

Amounts in the Treasury to the credit of appropriations of the Subsistence Department on June 30, 1889, as follows:

Commutation of rations to prisoners of war in rebel States and soldiers on furlough, certified claims, act March 2, 1889.....	\$664. 12
Relief of Peter Marek and others, act April 4, 1888..	2, 541. 41
Subsistence of the Army, 1888	57, 352. 64
Subsistence of the Army, 1889	98, 358. 72

\$158, 916. 89

Amounts to the credit of officers of the Subsistence Department and of officers doing duty in the Subsistence Department with the Treasurer, assistant treasurers, and designated depositaries, and in their personal possession on June 30, 1889, as follows:

Commutation of rations to prisoners of war in rebel States and soldiers on furlough prior to July 1, 1885, acts February 1 and March 30, 1888.....	\$1, 515. 20
Commutation of rations to prisoners of war in rebel States and soldiers on furlough prior to July 1, 1886, act October 19, 1888.....	1, 254. 25
Commutation of rations to prisoners of war in rebel States and to soldiers on furlough, certified claims, act March 2, 1889	833. 63
Subsistence of the Army, 1888.....	873. 02
Subsistence of the Army, 1889.....	280, 605. 39

285, 081. 49

Amounts refunded to the Treasury near close of fiscal year, 1889, since carried to the credit of appropriations, as follows:

Subsistence of the Army, 1888.....	\$15. 97
Subsistence of the Army, 1889.....	5. 79

21. 76

Amounts appropriated for the Subsistence Department for the fiscal year ending June 30, 1890, as follows:

Subsistence of the Army, 1890, act March 2, 1889...	\$1,745,000.00	
Commutation of rations to prisoners of war in rebel States and soldiers on furlough, certified claims, act April 4, 1890		31,023.11
Commutation of rations to prisoners of war in rebel States and soldiers on furlough, certified claims, act April 5, 1890.....		14,000.00
Relief of sufferers from overflow of Mississippi River and its tributaries, joint resolution of April 25, 1890		150,000.00
		<u>1,940,023.11</u>

Amounts collected from various sources and refunded to the appropriations of the Subsistence Department on the books of the Treasury during the fiscal year 1890, as follows:

Subsistence of the Army, 1887, and prior years.....	\$376.81	
Subsistence of the Army, 1887, and prior years, transfer account		2,810.46
Subsistence of the Army, 1888		132.74
Subsistence of the Army, 1889		2,485.57
Subsistence of the Army, 1890		5,351.00
		<u>11,156.58</u>

Amounts received by officers of the Subsistence Department, and by officers doing duty in the Subsistence Department, from sales of subsistence stores to the following purchasers during the fiscal year 1890, and taken up under the following appropriations:

Subsistence of the Army, 1889: Sales to officers and enlisted men not previously reported.....	\$259.53	
Subsistence of the Army, 1890: Sales to officers, \$332,243.70; to enlisted men and to companies, detachments and hospitals, \$438,721.82; to civil employes, \$17,744.81; to Leavenworth Military Prison, \$12,123.62; to Quartermaster's Department, \$209.21; to headquarters of the Army, \$7.51; to Indian agents, \$207.96; to Geological Survey, \$122.19; of surplus and condemned stores and property at auction, \$4,844.69; of boxes, barrels, etc., \$165.62; of garden seeds and agricultural implements, \$204.97; total.....		806,596.10
		<u>806,855.63</u>

Amounts taken up by officers doing duty in the Subsistence Department on account of reclamations for stores lost, damaged, etc., and in correction of errors in their accounts, etc., during the fiscal year 1890:

Subsistence of the Army, 1889.....	\$167.35	
Subsistence of the Army, 1890.....		668.84
		<u>836.19</u>

Amounts in hands of representatives of deceased officers to be collected:

Subsistence of the Army, 1878.....	\$109.84	
Subsistence of the Army, 1882.....		248.63
Subsistence of the Army, 1883.....		70.95
		<u>429.42</u>

Amounts charged against officers (deceased and resigned) on account of funds alleged to have been lost by theft, etc., as follows:

Subsistence of the Army, 1879 and prior years		3,000.89
---	--	----------

Amounts charged against officers still in service on account of funds and stores alleged to have been lost by theft, etc., and for which relief can only be obtained in the Court of Claims, under sections 1059 and 1062, Revised Statutes, or from Congress, as follows:

Subsistence of the Army, 1879 and prior years	\$377.19	
Subsistence of the Army, 1880.....		393.96
Subsistence of the Army, 1882.....		39.18
Subsistence of the Army, 1886.....		2,598.57
Subsistence of the Army, 1889.....		82.37
		<u>3,491.27</u>

Total resources.....		<u><u>3,209,813.23</u></u>
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EXPENDITURES.

Amounts expended on the books of the Treasury from the appropriations of the Subsistence Department during the fiscal year 1890, as follows:

Subsistence of the Army, 1887, and prior years, transfer account..	\$16. 44
Subsistence of the Army, 1888.....	435. 33
Subsistence of the Army, 1889.....	271. 41
Subsistence of the Army, 1890.....	483. 33
	1, 206. 51

Amounts disbursed by officers of the Subsistence Department and officers doing duty in the Subsistence Department during the fiscal year 1890, as follows:

Commutation of rations to prisoners of war in rebel States and soldiers on furlough prior to July 1, 1885, acts February 1 and March 30, 1878	\$478. 83
Commutation of rations to prisoners of war in rebel States and soldiers on furlough prior to July 1, 1886, act October 19, 1888.....	761. 75
Commutation of rations to prisoners of war in rebel States and soldiers on furlough, certified claims, acts March 2, 1889, and April 4, 1890.....	28, 273. 49
Commutation of rations to prisoners of war in rebel States and soldiers on furlough, certified claims, act April 5, 1890	5, 102. 25
Subsistence of the Army, 1889.....	183, 166. 90
Subsistence of the Army, 1890.....	2, 123, 747. 87
Relief of sufferers from overflow of Mississippi River and its tributaries, joint resolution of April 25, 1890.....	101, 464. 62
	2, 442, 995. 71

Amounts dropped by officers doing duty in the Subsistence Department in correction of errors in their accounts during the fiscal year 1890:

Subsistence of the Army, 1890.....	113. 90
------------------------------------	---------

Amount charged against deceased officer removed by Second Auditor's settlement, September 18, 1883, as follows:

Subsistence of the Army, 1883.....	70. 95
------------------------------------	--------

Amount charged against officer still in service removed by Second Auditor's settlement and by Commissary-General of Subsistence:

Subsistence of the Army, 1886.....	142. 75
------------------------------------	---------

Amount charged against officer still in service removed by judgment of Court of Claims December 16, 1889:

Subsistence of the Army, 1879 and prior years.....	377. 19
--	---------

Amounts transferred on books of Treasury, act March 3, 1875 (18 Stat. L., 418):

Subsistence of the Army, 1887 and prior years, transfer account...	2, 794. 02
--	------------

Amounts carried to the surplus fund on June 30, 1890:

Subsistence of the Army, 1887 and prior years.....	\$376. 81
Subsistence of the Army, 1888.....	57, 939. 04
	58, 315. 85

Total expenditures..... 2, 506, 016. 88

BALANCES.

Amounts in the Treasury to the credit of appropriations of the Subsistence Department on June 30, 1890, as follows:

Commutation of rations to prisoners of war in rebel States and soldiers on furlough, certified claims, acts March 2, 1889, and April 4, 1890.....	\$7. 50
Relief of Peter Marck and others, act April 4, 1888.....	2, 541. 41
Subsistence of the Army, 1889.....	195, 934. 59
Subsistence of the Army, 1890.....	164, 367. 67
Relief of sufferers from overflow of Mississippi River and its tributaries, joint resolution of April 25, 1890.....	40, 000. 00
	\$402, 851. 17

Amounts to credit of officers of the Subsistence Department, and of officers doing duty in the Subsistence Department, with the Treasurer, assistant treasurers, and designated depositaries, and in their personal possession on June 30, 1890, as follows:

Commutation of rations to prisoners of war in rebel States and soldiers on furlough prior to July 1, 1865, acts February 1 and March 30, 1868.....	\$1,036.37	
Commutation of rations to prisoners of war in rebel States and soldiers on furlough prior to July 1, 1866, act October 19, 1868.....	492.50	
Commutation of rations to prisoners of war in rebel States and to soldiers on furlough, certified claims, acts March 2, 1869, and April 4, 1890.....	4,239.87	
Commutation of rations to prisoners of war in rebel States and to soldiers on furlough, certified claims, act April 5, 1890.....	8,897.75	
Relief of sufferers from overflow of Mississippi River and its tributaries, joint resolution of April 25, 1890.....	8,535.38	
Subsistence of the Army, 1889.....	2,380.03	
Subsistence of the Army, 1890.....	265,438.72	
		291,020.62
Amounts refunded to the Treasury near close of fiscal year 1890, but not carried to the credit of the appropriation by June 30, 1890:		
Subsistence of the Army, 1889.....		129.42
Amounts in hands of representatives of deceased officers, to be collected:		
Subsistence of the Army, 1878.....	\$109.84	
Subsistence of the Army, 1882.....	248.63	
Subsistence of the Army, 1890.....	3,464.45	
		3,822.92
Amounts charged against officers (deceased and resigned) on account of funds alleged to have been lost by theft, etc., as follows:		
Subsistence of the Army, 1879 and prior years.....		3,000.89
Amounts charged against officers still in service on account of funds and stores alleged to have been lost by theft, etc., and for which relief can only be obtained in the Court of Claims under sections 1059 and 1062, Revised Statutes, or from Congress, as follows:		
Subsistence of the Army, 1880.....	\$393.96	
Subsistence of the Army, 1882.....	39.18	
Subsistence of the Army, 1886.....	2,455.82	
Subsistence of the Army, 1889.....	82.37	
		2,971.33
Total balances.....		703,796.35

Statement of the average contract prices per pound (independent of quantities purchased) in each State and Territory, for the fresh beef supply in the fiscal years 1890 and 1891.

State or Territory.	Average price per pound.		State or Territory.	Average price per pound.	
	1890.	1891.		1890.	1891.
Maine.....	Cents. 10.25	Cents. 7.56	Georgia.....	Cents. 8.00	10.00
Massachusetts.....	8.88	6.53	Alabama.....	5.00	5.00
Rhode Island.....	8.00	8.27	Louisiana.....	7.00	6.50
Connecticut.....	13.00	13.50	Arkansas.....	6.20	4.56
New York.....	7.57	7.05	Texas.....	4.99	5.59
Pennsylvania.....	10.50	11.75	Kentucky.....	10.00	11.00
Maryland.....	8.99	8.25	Ohio.....	5.48	5.70
District of Columbia.....	6.40	5.00	Indiana.....	7.20	7.00
Virginia.....	6.57	3.97	Colorado.....	5.68	6.42
Illinois.....	6.48	6.50	Utah.....	6.28	6.50
Michigan.....	7.80	7.89	Montana.....	6.81	6.89
Missouri.....	4.29	5.37	California.....	6.37	7.61
Minnesota.....	5.43	4.35	Arizona.....	6.27	5.57
Nebraska.....	5.74	5.61	Washington.....	8.01	8.68
Kansas.....	4.95	4.28	Idaho.....	7.74	7.12
Indian Territory.....	5.49	4.95	Oregon.....	5.99	11.99
Wyoming.....	7.45	7.81	Florida.....	12.28	12.25
Dakota, North.....	} 7.46	{ 7.11	Wisconsin.....		8.00
Dakota, South.....			{ 7.02	Oklahoma.....		7.17
New Mexico.....	6.65	5.64		Average price.....	7.27	7.31

During the fiscal year ended June 30, 1890, 331 newspaper advertisements and 366 circulars and posters inviting proposals for subsistence supplies were reported to this office. There were also reported 2,874 contracts of various kinds for fresh meats, complete rations, and other supplies required for the subsistence of the Army.

ISSUES TO INDIANS.

Subsistence supplies were issued to Indians during the year, as follows:

Destitute Hualpai Indians, on request of the Interior Department, and for which re-imbursement has been made by that Department.....	\$7,018.26
Apache Indian prisoners at Fort Union, N. Mex., on request of Interior Department.....	1,299.85
White Mountain Indian prisoners at Fort Union, N. Mex.....	341.94
Chiricabua Indian prisoners of war at Mount Vernon barracks, Ala.....	17,933.04
Indian prisoners of various tribes at different posts.....	110.51
Indians visiting military posts under Army Regulations 1395 and 1396....	981.49
White Mountain Apache Indians.....	825.00
Total.....	28,510.09

MISCELLANEOUS ISSUES AND EXPENDITURES.

There were issued to destitute citizens at various posts during the year, upon the orders of commanding officers, 419 rations.

The disbursements for liquid coffee for enlisted men traveling by cars, stage, etc., amounted to \$8,083.33, an increase over previous fiscal year of \$1,555.93.

For extra-duty pay of enlisted men detailed for duty in the Subsistence Department at the different military posts, the sum of \$22,288.17 was expended, being an increase over previous year of \$1,426.86.

For advertising, the sum of \$7,818.04 was disbursed, a decrease from previous year of \$3,009.65.

For cooked rations for recruiting party and recruits, the sum of \$48,065.44 was expended, a decrease from previous year of \$8,130.12.

LOSSES OF STORES AND PROPERTY.

The value of stores reported lost by accident, wastage in transportation, while in store, etc., during the year, for which no one has been held accountable, was \$4,936.41. The following special items were included in these losses:

Where reported.	Cause of loss, per report.	When reported.	Value.
Fort Stanton, N. Mex.....	Frost, etc.....	September and November, 1889.	\$216.03
Fort D. A. Russell, Wyo.....	Theft.....	December, 1889.....	36.00
Fort Du Chesne, Utah.....	Fire.....	January, 1890.....	206.09
Fort Supply, Ind. T.....	Rotting.....	March, 1890.....	59.39
Fort Niobrara, Nebr.....	Bursting of barrel.....	April, 1890.....	5.99
Fort Randall, S. Dak.....	Rotting.....	April and May, 1890.....	38.53

Supplies lost in transportation during year and responsibility fixed, amounted to \$745.45, of which \$227.93 have been collected.

SALES OF CONDEMNED AND SURPLUS SUPPLIES.

	Subsistence stores.		
	Condemned.	Surplus.	Total.
Original cost	\$15,353.94	\$3,686.57	\$19,040.51
Amounts realized from sales	2,055.43	2,533.01	4,588.44
Loss.....			14,452.07

Of subsistence property, the amount realized from such as was condemned was \$67.24; from such as became surplus, \$189.01.

RELIEF OF SUFFERERS FROM OVERFLOW OF THE MISSISSIPPI RIVER AND ITS TRIBUTARIES.

Congress, by joint resolution of April 25, 1890, appropriated \$150,000, to be expended by and under the direction of the Secretary of War in the purchase and distribution of subsistence stores to such destitute persons as may require assistance in the district overflowed by the Mississippi River and its tributaries.

Capt. J. F. Weston, C. S., was charged with making the purchases and distribution of such stores, and performed the duty in a most efficient and satisfactory manner.

The supplies were distributed upon the basis of a ration of 9 ounces of salt meat and 13½ ounces of flour or 15 ounces of corn-meal, it having been found that this would be a fair proportion for distributions based upon requests for the relief of those requiring it, which included men, women, and children.

The following stores were distributed :

State.	Pork.	Bacon.	Flour.	Corn-meal.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Tennessee	31,432	30,000	54,880	56,791
Arkansas		91,065	77,659	65,471
Texas		10,462		17,800
Mississippi		167,498½	95,917	172,508½
Louisiana		739,696½	496,639	680,545
Total	31,432	1,038,721½	725,095	993,115½

Of the appropriation of \$150,000, it was found necessary to draw from the Treasury only \$110,000, and of that \$4,800 has since been returned to the Treasury, leaving a balance of \$44,800 of the appropriation unused, which balance has since been reappropriated by Congress to the Territory of Oklahoma.

ARMY COOKS AND BAKERS.

My predecessor has, in several previous reports, recommended that Congress be urged to provide for the enlistment of a cook to each troop, battery, and company, and to each general depot of recruits, and of a baker to each garrisoned post. I renew this recommendation on account of the importance of the matter, the proper cooking of their food, in field as well as in garrison, being an absolute necessity for the health and efficiency of the troops.

COMMISSARY SERGEANTS.

Number of commissary sergeants in service at the commencement of the last fiscal year	124
During the year the following casualties occurred :	
Died	2
Discharged	4
Retired	6
	— 12
	112
Reappointed during the year	1
Appointed during the year	4
	— 5
Total in service June 30, 1890	117

ACCOUNTS AND RETURNS DIVISION.

Accounts and returns on hand, received, and examined during the year.

	Accounts-current.	Returns of subsistence stores.	Returns of subsistence property.
On hand June 30, 1889	258	187	21
Received during the year	2,270	1,849	778
Total	2,528	2,036	799
Examined during the year	2,286	1,818	799
On hand June 30, 1890	242	218	—

The accounts and returns received were rendered by 460 officers.

The accounts current examined were accompanied by 36,005 vouchers; the returns of subsistence stores by 31,529 vouchers, and the returns of subsistence property by 1,728 vouchers. In connection with the examinations 5,160 letters and 1,843 indorsements were written and recorded, and 128 papers copied.

There were issued 5,115 certificates of non-indebtedness and 386 certificates of services as acting commissaries of subsistence.

CLAIMS DIVISION.

Act of July 4, 1864 (sec. 300 B., Rev. Stat.).—At the commencement of the fiscal year there was one claim on file in this office awaiting examination under section 3, act of July 4, 1864, and the acts and joint resolutions supplementary thereto. A final decision was reached in this case, thereby leaving no claims of this class on file.

In connection with this class of claims 341 reports were rendered to the Secretary of War, upon requests therefor, made by the Department of Justice and Court of Claims.

Joint resolution of July 25, 1866, and third section of act of March 2, 1867.—At the beginning of the fiscal year there were on file in this office 1,611 claims for commutation of rations of Union soldiers, while held as prisoners of war, and during the year 1,622 more were received, making a total of 3,233 claims of this class for examination.

Of these, 2,475 were examined and transmitted to the Third Auditor of the Treasury: 1,204 recommended for disallowance, and 1,271, amounting to \$25,882.25, for payment.

In addition, 1,938 old claims were re-examined and transmitted to the Third Auditor of the Treasury, of which 1,853 were recommended for disallowance, and 85, amounting to \$1,627.75, for payment.

Miscellaneous claims.—There were at the commencement of the fiscal year 2,221 miscellaneous claims on hand, and during the year 1,103 more were received, making a total of 3,324 claims of this class for examination.

Of these, 1,805 were examined and transmitted to the Third Auditor of the Treasury: 1,176 recommended for disallowance, and 629, amounting to \$7,160.41, for payment.

In addition, 28 old claims were re-examined and transmitted to the Third Auditor of the Treasury, of which 17 were recommended for disallowance, and 11, amounting to \$196, for payment.

Letters and indorsements.—In connection with these three classes of claims mentioned, 20,553 communications were sent out during the year.

DUTIES AND STATIONS OF OFFICERS OF THE SUBSISTENCE DEPARTMENT.

A roster of the officers of the Subsistence Department on June 30, 1890, showing their stations and duties on that date, is hereto appended.

Very respectfully, your obedient servant,

B. DU BARRY,
Commissary-General of Subsistence.

THE SECRETARY OF WAR.

Roster of the Subsistence Department, U. S. Army, June 30, 1890.

Name and rank in the Department.	Rank by brevet.	Duty and station.
COMMISSARY-GENERAL OF SUBSISTENCE.		
<i>Brigadier-General.</i>		
Robert Macfeely		Commissary-General of Subsistence.—Washington, D. C.
ASSISTANT COMMISSARIES - GENERAL OF SUBSISTENCE.		
<i>Colonels.</i>		
Beekman Du Barry		Assistant to the Commissary-General of Subsistence.—Washington, D. C.
George Bell	Bvt. Brig.-General, April 9, 1865.	Purchasing and Depot C. S. at New York City, N. Y.
<i>Lieutenant-Colonels.</i>		
Michael R. Morgan	Bvt. Brig.-General, April 9, 1865.	Chief C. S., Division of the Missouri.—Chicago, Ill.
John P. Hawkins	Bvt. Major-General, March 13, 1865.	Chief C. S., Division of the Pacific and Department of California.—San Francisco, Cal.
Michael P. Small	Bvt. Brig.-General, April 9, 1865.	Chief C. S., Division of the Atlantic and Department of the East.—Governor's Island, New York, N. Y.
COMMISSARIES OF SUBSISTENCE.		
<i>Majors.</i>		
Thomas C. Sullivan	Bvt. Lt.-Col., March 13, 1865.	Chief C. S., Department of Dakota, and Purchasing and Depot C. S. at St. Paul, Minn.
John W. Barriger	Bvt. Major-General, March 13, 1865.	Chief C. S., Department of the Missouri, and Purchasing and Depot C. S. at St. Louis, Mo.
Thomas Wilson	Bvt. Brig.-General, March 13, 1865.	Purchasing and Depot C. S. at Chicago, Ill.
William H. Bell		Chief C. S., Dept. of the Platte, and Purchasing and Depot C. S. at Omaha, Nebr.
Jeremiah H. Gilman	Bvt. Lt.-Col., Dec. 31, 1862.	Assistant to the Commissary-General of Subsistence.—Washington, D. C.
Samuel T. Cushing		Purchasing and Depot C. S. at Fort Leavenworth, Kans.
William A. Elderkin		Chief C. S., Dept. of Arizona.—Los Angeles, Cal.
Charles B. Penrose	Bvt. Lt.-Col., Nov. 11, 1867.	Purchasing and Depot C. S. at Baltimore, Md.
<i>Captains.</i>		
William H. Nash	Bvt. Major, Nov. 17, 1865.	Chief C. S., Dept. of the Columbia, Vancouver Barracks, State of Washington.
Charles P. Egan		Chief C. S., Department of Texas, and Purchasing and Depot C. S. at San Antonio, Tex. On leave.
John F. Weston		Purchasing and Depot C. S. at New Orleans, La.
Charles A. Woodruff		Purchasing and Depot C. S. at San Francisco, Cal.
John J. Clague		Purchasing and Depot C. S. at Boston, Mass.
Wells Willard		Acting Chief C. S., Dept. of Texas, San Antonio, Tex.
Henry G. Sharpe		Purchasing and Depot C. S. at Portland, Oregon.
Frank E. Nye		Purchasing and Depot C. S. at Washington, D. C.
Charles Hay		Purchasing C. S. at Denver, Colo.
Douglas M. Scott		Asst. to the Chief C. S., Dept. of the Platte, Omaha, Nebr.
Wm. L. Alexander		Depot and Post C. S., Fort Monroe, Va.
Henry B. Osgood		Post C. S. at Jefferson Barracks, Mo.

REPORT OF THE SURGEON-GENERAL OF THE ARMY.

REPORT

OF

THE SURGEON-GENERAL.

SURGEON-GENERAL'S OFFICE,
Washington, D. C., August 8, 1890.

SIR: I have the honor to submit herewith a statement of disbursements made during the fiscal year ended June 30, 1890, from the appropriation made by act of Congress, approved March 2, 1889, for the expenses of the Medical Department of the Army, and the balance on hand at the close of said fiscal year, viz:

Medical and hospital department, 1890:

Appropriation by act approved March 2, 1889..... \$215,000.00

Refunded during the year:

By United States Soldiers' Home, for medical supplies \$460.61

By Major J. P. Conley, P. M.—stoppage against pay of

Private J. P. Gainey, Company G, Fourth infantry... 60.25

From sale of medical and hospital stores..... 110.33

For loss of medical and hospital property during transportation, etc 16.05

647.24

Total to be accounted for..... 215,647.24

Disbursed during the year:

For medical and hospital supplies.....\$81,856.33

Expenses of purveying depots..... 73.40

For pay of employes, viz:

Medical purveying depot, New York.....\$11,164.84

Medical purveying depot, St. Louis..... 12,621.96

Medical purveying depot, San Francisco... 6,219.96

Army dispensary, Washington, D. C..... 1,200.00

Army and navy hospital, Hot Springs, Ark. 6,941.53

Medical director's office, Division of the Atlantic

..... 1,800.00

Medical director's office, Division of the Pacific

..... 575.00

Medical director's office, Department of Missouri

..... 600.00

Medical director's office, Department of Dakota

..... 550.00

Medical director's office, Department of Arizona

..... 550.00

.....42,223.29

For medical attendance and medicines..... 8,399.53

For advertising..... 203.70

For miscellaneous expenses..... 813.20

133,569.45

Balance on hand June 30, 1890..... 82,077.79

As follows:

Balance in United States Treasury.....\$38,019.17

In hands of disbursing officers..... 44,058.62

82,077.79

Nearly all the balance remaining on hand at the close of the fiscal year has already been or will be expended in the payment of supplies contracted for, and other obligations incurred prior to July 1, 1890.

The money value of the medical and hospital supplies actually issued during the fiscal year ending June 30, 1890, was \$194,386.03, and the cost of the supplies required for issue during the current fiscal year will undoubtedly exceed that amount. I base the estimate of the probable cost of the medical and hospital supplies which will be required for issue during the present fiscal year on the fact that the average money value of medical supplies issued annually since the fiscal year 1877 was, approximately, \$176,000, exclusive of all other expenses, and to the further fact that in addition to supplying the Army proper, medical and hospital supplies are now furnished by the medical department of the Army for the use of the National Guard, District of Columbia, under provisions of the act of Congress approved March 1, 1889.

I have the honor to submit also a statement showing the expenditures during the last fiscal year from the appropriations for the medical department for prior fiscal years, and the balances on hand June 30, 1890, viz:

Medical and Hospital Department, 1889:	
Balance on hand July 1, 1889.....	\$74,599.71
Refunded by Quartermaster's Department for veterinary medicines furnished.....	5,779.72
Refunded by U. S. Soldiers' Home for medicines furnished.....	301.02
Total to be accounted for.....	80,680.45
Disbursed during the year:	
For medical and hospital supplies.....	\$63,713.63
For pay of employes.....	1,348.33
For expenses of purveying depots.....	1,389.20
For medical attendance and medicines.....	2,651.04
For miscellaneous expenses.....	183.69
	<u>69,285.89</u>
Balance on hand June 30, 1890	11,394.56
As follows:	
In United States Treasury	\$2,044.50
In hands of disbursing officers.....	9,350.06
	<u>11,394.56</u>
Medical and Hospital Department, 1888:	
Balance on hand July 1, 1889.....	\$46,905.21
Refunded by Quartermaster's Department for supplies furnished...	679.55
Total to be accounted for.....	47,584.76
Disbursed during the year.....	\$4,252.53
Transferred to surplus fund.....	43,332.23
	<u>47,584.76</u>
Medical and Hospital Department, 1886:	
Balance on hand July 1, 1889.....	5,282.46
Disbursed during the year.....	910.00
Balance on hand June 30, 1890, in hands of disbursing officers ...	<u>4,372.46</u>
Library of the Surgeon-General's Office, 1889:	
Balance from previous fiscal year.....	1,677.89
Disbursed during the year.....	1,677.89
	<u>1,677.89</u>
Library of the Surgeon-General's Office, 1890:	
Appropriated by act of March 2, 1889.....	10,000.00
Disbursed during the year	9,428.84
Balance June 30, 1890.....	<u>571.16</u>

Army Medical Museum, 1889 :	
Balance from previous fiscal year	\$445. 44
Disbursed during the year	445. 44
<hr/>	
Army Medical Museum, 1890 :	
Appropriated by act of March 2, 1889	5, 000. 00
Disbursed during the year	3, 917. 46
<hr/>	
Balance June 30, 1890	1, 082. 54
<hr/>	
Medical and Surgical History :	
Balance from previous fiscal year	2, 711. 94
Disbursed during the year	
<hr/>	
Balance June 30, 1890	2, 711. 94
<hr/>	
Building for Army Medical Museum and Library :	
Balance from previous fiscal year	1, 272. 89
Disbursed during the year	88. 84
<hr/>	
Balance June 30, 1890	1, 184. 05
<hr/>	
Artificial limbs, 1888 :	
Balance from previous fiscal year	34, 059. 47
Disbursed during the year	\$3. 80
Carried to the surplus fund	29, 576. 25
<hr/>	
	29, 580. 05
<hr/>	
Balance June 30, 1890	4, 479. 42
<hr/>	
Artificial limbs, 1889 :	
Balance from previous fiscal year	23, 181. 36
Disbursed during the year	14, 306. 19
<hr/>	
Balance June 30, 1890	8, 875. 17*
<hr/>	
Artificial limbs, 1890 :	
Appropriated by act of March 2, 1889	130, 000. 00
Appropriated by act of April 10, 1890	60, 000. 00
<hr/>	
Total to be accounted for	190, 000. 00
Disbursed during the year	186, 364. 51
<hr/>	
Balance June 30, 1890	3, 635. 49
<hr/>	
Appliances for disabled soldiers, 1888	
Carried to the surplus fund	1, 630. 70
<hr/>	
Appliances for disabled soldiers, 1889 :	
Balance from previous fiscal year	754. 23
Disbursed during the year	149. 28
<hr/>	
Balance June 30, 1890	604. 95
<hr/>	
Appliances for disabled soldiers, 1890 :	
Appropriated by act of March 2, 1889	2, 000. 00
Disbursed during the year	1, 303. 56
<hr/>	
Balance June 30, 1890	696. 44
<hr/>	
Support and medical treatment of destitute patients :	
Appropriated by act of March 2, 1889	17, 000. 00
Disbursed during the year	17, 000. 00
<hr/>	
Expended in furnishing trusses to disabled soldiers, under the Revised Statutes, sections 1176 to 1178, and act of March, 1879	
	8, 767. 61
<hr/>	

There were furnished during the year ending June 30, 1890 :

Trusses	1,623
Special appliances	196
Apparatus for the arm	1
Artificial arms	3
Artificial legs	23
Commutations in place of artificial limbs and apparatus	3,651

ARMY MEDICAL MUSEUM.

The total number of specimens received during the fiscal year was 1,315; total number of specimens in the museum June 30, 1890, 29,285. The following statement shows the details of additions, transfers, etc., in the different sections :

Pathological section :

In museum June 30, 1889	9,932
Transferred or discarded during the year	4
	<hr/>
	9,928
Received during the year	55
Transferred from provisional pathological section during the year	3
	<hr/>
In museum June 30, 1890	9,986

Anatomical section :

In museum June 30, 1889	3,171
Exchanged during the year	4
	<hr/>
	3,167
Received during the year	129
	<hr/>
In museum June 30, 1890	3,296

Section of comparative anatomy :

In museum June 30, 1889	1,717
Received during the year	0
	<hr/>
In museum June 30, 1890	1,717

Microscopical section :

In museum June 30, 1889	10,736
Received during the year	630
	<hr/>
In museum June 30, 1890	11,366

Miscellaneous section :

In museum June 30, 1889	989
Received during the year	238
	<hr/>
In museum June 30, 1890	1,227

Provisional pathological section :

In museum June 30, 1889	904
Transferred or discarded during the year	6
	<hr/>
	898
Transferred from pathological section	1
Received during the year	151
	<hr/>
In museum June 30, 1890	1,050

Provisional anatomical section :

In museum June 30, 1889	533
Discarded during the year	2
	<hr/>
	531
Received during the year	112
	<hr/>
In museum June 30, 1890	643

RECAPITULATION.

Total number of specimens in museum June 30, 1889	27,982
Exchanged or discarded during the year	12
	27,970
Total number received during the year	1,315
	29,285

The following are some of the more interesting specimens received during the past fiscal year :

(1) A series of medical and surgical field equipments, as used in the British army, made by Savory & Moore, London, England. (2) A series 180 microscopic slides from yellow fever cases, prepared and presented by Maj. George M. Sternberg, surgeon, U. S. Army. (3) A collection of crania (24) of natives of the Gazelle peninsula, New Britain, from the National Ethnographical Museum at Leyden, Holland. (4) Seven Frankish crania of the sixth century, collected near Worms, Germany. (5) Thirteen papier maché models, on an enlarged scale, prepared by Mr. J. H. Emerton, Boston, Mass. (6) A series of human embryos at various ages and uteri in various stages of conditions, from Dr. Charles S. Minot, Harvard Medical School, Boston. (7) The skeleton of a woman who had been bedridden for over twenty years, showing osteomalacia, from Dr. Mary A. Parsons, Washington, D. C. (8) A sternum showing extensive congenital fissure, from the body of a physician, from Dr. L. S. Pilcher, Brooklyn, N. Y. (9) A portion of a skull showing extensive fracture which had healed; some years afterwards the patient died from a second fracture of the skull, from Capt. Edward Everts, assistant surgeon, U. S. Army. (10) A specimen of extensive calcareous pericarditis, from Dr. E. M. Schaeffer, Washington, D. C. (11) Specimens of general cancer from a jaguar, and also from the intestines of a chicken, from the U. S. National Museum. (12) A series of jetons of the Paris Medical School from 1650 to 1750, among them the busts of H. T. Baron, Bourru, Boyer, Morand, and others. Other valuable medals received were: Yellow fever at Barcelona, 1821; cholera at Berlin, 1831; cholera in France, 1832; Dr. Johan Klainmuller, 1527; Dr. C. C. Rumpf, 1677, and Franciscus Redi, 1684.

LIBRARY.

The following table shows the additions made to the library during the fiscal year :

Description.	On hand June 30, 1889.	Added during fiscal year.	Total June 30, 1890.
Medical journals	28,009	1,008	29,017
Medical transactions	3,981	175	4,156
Bound theses	1,531	43	1,574
Bound pamphlets	1,818	107	1,925
Other medical books	58,612	2,602	61,214
Total	93,951	3,935	97,886
Medical theses	47,121	2,286	*49,407
Medical pamphlets	90,794	8,876	†99,670
Total	137,915	11,162	149,077

*Of the total number of single theses on hand, there were bound during the year, 723, in 43 volumes.
†Pamphlets bound during the year, 3,467, in 82 volumes.

There were presented to the library during the year, 510 books and 5,587 pamphlets, also 3,917 numbers of journals.

Volume XI of the Index-catalogue, including from "Phædronus" to "Régent," forming a volume of 1,116 pages, has been printed, and the edition will be distributed, as soon as bound, to those institutions and persons who have received the previous volumes. The preparation of the manuscript of Volume XII is already well advanced.

HOSPITAL CORPS.

Under the Army Regulations governing the allotment of hospital corps members, the number demanded by the distribution of troops of the line, the arsenals, engineer stations, West Point, recruiting depots, and other independent commands, is as follows:

One hundred and sixty-five hospital stewards, one hundred and one acting hospital stewards, and six hundred privates. There are now in service one hundred and thirty-seven hospital stewards, sixty-two acting hospital stewards, five hundred and sixty-two privates; and vacancies exist for twenty-eight hospital stewards, thirty-nine acting hospital stewards, thirty-eight privates, and ten civilians.

The number of desertions from the corps amounted to twenty-five during the year, or 3.2 per cent. of the force.

Seven hospital stewards were tried by general court-martial for various offenses; none were sentenced to dismissal from the Army. Two acting hospital stewards were tried; one for a minor offense, the other was sentenced to dishonorable discharge. Twenty privates, also, were tried, of whom one was acquitted, eight received minor sentences, and eleven were dishonorably discharged.

The number of members of the corps who were discharged by expiration of service and did not re-enlist was ninety-one, or 11.9 per cent. of the force.

The percentage attained by the candidates examined was as follows: For hospital steward, four, from 92 to 95 per cent.; four, 89 per cent.; nine, from 80 to 85. For acting hospital steward, one, 99 per cent.; two, 97; two, 96; eleven, from 90 to 95; seven, from 86 to 89; seven, from 80 to 85; nine, from 75 to 79; one, less than 75.

Table showing gain and loss to the hospital corps for the year ending June 30, 1890.

	Hospital stewards.	Acting hospital stewards.	Privates.	Matrons.
GAIN.				
In service July 1, 1889	141	50	578	156
Re-enlisted	25	10	40	.....
Promoted after examination	18	.....	.....	.....
Rejoined from desertion .....	.....	.....	5	.....
Detailed from privates of the hospital corps .....	.....	38	.....	.....
Transferred from the line .....	.....	.....	177	.....
Enlisted .....	.....	.....	3	.....
Re-enlisted from other corps .....	.....	.....	4	.....
Reduced from acting hospital stewards .....	.....	.....	2	.....
Appointed .....	.....	.....	.....	89
Total to be accounted for	184	98	809	245
Total gain	43	48	231	89
LOSS.				
Discharges:				
Expiration of service	33	17	131	.....
For disability	3	.....	11	.....
By sentence of general court-martial .....	.....	1	10	.....
By order	5	1	24	84
To enter Soldiers' Home .....	.....	.....	1	.....
Promoted .....	.....	15	40	.....
Retired	3	.....	.....	.....
Died	3	.....	5	1
Reduced to private .....	.....	2	.....	.....
Deserted .....	.....	.....	25	.....
Total loss	47	38	247	85
In service June 30, 1890	137	62	562	160

Record of examinations.

	Hospital stewards.	Acting hospital stewards.		Hospital stewards.	Acting hospital stewards.
Number of applications	36	65	Examination authorized	23	50
Disapproved	2	5	Declined examination	2	4
Withdrawn	2	5	Failed	4	6
Not entitled to examination ..	1	.....	Found qualified	17	40
To be examined in next class ..	8	5			
Examination authorized	23	50		23	50
	36	65			

CIVILIANS.

Applications received	28
Failed to accept conditions	28

PROVIDENCE HOSPITAL.

Under the provisions of the act of March 2, 1889, making appropriation of \$17,000 "for the support and medical treatment of 85 medical and surgical patients who are destitute in the city of Washington, under a contract to be made with the Providence Hospital by the Surgeon-General of the Army," a contract was duly entered into with the institution named, and has been fulfilled to my satisfaction and without complaint on the part of the persons sent there for treatment. The following is a statement of the amount of relief afforded under the appropriation:

Number of patients in hospital July 1, 1889	91
Number of patients admitted during the year	855
Total number of patients treated	946
Average number of patients admitted per month	71
Number remaining in hospital June 30, 1890	98
Total number of days' treatment afforded	34,463
Average number of days' treatment per patient	36
Average number of patients treated per day	94
Longest term of treatment	days 365
Shortest term of treatment	day 1
Number of patients in hospital during the whole year	24

The patients included in the statement represent all classes of diseases, acute and chronic, except those of a contagious nature. The patients shown as having remained in hospital during the whole year are incurable, without home or friends.

ARMY AND NAVY GENERAL HOSPITAL, HOT SPRINGS, ARK.

At the beginning of the year, July 1, 1889, there were in hospital:

Patients	50
Admitted during the year	139
Total	189
Returned to duty	89
Left hospital for residence, station, and on sick leave	28
Discharged on expiration of service	3
Discharged on surgeon's certificate of disability	27
Died	2
Deserted	1
Total left hospital	150
Remaining	39

Of the cases treated, the majority were rheumatism in its various forms and with its many complications. The results obtained were even more satisfactory than those of the preceding year. In nervous diseases the results were not so favorable, while in those of the digestive and respiratory systems much benefit was obtained.

Two deaths occurred during the year—one from typhoid fever, a patient under treatment for general paresis; the other from pulmonary tuberculosis.

The special feature in the treatment of diseases at this hospital is the bath, which is administered in the various forms of tub, plunge, douche, vapor, etc. Nine thousand seven hundred and twenty baths were given during the year, an average of 33 in each bathing day.

The supply of hot mineral water is obtained from a spring at the lower part of the west side of Hot Springs Mountain, and about 60 feet below the bath-house. It flows at a temperature of 140° Fahr., and is one of the celebrated Hot Springs of this place, of which there are along the mountain side about 70, all within an area of 1,200 feet in length by 300 feet in breadth. Its composition, as given by analysis of Prof. David Dale Owen and Prof. E. H. Larkin, is as follows:

	Grains per gallon.
Magnesium carbonate	0.13
Calcium carbonate	3.97
Sodium sulphate	0.38
Potassium sulphate	0.23
Calcium sulphate	0.11
Sodium chloride	0.01
Calcium silicate	0.46
Iodine and bromine, of each	a trace
Iron sesquioxide	0.10
Alumina	0.45
Silica	1.87
Organic matter	0.70
	8.41

It also contains free carbonic acid. The springs may be classed as indifferent thermals, resembling in composition those of Schlangenbad, Töplitz, Gastein, Wildbad, Chaudefontaine, and Pfeffers, and also, but not so closely, Bath, in England, and Baden Baden, in Germany, the latter containing a greater proportion of mineral.

The spring which supplies the hospital has an estimated flow of 30,000 gallons in twenty-four hours. The water is forced by a steam pump into a reservoir at a height of 150 feet, from which it is distributed to the bath-house and the hospital buildings; the reservoir, which has a capacity of 12,000 gallons, is of stone, arched over with brick, and in order that the water may be cooled before being used it is led into two other reservoirs of stone, having covers of open wood-work, from which it is drawn alternately. These reservoirs have each a capacity of about 8,000 gallons.

The pump and its reservoir is located at the level of the spring, on ground which was at the time leased by the Interior Department to a citizen, who, in 1887, erected a bath-house that so covers the pump-house as to leave only a dirty, dark, and disagreeable passage through which the pump and spring may be reached; the proprietors of the bath-house refused to improve this; their lease expired in June, 1888, and representation of the case was made to the War and Interior Departments requesting that the lease be not renewed until provision is made for free and convenient access to our water supply.

An appropriation of \$31,000 was made by Congress October 2, 1888, for the construction of a reservoir and pumping works to collect and

utilize the hot water which now runs to waste from points below the level of the bath-houses; after many delays the contracts have been made and the work is about to begin. It is hoped that when completed the hospital may be able to draw its supply from this source.

Much has been done towards completing the interior of the hospital buildings and improving the grounds, but much yet remains to be done. During the past year a steam-heating apparatus has been introduced into one of the wards, into the administration building, including the rooms for officers, and into a part of the bath-house; it should be extended this year to the other ward and the mess-building; concrete has been laid on the floors of two of the rooms in the bath-house and on some of the walks on the grounds; the boundary wall along the street front has been extended, and this year should have a further extension of 180 feet to complete it; it should be finished with a coping and an iron railing similar to the rest of the wall along that front. The east and north sides of the hospital grounds, which do not front on any street, are protected by barbed wire fence.

The work on the grounds has been continued through the year and requires still further outlay to place them in safe and good condition. The hospital reservation has an extent of ten acres, which, on account of its steep and uneven surface, has required terracing and sloping in many places to keep the earth from being washed out in gullies by the heavy tropical rain-falls in summer; this work has been difficult and expensive, but if continued this year it will be nearly or quite completed.

The external wood-work of the buildings requires painting, and the passage to the bath-house needs inclosing and completing, to protect the patients from exposure during cold weather while passing to and from the baths.

MEDICAL OFFICERS.

The requirements of the Army, as regards medical officers, during the past year, have been as follows :

Number of permanent posts and stations (4 posts under orders to be abandoned).	138
Number of temporary posts and substations	26
Total.....	164

There were 109 medical officers reported to this office as having been on duty with scouting parties and other field service during the year.

An Army medical examining board was convened in New York City on the 1st day of October, 1889, and the 28th of April, 1890, and remained in session during the respective months. The following is a recapitulation of the work performed by the board during its sessions :

Number of candidates invited to appear for examination:.....	49
Number of candidates found qualified.....	9
Number of candidates rejected.....	17
Number of candidates rejected, physical disability.....	7
Number of candidates who withdrew after partial examination	3
Total number examined.....	36

Number of candidates who failed to appear for examination	13
---	----

Deaths.—Since the date of last report 1 surgeon with the rank of major, 1 major, and 1 captain on the retired list.

Retirements.—Two surgeons with the rank of colonel.

Promotions.—Two surgeons with the rank of lieutenant-colonel have been promoted to the rank of colonel; 2 surgeons with the rank of major have been promoted to the rank of lieutenant-colonel; 3 assistant surgeons with the rank of captain have been promoted to the grade

of surgeon with the rank of major; 4 assistant surgeons with the rank of first lieutenant have been promoted to the rank of captain (after five years' service), act of June 23, 1874.

Appointments.—Nine assistant surgeons with the rank of first lieutenant.

Resignations.—Two assistant surgeons with the rank of captain.

Vacancies.—There are now two vacancies in the Medical Department.

Non-effective medical officers.—There are 15 medical officers on sick leave of absence, 10 of whom have been found incapacitated for active service and recommended for retirement by Army boards.* The nature of the disability alleged by the remaining 5, leaves but little room to expect their ultimate cure or return to duty. There are also 7 medical officers who by reason of physical disability are unfitted for full duty, and are consequently permitted to remain as permanent occupants of stations where duty is light and the climate suitable. There are 5 medical officers on ordinary leave of absence.

I have nothing to add to my remarks in the last annual report concerning the embarrassment to the efficient working of the medical corps which is caused by the presence of this large number of non-effective medical officers, and renew my recommendation that the matter be submitted to Congress with a view of securing the necessary legislation to retire those medical officers who may be found unfitted for the performance of their duties.

CONSTRUCTION AND REPAIR OF HOSPITALS AND HOSPITAL STEWARDS' QUARTERS.

The construction of four new hospitals, two of brick and two of wood, has been authorized, and new wards have been added to three of the hospital buildings. There are now six hospitals, including two constructed last year, built after the plans adopted in 1887. The methods employed for heating by steam and ventilation by aspiration have proved quite satisfactory after the correction of slight defects which were found in the first building. The wards are heated by the method of indirect radiation, the main building by direct radiation. The general plan has been found convenient for administration, and although the buildings are plain architecturally, their proportions are good and their general appearance is highly creditable to the Department. Colonel Sutherland, medical director of the Division of the Atlantic, in his report of the inspection of the hospital at Fort Wayne, the first one built after the new plan, says: "Its external appearance is handsome. The interior is equally fine. The walls are covered by an asbestos finish, and all the wood work is unpainted, thus making a complete aseptic building. The ventilation system exhibits every feasible method of emptying the foul air and the carrying in a fresh supply. * * * The lavatory and water-closet is complete. There is an abundance of space in the hospital, and in an emergency the two upper rooms could be available as wards. Ample space is allotted for office and dispensary; this has been a long-desired improvement by those who felt the present arrangement to be too restricted in the old regulation hospitals. The general arrangement of the building is a very convenient one. The plumbing, heating, and all the details of building have been creditably and satisfactorily executed, all under the supervision of the two very able and intelligent medical officers of the post who devoted their time and ability to the work."

*Assistant Surgeons James W. Buell, William R. Steinmetz, J. V. De Hanne, F. W. Elbrey, Surgeons B. E. Fryer, William S. Tremaine, Assistant Surgeons Victor Biart, R. W. Shufeldt, John de B. W. Gardiner, and Surgeon L. Y. Loring.

Of hospital stewards' quarters, nine sets have been constructed and four others, commenced during the previous fiscal year, have been completed. It is but an act of justice to a class of faithful non-commissioned officers that I should invite your attention to the mandatory limitation in the appropriation bills of the cost for constructing their quarters to \$800 and \$1,200. Experience has demonstrated that it is impossible to construct any building of brick or stone for this cost, and that there are but few places in the country where suitable wooden buildings can be constructed for the money. It has therefore been necessary either to quarter many of the stewards in hospitals where they occupy room required by the sick or their attendants, or to place them in such rude shelter as the station may afford.

The buildings at the new posts now in process of construction in various parts of the country are of brick or stone, and I am informed that quarters of these materials are erected for the non-commissioned staff at an average cost of \$2,200 each. At some of these posts small wooden structures for hospital stewards can be erected within the legal limitation of cost; but the authorities very properly object, first, on account of the inflammable material used in construction, and the consequent danger to contiguous buildings, and second, because the building would not be in harmony with the general architectural design of the post. Aside from these cogent reasons consideration is due to military ethics and discipline, a distinction, which may properly be called invidious, being made in this matter of quarters between the hospital steward and his non-commissioned colleague of the staff or line, with each of whom he is declared to be, by Army Regulations, 8, the equal in rank.

I therefore recommend that the matter be brought to the attention of Congress, and that provision be made to rectify an evil which is productive of much dissatisfaction and tends to subvert the discipline of the corps.

INSPECTIONS BY MEDICAL DIRECTORS.

The inspections by medical directors of departments required by Army Regulations, 1662, have been generally made, and their reports indicate a high state of efficiency in the "personnel" of the department. The records of the various hospitals are as a rule correctly kept, the reports and returns required by the department are duly rendered, the medical supplies are abundant in quantity and excellent in quality, and the duties of the officers and men have been performed to the satisfaction of their superiors.

The general health of the troops and the sanitary and hygienic condition of the garrisons will be treated of further on in detail.

HEALTH OF THE ARMY.

During the year the rate of admission to sick report was 1,315.02 per thousand of strength, a rate but little different from that of the previous year, 1,270.73. The number of men constantly non-effective from sickness was unusually large, 44.12 per thousand of strength, as compared with 41.91 in the previous year and 43.54 in the previous decade; the number of days lost on account of sickness also was large, averaging 16.1 days for each man in the Army, as compared with 15.3 in the previous year and 15.9 in the previous decade. These rates of sickness would lead us to expect a larger death-rate than was recorded during the previous year, but this expectation is not sustained by the reports, for this important rate is found to be only 6.33, as compared with 8.15 during the previous year and 9.52 during the decade. The list of discharges for disability gives an explanation of the increased

sickness. The report for 1889 called the attention of medical officers to the facility with which discharges for disability was obtained, and although the year was well advanced before that report was published it had the effect of reducing the rate of discharges to 22.79 per thousand of strength, as compared with 27.75 during the previous year, and of increasing the number of days of treatment before discharge from 76.4 to 86.6. The number of men held during a protracted sickness and ultimately restored to duty instead of being discharged, together with the increased duration of the period of observation in cases that ended in discharge, accounts satisfactorily for the larger number of men constantly non-effective and for the increased number of days lost on account of sickness, while the materially lessened death-rate indicates that the health of the Army during the year was in no respect inferior to that of previous years.

In my last annual report, I indicated the proper standard of comparison of the health of an army to be its own best annual record as to death from disease, inasmuch as outside of unusual vicissitudes, exposures and epidemics, the sanitary surroundings of the soldier do not vary much from year to year except in so far as they are favorably modified by intelligent efforts for their improvement. Excluding deaths from injury the lightest mortality record of our Army was that for the year 1885, 4.76. The rate of 6.33, recorded for the past year, includes deaths from injury. When these are excluded the proper comparative rate, that from disease, is found to be only 3.95, so that notwithstanding its slightly increased rate for admissions and its materially increased rate of men constantly sick, the past year puts 1885 into second place by recording the lowest annual death-rate in the history of our Army.

As compared with the armies of Great Britain, Italy, and Germany, the last only has a lower death-rate from disease, 2.95, than our Army during the past year; but when we consider the large number of discharges for disability from that Army the idea is suggested that the death-rate might have been larger if the number of discharges had been smaller; in other words, that some of the men were discharged to permit them to die at home.

The following table presents a comparison of points connected with our Army as compared with those of Great Britain, Italy, and Germany:

Army.	Mean strength.*	Ratios per 1,000 of mean strength.					Average sick time to each soldier (days).	
		Admissions.	Deaths.†			Discharges.‡		Constantly non-effective.
			Disease.	Injury.	Total.			
United States, 1889.....	25,008	1,315.02	3.95	2.38	6.33	22.79	44.12	16.1
United States, 1888.....	24,726	1,270.73	6.09	2.06	8.15	27.75	41.91	15.3
United States, 1878-1887....	23,698	1,579.55	6.03	3.49	9.52	31.96	43.54	15.9
Great Britain (home), 1887..	101,114	786.80	4.43	.71	5.14	14.80	45.12	16.5
Italy, 1887.....	212,898	760.49	8.08	.66	8.74	14.01	32.90	\$12.0
Prussia, Saxony, Württemberg, 1883-1884.....	383,021	830.11	2.95	1.15*	4.10	29.41	31.40	11.5

* The mean strength, admissions, deaths, discharges, and non-effective rates for the English, Italian, and German armies are exclusive of officers. In the German armies, cadets and invalids are included.

† The ratios of deaths and discharges in the United States and English armies are based on the mean strengths as furnished by their respective Adjutants-General.

‡ The Italian contingent serving in Africa, having a mean strength of 7,706 men, with 7,392 admissions to the sick report and 530 deaths, is not included in the above statement.

§ There is in the Italian army a system by which large numbers of convalescents, instead of being retained in hospital, are sent to their homes until their recovery is complete. In 1887, 5,704 men were thus furloughed for from one to three months, and 1,950 for a longer period. The report does not state whether the time of these men is included in the total number of days lost to the service or not; in the latter case the ratio for constant non-effectiveness would, of course, be greatly increased.

The mean strength of the command, officers and men, white and colored, from which medical reports were received during the year amounted to 25,008; white, 22,591; colored, 2,417.

The admission-rate for the white troops was 1,318.67, as compared with 1,249.71 for the previous year and 1,570.45 for the previous decade; while that for the colored troops was 1,280.93, as compared with 1,464.82 for the previous year and 1,742.77 for the previous decade. It will be seen from these figures that the low rate of the colored troops during the year is exceptional. The non-efficient rate of the colored troops, and also the number of days lost by them on account of sickness, correspond with the admissions in being not only lower than those of the white troops, but lower than any rates heretofore reported by the colored commands. The non-efficient rate of the white troops was 44.44, as compared with 41.62 during the previous year, while that of the colored troops was 41.09 as compared with 44.56. The number of days lost for each man on account of sickness during the year was, for the white troops, 16.2 as compared with 15.2 during the previous year, and for the colored troops 15.0 as compared with 16.3. The difference in the ratios of discharges was but slight, 22.65 for the white troops, 24.14 for the colored, as compared with 27.67 and 28.45, respectively, for the previous year, and with 31.92 and 32.38, respectively, for the decade. The ratio of deaths was, however, somewhat increased among the colored troops. The rates from injuries was about the same in both classes, 2.35 per thousand white men and 2.68 per thousand colored; but the rates from disease among the colored troops, 6.90, was about double the rate of the whites, 3.64, the corresponding rates for the previous year being 5.60 as against 10.62, and for the previous decade 5.92 as against 7.24. Although the fatality of disease among the colored troops was so much greater than among the whites it is satisfactory to observe that the rate is considerably less than was recorded during the previous year and a little under the average rate of the previous decade. Compared with the rates prevailing among the colored troops of the British army in the West Indies those of our colored troops show to great advantage. Thus, the British colored troops in 1887 had 11.62 deaths per thousand men, 66.39 discharges, and 74.29 constantly sick, and during the previous decade 15.51 deaths, 34.82 discharges and 58.58 constantly sick.

The principal causes of the 1,315 admissions per thousand of strength were injuries, chiefly contusions, sprains, cuts, and lacerations, which occasioned 249, malarial fevers 120, diarrhoeas 111, catarrhs and bronchitis 98, and rheumatism 93. Injuries took first place also among the causes of non-effectiveness, 8.55 of the total of 44.21 per thousand of strength being due to them; venereal diseases came second with 5.61 constantly sick; then followed rheumatism with 4.78, malarial fevers with 3.25, and diseases of the digestive system with 2.37 per thousand men.

As compared with the causes of admission to sick report in foreign armies our statistics are quite satisfactory. The five principal causes in order of importance in the British army were, 1, venereal diseases; 2, skin diseases; 3, injuries; 4, tonsillitis; 5, catarrhs and bronchitis,—in the Italian army 1, venereal diseases; 2, catarrhs and bronchitis; 3, malarial diseases; 4, diseases of the digestive system; 5, specific fevers,—and in the German army, 1, skin diseases; 2, injuries; 3, tonsillitis; 4, diseases of the digestive system, and 5, catarrhs and bronchitis.

The deaths during the year numbered 173 or 6.33 per thousand of strength as compared with an annual average of 9.52 during the pre-

vious decade. Injuries caused 65 of these deaths or 2.38 per thousand of strength as compared with 3.49 during the decade; 22 of the deaths from injuries were the result of gunshot wounds. Pneumonia killed 19 men or .70 per thousand as compared with .77 during the decade; typhoid fever 15 men or .55 as compared with .74; consumption 12 men or .44 as compared with .53, and diseases of the digestive system, of the liver chiefly, 9 men or .33 as compared with .56.

In contrasting our death lists with those of the Germans we find in every thousand men of our Army twice as many deaths from violence and five times as many from heart disease. Our rates for injuries and heart disease were about four times larger than those of the Italians, but their rates for typhoid and other specific fevers, pneumonia, and bronchitis were four times larger than ours. Our rate for injuries was three times larger than the British rate; for typhoid fever, twice larger; and for heart disease considerably larger; but their rate for consumption was three times larger than ours.

The discharges numbered 623, equal to 22.79 out of every thousand men, a considerable reduction from the rate of 31.96, the average for the previous decade. Of the 22.79 cases 3.52 or 96 men were discharged for venereal diseases, the decade rate being 4.30; 3.18 or 87 men were discharged for the results of injuries, the decade rate being 3.90. Diseases of the nervous system took third place in the causation of discharges, 74 men contributing 2.71 to the rate, a material reduction from the 4.06 of the decade—of the 74 cases 30 were affected with insanity and 18 with epilepsy. Diseases of the digestive system were fourth in order of importance, causing a rate of 2.09 as compared with 2.50 for the decade; of the 57 men lost to the service by these diseases 30 were really the results of accident, being cases of rupture—10 were confirmed dyspeptics. Rheumatism came fifth, with 1.98 per thousand of strength or 54 men from the ranks of the Army, an improvement on the decade rate, 2.98. Consumption followed rheumatism in order of importance by occasioning the discharge of 41 men, equal to 1.50 per thousand as compared with 2.10, the average annual rate of the previous decade. Heart disease closes the list of prominent causes by accounting for 39 men, equal to a rate of 1.43 as compared with 2.20 for the decade.

The largest number of discharges at any one post was 35 at Columbus Barracks, equaling a rate of 58.43. The largest rate was given by Little Rock Barracks, where 10 discharges from its garrison of 95 men gave a rate of 105.26 per thousand of strength; four of the cases were caused by venereal diseases, 1 by genito-urinary disease, 1 by rheumatism, 2 by consumption, and 2 by injury.

The excess of our discharge-rate (22.79) as compared with the rate of Great Britain (14.80) and of Italy (14.01) is mainly due to venereal diseases, injuries, and rheumatism. Venereal diseases occasioned the loss of 3.52 per thousand of our men, while only .69 of the home forces of Great Britain and .01 of the Italian troops were discharged on this account; injuries caused among us 3.18, among the British .82, and among the Italians .43; rheumatism 1.98 among us, .66 among the British, and .17 among the Italians. The excess of injuries and rheumatism necessitating the discharge of our men indicates that their service is of a more active character than that of these foreign troops. The discharges for heart disease and consumption were relatively more numerous in Great Britain than with us, and owing to the prevalence of measles in the Italian army its discharge rates for consumption and pulmonary affections were greater than ours. The German troops had

few discharges, .03, for venereal diseases, and a rate of only .79 for injuries; but their discharges for consumption were 6.40 per thousand of strength; for diseases of the digestive system (including rupture) 4.43, and for heart disease 2.57. A large proportion of these discharges were really the rejection of conscripts, who proved unfit for service on account of disability existing before enlistment, hence the relatively high rate of the German army.

The difference between the discharge rates of our Army and those of the European troops, so far as regards venereal diseases, is so marked as to merit a word of explanation. The high rate of our troops is not due to the greater prevalence of these diseases among them. Venereal diseases take first place among the causes of admission in Great Britain and Italy, while they do not form even one of the five prominent causes among our men. The admission-rate of the British army is 253 per thousand men, equivalent to every fourth man affected, while the rate among our troops is 85, equal to one man in twelve. Nevertheless we discharged 96 men on account of these diseases from our Army of 25,000, the British 70 from their home force of over 100,000, the Italians 2 from their army of over 200,000, and the Germans 12 from their strength of nearly 400,000.

Several causes combine to make discharge for syphilis more frequent in our Army than in the European services. Modes of treatment and their results are not concerned in the explanation. The economic side of the question appears to determine the matter. The armies of Europe are large, representing in many instances the maximum strain which their respective countries are capable of bearing, and they can not afford to throw out men who may be put to use in an emergency. Our Army, on the other hand, is so small that there is no difficulty in securing its complement of physically qualified men. Its numbers at the same time do not permit it to have its strength impaired by the presence of non-effectives. The short period of the enlistment is also regarded as calling for the prompt discharge of such cases, many of which would remain on sick report during the greater part of their term if held for treatment until a thorough cure was effected. There is, moreover, a very general dislike on the part of the men to be associated with the unclean, so that as soon as a case of syphilis is known to exist in a company pressure is brought to bear on the medical officer to have the man discharged. If the unfortunate has already served one or two enlistments, and is valued as a good soldier, he may be subjected to careful courses of treatment with the view to his cure and retention in the service, but as most of the syphilis of the Army is developed in recruits, the frequency of discharge is readily understood.

There is, however, another side from which this question must be viewed, that of justice to the individual and to society. Both of these considerations require that the Army should take care of its disabled men, irrespective of cause, until they are in a measure able to take care of themselves. Hence it follows that in practice discharges for syphilis are not effected until the cases have been under such treatment as will remove the first effects of the disabling cause, and enable a decision to be made on the advisability of further detention with a view to service or of discharge as an economic measure. This period of detention averaged for the Army fifty-six days in each case. The detention in the one case at David's Island was one hundred and six days; the average of the eleven cases at Jefferson Barracks was sixty-five days; of the twenty-one cases at Columbus Barracks, forty-two days.

THE HEALTH OF THE MILITARY DEPARTMENTS.

In examining the statistics of the various departments it is found that the admission-rate ranged from 1,180 per thousand of strength in the Departments of Dakota and Arizona to 1,526 in the Department of the East; the number of men constantly sick from 36 in every thousand in the Department of the Platte to 50 in that of Texas; the death-rate from 4.56 in Dakota to 12.09 in California, and the rate of discharge for disability from 15.75 in Texas to 27.51 in the Department of the Platte, while the number of days during which the discharged men were held for observation and treatment ran from 59.5 in the last-mentioned command to 112.8 in the Department of the Columbia. The small non-effective rate in the Department of the Platte is thus seen to have been caused by the relatively large number of discharges and the comparatively short period during which the discharged men were held after having been reported sick. Taking all the rates into consideration, the Department of Dakota presents the best record for the year and the Department of the East the worst.

DEPARTMENT OF THE EAST.

In this department, average strength 5,352 men, the rate of admission was 1,526 per thousand of strength as compared with the average of 1,315 for the Army; the non-effective rate 46.39 as compared with 44.12; the death rate 6.54 as compared with 6.33, and the discharge-rate 24.29 as compared with 22.73, while the number of days prior to discharge was 61.6 as compared with the average 86.6.

The increase of the admission-rate over the average was mainly due to venereal diseases, 130 per 1,000 instead of 85; alcoholism 70 instead of 41; catarrhs and bronchitis 147 instead of 98; and vaccination 69 instead of 33.

The posts which contributed the increased rates to the department were principally Fort McPherson, which gave no less than 3,417 entries on sick report per 1,000 of strength during the year; Willets Point, 2,388; Columbus Barracks, 2,319, and Fort Monroe, 1,668. Many of the smaller posts had rates considerably above the Army average of 1,315, but their influence in determining the average was slight in comparison with the posts mentioned. Fort McPherson was garrisoned by 156 men; Willets Point by 381; Columbus Barracks by 599, and Fort Monroe by 367.

The large admission-rate at Fort McPherson had necessarily a variety of causes, chief among which was a local epidemic of diarrhœa, which gave a rate of 820 as compared with 111, the average of the Army; venereal diseases gave a rate of 404 as compared with 85, and their ally, alcoholism, 244 as compared with 41; injuries, diseases of the digestive system, rheumatism, and bronchitis, were also at this post markedly in excess of the average of the Army. At Willets Point the large admission rate was caused by alcoholism, which gave 273 as against 41; headache, 123 as against 50; catarrhs and bronchitis, 375 as against 98, and rheumatism 203 as against 93—many of these cases not improbably connected with the excess of alcoholism either as a direct sequence or indirectly through the medium of unnecessary exposures; injuries and malarial fevers were also in excess of the Army averages. At Columbus Barracks the excess of admissions was due to the extensive prevalence of venereal diseases, 462 in every thousand of strength as against 85; malarial diseases, digestive disorders, and the temporary

indisposition attending the revaccination of recruits made up the remainder of the excess. The rate at Fort Monroe was small as compared with those of the posts just mentioned, and was mainly owing to diarrhœa, bronchitis, and venereal diseases.

The number of men constantly sick per thousand of strength, or the rate of non-effectiveness at each of these posts, was in excess of the Army average: 92.74 at Columbus Barracks, 72.80 at Fort McPherson, 51.94 at Fort Monroe, and 48.42 at Willets Point. The character of the cases at the last-mentioned post, alcoholic excesses and their consequences, explains the relatively low rate of non-efficiency—the individual cases were not prolonged.

The excess of discharges in the department was due chiefly to Columbus Barracks and Washington Barracks, where the rates were respectively 58.43 and 47.81. David's Island gave the largest death-rate, 12.09.

As showing by contrast the results which may be obtained in a military command the rates at West Point, a post of 354 men, may be cited. Its admission-rate, 955, as compared with 1,315, the average of the Army, or with 3,417 at Fort McPherson, and its non-effective rate, 25.01, as compared with 44.12 in the Army, or with 92.74 at Columbus Barracks. Fort Adams, 199 men, had 1,085 admissions and 29.97 non-effectives. David's Island, a recruiting depot, and hence so far as the men are concerned exactly comparable with Columbus Barracks, had an average strength of 579 men with an admission rate of 1,259 and a non-effective rate of 43.01. Some of the smaller posts, as Forts Wadsworth, Niagara, and Porter, also had rates below the average of the Army.

DEPARTMENT OF DAKOTA.

In this department, average strength 4,168 men, the rate of admission was 1,180 per thousand of strength, of non-efficiency 41.16, of death 4.56, and of discharge 20.87, with an average detention in hospital of 92 days prior to discharge.

The low rate of admission was due mainly to the infrequency of malarial fevers, 37 as compared with the Army rate, 120; of venereal diseases 57 as compared with 85; of alcoholism 27 as compared with 41, and of catarrhs and bronchitis 73 as compared with 98.

The posts which present the highest rates in this department are Camp Sheridan, a small post of 61 men, with 1,656 admissions per thousand of strength, 62.6 non-effectives, and 2 discharges; Fort Buford, with 305 men, 1,636 admissions, 58.82 non-effectives, 1 death, and 13 discharges; Fort Snelling with 301 men, 1,422 admissions, 56.40 non-effectives, 2 deaths, and 15 discharges; Fort Pembina, 80 men, had a large admission rate, 1,612, but its non-effective rate, owing to the nature of the prevailing affections, was below the average. Injuries, catarrhs, and bronchitis, rheumatism and malarial fevers, were the causes of the large rates at Fort Buford and Camp Sheridan; but at Fort Pembina, where injuries and malarial fevers were not in excess, alcoholism, headache, diarrhœa, and digestive disorders increased the admission rate, and at Fort Snelling diarrhœa and bronchitic affections added to both the admissions, and typhoid fever and syphilis to both the admissions and the non-effectiveness.

The posts which had light rates for the year were Fort Totten, 89 men, with an admission rate of 742 per thousand of strength, a non-effective rate of 18.07, 1 death, and 2 discharges; Fort Shaw, 179 men, with 899 admissions and 29.75 non-effectives; Fort Missoula, 204 men,

with 867 admissions, 30 non-effectives, 2 deaths, and 7 discharges; Fort Keogh, 410 men, with 868 admissions, 34.20 non-effectives, 3 deaths, and 6 discharges; Fort Yates, 308 men, also had a small admission rate, 841 per thousand, but its non-effective rate, 42.43, was above the average of the department, although not above that of the Army.

DEPARTMENT OF THE PLATTE.

This department, with an average strength of 3,453 men, had 1,255 admissions per thousand of strength during the year, 36.04 constantly sick, a death-rate of 6.37, a discharge rate of 27.51, with 59.5 days as the average period of sickness prior to discharge.

The most notable differences in the admission-rates of the department, as compared with those of the Army, occur under the headings: Malarial fevers, which give 62, as against 120; venereal diseases, 45, as against 85; alcoholism, 33, as against 41; injuries also give a smaller rate, and the rate of the department is comparatively free from the results of vaccination. The relative infrequency of these entries on the sick report has its influence on the rate of non-effectiveness. On the other hand, rheumatism appears with somewhat greater frequency, 121 as against 99, and in an aggravated form, as it adds materially to the non-effective rate and also to that of discharge.

The post with the worst record in this department is Fort Washakie, 126 men, giving an admission-rate of 2,008, a non-effective rate of 49.23, with 1 death and 6 discharges. Fort Sidney, 214 men, competes for the undesirable first place on account of its large non-effective rate, 51.93, 1 death and 12 discharges, although the admissions, 1,631, were by no means so numerous as at Washakie. Fort Du Chesne, 255 men, had 1,671 admissions, 39.22 non-effectives, 1 death, and 8 discharges. Fort Robinson, 427 men, also had the admission and non-effective rates high. Fort Russell, 341 men, and Fort Omaha, 377 men, had low admission-rates, but their non-effectives were 43.26 and 50.99 respectively, with 2 deaths and 19 discharges at the one and 4 deaths and 17 discharges at the other.

The increased rates at Fort Washakie were due to injuries and tonsillitis, aided by rheumatism, neuralgia and headache; at Fort Sidney to bronchitic affections and diseases of the digestive system; at Fort Du Chesne to bronchitis, injuries, and rheumatism. At Fort D. A. Russell the increase in the non-effective rate was the result of injury, diseases of the nervous system, and rheumatism, and at Fort Omaha to venereal diseases and consumption.

The best record is given by Fort McKinney, 177 men, only 586 admissions, 24.63 non-effectives, with 2 deaths and 1 discharge. Fort Douglas, 372 men, follows with 841 admissions, 30.90 non-effectives, 1 death, and 4 discharges. In fact it is the rates of these posts which bring down those of the department below the average of the Army.

DEPARTMENT OF THE MISSOURI.

The rates of this department, average strength 4,436 men, may be said to differ from those of the Army only by decimal figures, its admissions being 1,330, its non-effectives 43.39, its deaths 6.09, and its discharges 22.54; the average detention of men prior to discharge was 74 days.

The rate of admission for malarial fevers was higher than the average, 248 per thousand of strength instead of 120, with a non-effective rate of

6.63 instead of 3.25; but alcoholism, headache, and rheumatism offset this increase by their lessened prevalence.

The post with the worst record was Little Rock Barracks, 95 men, with 2,379 admissions and 84.82 non-effective per thousand of strength, and 2 deaths and 10 discharges in its small garrison. Fort Logan, 151 men, follows with an admission rate of 1,781, a non-effective rate of 70.78, 2 deaths, and 1 discharge; Fort Elliott, 147 men, with 1,762 admission-rate, 67.64 non-effective rate, 1 death, and 1 discharge; and Fort Reno, 255 men, with 1,474 admission-rate, 61.55 non-effective rate, 1 death, and 8 discharges; Fort Sill, 276 men, had an excess of admissions, but the non-effective rate was not above the average of the Army. Jefferson Barracks, 598 men, had a large non-effective rate, but its admissions were considerably below the average.

Little Rock Barracks had 421 admissions for venereal diseases per thousand of strength as compared with 90, the average of the department; malarial fever, vaccinia, rheumatism, bronchitis, consumption, and pleurisy were also in excess. The non-effective rate of this post for venereal disease was as large, 29.58, as that of Fort Crawford or Fort Sheridan for all diseases. Fort Logan had an excess of specific fevers, rheumatism, bronchitis, and diseases of digestion, and its malarial fevers, though few in number, gave a higher non-effective rate than the average. Fort Elliott had rates for diarrhœa, diseases of the digestion, skin diseases, and injuries, which made its general rate much higher than the average, notwithstanding its comparative freedom from malarial fevers. The excess of admissions at Fort Reno was owing to the prevalence of malarial diseases.

Forts Sheridan, 97 men, and Crawford, 91 men, had the best admission-rates in this department. The former had 938 admissions per thousand of strength and 29.57 non-effectives, with no death nor discharge; the latter had 912 admissions, 29.93 non-effectives, with 1 death and 4 discharges. Fort Leavenworth prison guard, 118 men, had the best non-effective rate, 16.74; its admission-rate was 1,093, with no death and only 1 discharge. Fort Riley, 548 men, had the best record among the large posts: 993 admissions, 39.28 non-effectives, with 5 deaths and 2 discharges.

DEPARTMENT OF TEXAS.

In this department, average strength 1,778 men, the admissions per thousand of strength numbered 1,391, the men constantly sick 50.28, the deaths 7.31, the discharges 15.75, with a detention of 80.6 days prior to discharge. Fort Brown, 145 men, is the post which spoils the health record of this department. Dropping its statistics from the calculation the admission-rate of the department would be 1,186 per thousand of strength and its rate of non-efficiency 44.58, the latter differing only by a fraction from the average rate of the Army, the former markedly lower. The discharge-rate also was low in this department, so that when the influence of a low rate of discharge in increasing that of non-efficiency is taken into consideration it will be seen that, but for Fort Brown, this department would have compared favorably with any of the others in their record of health for the year.

Pulmonary diseases were rare at Fort Brown and typhoid fever non-existent, but almost every other disease was more prevalent than at other posts; even injuries gave rise to 676 admissions per thousand of strength as compared with 249 in the Army, and to 18.63 non-effectives as compared with 8.55. Malarial fevers caused an admission-rate of 1,676 as compared with 120, and a non-effective rate of 38.58 as compared

with 3.25; venereal diseases 200 admissions as compared with 85, and 26.36 non-efficiency as compared with 3.52, and alcoholism 117 admissions as compared with the average of 41. The admission-rate for all diseases and injuries was 3,710, the average for the Army being 1,315, and the non-efficiency 114.44, the average being 44.12. The three deaths that occurred at this post were due to injury.

At Fort McIntosh, 129 men, the principal causes of the excess of the admission-rate, 1,574, and of the non-effective rate, 53.75, over those of the Army, were venereal diseases and alcoholism, the former giving 217 admissions and 16.17 non effectives per thousand of strength, the latter 101 admissions; malarial fevers and diseases of the digestion also contributed to the excess. The post of San Antonio, 476 men, and Fort Clark, 349 men, had average admission rates, but their non-efficiency was high, 50.64 per thousand of strength at the one and 60.05 at the other; the increase was due at Fort Clark to malarial fevers, 7.94, and to venereal diseases, 12.34, and at San Antonio to the same diseases, 6.82 and 9.09, respectively, and to typhoid fever, which added 2.45.

Some of the posts in this department gave excellent records, although all were blurred by the presence of venereal diseases. At Fort Bliss, 118 men, the diminution of the admission rate to 1,068 and of the non-effective rate to 23.78, was due to the lessened prevalence of all diseases except venereal and alcoholism, the admissions for which were 102 and 93, respectively. The small rates at Fort Davis, 102 men, admissions 1,000, non-effectives 29.79, was the result of a lessened prevalence of all except rheumatism. At Fort Ringgold, 144 men, only 562 admissions, with 23.34 non-effectives, were reported per thousand of strength, although the post had the average number of cases of venereal diseases. Without those diseases its admissions would have numbered only 459 per thousand of strength, as compared with 3,710 at Fort Brown, and its men constantly sick 18.26 as compared with 114.44.

DEPARTMENT OF CALIFORNIA.

The admissions and non-effectiveness in this department, average strength 1,241 men, were below the average of the Army, 1,241 and 41.20, respectively; but the death and discharge rates were higher, 1,209 and 26.59, while the period during which the discharged men were held under observation, 70.2 days, was shorter than the average.

The diminished rates were due to the lessened prevalence of specific and malarial fevers, diarrhoea, and digestive diseases. Venereal diseases occurred more frequently than in the Army generally, 97 per thousand, compared with 85, and caused considerably more non-effectiveness, 7.34 compared with 3.52; alcoholism also was a more frequent occurrence, 66 compared with 41. The admissions for rheumatism were not over the average, but the non-efficiency from this affection was 3.19 compared with 1.98, and, notwithstanding the repute of California for equability of temperature as compared with the Eastern States, the bronchial affections of the department caused an admission-rate of 171, compared with 98.

The rates of the Presidio of San Francisco, 491 men, admissions 1,578 per thousand of strength, and non-effectiveness 60.60, impress their character on those of this department. Only two of the posts had garrisons numbering more than 100 men, and of these Angel Island had 562 as its rate of admission, with 19.68 of non-effectiveness, while Fort Bidwell, with an average admission-rate, had only 27.69 of non effectiveness. All the smaller posts had low admission-rates, and most of them

low non effective rates, as witness Alcatraz Island, 95 men, with 695 and 23.82, respectively. The increase of admissions at the Presidio was due to catarrh and bronchitis, 328 instead of 98; injuries, 340 instead of 249; venereal diseases, 138 instead of 85, and alcoholism, 114 instead of 41. The increase of the non-effective rate was due to venereal, injuries, and bronchial affections, 11.49, 12.80, and 4.63, respectively.

THE DEPARTMENT OF THE COLUMBIA.

This department, average strength 1,423, had its admission, death, and discharge rates about the average, 1,306, 5.62, and 21.79, respectively; but its non-efficient rate was small, 38.50, notwithstanding that its discharged men were kept under observation for 112.8 days.

Malarial and specific fevers were somewhat less prevalent in this department than in the Army as a whole; injuries, bronchitis, alcoholism, and headache, somewhat more prevalent. None of the posts had rates so much above or below the average as to call for remark.

THE DEPARTMENT OF ARIZONA.

This department, average strength, 3,106 men, presents a good record for the year. Its admission-rate, 1,183, was considerably below the average; its rate of non-efficiency, 41.35, also lower than the Army rate; its death and discharge rates, 8.05 and 24.15, respectively, both a little high; but its period of observation on subjects for discharge, 95.9 days, was considerably longer than the average.

The principal differences in the rates for this department as compared with those of the Army arise from the diminished prevalence of certain diseases,—malarial fevers, venereal diseases, alcoholism, and bronchitis. Although Arizona not many years ago was one of the hot-beds of malarial fevers, the admission-rate for the past year on their account was only 61 per thousand as compared with 120 in the Army. This is due to the abandonment of posts that had been established in unhealthy localities and to progressive improvement in the sanitary condition of those that were continued as military stations. The admission-rate for venereal diseases was 62 as compared with the Army rate of 85; for alcoholism, 25, as compared with 41, and for bronchitis, 69, as compared with 98.

Forts McDowell, Marcy, and Lowell had the largest admission-rates, the first, having a garrison of 93 men, recorded 1,699 admissions per thousand of strength; the second with 150 men, recorded 1,607; the third, with 149 men, recorded 1,584. Diarrhœa and injuries contributed to the excess of admissions at each of these posts; rheumatism and bronchitis added to the excess at Forts Marcy and Lowell, and alcoholism at the last mentioned. Some of the smaller posts had large non-effective rates, as 70.51 and 77.07, respectively, at Fort Mohave and San Diego Barracks, each garrisoned by an average strength of 53 men; bronchitis and digestive diseases were the causes of the non-efficiency of the former; diarrhœa and rheumatism, and consumption, held for discharge, the causes at the latter. Of the large posts, Whipple Barracks, 203 men, had the highest non-effective rate, 56.20 per thousand of strength, the excess over the average being due to diseases of digestion, dysentery, injuries, diseases of the ear, and consumption. The rate at Fort Thomas, 101 men, was 55.23, the excess due to malarial fevers and dysentery, injuries, diseases of the eye, and consumption. At Fort Bowie, 102 men, the rate of 50.34 was reached by an

excess of malarial fevers, pneumonia, genito-urinary diseases, and injuries; at Fort Lowell, 49.44, to venereal diseases, eye affections, tonsillitis, and injuries, and at Fort McDowell, 49.34, to dysentery, venereal diseases, and affections of the eye and ear.

A corresponding number of posts had low rates, Fort Verde, 98 men, and Fort Union, 140 men, showing best in this respect; the former had only 520 admissions per thousand of strength and 27.40 non-effective; the latter, 786 and 24.56. Fort Huachuca, 248 men, had 927 admissions per thousand, with 33.56 non-effective; Fort Wingate, 309 men, 1,036 admissions, with 33.03 non-effective, and San Carlos, 199 men, 1,100 admissions, with 29.05 non-effective.

Fort Bayard had the largest rate of death and discharge, giving in its garrison of 310 men, 5 deaths and 13 discharges, equivalent to 16.13 and 41.94, respectively, per thousand of strength.

HEALTH OF INDIVIDUAL POSTS.

When the posts are divided into groups in accordance with the number of men in their garrisons, it is found that the large posts with a strength of 400 men or more had rates of sickness higher than the average, and the small posts of less than 100 men rates lower than the average, while those with 100 to 400 men differed but little in their rates from the average of the Army. Thus eleven posts, with strength ranging from 410 at Fort Keogh, Mont., to 636 at Jefferson Barracks, Mo., had an average admission-rate of 1,349, with 49.75 constantly sick per thousand of strength. Seventeen posts, ranging in strength from 301 at Fort Snelling, Minn., to 384 at Fort Wingate, N. Mex., had 1,281 admissions and 44.56 non-effective; fourteen, with from 203 at Whipple Barracks, Ariz., to 291 at Fort Lewis, Colo., had 1,333 and 41.96 respectively; and thirty-seven, with from 101 at Fort Thomas, Ariz., to 199 at Fort Adams, R. I., had 1,333 and 41.72. Fifty-nine posts, ranging in strength from 13 men at Camp Langtry, Tex., to 98 at Fort Verde, Ariz., had 1,127 and 36.22. The difference in favor of the smaller posts is only such as might be expected when it is remembered that men belonging to large garrisons will report at sick-call and be excused from duty for trifling ailments which would not prevent them from doing duty if their services—as is often the case in a small garrison—were specially required.

Of the eleven large posts, Columbus Barracks, Ohio, had by far the worst record, 2,319 admissions and 92.74 non-effective per thousand of strength. The rates at the Presidio of San Francisco were high—1,578 and 60.60; and San Antonio, Tex., Fort Assinniboine, Mont., and Jefferson Barracks, Mo., had non-effective rates larger than the average. Fort Keogh, Mont., had the best rates—868 and 34.20; those of Fort Riley, Kans., also were good—993 and 39.28.

Of the seventeen posts garrisoned by 300 to 400 men each, Willets Point, N. Y., had the worst record—admissions, 2,388; non-effective, 48.42. Fort Buford, N. Dak., had a larger non-effective rate than this, but its admission rate—1,636—was by no means so large. Fort Clark had the highest non-effective rate—60.05—although its rate of admission was only a fraction higher than the average of the Army. West Point, N. Y., gave the best record—954 and 25.01—followed by Camp Douglas, Utah, with 841 and 31.90. Fort Grant, Ariz., and Fort Yates, Dak., had low admission rates—968 and 841, respectively—but their non-effective rates were not correspondingly low.

Of the fourteen stations garrisoned by 200 to 300 men each, Fort Sill,

Ind. T., had the largest admission-rate, 1,797, and Fort Reno, Ind. T., the largest non-effective rate, 61.55; but the worst combination of rates was found at Fort Sidney, Nebr., where admissions gave 1,631 per thousand and non-effectiveness 51.93. Fort Missoula, Mont., had distinctly the best record among these stations, having the lowest admission-rate, 867, as well as the lowest non-effective rate, 30.00. Fort Supply, Ind. T., and Forts Huachuca and Apache, Ariz., also had good records, their rates being respectively 1,113 and 30.10, 927 and 33.56, and 1,029 and 36.53.

Of the thirty-seven posts having 100 to 200 men each, Fort Brown, Tex., shows the worst record—rate of admissions 3,710, of non-effectiveness 114.44; Fort McPherson, Ga., follows with 3,417 and 72.80; then Fort Logan, Colo., with 1,781 and 70.78; Fort Elliott, Tex., with 1,762 and 67.64; Fort Washakie, Wyo., with 2,008 and 49.23, and Fort McHenry, Md., with 1,811 and 53.71. Angel Island, Cal., had the best record of the posts of its size, 562 and 19.68. Forts Ringgold and Union, Tex., and Fort McKinney, Wyo., also had good rates respectively, 562 and 23.34, 786 and 24.56, 588 and 24.63. The Leavenworth prison guard had 1,093 and 16.74. Many others of the posts in this series had rates considerably lower than the average of the Army, but the low rates just instanced show the otherwise excellent records of these to disadvantage. Among them may be mentioned Fort Adams, R. I.; Fort Myer, Va.; Forts Bridger and Laramie, Wyo.; San Carlos, Ariz.; Forts Bliss and Davis, Tex., and Fort Lyon, Colo.

The extreme rates at eight posts, garrisoned by 90 to 100 men each, were 695 admissions and 23.82 non-effective at Alcatraz Island, California, and 2,379 and 84.82 at Little Rock Barracks, Ark. The extremes in six posts having 80 to 90 men each were, admissions 710 and 1,612 at Fort Porter, N. Y., and Fort Pembina, N. Dak. respectively; non-effectiveness 18.07 and 54.86 at Fort Totten, N. Dak., and Mount Vernon Barracks, Ala., respectively. In nine posts having 60 to 80 men each the extremes of the admission rates were 986 at Benicia Barracks, Cal., and 2,013 at Fort Brady, Mich., and the extremes of non-effectiveness 24.14 at Watervliet Arsenal, N. Y., and 62.56 at Camp Sheridan, Wyo.

The posts which have the highest rates of admission in the Army are Fort Brown, 3,710; Fort McPherson, 3,417; Willets Point, 2,388; Little Rock Barracks, 2,379; and Columbus Barracks, 2,319. Those having the highest rates of non-efficiency are Fort Brown, 114.44; Columbus Barracks, 92.74; Little Rock Barracks, 84.82; Fort McPherson, 72.80; and Fort Logan, 70.78. Fort Brown is thus seen to have the worst record of any post in the Army. The nature of the prevailing diseases has already been mentioned. This post held the same unenviable position in 1888 and 1889, but before that time, although it has had always a large non-effective rate from sickness, several of the posts exceeded it, as for instance Jefferson Barracks in 1885 to 1887, Columbus Barracks in 1884 and 1885, Fort Grant in 1887, Forts Davis and Robinson in 1886, and Jackson Barracks in 1884. Columbus Barracks held second place for non-effectiveness during the three years 1888-'90, fifth place in 1887, ninth in 1886, and third in 1885 and 1884. Little Rock Barracks has taken rank as an unhealthy post only during the past two years. Forts McPherson and Logan have had high rates since their establishment three years ago. Willets Point for several years back has had unnecessarily high rates, and among the small posts Indianapolis Arsenal has been similarly characterized.

The post with the best record is Angel Island, 153 men, with an admission rate of 562 and a non-effective rate of 19.68; the Leaven-

worth prison guard, 118 men, had a smaller non-effective rate, 16.74, but its admission-rate was much larger, 1,093. Fort McKinney, 177 men, comes second, with admissions 562, non-effective 23.34; Fort Union, 140 men, third, with 583 and 24.63. Alcatraz Island, 95 men, fourth, with 695 and 13.82. Fort Ringgold, 144 men, fifth, with 786 and 24.56. West Point, Fort Missoula, and Fort Keogh also had a gratifying freedom from disease.

When the admissions for venereal diseases, alcoholism, vaccination, and injuries are deducted from the total the admission-rate of the Army becomes reduced from 1,315 to 907. When similar deductions are made from the records of the individual posts their relative position in order of frequency of admissions is not materially altered from that already given. Thus, Forts Brown and McPherson continue to lead with 2,634 and 2,404 respectively per thousand of strength. Omitting the small posts and arsenals, Willets Point takes third place with 1,690, Little Rock Barracks fourth with 1,495, Fort Sill fifth with 1,456, Columbus Barracks sixth with 1,371.

Making a similar deduction in the rates of non-efficiency, that of the Army is found to be reduced from 44.12 to 28.33. Excluding the small posts and arsenals, where one man more or less on sick report makes an enormous difference in the rates, Fort Brown is found to retain its position at the head of the list with 67.54 non-effective per thousand of strength. Then follow Forts Logan, Reno, Elliott, McPherson, and Whipple Barracks, Fort Buford, and Little Rock Barracks. Columbus Barracks is the twentieth post in a list of this kind; thus showing the influence of venereal diseases in destroying the efficiency of the recruits at the depots.

A paragraph or two comparing the amount of sickness at the three recruiting stations may be of value. At David's Island, New York, 579 men, both the admission and the non-effective rates were below the average of the Army. The admissions numbered only 1,259 per thousand of strength, owing to the lessened frequency of malarial and venereal diseases, alcoholism, rheumatism, and injuries, and this notwithstanding the large number of entries on sick report of vaccinated recruits and an increased prevalence of catarrhs and bronchitis, tonsillitis and specific fevers. The same influences affected the non-effective rate, which, nevertheless, was only 43.01 as compared with the Army rate, 44.12. Seven deaths and 6 discharges were reported, giving a rate of 12.09 for the former and 10.36 for the latter per thousand of strength. The deaths—1 from injury, 1 typhoid fever, 1 congestion of the brain, 2 pneumonia, and 2 heart disease; the discharges, 3 injury, 1 inguinal hernia, 1 venereal, 1 pleurisy.

At Jefferson Barracks, Mo., 598 men, the admission-rate was low, 967 per thousand of strength, notwithstanding large rates for specific fevers, malarial and venereal diseases. As these same diseases increased the non-effective rate to 48.65, it is readily seen that but for them the statistics of this post would have compared favorably with those of any of the large posts in the country. Much has been done recently for the sanitary improvement of this post and with good effect, for although during the three years 1885-'87, it had the largest non-effective rate in the Army, in 1888 it fell to the third place in the list of non-effectiveness, and during the past year its name does not appear in the list of the twenty posts which had the highest rates of admission and non-efficiency. Four deaths and 34 discharges were reported, giving rates of 6.29 and 53.46 respectively. The deaths were caused—2 by injury, 1

by pneumonia, and 1 by meningitis; 13 of the discharges were the result of venereal infection, 6 rupture, 4 injury, and 3 affections of the ear.

At Columbus Barracks, Ohio, 599 men, the admissions were 2,319, the non-efficiency 92.74 per thousand of strength. The large admission-rate was due to 462 venereal cases instead of the Army average of 85; to 320 cases of vaccination as compared with 202 at David's Island and 63 at Jefferson Barracks, and to 274 malarial fevers as compared with the Army average, 120. The rate of non-efficiency from venereal diseases, 28.99, was alone greater than the rate for all diseases and injuries at the posts that have been instanced as having the best medical records for the year. Of the 35 discharges no less than 24 were occasioned by gonorrhœa and syphilis. The advisability of having a depot for recruits established within the wards of a city may readily be questioned in view of these statistics. The non-efficiency from vaccination was also high, 23.73, as compared with 6.94 at David's Island and 2.97 at Jefferson Barracks. Only two deaths were reported from this post, both the result of injury. There is one gratifying feature in the statistics of these recruiting depots—their freedom from alcoholic excesses. The admissions from this cause at David's Island were 26, at Columbus Barracks 20, and at Jefferson Barracks 5 per thousand of strength, as compared with the Army rate of 41.

THE PREVALENCE OF SPECIAL DISEASES.

SPECIFIC FEBRILE DISEASES.

The specific febrile and infectious diseases have been somewhat more prevalent during the year than usual, the admission-rate having been 25.59, as compared with 21.64, the average of the past decade. This was due in part to the occurrence of some cases of influenza towards the close of the year, and in part to a slight increase in the number of cases of typhoid fever, measles, and mumps. Typhoid fever was the only one of these diseases which caused death.

The contagion of *small-pox* was introduced into four posts, Angel Island and Fort Riley, from each of which 1 case of varioloid was reported, Fort Stanton, which had 1, and Fort Grant 3 cases of the unmodified disease; Fort Lyon, Colo., had 1 case, but not in an enlisted man. The precautions taken by post medical officers prevented any further spread of the contagion.

One case of *chicken-pox* was reported from Fort Monroe, and 1 or 2 in children at a few other posts, as Forts Schuyler, Clark, and McHenry.

Only 1 case of *whooping-cough* occurred among the troops, in a member of the garrison of the Presidio of San Francisco; but the children at several of the posts, as at Forts Laramie and Sherman, were generally affected.

Of *diphtheria* only 4 cases were recorded among the enlisted men during the year—2 at Fort Buford, and 1 each at Forts Brady and Porter. At the first-named post the disease prevailed extensively among the children, 20 cases with 8 deaths; the lighter cases during this epidemic were recorded as follicular tonsillitis. The families at Fort Union also were affected. At West Point 6 children of one family became affected and 4 died. Three cases with 1 death occurred in a set of old adobe buildings used as laundress' quarters at Fort Sidney, and 6 cases with 1 death at Fort Grant. A case occurred at Bois  Barracks in the person

of a servant girl who slept in an addition to a set of officers' quarters which had been built over a recently filled in privy-pit.

Mumps prevailed at 30 posts, giving a total of 208 cases. At more than half of these posts only 1 case was reported from each. At Fort McKinney, Wyo., Fort Riley, Kans., and Fort Clark, Tex., its introduction was ascribed to recruits from the depots. At other posts its invasion was from neighboring civilian settlements; Jefferson Barracks appears to have received the disease from Philadelphia. The colored men were more susceptible to attack by this disease than the white troops—88 cases among the former and only 120 among the latter, notwithstanding that they numbered nearly ten times as many men.

Only 2 cases of *scarlet fever* occurred, one at Fort Keogh, the other at the recruiting depot at David's Island. The disease appeared among the children at several posts, 1 case at Fort Leavenworth, 2 at Fort Laramie, 2 at Mount Vernon Barracks, and 3 in one family at Fort Schuyler, but the precautions taken prevented the spread of the infection. At West Point the disease prevailed for several months.

The infection of *measles* was present at all the recruiting depots during the year. Jefferson Barracks had 21 cases, Columbus Barracks 13, David's Island 8. At eighteen posts the disease appeared among the troops, but six of these posts had only 1 case each; Fort Randall had 11 cases, San Antonio 9, Fort Snelling 6, and Fort Washakie 5. It was present among the children at several of the posts, as Forts Columbus, Riley and Abraham Lincoln, Vancouver Barracks, and West Point, but only in isolated families. The control of this disease is highly creditable to the medical officers concerned.

Ten cases of *rötheln* occurred among the garrison of Fort Leavenworth, and one of these was represented as being so much like measles that if it had been alone it would have been recorded as measles. At Fort McPherson a few cases occurred in the families of officers.

One hundred and thirty-three cases of *typhoid fever* were reported, 15 fatal; the average duration of cases to death or convalescence was 54 days. Twenty of the cases occurred among troops in the field, the others at thirty-seven different posts. Twenty-one posts had 1 case each; five posts 2 each, and five posts 3 cases each. Fort Snelling had 20 cases with 2 deaths; Fort Assiniboine 19, with 2 deaths; Fort Monroe 10, with no deaths; San Antonio 8, with 1 death; David's Island 5, with 1 death, and Fort Logan 5, with 2 deaths.

The cases at Fort Snelling, Minn., occurred during the months from August to November, inclusive, in companies occupying old quarters that had been condemned on account of their insanitary condition. The men were moved into camp until the completion of the new buildings, and with this abandonment of the old quarters the local epidemic ceased.

The cases at Fort Monroe were developed during July and August in men who used cistern water. In 1887 a similar outbreak occurred, and in the absence of any other cause the cases were attributed to this water, as it contained considerably more organic matter than the general water-supply. The suspected water was disused, and no case of fever was developed after this action was taken. Since then the cisterns have been again brought into use. Towards the end of July, last year, when the presence of typhoid fever was recognized, the former experience with the cisterns led to their immediate closure. One case was developed on the day after the disuse of the water, but no more. This seems to indicate a causative relation between the water and the fever, but the evidence is somewhat weakened by the fact that two

batteries in camp near the post made use of the water, but had no febrile developments. There were, however, few men in the camp as compared with the number in the barracks that used the water.

The cases at the recruiting depot at David's Island were not a product of the locality. The disease was brought to the post in each instance by the affected recruit. The depot at Jefferson Barracks, Mo., had but 1 case; Columbus Barracks had none.

The San Antonio cases led to a careful inspection of the methods in use at the post for the disposal of garbage and night-soil, as the fever was attributed to soil contamination.

The first case at Fort Logan occurred among men quartered in the old barracks. These were so overrun with vermin that the men slept outside to escape from the annoyance. Typhoid fever was prevailing largely among civilians in the neighborhood; and later in the season it broke out in the workmen's camp on the reservation, the dejections in this case being thrown on the ground. Sanitary supervision was subsequently exercised over this camp, so that the disease did not spread. As the condition of the post was regarded as excellent by the medical director, and the water supply came from an artesian well, the presence of the disease was attributed to invasion from the infected neighborhood.

Captain La Garde referred the outbreak at Fort Assinniboine to a want of ventilation under the floor of one of the company barracks and to changes in the proportion of subsoil moisture. His report, which gives a sketch of typhoid fever with its malarial associations as seen at our Western posts and in the field, is as follows:

I have the honor to report as follows upon the prevalence of typhoid fever at this post during the months of September and October, 1889. There were treated altogether 23 cases, admitted from the different organizations, as follows:

Company or troop.	Regiment.	From quarters.	From the field.	Total.
Company B.....	Twentieth Infantry.....	7	.....	7
Company C.....	do.....	4	1	5
Company D.....	do.....	2	1	3
Company E.....	do.....	.....	.....	.....
Company F.....	do.....	3	.....	3
Company H.....	do.....	1	.....	1
Company K.....	do.....	1	.....	1
Troop C.....	First Cavalry.....	.....	1	1
Troop F.....	do.....	1	.....	1
Troop H.....	do.....	.....	1	1
Total admitted .....	.....	19	4	23

The first case, Private Lorenzo Altmeyer, D Company, Twentieth Infantry, was admitted to hospital August 24, 1889, by transfer from Snake Creek, Montana. The patient's company was on the march to the encampment on Lodge Creek in the Little Rocky Mountains, with headquarters, band, and Companies C, D, E, F, H, and K, Twentieth Infantry, and Troops C and H, First Cavalry, the command having left the post, its regular station, on the morning of the 21st. Headache, malaise, chilliness, furred tongue, and nosebleed were among the early symptoms; tympany, gurgling, and moderate diarrhœa were present from time to time. No rose-colored spots were noted at any time. Defervescence occurred on September 23. When the case was admitted, quinine, in antiperiodic doses, was tried on three successive days, 10 grains at 6, 7, and 8 a. m., and 3 grains every three hours thereafter. On August 28 the morning temperature was 96.6° Fahr.; at 8 p. m. 100.2° Fahr., notwithstanding the quinine. This remedy was tried a number of times, in 10-grain doses, during the subsequent course of the disease at such times as the temperature curve pointed to favorable remissions. It never returned to the normal, however, until defervescence on September 23. A close study of the temperature chart in this case would show that an element of malaria existed with the typhoid affection in the early part of the

illness. The brisk dosing with quinine having brought the temperature to the normal on the 28th is strong evidence on this point. The rest of the chart is of interest because it shows from the 1st of September on, a type of curve somewhat approaching that typical of typhoid fever, although some of the essential elements of this disease were wanting.

The next case admitted was that of Private John L. Jones of H Company, Twentieth Infantry. His company was at the encampment, but he was left behind attached for rations to B Company. He was company gardener, and slept in a tent pitched in Beaver Creek bottom near the post. He was admitted September 3, complaining of nausea, fever at night, slight diarrhoea, and pains in the legs and back. On September 4 quinine was given in 10-grain doses, hourly, for three hours, commencing at 6 a. m., and continued in 5-grain doses every three hours; 5th, 9 a. m., temperature 98°; quinine continued, 3 grains every three hours. Patient did well until the 11th, although slow in recovering his strength. His temperature was not taken, as he was up and about the ward apparently improving. On the morning of the 11th I found his temperature to be 99° Fahr.; he was pale, tongue furred and tremulous, features pinched, and lips quivering; evening temperature, 101.8° Fahr.; ordered to bed on liquid diet. 12th: 9 a. m., temperature 99.4°; quinine was given in 10-grain doses at 9, 10, and 11 a. m., and continued in 3-grain doses every three hours, day and night. 19th: 9 a. m., the temperature being normal it was considered safe to give something besides milk and beef-tea; a soft-boiled egg was ordered with milk toast. As the evening temperature rose to 100° he was ordered back to milk and beef-tea; quinine three times a day. The bowels, with the exception of a little looseness in the early history of the attack, were regular; there were no rose-colored spots, no tympany nor iliac tenderness; but there was slight bronchial catarrh, and it was observed that an exacerbation of the fever was apt to take place upon either letting the patient out of bed or extending his dietary. His temperature record for the 22d shows a slight rise—99.6° Fahr.—on the evening of that day, when he had been allowed to get out of bed, and was given Saratoga chips, weak tea, and buttered toast, and at noon whipped cream, sweetened, flavored with lemon and frozen. 23d, 9 a. m., temperature 98°. The nurse having found the temperature normal at 8 o'clock, gave 10 grains of quinine, and again at 9: the order from me at this hour was to give an additional dose of 10 grains at 10; and 3 grains thereafter every three hours. The patient was allowed to remain out of bed on special diet. At 8 p. m. the temperature was 102.6° Fahr. 24th: 9 a. m., temperature 101.2°; administration of quinine was suspended because it nauseated; to remain in bed on milk, beef-tea, and chicken broth. 30th: 9 a. m., temperature 98°; no fever since the evening of the 27th; allowed out of bed; milk toast and one soft-boiled egg; result, increased fever. I determined then to keep this patient in bed on liquid food until he had been without fever about ten days. I purposed treating him, as far as diet and permitting him to rise from bed, in the same way that I would a typhoid-fever case. October 14: Patient allowed to dress and go about the ward; boiled rice and buttered toast. 24th: Returned to duty.

The next case is of interest in connection with the preceding; the two men were treated most of the time in adjoining beds in the same ward. Corporal George W. Tucker, B Company, post librarian, was admitted September 8. He had been treated for febricula, August 26 and 29, on liquid food and quinine. After this he remained well for a week, when he was taken with malaise, anorexia, pains in the loins and lower limbs, headache and thirst, with fever at night. On the evening of the 7th he had a chill, followed by fever, but no sweating, although under six blankets all night. On admission he was cheerful enough, although he said he was dizzy, and fainted just before entering. Temperature, 100.4°; tongue, white furred; bowels not moved for three days, attributable to the fact that he had eaten little during the last week. Ordered teaspoonful doses of castor-oil, repeated hourly till the bowels are moved; quinine, 5 grains every three hours; milk diet; 8 p. m., temperature 101° Fahr. 9th: Temperature 98.4°; bowels moved slightly yesterday afternoon after taking two doses of oil; quinine and milk continued; enema, followed by copious stools; 8 p. m., temperature 98.6°. 10th: 9 a. m., temperature normal. To remain in bed on liquid food; 8 p. m., temperature 98.8°; quinine, 5 grains three times a day. 11th: 9 a. m., temperature 98°; allowed to dress; two soft-boiled eggs and milk toast; 8 p. m., temperature 100.4°; to bed, on liquid food; quinine suspended as it nauseates him and makes his head worse. Temperature continued normal from the evening of the 13th to the afternoon of the 16th. The nurse had orders on the 16th to let the patient out of bed next morning, but finding his temperature up the morning of the 17th, he kept him in bed. 18th: The nurse found a paper of chocolate-drops under the pillow; the patient told him he had taken one now and then to put the bad taste out of his mouth. He had three yellow liquid passages during the night, and vomited this morning. Examination of the abdomen for spots and tenderness gave negative results. Ordered powders of lead, morphine, and bismuth, and to use the bed-pan. 19th: Bowels moved three times since yester-

day morning. Bismuth powders continued morning and evening. Patient petulant and will not use the bed-pan, insisting on getting up. 22d: 8 a. m., temperature 96°; bowels moved a number of times last night; tenesmus; can not retain milk. Ordered hyoscyamus and opium suppositories, and to take pepsine and bismuth every two hours; mustard to pit of stomach. A few rose-colored spots on abdomen; no pain on pressure; slight tympany. 24th: Bowels inclined to be loose; dullness and tenderness from the right iliac fossa to the ribs of the same side, and almost to the median line. Morphia, one-third grain hypodermically three times a day. 27th: Instead of dullness, abdomen puffed and tender; countenance distressed; pulse frequent and small; passes feces and urine in bed; delirious at times. 30th: 9 a. m., tympanites with marked tenderness all over the abdomen; although he takes plenty of milk he is losing weight and strength; pulse 120, small; he objects to stimulants. Bowels loose, held in check by opiates. October 2: 9 a. m., rose-colored spots more numerous on abdomen. He takes 3 quarts of milk in twenty-four hours; ordered sherry and egg in addition to m/sk. Bowels are more readily influenced by opiates. 4th: 7 p. m., patient died. In low delirium since last note. In spite of all medication the bowels moved seven times in the last twenty-four hours. 5th: *Post mortem examination* revealed three perforations in the ileum near the valve; circumscribed peritonitis with much exudation matting the loops of intestine in the neighborhood of the perforation; marked congestion and inflammation of the mucous membrane of the lower ileum, with infiltration of the solitary follicles, and Peyer's patches, and ulcers here and there; some of the mesenteric glands notably enlarged; spleen enlarged.

Who would be so bold as to make a diagnosis of typhoid fever in this case from the temperature records alone? That the man suffered from typhoid fever we know positively since we have the *post mortem* evidence. What was the date of the initial stage of the fever? August 26, the first time he was treated in hospital with fever—febricula? This could hardly be, since defervescence so speedily occurred. September 11? If the answer is to be determined by the phenomena of the fever as given in the text books it must be rendered in the negative, since defervescence took place this time on the 13th and continued till the 17th. Did the initial stage occur on the 17th? The exacerbation of the last date continued until the 22d, when the defervescence lasted over twenty-four hours. For the present the answer to the last question may be withheld. Finally, did the initial stage of the fever take place on the 23d? This may be answered with a positive NO; because the abdominal dullness occurred about the 24th. In the light of the testimony furnished by the *post mortem examination*, this note shows that there was undoubtedly peritonitis with exudation on that date, and that the initial stage could not have occurred on the day before. If, however, we attempt to fix the initial stage from the time the perforation occurred, we must go back seven days at least, from the time the dullness was noted, and this would fix the commencement of the fever about the 17th.

Judging from the influence of quinine in the early history of the case, we very likely had a malarial element to deal with at the start. Typhoid infection took place later. The behavior of the case, in the beginning, led me to enter the diagnosis of malarial remittent, which was changed to typhoid after the *post mortem*.

The relapses in this and the preceding case were a puzzle to me. To the time of the perforation, in the last case, I had regarded the cases as similar. After the fatal termination of the latter I changed the diagnosis in *both instances* to typhoid fever. I admit that there was not sufficient proof of typhoid infection in the case of Jones to warrant the change, but I will hereafter explain my position in the matter.

The term relapse has probably been misapplied here, but for the sake of convenience it will be retained. I do not mean in this connection a reinfection of the individual, or a renewal of the typhoid process. The relapses referred to were more like the recrudescences often noted in the early convalescences of typhoid fever, and like these recrudescences, they were almost always dependent upon over-exertion or an extension of the dietary.

The next two cases are of interest in connection with the subject of relapses. The first should be studied with that of Jones. Private Edward Speis, F company, Twentieth Infantry, twenty-eight years old; admitted September 25. Three days before admission he had a distinct chill, followed by fever, since which time he has had headache, lassitude, and pains all over. Took 20 grains of quinine last night at one dose. On admission, 7 a. m., temperature 100°; tongue coated with white fur; constipation; tenderness over right iliac fossa. Ordered one ounce of castor-oil; 5 grains of quinine every three hours, day and night; milk diet; to remain in bed; 9 p. m., temperature 102.4°; headache; bowels opened twice by the oil. 26th, 9 a. m.: Temperature, 100.2°; headache; right iliac tenderness; rose-colored spots on chest. 27th, 9 a. m.: Temperature 99.4°; patient brighter; not so much headache; epistaxis at 12.40 this morning; quinine continued. 28th, 9 a. m.: The nurse had orders to give 30 grains of quinine, 10 grains at intervals of one hour, should the morning temperature be below 100°. The orders were carried out, and the

patient is to receive 5 grains every three hours as before. He feels cheerful, and says he is well; is hungry, and desires to get up. 29th, 9 a. m.: Took quinine this a. m. as yesterday; its administration at the rate of 5 grains every three hours continued. 30th, 9 a. m.: Allowed out of bed, and to have one soft-boiled egg, milk toast and Saratoga chips; quinine continued; result, increased fever. October 1: To remain in bed on liquid diet; took 10 grains of quinine at 6, 7, and 8 o'clock this morning, and 5 grains every three hours thereafter. 2d, 9 a. m.: Rose-colored spots well marked; iliac tenderness and constipation; bowels moved from time to time with castor oil. 4th: The quinine was withheld on account of nausea. 5th, 3 p. m.: Temperature 103.6°; rose-colored spots, well marked; bed-pan to be used hereafter. 9th, 9 a. m.: Having met with success in several cases of commencing convalescence in the south ward by administering quinine in full doses during the morning hours when the temperature descends to the normal, I ordered the nurse last night to administer 10 grains of quinine to several patients, designating them by name, if he found their temperature normal this morning. Having found this patient without fever, he gave 10 grains at 6, 7, and 8 o'clock. Quinine continued at the rate of 5 grains every three hours. 15th: Allowed to dress and go about the ward. 21st: The patient's term of service having expired, he was discharged, and left for his home in the East.

The rose-colored spots, epistaxis, and fever were the symptoms by which I was guided in making the diagnosis in this case. As noted in the case of Corporal Tucker the fever was prone to relapses. I believe the influence of quinine in partially holding the fever in abeyance in both cases at the onset showed a certain amount of malarial toxæmia. There was constantly present, however, an underlying typhoid factor which was ever ready to assert itself; and its presence was, in my opinion, demonstrated by the occurrence of relapses even before the appearance of rose-colored spots. This typhoid infection played the part of a lurking thief in the case of Tucker, and the apprehension and identification of the culprit were only assured when it was too late. The evidence in this case served as a note of warning in the case of Speiss, whose life was very likely saved by the precautionary measures employed.

I wish now to call attention to the temperature record of Private Jules Beck, C Company, Twentieth Infantry. This man's company was in the field at the time of his admission. He was attached to B Company for rations, and took his meals with that company. The cases of Jones and Beck are so similar in their clinical history that the history of one is that of the other. They are simple continued fevers with a strong tendency to relapse. They were considered to be typhoid in character because, 1, they were never wholly amenable to quinine; 2, because they occurred during an epidemic prevalence of typhoid, which was localized in the very quarters where these men messed and passed part of their time; and 3, because the tendency to relapse was a prominent feature in the cases of Speiss and Tucker, cases of known typhoid infection. The subject of intercurrent relapse, although mentioned but little in the literature of typhoid fever, is nevertheless not a new phase of that disease. For an interesting reference to the subject see an article by Dr. F. C. Shattuck, *American Journal of the Medical Sciences*, Vol. XCVIII, No. 5, November, 1889, or the *Boston Medical and Surgical Journal*, Vol. CXXI, page 221, 1889. Although this author speaks of an intercurrent relapse as occurring only before complete defervescence, meaning by the latter the first normal evening temperature, I know no reason why such freedom from fever, if it can persist twelve hours, can not extend beyond one, two, three, or more days. Contrary to the observations of this author the clinical history of the cases given above shows the relapses to have occurred almost invariably after extending the diet or getting out of bed, or both. It seemed that solid food and over-exertion favored the augmentation of the contagium vivum, which showed itself by a return of the fever. The fever attending such cases must belong to the mild type, the irregular or abortive forms, so much insisted upon by authors, and it is probably the primary fever due to the special poison, and not the secondary fever which accompanies the ulcerative process in the intestines. With the latter is generally seen the abdominal symptoms of the disease, and the diagnosis of such cases is usually easy. The cases of Jones and Beck were such as would have developed into the regular form of the disease under the adverse conditions which obtain in the field, or in remote sections of the country, where the patients fall into the hands of the ignorant for treatment and nursing. Under such conditions patients usually suffer exposure, over-fatigue, annoyances, and the administration of food unsuitable to the already susceptible alimentary canal. These conditions increase the fever and bring on the abdominal and ataxic symptoms by which it is generally recognized. In another group of cases I shall refer to two instances in this epidemic that illustrate this very point.

The relapsing tendency of the fever in the four cases thus far given was so pointed that in the early part of the epidemic I entertained grave suspicions of an outbreak of febris recurrens. I had never met the latter, and my ill-founded suspicions were

possibly due to that fact. Reference to the symptoms concerned in forming the diagnosis of this disease demonstrated the absence of the most essential clinical characters, namely, abruptness of invasion, more or less abundant perspiration without remissions, prominent arthritic and muscular pains; and above all the absence of contagion.

I inclose herewith ten temperature charts clasped together. In these the diagnosis of the disease was clearly marked. There is, therefore, but little in the recitation of each history to interest the reader. One of these cases, Corporal Patrick W. Lyons, Company D, Twentieth Infantry, died on the ninth day following his admission. September 19 he was at the camp of instruction in the Little Rockies, and returned with the command on the day of admission. While at the camp he was on duty as sergeant-major of one of the battalions. He stated that he had been ailing a few days before the return march with headache, fever, and diarrhœa. The march back occupied four days. He marched every day except the last; he was so exhausted on that day that he rode in a wagon to his quarters, and from there was transferred to the hospital on a stretcher. His temperature on admission was 104° Fahr. The gravity of the case was declared from the beginning. The diarrhœa continued more or less to the end. The infection seemed to exert its virulence principally on the nervous system; at first delusions, then delirium and coma. Muscular rigidity, one of the gravest symptoms, persisted from the time of his admission until death. The ataxic symptoms, carphologia, fumbling with the bedclothes, and twitching of the muscles, were well marked. The eruption was copious, extending to the extremities. The temperature could only be kept down by faithful packing, and on two occasions only by the use of the bath. The patient died at a time when we were overrun with work, and as there was no doubt as to the diagnosis, a post mortem examination was not deemed necessary.

Although this man was admitted from quarters his case, as the history shows, originated in the field, the patient reaching the hospital about the commencement of the second week. Apropos of this subject, I wish to mention briefly the cases of Corporal Pond and Private Libby among the cases under consideration. They were sent in from the field, arriving at the hospital on September 13. They traveled from the encampment, on Lodge Pole Creek, by ambulance to the nearest railroad station, a distance of 35 miles; from the station (Dodsou) they came by freight train, a distance of 80 miles, to Assiniboine Station, thence to the hospital by ambulance, a distance of 2 miles, arriving at their destination at 3 o'clock in the morning very much exhausted. Corporal Pond was in the beginning of the third week. He was delirious; abdomen tympanitic; tongue coated brown, dry, and cracked, and the teeth covered with sordes. Epistaxis occurred the day after admission, and the nurse in attendance en route to hospital stated that it had occurred several times in the earlier history. The men had been fed on beef-tea principally ever since they had been taken ill, as this was about all that could be got for them. Private Libby was in the end of the second week. He had diarrhœa, iliac tenderness, tympanites, and rose-colored spots; epistaxis had occurred a number of times. He proved a troublesome patient before his final recovery. He became delirious, and remained so for eight days. During this time he was possessed with the delusion that he must "go home." He suffered a relapse on the nineteenth day, in which there was a reappearance of rose-colored spots, diarrhœa, tympany, etc. There was no doubt concerning the diagnosis in these cases; they came from the field, where they had suffered exposure, want of proper food, sleep, and rest.

I shall now refer briefly to five cases of very irregular typhoid fever, in which the symptoms, with the exception of fever and the eruption, were entirely wanting. I inclose the temperature charts clasped together. There was one feature concerning them worthy of note, and that was a malarial element towards the termination of each. Quinine was tried on successive days at the onset without effect. It was tried from time to time in each case as the intermissions prompted its administration, and it is only as shown in the charts that the cases were finally cut short by its use, by strict rules of diet, rest in bed, and the bed-pan. The rose-colored spots were especially well marked in the cases of Hennessy and Amsbro. An isolated case of this kind, under other circumstances, would hardly have caused a suspicion of typhoid infection. During an epidemic prevalence of the disease, however, such cases become very clear. The circumstances and the cases must be seen to be appreciated.

Eight cases of the fever had been admitted from quarters up to September 18; and out of this number five belonged to B Company of the Twentieth Infantry. The other three cases, those of Jones, Beck, and Parkinson, can also with propriety be placed in the list of admissions from B Company, since they were attached to this organization for rations. They took their meals with the company, and spent more or less of their time in the barracks. Jones was the gardener of his company, and slept in a tent in the creek bottom. Beck and Parkinson were left behind as room orderlies and slept in their respective barracks. It may here be stated that B Com-

pany of the Twentieth Infantry and F Troop of the First Cavalry were left in the post to do garrison duty during the encampment.

After the date referred to, September 18, the admissions from quarters were no longer confined to B Company. This is due to the fact that the command returned from the encampment on that date. Typhoid fever had made its appearance at the encampment, and the admissions, with the exception of those from B Company after September 18, were probably due to infection in no way connected with the post. Among the admissions after the arrival of the command there are 2, namely, Private Thomas C. Kemery, F Company, Twentieth Infantry, admitted September 20, 1889, and Private James S. Crutchley, C Company, Twentieth Infantry, admitted September 21, 1889, who should properly be added to the list of admissions from B Company, since they, like Jones, Beck, and Parkinson, were left behind (they were company gardeners and slept in tents in the bottom) when the command took the field. They were both sick when the command returned on the 18th of September, but hesitated about coming to sick call until they were compelled to do so by loss of strength. These men were more than likely infected while messing with B Company. The September report gives 2 more admissions in the latter part of the month from B Company, making a total of 12 admissions on account of typhoid fever from this organization, and this number, with one exception (an officer), represents the outbreak as it occurred among the troops at the post. The fact that the outbreak was so localized excited a great deal of comment as to the cause. The following channels as possible sources of infection were considered:

(1) *The water.*—The water-supply of Fort Assiniboine is obtained from Beaver Creek, a mountain stream, flowing about 100 yards east of the parade-ground. The water is forced from a dam by a steam-engine at the saw-mill to a large tank on an elevated site, and from the latter it is distributed by pressure to hydrants in rear of the quarters. The latter are built to hold two companies, and these depend for their water-supply upon the one hydrant in rear. It was at once apparent that the water from either the creek or tank was not infected, because if this had been the case the fever would have been as likely to make its appearance among the men of F Troop or among the camp followers, numbering 167, all of whom were drinking the water. The particular hydrant furnishing the water-supply of B Company was carefully inspected and found in good condition, so that the vitiation of the water at this particular point by the surrounding soil had to be excluded from the list of possible causes. Another reason which militated against the theory was that E Company of the Twentieth Infantry, occupying the adjoining barrack and depending upon the same hydrant for its water, returned from the field on September 18. From that date on its men commenced the use of the water without the least ill effect. The water for B Company was collected for drinking purposes by the assistant cook and the room orderly, and placed in the dining-room and porch upstairs in zinc buckets as clean and pure as I have ever seen.

(2) *The food.*—Inquiry into the food-ration elicited nothing of special note. The men of B company had eaten the soldier's ration as had those of F troop, varied at times by a few vegetables from the company gardens.

(3) *The milk.*—The milk for the post is obtained from Sergeant Herron, who lives at the post. He milks about fifteen cows the greater part of the time. His premises are cleanly kept, and the milking is properly done. The majority of the people in the post—camp-followers and soldiers—drank and still drink his milk. On September 25 the eight-year-old son of Sergeant Herron took to bed with the fever. The symptoms of the disease were well marked. He convalesced October 15. If Willie Herron was infected by the poison from his father's premises, we might ask why it was that other members of the household, seven in all, were not stricken? Granted, for the sake of argument, that the milk furnished the post was in some way contaminated at Herron's premises, why was it that only the members of B company were susceptible to the disease? Why did it not spread among the members of F troop, or the officers and their families, and the camp-followers generally who partook of the milk? More than that, if we pursue the subject further we find that 35 per cent. of the men stricken in B company never used Sergeant Herron's milk. With this array of evidence against it, it seems to me that the theory of infection through the milk-supply finds no claim for consideration.

(4) *Emanations from typhoid stools.*—This subject was considered at the time. The clinical history in Corporal Tucker's case shows that he was sick possibly two weeks in quarters before he was admitted. He gave no history of diarrhœa during this time, and the onset of this symptom is first noted September 18. It should be remembered that the date of the initial stage was fixed at about the 17th of the same month. He was admitted to hospital on the 8th, and the question that naturally comes up is this: Could this patient's non-diarrhœal stools have infected the privy-boxes of his company during his stay in quarters? It should be remembered also that the symptoms of the fever were not prominent until the appearance of the rose-colored spots on the 24th, about 16 days after he had voided his last stool in his com-

pany privy. If we admit that his stools infected the boxes, the next question is this: Had the germs in his stools sufficient time to undergo the change required to give them the infectious properties necessary to bring Sergeant Bell to bed with the disease September 12, the date of his admission to hospital? Parkinson and Beck were admitted on the 10th and 11th, respectively, but they as well as the other victims who were attached for rations testified that they had not resorted to the B company latrines. There were a number of B company men who were ailing before and after Tucker's admission, who out of dread did not present themselves for treatment, and it may be that among these there were ambulating cases who were as likely to infect the boxes as was Tucker. If we admit emanations from typhoid stools as the cause, the reason for the appearance of the fever in the five men attached who did not frequent the B company latrines remains to be explained. The dry-earth system for the disposal of excreta, carried out imperfectly as it is at this post, favors in a high degree the infection of the privy-boxes.

(5) *The Habitation of the men.*—The company quarters are two-story brick buildings with verandas facing to the east for both stories. The lower story is occupied by the kitchen, dining-rooms, store-rooms, tailor shop, and first sergeant's room. The second story contains dormitories having a little more than the regulation allowance of cubic air-space. The latter are heated by stoves with a pure-air register under each, and an attempt at ridge ventilation in the ceiling. On October 5, while inspecting B company's quarters, I found that the opening in the stone foundation in rear of the building for ventilation under the floor was stopped up. It was necessary to dig along the wall for some time before the exact location of the ventilator could be found. We finally came upon it immediately under a tin gutter leading from the roof. After clearing away the grass and dirt we found a layer of bricks carefully laid, showing that the ventilator had been filled in purposely, in all probability, to divert the water coming down the gutter. The ventilator in front could not be found as it was covered by the floor of the veranda, which was laid close to the ground, but judging from the level in front and rear of the building the ventilator in front is some distance below the surface and very likely obstructed. I then proceeded to examine the ventilation under all the barracks. I found them open in the foundation of every barrack with one exception, and, to my astonishment, this barrack happened to be the ill-fated set mentioned in my sanitary report of November 30, 1887. It is in this set that most of our typhoid fever had originated up to the time of the present outbreak. The fact that the ventilators in the foundation-wall of these buildings, which we have learned now to regard as foci of infection, were the only ones obstructed is, to say the least, worthy of note. It is principally under the dining-room of these quarters that this lack of ventilation existed, because the space under the kitchen is taken up by a cellar area of the room. The strength of B Company all told was 57 men. This number includes those attached for rations. This was the strength of the company from the 21st of August to the 18th of September, during which the greater number of cases developed. The men gathered in the dining-room for meals three times a day, at 6:30 a. m., 11:30 a. m., and 4:30 p. m. In computing the cubic air-space we find when all were present only 111 cubic feet per man. The room depends upon the doors and windows for ventilation. If we allow thirty minutes for each meal we find that the men remained in the room one hour and thirty minutes each day. In view of these facts and the extreme dryness which had prevailed for months, is it asking too great a stretch of the imagination in the application of Pettenkoffer and Buhl's theory to say that the germ-laden air of the ground under the dining-room floor was being liberated continually to partly replace the heated air of the room, which in turn was constantly ascending and otherwise displaced? Wilson on Fevers explains the theory referred to in these words: "These observers explained the varying prevalence of enteric fever in connection with changes in the ground-water by the assumption that the causes of typhoid fever lie deep in the earth. When the water-level sinks, the layers of earth containing moist organic substances and exposed to the air, undergo changes which lead to the development of the fever poison. When, on the contrary, the water rises, these layers of earth are again covered and the development of the germs arrested." I have related the foregoing at length because it seems to me that the origin of the fever in B company, in accordance with the above theory, is not wholly improbable. There is a general predisposition to the disease in this western country aside from the outbreaks dependent upon local conditions of bad drainage and pollution of water supplies. I have known the fever to develop in the early and late autumn, in garrison, camp, and among troops on the march, when the victims have not been in or about human habitations for weeks at a time. Speculation upon the possible origin of the fever under such circumstances is unsatisfactory unless we adopt the theory of Pettenkoffer and Buhl. If the development of the typhoid fever germ in the earth depends upon a low-water line, that condition obtains in the West to a remarkable degree the greater part of the year. With the exception of the winter snows and the few spring showers the precipitation may be called scanty. The autumn is characterized by great dry-

ness. The following from the Signal Office at this station shows the amount of precipitation of snow and rain for the last four years: 1885, 6.82 inches; 1886, 11.48 inches; 1887, 18.94 inches; 1888, 13.99 inches.

Age and length of service in the country have a predisposing influence. In the epidemic under consideration the average age of those attacked was twenty-four years, and the average length of service in the country was one year and six months.

A communication from the Minister of War to the President of the Republic of France, published in "Le Temps," Paris, France, February 20, 1890, invites attention to the gratifying decrease in the sickness and deaths from typhoid fever that has attended the suppression of fixed cess-pools and the introduction of pure water-supplies. Bacteriological analyses in the laboratory at Val de Grace showed that the water at a third of the military stations was capable of developing epidemics, for the bacteria characteristic of typhoid fever or other infectious germs have been observed in them, sometimes in considerable numbers. The remaining two-thirds, although supplied with so-called good water, proved very deceptive in several instances, due generally to the fact that sufficient precautions had not been taken to protect the springs or reservoirs from coming in contact with contaminated water. The stations where the water is defective represent in France and Algeria 230,000 bunks, equivalent to a force of 175,000 men. The measures taken to protect this great body of men differ according to the localities. From July, 1888, to December 31, 1889, 92 stations received good spring-water; 64 were supplied with improved spring-water; in 122 contaminated wells have been condemned. The 156 stations in which the water has been changed or purified by filtration represent 77,000 bunks. The reform, though only partial, has shown its consequences by raising the standard in the medical statistics. Comparison between the sickness and mortality due to typhoid fever in 1889, and the average for the three preceding years, shows as follows: Cases of fever in 1889, 4,412; average of the three preceding years, 6,215; decrease in 1889, 1,803. Cases of death from fever in 1889, 641; average of the three preceding years, 843; decrease in 1889, 202.

The influence of a contaminated water-supply in the propagation of typhoid fever is clearly appreciated by the medical officers of our Army, and their efforts during the past few years to improve the water supplies have been of great value in lessening the sick-rates. They recognize fully the spread of this disease by an infected water; but cases are constantly occurring, as at Forts Assinniboine and Logan during the past year, which demonstrate that a water infected by the dejecta of a previous case is not the only means by which the germs of the disease are introduced into the system, and that to combat this fever successfully every point bearing on the sanitary condition and surroundings of the soldier must be subjected to the most careful consideration.

MALARIAL FEVERS.

The gradual diminution of late years in the prevalence of malarial fevers is an expression of sanitary improvements in connection with the drainage of military posts and their surroundings. During the past year the admission-rate was 120 per thousand of strength, as compared with 174, the average of the previous decade. The non-efficiency occasioned by these fevers during the year was equivalent to 3.25 men constantly sick in every thousand of strength.

Intermittents outnumbered the remittents as 5 to 1. Two deaths were occasioned by congestive cases; no death occurred in 414 remittent cases. The average non-effective rate among the colored troops was 2.09, as compared with 3.38 among the white men. Relatively

fewer of the colored troops were attacked, but the proportion of remittents to intermittents was greater among them, and the average duration of the remittent was longer—34.8 days for the colored, and only 21.2 days for the white men—an illustration of a well established fact that when the negro becomes seriously ill he does not rally so readily as the Caucasian.

If Fort Brown, Tex., were expunged from the list of military stations the prevalence of malarial disease in our Army would be greatly reduced. That post had an admission rate of 1,676 per thousand of strength, and 38.58 of non-effectiveness. Fort Sill, Ind. T., took second place as regards admissions, 692; but the cases were light, giving only 7.85 of non-efficiency, while Fort Reno, Ind. T., gave 21.93, and Little Rock Barracks 10.79; both with relatively fewer admissions than Fort Sill. These are the notably malarious posts of our Army, although there is yet room for considerable improvement in the rates of Fort Gibson, Ind. T.; Columbus Barracks, Ohio; Fort Clark, Tex., and Jefferson Barracks, Mo.

DIARRHOEAL DISEASES.

A decreased prevalence of these diseases was manifested last year as compared with the average of the preceding decade: Diarrhoea 111 admissions per thousand of strength; dysentery 7.4, with a death-rate for both of .14 and discharge-rate of .30, as compared with 181 and 16.6, with .33 and .52. The average number of days during which each case was under treatment was 3.7 for diarrhoea, 18.7 for dysentery. These diseases were evidently the result of local conditions, for, excluding the small posts, the six which had the largest admission-rates were scattered, one each in Georgia, Virginia, Texas, New York, Indian Territory, and Minnesota. Fort McPherson, Ga., had the largest rate, 820 per thousand of strength, and was indeed the only post where the record shows a special and unusual prevalence. Relatively more of this sickness occurred in the families of officers, and was attributed by the medical officer to defective drainage; moreover, the use of a water-supply drawn through pipes which had not been emptied for weeks, was conceived to have had "an undoubted influence in swelling the number of bowel complaints."

RHEUMATISM.

Rheumatism gave an admission-rate for the year of 93 per thousand of strength, 4.78 of non-effectiveness, and 1.98 of discharges. The admission-rate for the previous decade was 113, and the rate of discharge 2.98; its non-effective rate is not available for comparison. The posts which had the largest rate were scattered, one each in Georgia, Maryland, New York, Wyoming, and New Mexico; but at none of them was there such a prevalence as to suggest special inquiry into the cause of the affection. Fort McPherson had 237 admissions per thousand men, Fort McHenry 236, Willets Point 202, Fort Washakie 198, and Fort Marcy 193, as compared with the Army average of 93. The posts which had the largest rates of admission were, however, not those which had the greatest non-efficiency. Fort Hays, Kans., had 12.49 of constant sickness and Fort Washakie 8.02, while Fort McPherson had only 6.04, as compared with the Army rate 4.78.

VENEREAL DISEASES.

The admission-rate for venereal diseases during the year was 84.66, showing no improvement on that of the preceding decade, 84.37; the

white troops had 84.86, the colored 82.75. The discharge-rate was 3.52, as against 4.30, the average of the decade. The rate of non-effectiveness was 5.61, gonorrhœa by its greater frequency having been the occasion of greater disability than syphilis. The relative proportions of the admissions were, gonorrhœa 38.44, each case requiring 20.5 days for its treatment; syphilis, 22.07, each requiring 32.6 days; chancroids, etc., 24.15, each lasting 22 days. The posts which contributed to these large rates were Columbus Barracks and Little Rock Barracks, Forts McPherson and Brady, Newport Barracks, and Forts McIntosh, Wayne, and Brown. The admission-rate of the first was 46²/₁₀₀, of the last 200, the rates of the others being between. Little Rock Barracks, Columbus Barracks, Fort Brown, and Fort McPherson had the highest rates of non-efficiency, 29.58, 28.99, 26.36, and 18.27, respectively. Fort McIntosh had 16.27, Fort Brady 15.39, and Newport Barracks 15.07. Fort Wayne had 9.25, but several other posts already mentioned in discussing the sick rates of the departments had larger rates of non-efficiency, although the admissions were relatively fewer than at this post.

PULMONARY CONSUMPTION.

The rates for pulmonary consumption for the year were: Admissions 3.32, death .44, discharge 1.50, non-effectiveness .74, differing but little from those of the past decade. The absolute figures were 83 cases with 12 deaths and 41 discharges; average duration of treatment 81.2 days. Fort Niobrara, Nebr., had the largest number of cases, 7; Fort Townsend and Willets Point had each 5, and Washington Barracks 4; five posts had 3 cases each, eight posts 2 each, and thirty-one posts 1 each. The infantry arm furnished 40 of the cases, artillery 15, cavalry 13, engineers 6, recruits 5, medical department and hospital corps 4, of which 3 were in the persons of medical officers. The ages of 82 of the cases are given, the youngest 20, the oldest 58; 43 of the cases were from 22 to 28, inclusive. Seventy were reported as having been developed in the line of duty; 39 had been in service over five years, 6 over four years, 4 three years, 4 two years, 10 over and 19 under one year.

PNEUMONIA AND PLEURISY.

Pneumonia occasioned a larger number of deaths than any other individual disease, .70 per thousand of strength. The absolute number of deaths was 19, occurring in 130 cases, as compared with 39 in 181 cases during the previous year. The average duration of the cases was 38.4 days. Its prevalence and fatality were relatively greater among the white men. In addition to these, 3 cases of intercurrent pneumonia were reported in cases of typhoid fever, 1 in a case of remittent fever, and 2 as the sequel of measles.

David's Island had 8 cases, Jefferson Barracks 7, Fort Grant 6, Washington Barracks, Columbus Barracks, Fort Omaha, Fort Douglas, and Fort Robinson 5 each; three posts had 4 each, eleven posts 3 each, eight 2 each, and twenty-three 1 each.

Pleurisy caused 64 admissions, with 1 death and 2 discharges; the average duration of the cases 26.5 days. Fort Robinson had 7 of the cases, Fort Sill 6, David's Island 5, Little Rock Barracks 4, two posts had 3 each, nine had 2 each, and eighteen 1 each.

INJURIES.

The admission-rate for injuries, 248.72, and the non-effective rate, 8.55, differ but little from those of the previous year, 242.88 and 8.36 respect-

ively. *Contusions* and *sprains* gave, as usual, the largest admission-rate, 131.56, followed by *incised*, *lacerated*, and *punctured* wounds, 54.66 per thousand. *Heat-stroke* furnished 46 cases with 1 death and 1 discharge, and *frost-bite* 34 cases with 2 discharges, all among the whites.

Ninety-four cases of *gunshot wounds* were entered on the reports, resulting in 5 deaths and 15 discharges; but in addition there were 16 cases in which death was instantaneous or followed so soon after the receipt of the injury that the men were not taken on sick report. The number of these casualties was therefore 110, of which 3 with no death, occurred during the firing of salutes; 12 with no death, during the reloading of cartridges; 15 with 1 death, at target practice; 6 with no death, while hunting; 21 with 4 deaths, in personal encounters; 14 with 13 deaths, as the result of suicidal attempts; 32 with 4 deaths, by accidents; and 7 with no death, in the encounter between the escort of Paymaster Wham and road agents in Arizona.

Sixteen deaths from *drowning* were reported; of these 2 were suicidal, 5 occurred while boating, 2 while bathing, and 7 by other accidents.

Twenty-one cases of *suicide* were reported during the year; 2 were officers, and 19 were enlisted men. Seven occurred in the infantry, 5 in the cavalry, 3 in the artillery, 4 in the hospital corps, and 2 in the general service. Gunshot was selected in 13 cases, poison in 3, drowning in 2, suffocation in 1, strangulation in 1, and crushing under a railroad train in 1. Alcoholism was the cause assigned in 8, insanity in 2, love troubles in 2, remorse on having been detected in theft 1, and fear of the result of syphilis 1; in 7 cases the cause could not be ascertained.

The nationalities were, United States 8 (1 negro), German 7, Swiss, 2, and Irish, Scotch, English, and Canadian, 1 each. The ages twenty-five and thirty 3 each; twenty-seven and forty-two 2 each; twenty-three, twenty-four, twenty-eight, twenty-nine, thirty-one, thirty-two, thirty-eight, thirty-nine, forty-six, forty-nine, and over fifty, 1 each. Six occurred in April, 5 in June, 3 in August, and 1 each in January, March, May, July, October, November, and December. Two occurred at Fort Spokane, Wash., 2 at Fort Sherman, Idaho, 2 at Fort Mason, Cal., and 1 each at Fort Schuyler and Plattsburgh Barracks, New York, Angel Island, San Diego Barracks, and Presidio, San Francisco, Cal., Camp Poplar River, and Fort Keogh, Mont., Forts Apache, Huachuca and Whipple, Arizona, Jefferson Barracks, Mo., Columbus Barracks, Ohio, Fort Riley, Kans., Fort Brown, Tex., and at a civilian hospital in Providence, R. I.

Five *attempted suicides* were reported, all enlisted men,—3 infantry, 1 cavalry, and 1 artillery. Alcoholism was responsible for 3 cases, nostalgia and acute melancholia for 1 case each. The attempt to cut the throat was made in 3 cases, gunshot was used in 1, and in the other the means used was not reported. The nationalities were, United States 3, (1 negro) Irish 2. The ages twenty-two, thirty-one, thirty-five, thirty-seven, and forty-four. The cases occurred at Fort Hamilton, N. Y., Fort Leavenworth, Kans., Boisé Barracks, Idaho, Fort Lyons, Colo., and Fort Bayard, N. Mex. Two were reported in December, and one each in July, April, and March.

The total suicides and attempts at suicide numbered 26. Two occurred in the first year of service, 2 in the second, 2 in the third, 1 in the fourth, 1 in the fifth, 3 in the sixth, 2 in the seventh, 2 in the eighth, 1 in the ninth, 1 in the eleventh, 2 in the thirteenth, 2 in the sixteenth, 1 each in the twenty-second, twenty-fourth, twenty-sixth, twenty-seventh, and thirty-fourth.

The deaths by suicide constituted .77 per thousand of the strength of the Army, a considerable increase on .45, the rate of the preceding year, but not in excess of the average of the preceding decade .79. This rate is higher than in the English and Italian services. The German rate, however, in 1883-'84 was .74.

SURGICAL OPERATIONS.

During the year the Medical Department of the Army reported 213 surgical operations, 95 of which were necessitated by injuries, and 118 by disease. The number, character, and results of these are shown in the following statement:

Nature of operation.	Disease or injury.	Total.	Recov- ered.	Died.	Remarks.
Removal of Tumors		23			
Enucleation.....	Sebaceous, 7; en- cysted, 3; lipoma, 7; fibrous, 1; syphilis, 3; not classified, 2.	23	23		Scalp, 6; face, 8; neck, 3; shoulder, 2; hand, 1; penis, 3.
Removal of foreign bodies		8			
Bullets and shot.....	Shot wounds.....	8	8		Face, 1; chest, 2; back, 1; forearm, 1; hand, 1; thigh, 2.
Opening of abscesses		5			
Incision.....		5	4	1	Chest, 2; abdomen, 1; perineum, 1; nates, 1.
Operations on the eye		2			
Cataract.....		1	1		
Excision of eyeball.....	Laceration.....	1	1		
Operations on the ear		1			
Incision.....	Inflammation of middle ear.	1	1		
Operations on the nose		1			
Extraction of polypi.....		1	1		Through natural pas- sage.
Operations on the mouth		3			
Removal of tonsils.....	Tonsillitis.....	2	2		
Incision, uvula.....	Acute inflammation.	1	1		
Operation on veins		4			
For varicocele.....	Varicocele.....	3	3		Ligature.
Varicose veins.....		1	1		Ligation.
Operations on the respira- tory organs		2			
Tracheotomy.....	Diphtheria.....	1		1	Survived forty hours.
Paracentesis of pleura.....	Pleuritic effusion.	1	1		
Operations on the digestive organs		28			
For hernia, taxis.....	Inguinal 4.....	4	4		Strangulated, 3.
Fistula in ano.....		8	8		Incised, 7; ligature, 1.
Hemorrhoids.....		15	15		Ligation, 4; excision, 6; evacuation, 2; cau- tery, 2; dilation, 1.
Paracentesis abdominis.....	Contusion, dropsy..	1		1	Death, dropsy.
Operations on the lymphatic organs		6			
Removal of glands.....	Venereal, 3, adenitis 3	6	6		
Operations on urinary or- gans		12			
For stricture, urethral dilata- tion.....		2	2		
Internal urethrotomy.....	Gonorrhoeal 2.....	6	6		
External urethrotomy.....	Cystitis 1, urethri- tis 1.	3	2	1	
Lithotomy.....	Calculus.....	1	1		
Operations on generative organs		14			
For phimosis.....	Syphilitic 1, gonor- rhoeal 2.	10	10		Circumcision, 10.
Hydrocele.....		4	4		Tapping, 3; radical cure, 1.
Operations on bones		7			
Removal of portions of.....	Shot 1, disease 2, fracture 1.	4	4		Skull, 1; maxilla, 2; metatarsal, 1.
Trephining.....	Fracture.....	1		1	Also fracture of spine.
Excisions:					
Metacarpal.....	Fracture.....	1	1		Secondary.
Femur.....	Shot, caries.....	1	1		Secondary.

The number, character, and results of surgical operations—Continued.

Nature of operation.	Disease or injury.	Total.	Recovered.	Died.	Remarks.
Operations on joints .....	.....	36			
Reduction of dislocations .....	.....	35	35		Shoulder, 20; elbow, 10; wrist, 3; knee, 2. Knee.
Aspiration	Disease	1	1		
Operations on limbs .....	.....	48			
Amputations on injury .....	.....	43			
Shoulder-joint	Shot wound	1	1		Primary.
Arm	Shot 1, fracture 3	4	3	1	Primary, 4.
Wrist-joint	Fracture 2	2	2		Primary, 2.
Fingers	Shot 10, injury 16	26	26		Primary, 18; intermediary, 5; secondary, 3.
Thigh	Shot	1		1	Primary.
Leg	Fracture	2	1	1	Primary, 2.
Foot	Frost-bite	1	1		Intermediary.
Toes	Shot-wound, 1; injury, 3; frost-bite, 2	6	6		Primary, 4; intermediary, 1; secondary, 1.
Amputation for disease .....	.....	5			
Fingers .....	.....	4	4		
Leg	Periostitis	1	1		
Operations on the muscles and tendons .....	.....	1			
Tenotomy	Talipes equinus	1			
Operations on skin, etc .....	.....	12			
Ingrowing nails .....	.....	9	9		
Skin-grafting	Chronic ulcers	1	1		Thigh.
Closure of wounds	Incised wounds	2	2		Throat 1, face 1.
Aggregate .....	.....	213			

List of special reports received during the calendar year.

MEDICAL REPORTS.

Name.	Rank.	Report.
Ainsworth, F. K.	Act. asst. surgeon	Meningitis from extension of inflammation from middle ear; death.
Banister, W. B.	Lient. and asst. surgeon ..	Intercostal neuralgia.
Ball, R. R.	do	Placenta prævia centralis.
Benham, R. B.	Capt. and asst. surgeon ..	Thermographs; three cases of typhoid fever. Thermographs; three cases of intermittent fever. Erysipelas, facial; thermographs.
Brown, H. E.	Major and surgeon	Nervous exhaustion induced by use of narcotics; death.
Caldwell, D. G.	do	Measles at Jefferson Barracks, Mo., February and March.
Corbusier, W. H.	Capt. and asst. surgeon ..	Acute inflammation of left lung; death. Vaccination at Fort Hays, Kans.
Everts, E.	do	Aneurism of ascending aorta; autopsy. Abscess of the brain; autopsy.
Ferguson, J. B.	Acting assistant surgeon ..	Thermographs, five cases of remittent fever at Fort Sully, S. Dakota.
Finley, R. P.	do	Variola at Fort Stanton, New Mexico.
Forwood, W. H.	Major and surgeon	Typhoid fever at Fort Snelling, Minn. Thermographs; 22 cases of typhoid fever.
Frick, A. P.	Acting assistant surgeon ..	Vaccinations at Fort Selden, New Mexico.
Gardner, W. H.	Major and surgeon	Typhoid fever; death.
Gibson, J. R.	do	Valvular disease of heart, with aneurism of aorta.
Havard, V.	Capt. and asst. surgeon ..	Typho-malarial fever; death; thermograph.
Hoff, J. V. R.	do	Measles at Fort Reno, I. T., in May.
Holland, F.	Acting assistant surgeon ..	Constitutional syphilis, with local manifestations.
Jarvis, N. S.	Lient. and asst. surgeon ..	Prolapsus ani and diarræca; death. Cardiac hypertrophy and anemia; death.
LaGarde, L. A.	Capt. and asst. surgeon ..	Thermographs; 22 cases of typhoid fever at Fort Assinniboine, Mont.
Middleton, J. V. D. ..	Major and surgeon	Congestion of the brain; death; autopsy. Atheroma coronary arteries; atrophy and dilatation of heart; death.
Munn, C. E.	do	Valvular disease of heart.
Page, C.	Col. and asst. surg. genl. ..	Congestion of brain; acute alcoholism; autopsy. Relation of malarial diseases to impurities in drinking-water.
Pope, B. F.	Major and surgeon	Aneurism of the arch of the aorta.
Pilcher, J. E.	Capt. and asst. surgeon ..	Thermographs; nine cases of camp remittent fever.
Rafferty, O.	Lient. and asst. surgeon ..	Acute suppurative otitis; perforation of the drum of the ear.

List of special reports received during the calendar year—Continued.

MEDICAL REPORTS—Continued.

Name.	Rank.	Report.
Shillock, P	Lieut. and asst. surgeon ..	On vaccinations on the leg.
Strong, N.....	Capt. and asst. surgeon ..	Chicken-pox at Fort Schuyler, New York. Obstructive jaundice and hepatitis due to biliary calculus.
Suter, W. N.....	Lieut. and asst. surgeon.	Pneumonia, lobar; left lung; death. Pneumonia, entire right lung.
Taylor, A. W.....	Capt. and asst. surgeon ..	Acute dysentery; hepatic abscess; death. Phthisis pulmonalis; death; thermograph. Small-pox at Fort Grant, Arizona, February. Diphtheria at Fort Grant, Arizona.
Tesson, L. S.....	.....do	Acute mania; death; autopsy.
Tilton, H. R.....	Major and surgeon	Outbreak of influenza at West Point, N. Y., December. Acute indigestion among cadets; dietary and atmospheric causes. Apoplexy; death. Remittent fever; recovery; thermograph. Intermittent fever; endocarditis; death; thermograph.
White, R. H.....	.....do	Remittent fever at Fort Myer, Va; eighteen thermographs. Thermograph; acute dysentery.
Woodruff, C. E.....	Lieut. and asst. surgeon ..	Prevalent diseases in the vicinity of Fort Mackinac, Michigan. Hystero-epilepsy.
Wright, J. P.....	Lieut. col. and surgeon....	Acute intestinal obstruction.

SURGICAL REPORTS.

Appel, D. M.....	Capt. and asst. surgeon ..	Shot perforation of abdomen; death.
Banister, W. B.....	Lieut. and asst. surgeon ..	Osteo arthritis of knee-joint.
Ball, R. R.....	.....do	Septic poison; phlegmonous erysipelas; death.
Black, C. S.....	Capt. and asst. surgeon ..	Surgical injury.
Brown, J. M.....	Major and surgeon	Shot fracture of spine; death in eleven months.
Bushnell, G. E.....	Capt. and asst. surgeon ..	Fracture skull; cerebral abscess; trephining; recovery.
Cabell, J. M.....	Lieut. and asst. surgeon ..	Shot wound thoracic aorta and heart.
Carter, W. F.....	Capt. and asst. surgeon ..	Shot wound face, breast, and shoulder.
Cleary, P. J. A.....	Major and surgeon	Injury; rupture of the vena cava; autopsy. Shot perforation of chest; recovery.
Cochran, J. J.....	Capt. and asst. surgeon ..	Autopsy; death from insolation.
Corbusier, W. M.....	.....do	Dislocation of right humerus.
Corson, J. K.....	Major and surgeon	Shot fracture cranium; suicide. Poisoning by morphia; suicide.
Everts, E.....	Capt. and asst. surgeon ..	Fracture of skull; death.
Ewen, C.....	Major and surgeon	Shot penetration both lungs; thermograph.
Girard, A. C.....	.....do	Surgical injury. Stricture of urethra; spasmodic. Incised wound neck; attempted suicide. Excision metacarpal bone.
Gorgas, W. C.....	Capt. and asst. surgeon ..	Surgical injury.
Graham, H.....	Hospital steward	Excision head of femur; recovery. Dislocation, shoulder.
Hubbard, V. B.....	Major and surgeon	Osteo-sarcoma, lower jaw. Incised penetrating wound, chest and abdomen; autopsy.
Hayard, V.....	Capt. and asst. surgeon ..	Amputation finger.
LaGarde, L. A.....	.....do	Laceration of urethra. Shot penetration of right lung; ball lodged; recovery.
Munn, C. E.....	Major and surgeon	Suicide from strangulation.
Mans, L. M.....	Capt. and asst. surgeon ..	Shot wound; amputation arm.
Phillips, J. L.....	.....do	Tumor removed from the eye.
Price, C. E.....	.....do	Drowning; resuscitation; death probably from rupture of lung tissue.
Reed, W.....	.....do	Shot fracture humerus; conservation; recovery.
Shillock, P.....	Lieut. and asst. surgeon ..	Fracture parietal; intracranial blood clot; death.
Taylor, A. W.....	Capt. and asst. surgeon ..	Organic stricture urethra. Shot wound, face.
Taylor, B. D.....	.....do	Opium poisoning; suicide.
Wright, J. P.....	Lieut. col. and surgeon ..	Incised wound; amputation at wrist-joint.
Winne, C. K.....	Capt. and asst. surgeon ..	Poisoning by morphia.
Wilson, George F.....	.....do	Gunshot wound intestines; ball passed at stool; recovery.
Woodruff, C. E.....	Lieut. and asst. surgeon ..	Probable errors of food investigators and impossibility of making a perfectly accurate ration.

INFLUENCE OF SEASON ON THE PREVALENCE OF DISEASE.

In studying the statistics of admissions in connection with the months in which they took place, it is found that M^{ar}ch and April, July, August, September, and December had rates above the average, July and September having the highest, June and November the lowest. When venereal diseases, alcoholism, and injuries are excluded from the study, the results are not materially altered.

When the statistics of non-effectiveness are examined, February and April, and July to October inclusive, are found to have rates above the average, but when venereal diseases, alcoholism, and injuries are excluded, the rate of July drops below the average. June and November had the lowest rates, August and September the highest.

RECRUITING DURING THE YEAR.

During the year 20,787 recruits were examined; 12,144 were rejected on the first and 152 on the second examination. The rejections constituted 59.15 per cent. of the total number of candidates. It is not to be understood, however, that this large proportion of the men presenting themselves for enlistment were disabled by disease; 10.55 per cent. were rejected on account of failure to satisfy the requirements as to age, height, weight, etc., 1.53 were refused on account of want of knowledge of the English language, .89 on account of bad or doubtful character, and 8.02 for various causes not necessarily associated with physical disability. Disease and the result of injury were responsible for the non-acceptance of about 38 per cent. of the candidates; diseases of the eye rejected 8.83; of the digestive system, which includes rupture, 5.61, and developmental anomalies, 4.34.

JEFFERSON BARRACKS, MO.—*Maj. D. G. Caldwell* comments as follows on the work of inspection at this depot during the year:

The records show that 1,851 recruits were examined on arrival from the various rendezvous, and 77 men for enlistment. Of those examined on arrival 46 were rejected and brought before a board of inspectors, 28 were recommended for discharge, and 18 were ordered to be held to service by the board or by higher authority. Of the 77 men examined for enlistment, 26 were rejected. Increased efforts should be made to secure a better class of recruits, which would reduce expenses and benefit the service. The enlistment of young boys is expensive, because a greater number become disabled, and others, after a severe struggle and much time lost on sick report, establish a permanency of health which they should possess at enlistment. Many others, of more mature age, from previous exposure and dissipation, have a lowered vitality without actual disease, which causes an early transfer to the disability list.

FORT RILEY, TEX.—*Maj. Dallas Bache* also comments on the inadvisability of accepting immature recruits:

It is not unusual to find among the recruits sent here immature boys of eighteen and nineteen years of age, the testimony of whose general appearance and development should have outweighed any personal assertion as to their majority. With but few exceptions these youths will be perpetually on the sick list for the whole period of their enlistment, at the expiration of which they may have acquired that stability of health that should have been demanded at admission.

VACCINATIONS.

The total number of primary vaccinations reported was 1,800, of which 944, or 52.4 per cent., were successful; 521, with 335 successful at the recruiting depots, and 1,279, with 609 successes in the Army at large.

The revaccinations numbered 10,377. Of these 4,888 were at the

depots and 5,489 in the Army at large; 1,385 of the former and 1,600 of the latter, or a total of 28.8 per cent., were successful.

Bovine virus was used in 1,624 primary cases,—865, or 53.3 per cent., successful; and in 8,831 revaccinations, with 2,649, or 30 per cent., satisfactory.

Humanized virus was used in 176 primary cases—79, or 44.9 per cent., successful; and in 1,546 revaccinations, with 336 cases, or 21.7 per cent., satisfactory.

FIELD OPERATIONS.

Camps of instruction in field operations were established during the summer, and details from the medical department and hospital corps accompanied each body of troops. Departmental general orders in each instance gave specific instructions covering the preparation for the field maneuvers, the march, the camp, the course of instruction, and the return, in which provision was made for the exercises of the medical department. The ambulances followed the commands as in warfare, and, besides attending to those actually sick or injured, the hospital corps was to be exercised in establishing dressing stations at convenient points in rear of imaginary lines of battle, sending out litter-bearers to bring in dummy wounded, setting up field hospitals, breaking camp, and moving to the front or rear, the necessary instruments for primary operations to be laid out at all field hospitals and dressing stations; litter drill and practice in loading and unloading of ambulances were also enjoined.

In the Department of the Missouri the hospital corps was short-handed, and able only to take care of the sick of the expedition under the conditions of active service.

In the Department of the Platte, where 2,255 men participated in the maneuvers, the hospital corps was present in such numbers as to obtain advantage from the course of instruction, the whole of their time not being occupied in caring for those actually sick. The advantages of field instruction were fully appreciated by the medical officers attached to this column. Much valuable experience was gained also in the Departments of Dakota and Arizona. Difficulties in the management of hospital property and supplies were developed, as well as defects in the regulation litters and ambulances and in the drill system, the last depending mainly on the fact that the system in use was a provisional one, altered by each officer, under authority from this office, in accordance with his experience of what seemed to be best under the conditions. The whole of this experience has recently been consolidated by a board of medical officers, and it is believed that the resulting system of drill is one which will answer all the purposes of the hospital corps of our Army.

The reports of the work of the hospital corps during these field operations will be of interest to those medical officers whose duties prevented them from participating; some of these are given below. I add also the report of Capt. Louis Brechemin, on his tour of service with the Illinois National Guard during its summer camp of instruction. The advantage to the medical department of the National Guard of inspection and instruction by an Army medical officer can be readily appreciated from his report.

[Extracts from the report of Capt. J. Van R. Hoff, U. S. Army, Department of the Missouri.]

The work devolving upon this department naturally divided itself into the practical and theoretical, the former pertaining to the care of the sick presenting from day to day, the latter to the instruction of its officers and men in field work under con-

ditions of active service assumed to exist during continuance of maneuvers. In order to meet the first a divisional hospital was organized for the treatment of the seriously sick; this consisted of hospital tents arranged cruciform and capable of extension in any direction. Five hospital tents were used—as dispensary wards and mess tent, one wall-tent with extended fly for kitchen, two wall-tents and four common tents for quarters of men of the hospital corps, and a common tent for office. Additional canvas was at hand to meet emergencies, which fortunately did not arise. Two of the wards were furnished with the regulation beds, the third with hand litters, and were capable of accommodating very comfortably fifteen patients. Material at hand would have permitted of considerable increase of this number if found necessary. The kitchen was supplied with a range and all essentials to the proper preparation of food.

Medical officers were assigned to duty as follows:

Capt. Blair D. Taylor, assistant surgeon, to the Seventh Cavalry; Capt. C. N. B. Macauley, assistant surgeon, to the Fifth Cavalry; First Lieut. R. E. Ball, assistant surgeon, to the infantry brigade; First Lieut. B. L. Ten Eyck, assistant surgeon, to the artillery battalion; Acting Assistant Surgeon W. Whitney, executive officer of the hospital; Acting Assistant Surgeon F. S. Dewey, on duty at hospital and during sick call, with Major Cook's battalion of infantry.

The medical arrangements were as follows: At sick call the men of each command presented themselves to the medical officer assigned to duty therewith; those ordered into hospital were taken there in ambulances, one of which, with an attendant, reported to each medical officer at the hour of sick call; those treated in quarters were prescribed for by the surgeon, and the medicines dispensed by an orderly permanently detailed with each command. A numerical report of sick was sent to each headquarters, and a nominal list to the chief medical officer, who made a consolidated numerical report to division headquarters and a nominal consolidated report to the Surgeon-General, U. S. Army, and medical director, Department of the Missouri.

This plan concentrated the clerical work and proved excellent under the existing conditions, but in actual service, with increased facilities then always obtaining, the regimental method of reporting to the medical department authorities would prove far more satisfactory, the regiment being a constant factor, the division an ever-changing one.

The movement of sick during the encampment was as follows, viz:

Received from various commands en route.....	34
Taken sick	241
Total	275
Returned to duty	246
Transferred to various commands	29
Total	275

The diseases were chiefly those pertaining to camps—malarial fevers, diarrhœa, and dysentery—and while some of the cases were serious, none resulted fatally. The sick report shows a somewhat remarkable and certainly unexpected fact, that there was a progressive increase in non-effectiveness from sickness during the first eleven days, and thereafter a marked decrease, as shown by the following record, taken from the consolidated morning report:

Date.	Number.	Date.	Number.	Date.	Number.
September 23.....	54	September 29.....	76	October 5.....	74
24.....	61	30.....	93	6.....	56
25.....	68	October 1.....	87	7.....	56
26.....	70	2.....	84	8.....	54
27.....	79	3.....	99	9.....	46
28.....	69	4.....	92	10.....	19

Nine cases were transferred to posts during the continuance of the camp and 19 to the different commands upon breaking up.

An interesting point, a discussion of which is not permissible in the limits of this report, is afforded in the comparative non-effectiveness from sickness of different organizations of this command; percentages varied from nothing to 18, the latter obtaining in the infantry camp, chiefly among troops who had served in Oklahoma since its opening.

A glance at the location of Camp Schofield leads to the conclusion that it would be difficult to find a more healthful one in the Indian Territory, but any camp in that Territory, where malaria is so universally prevalent, can never be above sanitary suspicion.

The method, under the circumstances alone available, of assembling supplies for the medical department, entailed an immense amount of labor upon its officers and men, and consumed a great deal of valuable time which might have been profitably employed in other directions. General Orders No. 12, Headquarters Department of the Missouri, required that "each command will carry supplies (medical) to last until the return to its post." General Orders No. 14 directed that "the hospital now at Oklahoma Station will be shipped by rail to Chilocco." This hospital was possibly sufficiently supplied for a command of 200 men. Forts Riley, Logan, and Hays furnished by far the greater part of the medical supplies brought to the camp. Some commands came without medical officers and some medical officers practically without supplies. Fortunately the supplies were ample, but they were so only because a deficiency was anticipated and made up from the posts above mentioned. Demands upon the hospital were made immediately after the arrival of the commands; its construction, furnishing, and reception of patients went on *pari passu*. Property from every direction was opened promiscuously, some of it was marked, the rest not. Each hospital-corp man had in his possession property pertaining to the medical department for which some officer was accountable, and these men were assembled from many stations. The result is easily imagined. It took most of the time the hospital was in existence to straighten out the property pertaining to it, and finally to get it separated for return to the posts from whence it came. If this method of supply is to be followed in future it is most desirable that the field hospital be in readiness before any part of the command arrives on the field; that each medical officer be directed, in his estimates of material necessary, to conform to the requirements of the Supply Table issued by the medical department, and that before leaving his post he shall see that every article of non-expendable property be stamped with the name of the post from whence it came. But, in my opinion, by far the most satisfactory method is the organization of a field hospital at each department headquarters, this hospital to be of sufficient capacity to meet any requirements of the command to which it is attached, and to be supplied with all the latest improvements that military sanitation has devised in this direction. Such a hospital should be, when not in use, under the immediate supervision of the medical director, whose duty it should be made to see that it is always in perfect condition. When needed it could be shipped complete to any point, and when no longer required returned to department headquarters again. A field hospital of this character, aside from its usefulness, might be made a valuable means of instruction, and being constantly improved would serve as a model upon which all field hospitals could be formed in active service. I believe this to be a matter of more than passing importance. If so much trouble arises in organizing a field hospital for a command of 1,500 men, what would happen with the Army?

The scope of the theoretical instruction of the medical department is defined by General Orders No. 12, above mentioned, as follows: "The exercises of the medical department will consist in establishing dressing stations at convenient points in rear of imaginary lines of battle, sending out litter bearers to bring in dummy wounded, setting up field hospitals and breaking camp, moving to the front and rear, re-establishing camp, litter drills, and loading and unloading wounded from the ambulances." These instructions were carried out as far as practicable, and with reasonably satisfactory results. Certain important considerations materially interfered with perfect success. The demands made upon the department for the care of the sick, which had to be met before all else, occupied the entire time of a large part of the force under my command. Two non-commissioned officers were constantly employed at the hospital, and the remaining two almost constantly; six privates were on duty in the hospital; three were permanently detailed as orderlies with medical officers in the different camps; one was an ambulance driver and one was incapacitated on account of sickness, leaving but seven men available for field-work. In addition, four privates of the line and two citizens were on duty as ambulance drivers. To meet the possibilities of sickness or accident, medical officers and ambulances accompanied the different commands during maneuvers, and with each ambulance was an orderly with medicine case. These orderlies had to be supplied from the seven available men, as those detailed in the camps remained behind to attend to the sick in quarters. It is thus seen that the medical department was too largely occupied in meeting the actualities of the camp to permit of its very extended theoretical instruction.

The want of uniformity in the bearer-drill of the men added largely to the difficulties of the situation. Assembled from nine different posts, at each of which a different manual had been taught, any combined action was simply out of the question, and the instruction in yet another method would have only added confusion. One poor fellow, upon being asked in what method he had been instructed, replied that he had already learned six different drills but thought perhaps he might be able to learn another. I have heretofore had occasion to comment officially on this condition of affairs, and can abate nothing from what was then said; it is absolutely chaotic; each little detachment is a rule unto itself, and any uniformity of action when

these detachments are consolidated is simply out of the question. There certainly should be no difference of opinion upon this subject among medical officers; if the hospital corps is to be regarded as a military body, and expected to act in concert in large numbers, it should be instructed accordingly, *i. e.*, by one method only. An experience during the field maneuvers for the last two years has forced this opinion, long entertained, into a conviction that we are losing valuable time and demoralizing the corps by the use of conflicting methods. Those who strive to improve it simply have their labor for their pains; the men can not be made to take interest in learning that which to-morrow they may be called upon to unlearn. They can not be expected to take pride in an organization the scope of which seems not to be understood even by the medical officers upon whom its success depends. But in spite of these drawbacks, I desire to bear testimony to the fact that the men of the hospital corps did their important work very well, far better than it could have been done under the old method of extra-duty details, and under conditions the pecuniary reward for which is not at all commensurate with the labor required.

It has already been stated that one man of the corps was on duty as ambulance driver, together with four privates of the line. This man did quite as much work as his comrades of the line, and yet for this work he simply drew his pay of \$13 per month, while the others were allowed 35 cents a day extra-duty pay in addition. Under such circumstances is it to be expected that there can be even measurable contentment in the situation, leaving enthusiasm for the work entirely out of the question? I have repeatedly called attention to the necessity for increased pay to privates of the hospital corps. The character of the men must be commensurate with the quality of the work required of them, and the compensation should be proportionate.

I venture the opinion that in field maneuvers as little as possible should be left to the imagination, for at best this faculty must be largely drawn upon. Wars without casualties belong to a state of affairs with which we are not concerned, and these casualties, I am led to believe, form an important factor in the conduct of all military operations. The casualty results of contact with different arms have been so accurately determined that the conditions being settled upon beforehand, which they necessarily must be in camps of instruction, the number of killed and wounded and the character of wounds could be easily calculated. To make the lesson as realistic as possible to introduce a factor of the greatest importance, it seems to me desirable that a given number of officers and men in every contact operation should be required to represent the killed and wounded, for these are the net results of battle. I presume this suggestion will meet with opposition on the part of many, but its importance can scarcely be gainsaid. Should such a plan be put in execution the necessity for the instruction of the hospital corps and company bearers in their special field work would be much more apparent to those who would benefit by it than at present seems to be the case. With an object lesson of this character before them, in future there would be less likelihood of hearing the comment recently made by an officer that it was "ridiculous to see well men carried off on stretchers," just after he had enthusiastically applauded a charge made by a skirmish line which rushed up a hill to attack an enemy which had no existence in fact or fancy.

If, however, the hospital corps is to profit by instruction of this character, it must be assembled in larger numbers than obtained at Camp Schofield; for there, as already shown, I had scarcely more than enough to meet the large current demands made upon my department.

In concluding this report I desire to commend the zealous and faithful discharge of duty on the part of all the officers and men of my command, who, I venture to believe, contributed their full share towards the success of the field-work at Camp Schofield, which all are agreed was most successful.

[Extracts from the report of Major DALLAS BACHE, Medical Director, Department of the Platte.]

The computed strength for the encampment was 139 officers and 2,476 men, a total of 2,615. The mean force actually assembled was 2,255, of which 126 were officers. There were on duty in camp 8 medical officers, 7 hospital stewards, and 22 privates of the hospital corps. Two medical officers, 1 steward, and 6 privates remained on duty at Fort Robinson, undisturbed in their post status, and at the same time charged with distinct hospital service of the encampment.

My own estimates for the care of the sick were therefore based on the computation of an average strength of 2,500 men, of whom I thought that not more than 2 per cent. should require hospital treatment at any one time. I also estimated that for a short period, in a fairly healthy location and on well selected ground, with the elimination of weak material before a march, the average ineffective list from sickness should not number more than 3 per cent. of the command.

I was anxious to prepare for the organization of a division field hospital, each separate body of troops bringing with it a designated contribution of tentage and material, an autonomy of medical service that should be held steadily in view. The

line of procedure, however, having been previously marked, and transportation reduced to the lowest effective limit, I was unwilling to urge a revision of the scheme, and determined to use the post hospital at Fort Robinson with its personnel and equipment, a capacity of twenty-four beds, and sufficient grounds for the reception and treatment of the sick of the camp, at the same time holding in mind the necessity for supplementing its supplies in several particulars. Instructions to this end were accordingly given to the post surgeons interested, under date of August 5.

The troops designated arrived upon the day appointed, and the various details of general organization having been prescribed by General Field Orders No. 1, August 19, the further assignment of medical officers and men of the hospital corps was made August 21, General Field Orders No. 2.

It will be seen by a reference to this order that to each of the six regiments or battalions of infantry, and to the nine troops of cavalry and one light battery, constituting a separate command, were assigned one medical officer, one hospital steward, and three privates of the hospital corps.

In the absence of a division field hospital, the proper point for assembling and distribution, this arrangement of the hospital corps seemed the best practicable, the constant transfer of sick to the post hospital at Fort Robinson releasing the detachment for drill and practical work in the field.

The difficulty at once confronted in the matter of drill was the want of previous uniformity of procedure, and the lack of scope in the several methods taught. The provisional manual had governed at most of the posts in the department, and at only one, Fort Laramie, had the enlargement of Surgeon Smart, U. S. Army, as laid down in his hand-book, been used. I am quite sure that the manual of drill in this latter work was not generally regarded as positively substituted for that of the provisional manual. Capt. Louis Brechemin, assistant surgeon, U. S. Army, was selected to conduct the drills, which, August 21, were ordered daily; and upon ascertaining the need, this instruction was supplemented, August 21, by an order requiring the preliminary attendance of a class of medical officers, who, after a half hour of personal instruction, then attended the drill of the hospital corps. Each officer was in turn required to drill the whole detachment, and each man was finally able to give all the orders and procedure as laid down in the hand-book. Ambulances were paraded for inspection each day immediately before the drill hour.

This scheme was maintained, with the interruptions due to reconnoissances, until September 9, from which date to September 14, inclusive, the entire command was absent from the permanent camp upon a practice march of some 65 miles. The operations during this march, mainly the attack and defense of rough defiles, did not admit of any practical demonstration of hospital field-work, and drills were necessarily suspended. A medical officer was detailed each day in charge of the ambulances for proper admission of patients and general superintendence; the privates of the corps were required to march, and the hospital stewards were permitted to ride upon the driver's seat of the ambulances. The absence of mounts for the stewards and the privates designated in paragraph 1588, A. R., is a serious obstacle to efficient field service. Nothing can be demonstrated so long as the materials for demonstration are not furnished. The value of the work is belittled, and when an emergency comes the proper men are found untrained. In actual trial, in the operations here reported, medical officers acted as their own messengers and the embarrassment from delay was frequent and remarked:

As soon as it was thought that the members of the hospital corps were familiar with the principles and details of the drills, orders were issued to assemble the company bearers for the same exercises, a day being designated for those of each brigade. The drill of bearers was in lieu of the ordinary battalion or brigade movements ordered for the day, from which the bearers were excused, and this alternating arrangement was made in order to avoid depleting the whole command on any one occasion. In fact, the number of bearers to be obtained from the sixteen companies, the brigade organization, in addition to the hospital corps, was as large an untrained force as could be handled to advantage. It was soon demonstrated that nothing could be wisely attempted beyond the primary training of the manual, concluding with the loading and unloading of the litter. The subsequent manual for the ambulances was omitted.

The faults of the present bearer system are several—of selection, of attendance, and equipment. The best, most apt, and most intelligent men of a company are seldom selected; the company commander is not yet persuaded of the importance of the function. Attendance is desultory, and probably does not average over one-half of the bearers on the roster. For this absenteeism there are several reasons—details upon other duty, sickness, vacancies unfilled. It is the current operating idea that the bearer should be drilled and taught in addition to all his other military duties, and that the time so occupied should be in addition to all other military occupation, relieving him from nothing. Yet the intention of the regulation is clear, and the implication of paragraph 1575, A. R. plain, that deduction is to be made from the sum

of other duties to give time for this special instruction. Finally, as to equipment, the company bearers should have issued to them under paragraph 1584, A. R., the litter they are to handle in actual service in the field. The individual is not ready at changing tools, and as an instrument the Satterlee litter is obsolete and practice with it misleading.

I have thought it best to give here the main obstacles operating against the successful working of the law which intends to form of the company bearers a school of reserve from which the privates of the hospital corps may be drawn. The personnel is not select, the service is unattractive, and the training inadequate.

I had hoped that the scheme of instruction during the encampment would embrace some definite field operation of attack and defense admitting of a near simulation of medical service under fire, and the positions of the various stations of relief up to the field hospital. This opportunity did not occur, and advantage was accordingly taken of the varying lines of battle formed in division drill for the presentation of this service. A scheme was issued for each occasion, giving assignment for the various stations, and regulating the distances to be observed. These intervals were, from the limit of the ground, much less than would be observed in actual warfare. These object lessons were of value, and showed the medical officers and hospital corps to be alert and trained in the duties of first aid and transportation of the wounded, and I am confident of their ability to meet the conditions of the battle-field. A band was detailed on each occasion of this practice to personate the wounded. The company bearers were not used.

The camp of instruction was finally dissolved September 20, a preparatory order, General Field Orders No. 6, having been issued on the 16th, directing the various movements.

Medical officers were instructed as to the disposition of their sick on departure, and cautioned against unnecessary transfers to the hospital at Fort Robinson.

A discussion of some separate topics is here necessary. As briefly mentioned before, the site of the camp was well selected, a plain of gentle slope towards Soldier's Creek, sparsely grassed, the sandy soil readily absorbent of rain or unavoidable liquid waste. The atmosphere was generally very dry, there being but two light rain-falls, small fractions of an inch, during the encampment period. The range of temperature was, however, too great for health, the mean difference between maximum and minimum for twenty-one days being 32° , and the extreme range a drop from 97° to 33° , September 2, within eight hours. The consequence of this instability was mainly in the production of diarrhoea and in determining a number of cases of periodic and continued fevers, which, with more equable temperature, it is probable would not have occurred. The light, dry soil was readily disturbed and the occasional storms of dust were a serious inconvenience. The water supply was abundant, the barrels for storage being newly purchased for the purpose, well covered, and refilled daily. The quality of water early engaged my attention. It was the common and only supply of the post, except for irrigation, issuing from a large spring, pumped directly into wooden tanks for distribution through iron pipes. As delivered, however, from the mains, the odor and taste were offensive, conditions that had lasted for some weeks. The source of supply was inspected and found pure, the tanks then examined, and it was concluded that, for want of recent cleansing, the confervoid growth covering the sides and bottoms, finding lodgment within the pipes, with the entanglement of sediment, had probably caused the putrefaction noticed. At all events, a thorough cleaning of the tanks and flushing the mains under pressure from the pump cured the evil at once. An analysis of the water was made under direction by Assistant Surgeon J. R. Kean, the results of which established the wholesomeness of the water for drinking. It is hard, but free from any suspicion of pollution. A report of this analysis was forwarded to the Surgeon-General's Office October 3, 1889. Bread of uniformly good quality was furnished from the bakery at Fort Robinson; the meat was excellent, a fair supply of fresh vegetables obtainable, and the cooking satisfactory. The police of the camp was well regulated and excellent.

On the basis of a computed strength of 2,500 men, and an estimated hospital list of 2 per cent., the number of beds to be supplied would have been 50. The strength proved to be much lower, a mean of 2,255, so that it was thought that a supplement of 4 hospital tents of 4 beds each, in addition to the 24 beds in the hospital proper, a total of 40 beds, would suffice, expansion by tentage to any extent being possible if demanded. This estimate was justified, the maximum occupation, for a few days only, reaching 38, the mean being 26. The tents were pitched in pairs, in the grounds of the hospital, convenient for service, and floored. It was not necessary at any time to contribute the equipment brought by separate commands to the support of the hospital, a temporary detail from the corps detachment of the camp for attendance only being required. As simplifying the management and probably obtaining better clinical results, the employment of an organized post hospital was of clear advantage, but as a component of a camp of field instruction the field hospital should certainly be provided for in the future, and suitably equipped.

The constant mean ineffective of the whole command from sickness was 3.6 per cent. This was a higher rate than was anticipated, and was attributable mainly, in my judgment, to thermometric conditions. From the aggregate sick there were transferred to hospital 78 patients, with no discharge, and 1 death from peritonitis. Of these admissions 25 remained at the end of the encampment, September 20, generally in various stages of convalescence, and of this residuum 24 were forwarded by rail to their respective posts on or before October 11, leaving at that date but 1 case under detention and treatment. These figures are chiefly interesting and instructive as showing the probable number of sick to be cared for, and duration of treatment, in similar camps under fair conditions.

I have said that the admissions to hospital numbered 78. Of these 26 were cases of fever, and out of this number 10 were finally diagnosed as "typhoid" by the post surgeon at Fort Robinson, under whose charge they came. The reasons for this distinction he gives in his valuable and interesting report.

I intrusted this officer with an analysis of these cases, as to distribution and possible sources of infection, the results of which are presented in detail in his report and the accompanying tabular statements. It is impossible, of course, to trace each individual case of typhoid fever to some definite locality of infection, but that the trail in this case runs broadly through Fort Laramie is, in my opinion, clear. The long standing and grave disrepute of this post in the very matter under discussion is thoroughly known.

The periodic malarial fevers reported, twelve cases, were undoubtedly either the outcroppings of old infection or of recent exposures, such as at the Bellevue rifle range, a locality of recognized malarial danger. Instances of this undoubted origin were reported to me at the time. It will also be noticed that the troops from Fort Omaha contributed an undue proportion of periodic fevers. I am satisfied from personal observation of these cases of fever that the diagnosis of typhoid, although jealously guarded, has included several instances of adynamic continued fever. This differentiation, however, is of small significance contrasted with the importance of excluding this class of disease from military camps. The extension of these camps of instruction for the future is highly probable, and they should be protected in advance from the introduction of infectious disease. Certainly this medical scrutiny has primarily to be directed to the protection of separate commands en route to the point of concentration; to the selection of camp sites; the avoidance of ground frequently occupied, and the collections of laborers common in the extension of railroads; to special caution in resting near small and unsanitary villages, and in the case of such a halting place and intermediate point of supply as that of Fort Laramie, to the use, if possible, of new ground, and above all of water reasonably free from suspicion.

The condition of the ambulances was not satisfactory. For the most part they were serviceable as means of transportation, but incomplete or out of repair in one or more particulars. The absence of a litter in one, unadjustable seats in another, the want of curtain fastenings in a third, contributed to an impression of a want of personal supervision on the part of the post surgeons, or of need of insistence on their part in securing the necessary repairs. The ambulance from Fort Douglas was one of obsolete pattern, fixed seats, and incapable of receiving a litter; the other ambulance at that post was reported as unserviceable. The equipment of the hospital corps was likewise incomplete. The issue of knives of approved pattern had not been made to some posts, but in instances where the issue had been made the knives had not been brought into the field. The reasons for this omission were not satisfactory. The use of the antiseptic packet was not uniform. With these exceptions the personal equipment of the members of the corps was satisfactory, and their appearance markedly good. But few of the company bearers were at the outset furnished with their insignia. Brassards for most were procured in season, but the initial neglect and the mistakes as to their proper position on the cuff of the left sleeve showed them to be unfamiliar, and their importance not understood. I think that the bearer, even in garrison, should wear some mark of distinction, and that paragraph 1575, Army Regulations, should be so amended.

I have previously spoken of the partial nature of the drill of the hospital corps as mainly the result of a want of understanding of the authority for the more advanced method. In but one of the detachments, that of Fort Laramie, had the improved manual (Smart's Handbook) been used, and it was for that reason and on account of his previous interest and activity in the matter, that I intrusted to Capt. Louis Brechemin the drill of the corps during the encampment. My own attendance at these drills was uniform and their supervision and the direction of the instruction as a scheme was retained by me. Within the limit of time imposed, and with the preliminary training of medical officers and men found necessary, it was thought unwise to attempt more than a thorough understanding of one system, and for this reason the manual of Surgeon Smart was adhered to with the modifications and expansion to be noted.

The medical officers were assembled at 7.30 a. m., and instructed until 8 a. m., at which hour the ambulances were drawn up for inspection, and the hospital corps reported for an hour's drill. Four ambulances were generally employed for drill, a squad being assigned to each, one composed of hospital stewards, and a medical officer in charge of every squad. After a certain time devoted to this separate instruction the medical officers were in turn required to drill the whole detachment. Supernumeraries were used as wounded. The concerted drill of the detachment was found of the greatest advantage, promoting accuracy of movement, and a finish and precision of detail, without the sacrifice of any observance necessary in the handling of the disabled.

The method employed of lifting and lowering the patient with four bearers was that of Hoff (pages 20 and 21 of his manual), a method so much to be preferred over what may be termed the "erect" method of the prescribed manual that the latter should only be taught as an alternative.

In addition to the authorized plan of preparing the litter the method of Woodhull (page 6 of his manual) was also taught. Personally I prefer this latter procedure, as the suspension of the litter longitudinally brings the legs and stretch-irons into sight, and permits the bearers adjusting them to see what they are doing. It is suggested that a finer finish to these stretch-irons will probably prevent much of the difficulty in locking and unlocking, a trouble of frequent occurrence and a cause of delay in preparing the litter.

An orderly and systematic preparation of the ambulances for seats or litters was found of importance, and that of Woodhull (pages 27, 28, and 29 of his manual) was used and found admirably suited to his purpose. In this preparation of the ambulances the disposal of the rollers deserves some attention. If left in the box they are out of sight, and apt to be covered with baggage or material hastily stored there. If kept in position they are subject to injury and in the way of seated patients. If folded in the canvas of the litters, both litters must be unpacked when only one may be needed. It would seem convenient, therefore, to have the rollers strapped or otherwise secured to the boxing at the head of the seat, the casing to be slightly recessed or retired for this purpose. I have dwelt upon this assembling of the ambulances because in practice it is not sufficient to rely on the intelligence of even trained men to do so seemingly simple a thing in a smooth manner. The presence of No. 1 in the ambulance, assisted by others in making the needful arrangements, the language of the handbook, results in interference of movement, unless the succession of that assistance is defined.

These modifications enumerated were essentially the important deviations from the authorized provisional method of drill, and may be credited with a tendency to promote a developed completeness of method.

Some imperfections of equipment should be stated before advancing to any general recommendations as to the drill itself. The Otis litter is structurally weak in two places; the canvas, which is frequently torn at the free edges next to the poles, should be re-enforced at the four angles and at the points where the stretch-irons are pivoted to the poles. The points readily break through the inner shell of wood at these places, and there should either be a thin metal plate to strengthen them, or the plan of pivoting should be changed. It was feared that the handles of these litters would break, but no instance of this kind occurred, although the litters were freely and constantly used. The handles were, however, occasionally fixed in position, closed from swelling, a difficulty which can probably be avoided by occasional oiling. Complaints were made of the sagging of the canvas, a fault which permits the patient to touch the rollers in loading and to rest on them when in position. It is only possible to remedy this by grooving the bars a little more deeply, and changing the canvas when unduly stretched from use. The rods and fulcrum bars of the ambulance brake, in travel over rough roads, allow the shoes to spring so as to bear upon one edge of the wheel only. This can be corrected by welding a stretcher bar to connect the two rods to which the shoes are attached.

In any discussion of a manual of drill for men whose office it is to care for the disabled, it may be assumed at once that, as these men will have to act for the most part independently and not in masses, the instruction of the litter unit, whatever it may be called, is of the first importance. At the same time these units must be brought together for common practice or for inspection, and it is of the next importance to provide for the management of this aggregation. The material divisions of this drill are therefore the school of the squad and the school of the detachment. It is necessary of course as a preliminary to fix the nomenclature of the litter unit, and the finding here will determine the terms to be applied to the larger divisions. I prefer to call a set of fours a squad, not because it is specially significant as a name, but for the reason that when you advance to the various multiples of four, if you reject "squad" there is difficulty in appropriate designation. From the squad to a section, two or four squads as may be preferred, and from the section to the platoon of two sections, the progress is easy. Detachment would then cover the whole.

I have already noted the deviations from the present authorized manual of the litter, whose excellence was thought to be marked, and generally speaking this subject is so well formulated that criticism must be directed principally to the superior finish of details. Little remains to be done in the mere formulary for handling the wounded, and the movements outside of this should be the fewest and simplest possible, consistent with the proper carriage of the litter, closed or open, and other than these to such as naturally contribute to the school of the detachment. Here, too, the reduction should be to the simplest maneuvers that will enable the medical officer in command to get the detachment on and off the ground in military order, to inspect it thoroughly, and to conduct a few concerted movements which the subdivisions of the detachment into sections and platoons render imperative. Handling the bearers of a brigade of four regiments, for instance, 160 men, without some exact formula would be farcical, and to attempt any mere intricacy of movement with a body of sanitary soldiers is equally out of place. Finally, I am of the opinion that whatever drill may be prescribed it should be set down in exact terms, so that reference to books of tactics of the various arms may not be necessary. This may argue ignorance on the part of the medical officer, but he will know clearly what he has to do and how it is to be done.

I wish to express my satisfaction with the medical officers on duty at the summer camp of instruction, and an equal satisfaction with the personnel, bearing, and discipline of the hospital corps. To Captain Brechemin specially I wish to convey through the medium of this report the recognition of his intelligent energy and success in the conduct of the drills, a duty assigned to him.

The month of field instruction was, in my opinion, a valuable stimulus to all of us. As a means of assembling the unfamiliar parts of the corps, of eliminating personal errors, and obtaining a uniform standard of training and discipline, the camp of practice is of the utmost value, and entitled to every encouragement.

[Extracts from the report of Lieut. Col. CHAS. H. ALDEN, Medical Director, Department of Dakota.]

It should be noted that owing to the great distances between the posts and the necessity for the constant presence of the garrisons thereat, no considerable number of companies could be concentrated in this as in some other departments, and most of the troops were exercised only in practice marches, and camping in the vicinity of their respective posts. Consequently the opportunities for bringing together the detachments of the hospital corps for combined instruction and drill were very limited.

The two main camps were Camp Alexander Chambers on the Little Missouri, Dakota, formed of troops from Forts Custer, Keogh, and Meade, having 3 medical officers, 1 steward, 2 acting stewards, and 9 privates of the hospital corps, and Camp on Lodge Pole Creek, Montana Territory, of troops from Forts Assiniboine and Buford, having 2 medical officers, 1 steward, and 7 privates. The reports of the chief surgeons of these camps, Maj. J. M. Brown and Capt. Valery Havard, are forwarded herewith.

It was, much to my regret, impracticable for me to visit these camps of instruction, and the views and recommendations now submitted in regard to the drill and other matters connected with the hospital corps are based on observations made at my recent inspection of posts.

I found that most of the detachments of the hospital corps had been drilled in accordance with the provisional manual, and some in Surgeon Smart's hand-book. At Forts Assiniboine and Buford, Havard's manual was chiefly used, the detachments having been drilled at Lodge Pole Creek by Captain Havard in his system.

In my opinion the manual given in Dr. Smart's hand-book, being the provisional manual, with some modifications, is an excellent one, and requires but little change.

An error in both Heizmann's and Smart's manuals is the mode of giving some of the commands. The command of execution should, in distinction from that of preparation, be a single word that can be sharply spoken, thus, "prepare to lift litter" should be followed not by "lift litter," but simply by the word "lift," in order that the bearers may execute the movement together. The same rules should govern in the commands for lowering the litter and for lifting and lowering the patient.

The omission in Heizmann's manual of orders for changes of direction of the litter in order to ascend an elevation when the patient's lower limbs are not fractured, or to descend an elevation when such a fracture is present, are supplied in Smart's hand-book.

The great merit of Surgeons Heizmann's and Smart's manuals is their simplicity, a quality of the first importance, and one in which the manuals of Woodhull, Havard, and Hoff are defective.

It is unnecessary and undesirable, in my opinion, to have any elaborate scheme of inspection, for marching maneuvers with closed stretchers, or for evolutions of a number of squads together. Practice in such way may produce an effect of military smartness, but is liable to divert attention from the main object of the drill, which

is the gentle and secure handling of the patient, and his safe transportation by bearers or transfer to the ambulance. At one of the posts I inspected this fall the squads, some 10 in number, with their stretchers made a well dressed line, wheeled and marched with precision, forming a very attractive parade, yet I found the men of the squads quite unskillful in handling the patient. At several posts I found that the tendency was to handle the patient and execute all movements in a somewhat hasty, jerky manner, too much like that of the manual of arms. Drill is of great value as a means of discipline and to secure concerted action, but is of course only a means to an end—the proper care of the patient.

I entirely concur in the opinion of Surgeon Brown that the ambulance driver should be supplied by the quartermaster's department, and not by the hospital corps, and for the following reasons: To take one private of the hospital corps for driver diminishes the detachment at a small post below the working force, the driver can not be drilled with the stretcher as the others are, and as the team of mules furnished by the quartermaster for the ambulance is apt to be a different one every time, the driver is not acquainted with the animals and can not manage them to the best advantage.

I find that the ambulance harness is entirely disused at most posts, and unavoidably so. It is impossible for the quartermaster to keep one team of mules specially for the ambulance. The small number of teams at his disposal does not allow it, and if one team could be so reserved it would not be sufficiently exercised to keep it in good working order. Consequently the team supplied for the ambulance not being always the same, the mules vary in size, and it is more convenient that the set of harness belonging to and already fitted to the team should be sent with it. To fit the hospital ambulance harness each time requires the movement of many buckles and straps, and consumes much time that can not in an emergency be afforded and is unnecessary.

The sheltering of the ambulance is another difficulty under the present system of accountability. Ambulance sheds can not be built near the hospital from the appropriation for the construction of hospitals, and their erection from the fund for barracks and quarters is not regarded with favor, there being already protection for vehicles at the quartermaster's stables, and this fund being always unequal to the demands made upon it.

I see no good reason why the ambulance and harness should not be accounted for and cared for by the quartermaster as the team is, and the driver furnished by him.

The ambulance, harness, and mules, and their regular driver being in one place, can be more quickly turned out in an emergency than at present. The improper use of the ambulance can be guarded against by strict enforcement of existing orders, as well under the plan proposed as at present. I strongly recommend as for the best interest of the service that General Orders, No. 56, of 1887, be modified in accordance with the foregoing suggestions.

There are three different forms of stretcher in use at present, one specially for use with the ambulance, the Halstead for the hospital corps, and the Satterlee for the company bearers. One form should be adopted both for the ambulance and hand carriage, so as to avoid transfer of the patient from one to the other. The present ambulance stretcher will not answer as it is too liable to be damaged, and when used by bearers the telescopic handles interfere with the braces. A stretcher with solid handles, collapsible, and with feet either short and rigid, or, if movable, that can be made very firm, is what is wanted. The remarks of Captain Havard on page 4 of his manual on this subject are worthy of attention. There is not much in a name, but I think that the word "stretcher" is, as suggested by this officer, more correct and better than "litter."

I find that rollers in the ambulance bed are constantly getting out of place and out of working order, and that the loops or straps for keeping the stretcher in place have been generally lost. Some better arrangements can I think be devised. The body of the ambulance is I think too heavy for the springs, as I have observed that the springs of many are weakened or broken by use during the summer movements.

Maj. Calvin De Witt, post surgeon Fort Missoula, showed me some additions he had made to his ambulance, particularly drawers for dressings under the foot-board, and a plan for carrying the pannier under the body. I have requested him to prepare a description thereof with illustrations, which will be forwarded as soon as received.

I found at some posts that attendance of company bearers at drill was much neglected. This was in some cases the fault of the post surgeon in not reporting absentees, and in some indifference on the part of post commanders. At one post and possibly at another no company bearers had been detailed. I would suggest that it would be well to have space provided on the monthly return of the hospital corps for a report as to the days and length of drills held, the number of company bearers present at each, and if absentees had been reported. Then, in case of habitual neglect, attention could be invited to it by the Surgeon-General.

I would also suggest that under equipment on the same return the number of swords, knives, belts, canteens, haversacks, and other articles of necessary personal

equipment be given. I find a desire in some cases to avoid obtaining and becoming accountable for articles for field use, reliance being placed on loans from the post ordnance officer or company commanders in case of need.

[Extracts from the report of Lieut. Col. JOSEPH R. SMITH, Medical Director, Department of Arizona.]

* * * It appears that the troops were in camp thirty days, with a mean daily strength of 715, among whom, during the month, the names of 147 appear on the consolidated report.

The surgeon-in chief herein specially mentions the occurrence of numerous cases of diarrhœa and intestinal catarrh, rheumatism and bronchial catarrh.

Examination of the consolidated report shows 37 cases of diarrhœa and 7 of intestinal catarrh, of which latter 5 are reported October 13, the last day of the encampment. This fact seems to me to show very possibly a change on that date in the fashion of nomenclature. Twenty-three cases are recorded of rheumatic trouble, 3 cases are recorded as bronchial catarrh, and 11 of bronchitis; possibly the surgeon used these two terms as synonyms. The above-named constituted about four-sevenths of all cases reported.

It was my desire to establish a field hospital at the camp, but the department commander having declined to furnish hospital tents, no such hospital was established; directions were given to treat in the post hospital at Fort Grant all soldiers needing hospital treatment.

The suggestions of the surgeon-in-chief in regard to contributions to the support of a hospital corps mess from the posts to which belonged the members of the hospital corps temporarily detailed in the camp are worthy of adoption.

The report concerning litter or bearer and ambulance drill merits careful study.

At my official visit to the camp, September 24, 25, and 26, I watched these drills with interest and attention. Seventeen sets of four were turned out to them at once, under Assistant Surgeons Arthur, W. B. Banister, and Wales, whose vigorous work in this direction merits praise.

The desire to drill numerous squads, instead of individual squads or individuals, was manifest; and so I have generally found it at military posts of such size that a number of company bearers could be assembled for drill with the hospital corps. Such drill of hospital corps men and company bearers in companies, or of a number of squads in movements almost entirely military, is, in my judgment, of the least value, and but little time can be profitably spent therein. Very elementary instruction of this kind will suffice.

On the field of battle, individual action or action of the squad as a unit is the most important, and it makes little difference whether the battle-field is reached by the bearers in single squads or in column of squads.

The report says "everything should be done in this drill to establish the independence of each squad." This principle is correct, but the fact is that each squad is originally independent, and the principal effect of the drill system here criticised is to establish and maintain interdependence and not independence.

I am in accord with the surgeon-in-chief as to omitting the command "Prepare to lift litter." I add that in my tours of inspection in the department of Dakota and in this department I have particularly instructed medical officers to study to omit not only superfluous orders, but the superfluous words in necessary orders.

The criticism in the report concerning Smart's hand-book has been made to me elsewhere by several medical officers, and has some justice. This book, though, has no pretense of being a thorough scientific exposition of its subject-matter, and I am of the opinion that it would be easier to compile a hand-book which is inferior than one which is superior.

In any change of the drill (which change should, I think, be made) the effort should be towards the most limited orders possible (both in numbers and words) to effect an object.

In cases more than one mode of effecting an object should be described, to be used at the discretion of No. 1. To illustrate what I mean, paragraphs 58 and 62 in the hand-book effect the same object in different ways. In my inspection of posts, at the drill, I am in the habit of calling No. 1 and informing him that a certain subject, lying near by, has such or such an injury, and that he must act and direct his squad just as if the real case were before him. Some know only the mode of paragraph 58, some only of paragraph 62, and some both, using either as needed.

Attention is invited to what is said in the report concerning the comfort of the wounded when carried by bearers, first, who keep step; second, who step with different feet together; third, who step irregularly. In this connection attention is invited to what has heretofore been written by me to the Surgeon-General on the same subject. During my recent inspection tour in this department experiments were made on this subject at every post visited. The great majority of those carried in the litter declared the movement was easiest when the bearers kept step; and it was noticeable

that those who declared the broken step preferable were those who had been most thoroughly taught by books and *viva voce* that such was the case. In Washington, in 1887, I once asked Surgeon Heizmann if he had ever experimented on the subject, and he replied that he was without experience on the subject. An abundance of experiments should be conducted in the manner described in Appendix II, and the result determined by such experience.

Assistant Surgeon Arthur's strictures on the ambulance are, some of them, well founded, and all of them worthy of attention. My own experience does not confirm all his views. It seems to me certain that no ambulance capable of going through a rough campaign can be made as easy in its motions as a light, luxuriously upholstered carriage. What we must strive after and be contented with is that wagon which combines the most comfort to the occupant with durability. I may add that while on my inspection of Fort Grant, the wife of the commanding officer said to me, "Don't you believe all that people say against that ambulance. A few years ago, while I was so sick that my death was expected, my husband's regiment was ordered to make a move, and, more dead than alive, I was placed in a Red Cross ambulance and carried therein almost 200 miles, and I assure you that I was transported with very great comfort and ease." I myself have ridden many miles in one of them with all the comfort that could be expected.

I have previously reported to you that the members of the hospital corps could not be mounted, the reason given being the small number of horses in this department. This state of things could only have been remedied by procuring more horses, or by assigning to the hospital corps their pro rata of those on hand, one of which modes I recommend be followed in future camps.

Concerning the uniform of the hospital corps, my experience since serving on the board which selected it, has caused me to doubt the wisdom of issuing "dark-blue pants."

Any further views and recommendations in connection with the accompanying report I deem it not now necessary to make.

[Report of Capt. LOUIS BRECHEMIN on his service with the Illinois National Guard.]

In compliance with Special Orders No. 159, Headquarters of the Army, Adjutant-General's Office, July 12, 18-9, I have the honor to report that I arrived at the encampment of the Illinois National Guard, at Springfield, Ill., July 23, and remained there on duty, instructing the medical officers and members of the hospital corps in their respective duties until August 15. During this period I met the Third, Fourth, Sixth, and Eighth regiments of infantry.

The camp grounds consist of 160 acres, about $1\frac{1}{2}$ miles northwest from the state-house, are well located, and possess every advantage which could possibly be desired. The grounds have a good natural drainage, fine woods for shade, and have been fitted up with a rifle range from 100 to 1,000 yards; a batatorium, paved with stone and furnished with water from the city water-works; bath-house for officers; sinks, connected with a sewer of ample size, frequently flushed with water; electric lights, etc. All offal is carried beyond the camp limits to a running stream. The tents are furnished with portable floors. The water was excellent in quality and ample in quantity; it was distributed by hydrants connected with the city water-works. The town of Springfield has the gallery system of water-supply, a system excluding danger of contamination from surface water.

The service uniform of the men consists of flannel blouse, lined, trousers, forage-cap, summer helmet and overcoat, furnished by contract, and made on the same specifications as the uniform of our non-commissioned officers. In this connection I would recommend that the flannel shirt, on account of its great sanitary value, be made a part of the uniform for field service. A large number of cases of illness would be prevented by the adoption of this suggestion.

The ration furnished is a generous one. In addition to the regular army ration the State of Illinois issues lard, fresh fish, eggs, butter, milk, baking powder, prunes, extracts of lemon and vanilla, onions, fresh beans, fresh tomatoes, cabbage, canned corn, tomatoes, and peaches. The average cost of the ration is about 33 cents.

One of the first defects attracting my attention was the ignorance manifested by company officers of their duties in relation to the medical department. So far as I could learn no instruction was given their men as to the meaning and intent of surgeon's call. In many cases men were excused by company commanders, on account of sickness, without being sent to the surgeon, and reported to the post adjutant as sick on the company morning reports. In consequence, whenever I compared the adjutant's consolidated report with the surgeon's morning report I found almost invariably that the number of sick reported as excused was in excess of the number reported as excused by the attending surgeon. First sergeants were not instructed, as a rule, to conduct the sick of their companies to the hospital at surgeon's call. The attentive study of paragraph 1610, Army Regulations, is recommended to the com-

pany officers of the Illinois National Guard. A slip of paper, or better, a small memorandum book, containing the names of the men to be presented to the surgeon for examination, and signed by the company commander, can be substituted for the company sick-report book required by this paragraph of Regulations. On this the surgeon, after examination, can indicate "opposite the names, the men who are to be admitted to hospital and those who are to be taken to quarters; what duties the latter are capable of, together with any information in regard to the sick which he may have to communicate to the commander."

Of the twelve medical officers and hospital stewards attached to the regiments I met, over one-half the number did not report for duty at all, or were present only a part of the week during which their regiment was in camp. One regiment, the Sixth, arrived at camp without any medical officer, hospital steward, or hospital corps. As at present conducted, the medical staff of a regiment is appointed by its colonel. This method is a faulty one for several reasons, the strongest being that the opinion of a non-professional man as to the qualification of a medical man is very liable to error. To remedy this a mode of selection similar to that employed in the regular service should be adopted. An examining board composed of the surgeon-general and brigade surgeons should be appointed, and appointments made of candidates recommended by them.

Soon after each regiment reported at the camp a detail of one man from each company for the position of private of the hospital corps was made. An hour every morning was given to litter and ambulance drills, instruction in first aid to wounded, improvised methods of carrying wounded men, etc. The squads, with litter, were detailed in turn to attend the different regimental formations, drills, guard-mounting, and dress-parade. Invariably the privates of the hospital corps showed zeal and intelligence in learning the drill and attended to their other duties with promptness and faithfulness. The practical value of the drill was appreciated by officers and men, and illustrations of its usefulness were of frequent occurrence. Cases of light heat exhaustion, aggravated by the strain of standing attention at guard-mounting or dress-parade, were not uncommon. As soon as a man fell out of ranks the litter squad on duty carried him from the field to the hospital, where he received the attention needed in his case. This first aid was given on the field without any interference with the military ceremony then in progress, and by its promptness in the relief of suffering elicited the favorable comment of all. The quickness and aptness of the squads gave me great satisfaction, lightened my labors materially, and made each drill a pleasure. This satisfaction was further increased when I found that, after one or two lessons, a squad could be detailed with confidence for practical service. Under the old methods, if a man in ranks fell to the ground by reason of sickness he was often obliged to lie there for some time for want of a proper system of attention in such cases.

The litters provided by the State were both faulty and flimsy in construction, and should be replaced by the Halstead litter, as used in the regular service. As the State does not own any ambulance, the want of one was badly felt for the proper execution of ambulance drill. A regulation hospital ambulance furnished with the Otis patent litters and a medicine pannier filled up according to the standard Supply Table of the U. S. Medical Department should be obtained for the use of future camps.

To further increase efficiency, I recommend that a rigid inspection should be made by the brigade surgeons of the medical department of each regiment belonging to his brigade during its encampment. A full and detailed report of this inspection should be submitted to the Surgeon-General, so that any abuses, inefficiency, or neglect of duty therein reported may be acted on by him.

A knowledge of the inadequacy of civilian methods for the needs of the military surgeon should oblige the medical officer of the National Guard to a certain amount of study to more fully equip him for his duties. The following articles in the "Reference Handbook of the Medical Sciences;" Greenleaf's "Examination of Recruits," volume 2; Smith's "Duties of Field Surgeons," volume 3; Woodhull's "Military Hygiene," volume 3, with Parke's "Hygiene" and Smart's "Handbook for the Hospital Corps," are recommended as of value for this purpose. Copies of the last work should be furnished the medical department of each regiment.

My thanks are due to Adjutant-General Vance, Surgeon-General Matthews, Colonels Ewert, Lawler, Bennitt, Clendenin, Smith, and other officers, for their kind courtesies and attention.

CIVILIANS ATTACHED TO OR WITH THE ARMY.

The civilian attachés of the Army comprise the families of officers and enlisted men, servants, employés of the various departments, together with their families, and, in short, all persons not included in the

personnel of the Army who are allowed to reside at military stations or accompany military commands.

As shown by the consolidated reports of the Departments, with a mean strength of 25,008 officers and enlisted men, there were constantly present during the year an average of 14,333 civilians, of whom 2,884 were adult males, 5,394 adult females, and 6,055 children.

The admissions to sick report for the year numbered—for the adult males, 2,331, and the deaths 20; for the adult females 7,460, deaths 41; for the children 7,739, deaths 122, or an aggregate of 7,739 admissions and 183 deaths.

The admission-rate per 1,000 of mean strength—808 for adult males, 1,385 for adult females, and 1,278 for children, or an average of 1,223; the death-rate—7 for adult males, 8 for adult females, and 20 for children, an average of 13. For the previous year the admission-rate for adult males was 550, adult females 1,239, children 929, all civilians 980; and the death-rate, adult males 11, adult females 7, children 16, all civilians 12.

The deaths and their causes are shown in the following table:

Diseases.	Adult males.	Adult females.	Children.	Total.
Specific febrile and acute infectious	4	2	43	49
Euthetic			1	1
Constitutional	3	4	8	15
Uterine (cancer)		1		1
Developmental	1	5	20	26
Nervous	2	1	16	19
Respiratory	5	17	16	38
Circulatory	1	3	2	6
Digestive		1	12	13
Peritonitis		1		1
Integumentary			1	1
Parturition and results		2		2
Total from disease	16	37	119	172
Total from injuries, etc	4	4	3	11
Total from all causes	20	41	122	183

MARRIAGES AND BIRTHS.

On the consolidated reports there were noted during the year 46 marriages, of which 11 were of officers, 31 of enlisted men, and 4 of civilian attachés. There were recorded also 499 births—male, 261; female, 238. Eighty-seven were children of officers, 349 of enlisted men, and 53 of civilian employés. Besides these, 31 births were reported among the Indian prisoners at Mount Vernon Barracks—24 females and 7 males.

THE SANITARY CONDITION OF THE ARMY.

QUARTERS.

The sanitary reports of medical officers represent the quarters at a number of the posts as in bad condition, built originally of poor materials and without any reference to ventilation or other sanitary requirements, and now, after ten, twenty, or more years of service, wholly unfit for occupation. Some of these, as Fort Sisseton, Dak.; Fort McDermit, Nev.; Fort Laramie, Wyo.; Fort Lyon, Colo., and Forts Concho and Hays, Tex., have been already abandoned, and the disuse

of others has been ordered, including Fort McGinnis, Mont.; Fort Bridger, Wyo.; Fort Sidney, Nebr.; Fort Crawford, Colo.; Little Rock Barracks, Ark., and Forts McDowell, Thomas, and Verde, Ariz.

The barrack buildings of the Army, as a rule, are in good sanitary condition—comfortable, clean, and fairly well ventilated. The exceptions belong to the class mentioned above, and will, no doubt, in the progress of time, be condemned and abandoned. At Fort Brown, for instance, the wooden buildings are decayed and the foundation timbers have sunk so that the plaster breaks and falls from the walls. At Fort Grant the walls of the barracks, with the exception of one set, are rickety, the floors in bad repair, the roofs leaky, doors and windows warped, and ventilation insufficient. At Jefferson Barracks the quarters do not in any respect meet the requirements of modern sanitation, notwithstanding continued efforts to improve them and keep them in repair. They are only 20 feet wide, and the two rows of bunks occupy nearly all the floor-space. The interior wood-work is decaying, and causes the rooms to have a musty and unwholesome odor. At Camp Peña Colorado the quarters are in miserable condition, the ceilings low, the floors in close proximity to the ground and several inches below its level. At Fort Omaha the barracks are not only old and dilapidated, but so crowded that everything in the form of a shelter has to be used as quarters. Six small cottages, built for the commissioned staff, are used by officers' families. The quarters occupied by the married soldiers are reported by the medical officer of the post as a disgrace to civilization. Overcrowding is not infrequent in the quarters of married men at military posts. It had its largest expression during the past year at West Point, N. Y., where two deaths occurred from cerebro-spinal meningitis and four from diphtheria, and where scarlet fever and measles gave the medical officers full occupation in treating the individual cases and endeavoring to limit the spread of these infectious diseases. To overcrowding and deficient ventilation at Willets Point, N. Y., was attributed the large number of admissions, which placed that post third on the list of insalubrious stations. At Fort Wingate, N. Mex., also, the dormitories were reported as overcrowded.

The dark, damp, unventilated, and moldy casemates of Fort Hamilton continue to be occupied as quarters, and similar insanitary conditions prevail on Alcatraz Island, with consumption as a natural product of the conditions.

At many posts, as at Forts Custer and Clark, no special provision is made for ventilation. When such provision is made fresh air is usually brought by boxes under the floor, opening near the stove, and the exits are either in the ceiling leading to outlets in the ridge, or in the walls near the ceiling and floor, opening by registers into the chimney flue. At Fort Apache exit apertures in the ceiling communicate with the space closed over by the roof without any outlet on the ridge; in this instance estimates were made on the recommendation of the post surgeon for fresh air-ducts and ridge-outflows. Even in the case of the new barracks at Fort Logan complaint has been entered that the ventilation is insufficient to prevent a perceptible fouling of the air shortly after the men retire for the night. Here a hot-air inflow and two exits are provided, all opening on the floor, but there is not a satisfactory diffusion of the incoming air.

The floors of the barrack buildings at a few of the posts are too close to the ground, and the space underneath is unprovided with means for its ventilation. This is the case at Forts Marcy and Davis. Fort Gib-

son has gratings in the wall, but insufficient in size to effect their purpose. At Fort Assiniboine the occurrence of typhoid fever in two buildings which had unventilated spaces under the floors suggests the importance of attending to this point in the sanitation of barrack buildings and quarters, particularly when it is considered that instances of the occurrence of this fever, depending for its causation apparently on just this condition, are by no means rare. At Fort Sill, which takes rank as second in the order of prevalence of malarial diseases, the post medical officer recommended the construction of new quarters, and the medical director, referring to the low-lying tendency of the malarial poison, and the notable protection given by sleeping on the upper floors of a building, added that the health of the men at this post would be materially improved by the construction of two-story barracks having the first ceiling high pitched.

Of all the buildings at our military posts the guard-houses are those which call forth the largest number of complaints on account of their insanitary condition, the insufficiency of their accommodations, their want of ventilation, etc. The post surgeon at Fort Brown recommends the abandonment of the guard-house at that post as being unfit for human habitation. It is represented as the most unhealthy building at that unhealthy station, a veritable fever-nest, situated on marshy ground and cut off from the winds by a high outer wall, the cells dark, damp and slimy, and unreachd by a ray of sunlight. At San Carlos also the guard-house is considered unfit for habitation. It is used for the confinement, in common, of soldiers and Indians. The floors and walls are damp in wet weather, filthy, and infested with vermin. At Forts Robinson and D. A. Russell, Marcy and Du Chesne, the guard-houses, although carefully policed, are always in bad sanitary condition on account of the foul odors developed by overcrowding. Irrespective of their defective ventilation they are too small for the size of the garrison; so also at Forts Apache, Bliss and Meade, and Jefferson Barracks. At the first-named the post surgeon reported the guard-house as being wholly unventilated and providing only 2,700 cubic feet of air-space for its 14 occupants, or 193 feet per man; but later in the year a grated opening thirty inches square in one of the walls materially improved its condition. At Fort Bliss, on account of defective ventilation, the whole interior is impregnated with foul odors from the buckets that are used at night as urinals. The guard-house of Fort Meade is poorly built, dilapidated, too small, and insufficiently ventilated. At Jefferson Barracks another prison-room is called for to relieve overcrowding and admit of the separation of deserters and old offenders from the recruits confined for minor offenses.

At Fort Leavenworth a careful inspection of the plumbing of the various barracks and quarters was made by Capt. W. O. Owens, jr., under the direction of Major Woodhull, which resulted in the detection and correction of several faults. A soil-pipe ventilator opening into a kitchen flue, the junction of untrapped bath-tub wastes with the lower part of water-closet traps, water-closets joined to soil-pipes by putty merely, and in many cases such needless changes of direction as to materially interfere with the flow of wastes and ventilation of soil-pipes.

WEST POINT, N. Y.—*Capt. William L. Kneedler*: "For years sanitary reports from this hospital have directed attention to the crowded and therefore unsanitary condition of quarters occupied by married enlisted men and their families. During the present month two deaths from cerebro-spinal fever occurred in a house in Rugertown. In this house, a 2-story frame building, containing 8 rooms 14 x 12½ and 4 hall rooms 5 x 7, 4 families live. The families consist of man, wife, and 8, 5, 2, and 5 children, respectively; in all, 28 persons, cooking, living, and sleeping in quarters

insufficient for half that number. It is believed that the disease and deaths above reported are attributable to the crowded condition of this set of quarters. Other sets of quarters are equally crowded and even more unhealthy. During the past year 12 small sets of quarters for enlisted men have been built upon this reservation. Nine families, and others, in all 54 persons, have been allowed to move on the reservation, so that the crowded quarters, about which so many reports have been made, remain about as crowded as before, and thus the health of every one upon the reservation is endangered. Against the policy of crowding persons upon this reservation medical officers, who are constantly in attendance upon the families of enlisted men, and who alone understand the urgency of the case, have repeatedly and emphatically protested."

The post quartermaster: "As to the crowded condition of the quarters, I will say that that condition is true. Efforts have been made for two years to obtain an appropriation for additional quarters, but without success."

Capt. William L. Kneedler, October: "Changes have recently been made that greatly improved the quarters occupied by some of the married enlisted men. The present population of the married men's quarters is 138. Eight sinks are used by these persons. The vaults are insufficient in depth, and after heavy rains are often half full of water. These sinks are inconvenient in their location, and so insufficient and disagreeable in their accommodation that, even in the day-time, and in pleasant weather, their use would be prompted only by an urgent call. * * * Earth-closets in the rear of each line of quarters would be safe and inexpensive. The principal objection to them is the need of constant attention. A system of water-closets connected with the main sewers and flushed by connection with the water-pipes would probably be entirely satisfactory."

The post quartermaster: "Water-closets * * * will be erected as soon as funds for the approaching fiscal year become available."

Captain Kneedler: "April 30 a report was made that for 5 months 138 men, women, and children had been compelled to use 8 small, dilapidated, inconveniently situated privy-houses. This evil has been remedied. On March 22 a case of measles appeared in that part of the garrison occupied by enlisted men. Within a few days several other cases broke out. During the month 37 cases occurred. All practicable precautions were taken to prevent a spread of the disease to the cadets. So far these measures have been successful. The cases have been confined to the families of the enlisted men. All are now convalescent. November: On the 7th a case of diphtheria developed in the family of Sergeant Emerick, Company E, Battalion of Engineers. This family consisted of man, wife, and six children. The quarters consisted of three rooms, in one of which all the family slept. In the same building two other married enlisted men lived. The cadet laundry and the public bath-house were each within a few yards. The Emerick family were moved into tents pitched upon the grounds of the soldiers' hospital. All of the six children were attacked by diphtheria. The disease was of malignant type, and four succumbed. A rigid quarantine was enforced, and there was no spread of the disease. October: At present eight cases of scarlet fever, all children of soldiers, are under treatment. Four of these cases are upon the reservation and four at Highland Falls. A rigid quarantine is enforced. November: There have been several cases of scarlet fever in the families of the enlisted men in addition to those reported last month. December: Several cases of scarlet fever."

WILLETS POINT, N. Y.—*Capt. E. C. Carter*: "If, in addition to an overcrowded condition, there are no adequate means by which the foul air may be withdrawn and fresh air, properly warmed and not in draughts, be introduced, the danger is graver. If these further conditions are added, viz, that the sleeping-rooms are heated by stoves, which can not be gas-tight, * * * and the walls of the rooms so thin that sudden changes of temperature are likely to occur when the fires become low between midnight and sunrise, during which period the human frame is most vulnerable to disease, it will be obvious that much illness and suffering will result. The condition of the barracks at this post is about as represented above. It does not seem strange, therefore, that the percentage of men taken sick at this post should be large. Most of the cases are such as are produced by inadequate ventilation, probably in connection with a somewhat defective diet."

ALCATRAZ ISLAND, CAL.—*Capt. W. D. Diets*: "The barracks are unsuitable on account of faulty location, dampness, insufficient light, inadequate ventilation, and lack of proper air-supply within. They are built over the damp, dripping vaults of the casemates. In rear of the quarters is a narrow alley which separates them from the perpendicular face of a hill. The floor of this alley is formed by a grating, which constitutes the roof of an exceedingly damp passage in the casemate. Rain-water collects in this passage and the atmosphere is moisture-laden and stagnant. The dampness of the quarters is increased by the puddles of water in the irregularities of the concreted casemate roof and the lack of ventilation under the buildings, which are not raised above said roof. On account of the overhanging heights the

quarters are deprived of direct sunlight for a considerable portion of the day. The squad-rooms are dark, stuffy, and damp, and the odor of animal emanations is always distinctly perceptible in them. Articles of leather kept in these rooms are apt to become moldy, and metal accoutrements soon tarnish. The building consists of two stories. In the ceiling of the lower squad-room is cut an opening, about 22 by 8 feet, an open stairway affording the means of communication between the two stories. The result of this arrangement is that men sleeping in the upper room are in a measure forced to breathe again the impure air exhaled by the sleepers below. The ridge-ventilation is faulty in construction and inadequate; with closed doors the rooms soon become stuffy, with open doors there is an excessive draught. The companies' wash-rooms and bath-rooms are located in dripping torpedo vaults, and are dark, clammy, and tomb-like. I have no doubt that the case of phthisis recently developed in a soldier of this garrison is due to causes connected with the unsanitary condition of the company quarters. I would respectfully recommend that the new barracks which it is contemplated to build be located on the level ground at the southeast end of the island."

FORT CUSTER, MONT.—*Capt. W. R. Hall*: "With few exceptions the buildings are old and more or less out of repair. * * * The system of ventilation, if the makeshift methods can be called a system, is primitive and faulty. There are no artificial inlets, and no currents to cause a flow of foul air through the exits. The new brick commissary building is a good one, but even in it the ventilation is poor. The hospital is also badly off in this respect. The buildings are kept tolerably clean and neat, but their age and dilapidated condition prevent perfection in this matter. There is one double set of barracks at the post, which is most admirable, except in the one point of ventilation. The guard-house is a wretched building, infested with vermin, and can only be mentioned to be condemned."

In connection with this report the Medical Director in his indorsement remarks: "To improve the ventilation of the barracks the plan adopted at several posts is the most practicable. This is to bring in fresh air through boxes under the floor, opening beneath the stoves, exit for air being by openings in the chimney near the floor and ceiling, controlled by registers. Chimneys should be built down to the ground, when necessary, and if not of sufficient capacity, a special exit flue should be built alongside. As observed at my recent visit to Fort Custer, the guard-house is in bad condition, and a new one is much needed. The new barrack is a satisfactory building, except in regard to ventilation, which has not been provided for."

FORT CLARK, TEX.—*Maj. B. F. Pope*: "It appears that the barracks, guard-house, and officers' quarters at this post were built during the years 1872 to 1875, with the exception of the double set (in center of parade) built about 1857, two adobe and log houses built in 1867, one set of bachelors' quarters, of sixteen rooms, built in 1885, and one double set of field officers' quarters built in 1888. Except as noted all of the barracks, the guard-house, and most of the officers' quarters are constructed of magnesian limestone with its outer surface rough dressed. The barracks are tightly shingled and are without roof-ventilation of any description, neither are they ceiled, and for this reason they are very hot in summer and quite cold in winter. For ventilation open doors and windows are wholly relied upon, and of course this means no ventilation in winter. While the windows are sufficient in number and are properly placed, in most of the cavalry barracks they are small, averaging only 5 feet in height by 3 in width. Since the upper sashes of these windows are in most cases immovable, a ventilating aperture of only $7\frac{1}{2}$ square feet per window is available, and as the distance from the floor to the top of this opening is only about $5\frac{1}{2}$ feet, it follows that less than one-half of the contained air of the barrack can be affected by opening the windows and doors. Above the point mentioned to the peak of the roof the air is practically dead, its only means of ingress and egress being through cracks in the shingles. The sub-floor ventilation in most of the barracks appears to be adequate. Beneath the floor of the guard-house this provision has been neglected, probably through design, in order to prevent the escape of prisoners. It would seem that this condition might be remedied without materially weakening the security of the building if stout iron bars were placed over the ventilating apertures that should be constructed. Six sets of officers' quarters are unprovided with such floor ventilation. Three of these are old buildings that should be abandoned, as they are filled with rotten timber and vermin of all sorts. * * * When the garrison has its full complement of twelve companies, overcrowding, especially of the cavalry barracks, is noticeable. These buildings, the cavalry barracks, average 108 feet in length by 23 feet 9 inches in width, inside measurement, which affords only 43 square feet of floor-space per man to a troop of sixty men. This is certainly too little when the large amount of room that is occupied by the soldiers' boxes, bunks, clothing bags, and cavalry equipments is taken into consideration. * * * In the infantry barracks, three of which are two-story buildings, the amount of floor-space per capita is over 70 feet, not because the rooms are larger, but because the companies are smaller. Three of these buildings are intended to shelter two companies each, one

in the first and one in the second story. At present but one company is assigned to a building. The upper rooms of these barracks are so closely crowded to the roof that the heat is almost unendurable in them during the day. Relief can be had, however, by resort to the broad porches which front the parade ground. The repairs to the barracks and quarters is for the most part satisfactory. The guard-house, while not all that it should be, is one of the best that I have seen at a military post. The cells are well lighted and well ventilated. Most of the flooring is hard-wood planks well matched and clean. The corridor next to the cells above requires to be re-floored. The general prison-room is large and well ventilated (better than the barracks for that matter). It is ceiled and the walls are frequently whitewashed. It is heated in winter by a stove."

FORT LOGAN, COLO.—*Capt. Charles Richards*: "The dormitories, however, do not appear to be adequately ventilated. There was a perceptible odor in all of them, even within a short time after the men had retired. The ventilators, with one exception, were found open. These ventilators are two in number in each dormitory. They are situated opposite each other at one end of the room close to the floor, with a hot-air register in the floor at a point nearly midway between them. The heated air coming through the hot-air register naturally makes its exit by the shortest route, which is directly to the ventilators. As a consequence there is only such circulation outside of these points as naturally occurs through the openings about the windows. The condition of the air is perceptibly different at the end away from, and that near the ventilators, in these dormitories. The rational remedy for this fault in ventilation would be to place the foul-air registers in the ceiling at points as remote as possible from the hot-air registers, so that the heated air coming from the latter would be obliged to sweep through the entire space of the rooms in order to make its exit."

On this report the Medical Director of the Department remarks: "The problem of ventilation of barrack-rooms has not been worked out very satisfactorily, but the method proposed by the post surgeon has frequently been tried without success. If the ventilators now in use carry off air from near the floor they are doing good work, even if they take a part of the hot air furnished for heating the rooms." Major John S. Billings says in relation to this: "I do not think that, under the circumstances described, the hot air from the registers in the floor would pass immediately to outlets close to the floor, even if these latter were only 10 feet away. The fresh hot air would probably rise to the ceiling, diffuse over it, and gradually sink as it became cooled by radiation from walls and windows. The trouble probably is that the area of the fresh air flues and registers, and of the flues supplying the furnace, are insufficient to supply a sufficient quantity of air to keep the dormitory free from odor and to secure sufficient ventilation. Freedom from animal odor can not be secured in a dormitory occupied by a number of men unless a constant supply of fresh air is introduced into the room equal at least to 2,400 cubic feet of air per hour per head. The amount prescribed by Parkes and De Chaumont is 3,000 cubic feet per hour per head. If Dr. Richards will compute the amount of air entering the dormitory by getting the amount of perfectly free area in the register when open, excluding all space taken up by cross-bars, louvers, etc., and then multiply this by the velocity of the incoming air, which probably does not exceed 6 or 7 feet per second, he will have some positive data as to the sufficiency of the supply. It is very easy to test whether the incoming air from the register in the floor passes immediately to the outlet register by placing films of light feather dust or floss silk in the current, or by generating fumes of nascent muriate of ammonia just over the hot-air register. This last can best be done by folding a sheet of blotting paper in the form of a cylinder, saturate it with hydrochloric acid, and setting it over a small beaker containing an ounce or so of liquor ammonia, thus producing dense fumes."

To this Captain Richards replied: "I compute the amount of air entering through the hot-air registers (two in number to each dormitory) as 16,200 cubic feet per hour. This computation is based upon an estimated velocity of the incoming hot air of 6 feet per second, which is probably a high estimate, as the flow of air through the register further removed from the furnace is much less than that through the nearer one. Each hot-air register has a free area of but 54 square inches. Each dormitory averages 23 men. By using the nascent muriate of ammonia test as suggested by Dr. Billings, I find, that the hot air does not pass directly to the outlet, but neither does it rise to the ceiling; it becomes diffused before it reaches the ceiling. If the vessel from which the fumes are generated be moved away from the hot-air register nearest the outlet register, the aspirating effect of the latter is quite perceptible. It seems to me that even if the quantity of incoming air were greater than it really is, the foul air outlets are not properly placed, being but 10 feet distant from one hot-air register, 42 feet from the other, and nearly 60 feet from the extreme end of the dormitory."

The recommendations of Maj. John S. Billings in this case were as follows: "It is very evident that the men sleeping in this dormitory obtain only a little over one-fourth the amount of air requisite to secure satisfactory ventilation coming through

the hot-air registers. No doubt nearly as much air as comes through the registers passes in through cracks around the windows and doors and through the walls themselves, but still the supply is entirely insufficient, nor can a satisfactory distribution be obtained of what air comes in by having the outlets only as marked in the diagram. There should be at least two more outlet shafts situated at the other end of the room and opening near the floor, as I have indicated in pencil, and there should be at least three more spaces provided for the admission of fresh air, each having not less than 1 square foot in area of clear opening, and this air should be warmed to a comfortable temperature in cold weather in order to prevent cold draughts, which the men will not endure and which they will stop by closing the openings. As I do not know what is beneath the room, the diagram of which you sent me, I can not state whether it is possible to place the fresh-air inlet as I have indicated in pencil. To economize heat to the utmost degree in a room of this kind, it is desirable to have the outlets open near or at the floor in winter time; but it is also a very good thing to have large openings into the same flues near the ceilings which can be opened in warm weather or when it is desired to rapidly change the air in the room. It must be borne in mind, however, that when so many outlet-flues are provided for one room, which flues have each a separate termination in the outer air, they are very liable to pull against each other, and unless the supply of fresh warm air is very ample there will be a down draught of cold air through one or more of these outlet-flues depending upon the direction of the wind, etc. The proper way to avoid this difficulty is to connect all the outlet-flues above the ceiling by means of tight boxes with one central upcast shaft which extends through the roof and has some form of cowl, preferably the one known as the Emerson ventilator. Here, again, I do not know enough of the building to know whether it is possible to make such an arrangement; I only offer the suggestion to be used if possible. If there were not extensive leakage of air into and out of this room through cracks, walls, floors, and ceilings, it would be impossible to preserve the health of the men with the allowance of 704 cubic feet of air per hour coming in through the hot-air registers, and grave forms of diseases of the throat and respiratory organs might be expected to occur under such circumstances."

FORT DAVIS, TEX.—*Maj. J. V. Lauderdale*: "The barrack of Company I, Fifth Infantry, and the guard-house sit too close to the ground to give proper ventilation beneath their floors. Something can be done to improve them. The basement walls may be pierced with openings at suitable points to let in fresh air without at the same time giving access to storm-water or vermin. As the rainy season will soon begin I would recommend that this matter receive attention."

On this the medical director remarked: "If the barracks at this post are to remain occupied it will be necessary to take up the flooring, remove the filth that has been accumulating under it for years, and some inches of earth, and replace the floor so that proper ventilation can be made underneath. The walls should be thoroughly scraped and whitewashed. The adobe walls of these buildings are crumbling from age, and have absorbed the exhalations of the occupants for years. For economical as well as sanitary reasons the buildings should be abandoned rather than make any considerable outlay on them. The cells at the guard-house should, under no circumstances, be occupied in their present condition."

FORT LEAVENWORTH, KANS.—*Maj. A. A. Woodhull*: "The water-closet most generally used here is the Demarest plunger closet, where the water in the bowl is cut off from that below by a plunge-valve placed at the side. The contents of the bowl are dropped into the soil-pipe by raising the plunger, and the rush of water forces everything through the trap. The plunger is hollow and thus provides for the escape of surplus water, should the flush be in excess, the level of the water being regulated by a floating ball-valve. The disadvantage of this style of closet is that the plunger-chamber will become foul, as will also its outer parts, with fecal slime, and occasionally insoluble matter sticking to the plunger itself will prevent complete closure, and thus allow the water in the bowl to leak. Until recently the water-supply to the closets has been copious by street pressure of great force from a single point near the top of the bowl. A part of the change now in progress is the supply of water from an overhead tank for each closet instead of directly from the main as before. This change is made chiefly for economic reasons, on account of occasional overflow under the old system. There is no objection to individual tanks, provided they supply sufficient water at a time. But in this apparatus the supply is through a half-inch pipe with a fall of about 6 feet. This supply-pipe should not be less than 1½ inches in diameter, in order to furnish an adequate flush. The danger of contaminating the drinking-water has been given as another reason for the change, but with the enormous pressure here that danger is almost inappreciable. The inefficient washing away of the waste under this diminished water service is more dangerous to health and vastly more offensive to the senses."

"In some of the quarters a closet known as the 'Cascade' is replacing the 'Demarest.' This is what is distinctively known as a siphon-closet with a rim-flush, and it has a double trap. The apparatus is excellent provided it is allowed to receive

sufficient water. Without the second trap it would be a short hopper-closet, and equally good, provided the flush is sufficient. This has the advantage of having no mechanical obstacle, except the water itself, to the escape of the waste matter. The rim-flush, by which the water enters the bowl at all points of the upper circumference, is the best mode of supply, and, for the sake of cleanliness, should be used in any style of closet.

"Notwithstanding the Cascade is much better than the Demarest, for pecuniary reasons it does not seem advisable to replace the latter as long as they remain in good working order and the water flows copiously in sudden flushes. But this can not be done with the one-half-inch pipe and the single point of entrance. While this combination is in use great pains must be taken to avoid accumulations in and above the trap. It will be seen that I think the tanks, as at present set up, undesirable. To be efficient the supply-pipe should be larger.

"Of course it is understood that the use of the trap with the water-seal is to cut off the escape of contaminated air from the soil-pipe into the rooms. And it is equally important to guard against the introduction of this contaminated air, commonly called 'sewer-gas,' by any other channel. Therefore all traps for bath-tubs and wash-sinks, as well as of water-closets, should be as near the fixtures as possible, so that the polluted section of pipe may be no longer than necessary; for all waste-pipes carry animal matter that will decompose. To introduce a bath-tub pipe into the lower part of a soil-pipe seal (as in quarters 12 and 19) with a view of using that seal as a trap is unwise, because a deposit will sometimes remain in the bend of the trap, and may regurgitate through the smaller pipe. To insure the best results, therefore, the pipes of exit should be as direct and with as great a fall as possible, to facilitate the flow; should not be too large, in order that they may be easily flushed; should be absolutely impervious both in material and joints, so that no gas may escape; all waste-pipes from basins, wash-sinks, bath-tubs, etc., should be as carefully trapped as those from closets, and in addition the main soil-pipe should be thoroughly ventilated. Putty and cement joints, wherever found, are mischievous. They do not serve the purpose for which joints are designed, that of keeping the whole line of pipe gas-tight. As example of special defect, attention is invited to quarters 12 and 13, where there are unnecessary changes of direction in the soil-pipe (No. 12), and the bath-tub waste-pipe (No. 13) enters the lower water-closet trap at such a point as to be liable to conduct foul air upwards after the trap has been flushed. This latter defect exists in quarters No. 19 also. In quarters 11 (commanding officer) it is a mistake to run a ventilating pipe into the kitchen chimney. This was formerly considered advisable, and I think I once said as much to the commanding officer, but it is now recognized as unwise. The pipe is liable to be clogged with soot, and an upward current in the chimney can not always be depended upon. When the current is reversed the house will suffer. The supply-pipe to the closets in the yards of 56 and 57, west end, is not of sufficient caliber to do the work properly. The company sinks and urinals, though not so attractive as fastidiousness may require, are effective, and when not in good condition it is not the fault of the apparatus. I have no change in them to recommend now. The hospital plumbing will receive attention in the hospital estimates, but it is desired that the detached leaks may be closed.

"There is no evidence that sickness has resulted from the plumbing as it now exists, but as serious errors have been found in the examination already made, I offer for consideration the propriety of a house-to-house inspection by the medical officer and the quartermaster, if his other duties will permit him, with the assistance of the post plumber, or by such other competent detail as may be preferred, to the end that a record may be made of the state of the plumbing in each house, and that estimates looking to necessary, if not to all the desirable changes, may be prepared. If there are available funds on hand, I recommend that the required changes already indicated be made now, and those yet to be pointed out to follow as soon as possible.

"The removal of all wooden or other walls about the fixtures that form dark closets and receptacles for dust can be done without expenditure, and is a first step towards exposing uncleanness and to leading to vigilance in the care of traps, and should be done."

DRAINAGE, SEWERAGE, ETC.

At many of the posts that have been occupied for years the want of satisfactory methods of disposing of excreta, garbage, and waste-water has led to conditions that must of necessity exercise a harmful influence on the health of the troops. The privy-pits at Fort Omaha have been dug and filled up so often that the soil is everywhere saturated and the ground-air so foul as to be a cause of complaint. No municipal gov-

ernment would tolerate the nuisances that exist at this post. At Fort D. A. Russell also the continued use of privy-pits and cesspools has rendered the ground impure. Improvements, however, continue to be made. The post of San Diego is now connected with the sewerage system of the neighboring city. Estimates have been made for sewers at Fort Bliss. A system was made at Fort Huachuca, but on account of frequent obstructions of the main sewer the connections have been removed and the use of privy-boxes resumed. The system introduced early in the year at Fort Mackinac was considered excellent, but exception was taken to the location of grease-traps inside the buildings. Dry-earth boxes have been substituted at many posts for the primitive vault. Reports against their use come from two posts, Forts Gibson and Assiniboine; at the one, the cause of the failure of the system was merely the trouble in procuring the earth; at the other, the difficulties attending removal. Wooden boxes are objectionable on account of the impossibility of keeping them clean. The medical officers at some posts, as Forts Sidney, Apache, Davis, and Clark, urge the use of pails of galvanized iron. These pails have been in use at Fort Hancock for several years and have answered their purpose admirably. There is no soiling of the surroundings, as they fit snugly, do not leak, and can always be handled with facility as there is no absorption nor swelling to prevent their withdrawal or replacement. Fort Ringgold became supplied with these pails during the past year. The dry-earth system appears to be a necessity at Fort Sheridan, as, on account of the high level of the subsoil-water, the privy-pits are always flooded. Fort Missoula obtained new earth-closets during the year, but some provision for the removal of its waste-water is needful. The medical officer at Fort A. Lincoln recommended the introduction of earth-closets or sewerage, but this was not considered advisable on account of the probable abandonment of the post. A call was made for earth-closets by the post surgeon at Fort Washakie on account of the tons of excreta accumulating annually in the vicinity of the post. Fort Yates at the close of the year was anticipating the substitution of the system of dry removal in place of its privy-pits. Earth-boxes were introduced at Fort Marcy and were considered a great improvement on the vaults. At this post the medical officer took exception to the construction of water-closets in the officers' quarters, as there was no outfall for the sewers except into cesspools. The Quartermaster's Department ultimately directed the use of the dry-earth system instead of water-closets, and provided leaching cesspools for the disposal of waste-water. The medical officer at Fort Gaston condemned the use of cesspools at his post. An odorless excavator in use at Fort Niobrara for emptying the cesspools is said to answer its purpose admirably. Facilities for the disposal of excreta are defective even at some of the oldest posts: Certain vaults at Fort Adams are reported as leaking into the basements of occupied quarters; at Fort Hamilton the bar as a water-closet seat is considered to be somewhat behind the times; and at West Point the sinks in rear of the band barracks, and of the various detachments of cavalry, artillery, and engineers are all in bad sanitary condition, not from insufficient police, but on account of the character of the closets and the insufficiency of water available for flushing.

FORT OMAHA, NEBR.—*Major A. Hartsuff*: "As there never has been any sewerage, and almost no surface drainage, the soil everywhere is saturated with the contents of old privy-vaults, and the atmosphere laden with odors from the same. A portion of many of the buildings rests directly on the ground; many are rotten, and therefore emit odors; no basements, no area walls, and hence the ground-air for many feet

around passes up through the buildings as through flues. The privy-vaults generally are in near and dangerous proximity to the cisterns, and owing to the peculiar construction of the post, the natural drainage from the vaults is, in the officers' quarters, under the quarters and into their front yards. The complaint of foul odors prevails generally."

FORT D. A. RUSSELL, WYO.—*Capt. D. M. Appel*: "The drainage of the post is very defective. A very small part of the post is drained by sewer, which is, however, not connected with any of the barracks nor the majority of the quarters of officers or enlisted men; in the latter the old cesspool and privy are still in use, a constant menace to the health of the garrison and breeding-ground for epidemic diseases. In as large a command as this a proper system of drainage is an urgent necessity, as being of the greatest sanitary importance."

FORT HUACHUCA, ARIZ.—*Major J. H. Patzki*: "The drainage is good; the sewerage system, as far as relates to troop-closets, is still unsatisfactory. Owing to the small diameter of the main sewer it is constantly becoming obstructed by the material used by the enlisted men. Most of the connections have been removed and the old system of boxes substituted. The fecal matter accumulated during five years in the vaults in the officers' yards still remains, as the estimate for its removal was considered excessive and disapproved by the Quartermaster-General."

FORT MACKINAC, MICH.—*Lieut. Charles E. Woodruff*: "The new drainage system which has just been completed is a very excellent one, and will be found to fulfill sanitary requirements except in one particular. * * * The first principle and foundation of all sanitary plumbing is to remove immediately from dwellings all waste-water and excreta; this is the object for which modern plumbing has been evolved, and yet it is violated by the miserable contrivances called grease-traps. These traps, which are inserted in each house, hold about two buckets of the filthiest water imaginable, * * * giving forth the most foul odors, even if the traps were cleaned every few days. * * * I would strongly recommend removing them all and substituting a simple lead 'S' ventilated trap."

The commanding officer of the post: "Grease-traps * * * have been in use but from ten to fifteen days; it seems early to condemn them. * * * They are so constructed that they act as gas-traps as well as grease-traps. * * * It seems probable that the sewers must soon be ruined if all the grease now retained in twenty grease-traps is allowed to pass into them."

The medical director: "Grease-traps are necessary adjuncts to good house and kitchen drainage. Of course they should be properly constructed, and placed under the care of a special individual to look after and keep them in order at least once a week. If neglected they become a source of annoyance and possible menace to the health of all interested. There are several varieties of grease-traps that are put up by the plumbers. It would be better to have traps of this kind located outside the quarters and inclosed in a brick vault with an iron case; the iron of the trap prevents any leak into the brickwork while the latter protects the trap from the frost and renders it readily accessible."

FORT GIBSON, IND. T.—*Capt. W. O. Owen, jr.*: "I would call attention to the condition of the out-houses back of the officers' quarters; in fact the same remarks apply to all those in the post. They are rotten at base, and tumble-down; the privies are supposed to be earth-closets, but earth is never used, there being no means to prepare it."

FORT ASSINNIBOINE, MONT.—*Capt. L. A. La Garde*: "The earth-closets in use at the present time will have to give way to more commodious arrangements. As conducted at present the dry-earth system is a failure. It is utterly impossible to remove the fecal matter during the extreme cold of this latitude without contaminating the surrounding soil. To conduct the system properly it is necessary to be prepared. (1) The urine and feces should be voided in separate vessels. (2) The temperature of the room should not go below freezing. (3) The vessels referred to should be entirely within the room. (4) The scavenger should enter the closet and empty the vessels in his cart at the door. As it is now, he goes to the rear of the closet, pulls the box, and in winter he chips the mass as best he can, empties what is possible in his cart, drops part on the ground, and the rest remains frozen in the bottom. The exciting cause of typhoid fever is in this post, as the epidemic of last fall has shown; and since the favorite habitat of the cause—doubtless a germ—is in 'cesspools, sewers, drains, wet manured soil and dung heaps,' it behooves us to be especially careful in disposing of our refuse. For that reason the present arrangement should be abolished at once and the perfected system, as indicated above, should be practiced instead. The latter is at present in use in my quarters, and although on a comparatively small scale, yet I am satisfied that with care and daily inspection, it could be conducted as satisfactorily for a company as it can be for a private family."

The general commanding the department, in his indorsement, remarks: "The earth-closets at Fort Assiniboine can be improved, and will be, but it will hardly be practicable in that cold place to keep them at such a temperature as to prevent at all times any freezing, neither does it seem essential to a good sanitary condition."

FORT SIDNEY, NEBR.—*Capt. C. S. Black*: "I can not say to what extent the ground in rear of the quarters and barracks has been used for privy-vaults; but from inquiry around, I should judge to a large extent. This is a serious matter, and if continued, will eventually generate enteric fever and other disorders. My opinion as to the best way of changing this is to substitute galvanized iron boxes, without square corners and with curved bottoms, to receive the excreta. Wooden boxes are highly objectionable, as the liquid excreta saturates the wood, and no amount of disinfection will remove the odor. Scavenger-work on the boxes I recommend should be done by civilian contract and not by soldiers or prisoners. Such occupation is degrading to a soldier, and in a garrison surely not in his proper line of duty. *Capt. L. S. Tesson*: While the sanitary condition of the post is as good as it can be made in ordinary, the condition of the privy-vaults is one that calls for a radical remedy. The unhealthfulness of these vaults, as well as their unsavory condition, is being constantly combated by the use of disinfectants, but in spite of a liberal use of the latter, the noisome effluvia pervade the whole post whenever we are unfortunate enough to be deprived of a brisk breeze. * * * This post, once noted and quoted for the health of its garrison, no longer stands pre-eminent in that respect; and as far as I am able to judge, this decadence is due principally to the condition herein noted."

FORT APACHE, ARIZ., *Capt. Edward Everts*: "The defective drainage of the officers' quarters and the use of privy-pits are sanitary evils of which frequent mention has been made. The natural drainage of the post is excellent as the grounds slope abruptly downwards on all sides. From the barracks the waste-water is carried off by loosely covered wooden drains and open ditches which are easily kept flushed and cleaned. The covered wooden drains of the officers' quarters, without traps, and usually without ventilation, become easily filled up with filth, and are a frequent source of annoyance and danger. Pit-privies are in general use, and they receive proper attention in the use of disinfectants. Dry-earth removal should be substituted for the privy-pit."

FORT DAVIS, TEX.—*Maj. J. V. Lauderdale*: "In many privies the wooden drawers have become so much broken that they should be replaced by hods of galvanized iron. All permanent seats or fittings in dry-earth closets should be removed and a box of suitable size with a removable cover pierced with the usual hole, and over this a suitable lid. The latter can be dispensed with if lumber is scarce. It need not have a bottom if well put together. It can be readily handled like a commode; is easily cleaned and disinfected. The only furniture required is a well constructed galvanized iron pail holding about five gallons, with iron handles at the sides. It is to be handled like an ordinary garbage can."

FORT CLARK, TEX.—*Major B. F. Pope*: "Water from the company wash-sinks and bath-rooms is conducted through short two-inch iron pipes to open drains. The greater part of this water disappears by evaporation, leaving a sediment that is from time to time cleaned out by sweeping and is carted to the dumps. The system of surface drainage is apparently the only feasible one at this post. The rocky foundation upon which the post is built approaches so near the surface that the expense attending the introduction of a sewer-pipe system on an extended scale would be very great; for the ditches, if sufficiently deep to protect against frost, would have to be blasted out. The dry-earth boxes are wooden drawers which are placed beneath the privy seats on slides. A majority of these are of the following dimensions: 48 inches long, 14 wide, and 11 deep; top and bottom of the same size. Many others are 60 inches long and of different widths. In fact there seems to be no uniform pattern, each box being fitted to the privy for which it is intended. While a number of them leak from age and faulty construction, a greater number are so badly shaped that a large amount of filth, especially urine, gets into the slide space instead of the box. This accident, of course, seriously pollutes both the wood-work and soil."

FORT HANCOCK, TEX.—*Acting Assistant Surgeon A. L. Buffington*: "The privies here are furnished with galvanized iron boxes or drawers, one to each seat, and are 26 inches long, 18 inches wide by 12 inches deep. This is the best arrangement I have ever seen of this kind. The advantages claimed for them over all other kinds are, they can be handled with ease, there being no absorption or leakage; there is no swelling, which allows them to be easily withdrawn and replaced, and they can be made to fit snugly and thus prevent soiling surroundings. Those at this post have been in use for nearly five years, and only two have become unserviceable by rust."

FORT MARCY, N. MEX.—*Capt. S. G. Cowdrey*: "Surface drainage good. No sewerage, which is very much needed. * * * Some of these privy-vaults contain the accumulations of many years, and can not be cleaned out or thoroughly disinfected owing to the depth of the filth. I would recommend that, until sewerage can be put into the whole post, beginning with the vaults longest in use, they be filled up and dry-earth boxes be used, and as soon as practicable all the sinks in the post be supplied with dry-earth boxes under the seats, removable for cleaning. * * * Of late the post quartermaster, I learn, has received some new water-closets for officers'

quarters. There are many objections to their introduction, as there is no city sewerage. I do not think they can be introduced and used with safety."

The post quartermaster: "I think, if proper precautions are used by having the cesspools deep enough and emptied when full, no danger from them can arise, as the water furnished the garrison comes through iron pipes from the reservoir. For twenty years or more I have lived in posts that had cesspools, and have always found that when they were properly cared for no trouble arose. The people of this city use cesspools entirely, and it is considered a very healthy place."

Capt. S. G. Cowdrey: "Santa Fé is an old town and has many relics of barbarism; among them are privy-pits and cesspools. The soil is saturated with faecal filth from one end to the other, which may account for the increase of late years of filth diseases in the city. I was surprised last summer at the large sick report here, and made an effort at once to stop soil pollution on the reservation. My efforts have been fully seconded until now. If additional cesspools are allowed a step backward toward unsanitary conditions will be taken. The argument of the quartermaster that no complaint of cesspools has been made avails naught. When I came here last June the privy-pits were horrible stench holes and no officer made complaint of them. It is hoped that the commanding officer will see the danger of any more cesspools."

The post commander: "I do not think two or three more would have any additional effect to the numerous cesspools in the immediate vicinity of this post. The whole of this town is literally honey-combed with cesspools and privy vaults, yet no one seems to suffer by it, though little care seems to be taken with regard to them. Earth-closets would no doubt be better if they were supplied. As it is, it may be considered a choice of evils whether it would be better to run the chances of the cesspool or undergo the exposure consequent upon outdoor vaults in cold weather. I would respectfully recommend that the earth-closet be used in case the cesspool is not approved of."

The Surgeon-General: "The sanitary report from Fort Marcy, N. Mex., contains a recommendation from the post surgeon that water-closets which have recently been received for use in officers' quarters at that post be disused and dry-earth closets substituted, for the reason that in the absence of a sewerage system at the post the outflow from water-closets must be into cesspools, which are dangerous to the health of the command. The dry atmosphere and absorbing soil of such towns as Santa Fé and Tucson, on the Mexican border, have permitted the use of privy-pits and cesspools without manifest harm to their communities for many years back, until now their sites are honey-combed with pits, either in actual use or filled up and disused. The height above the sea-level is such that a yellow-fever visitation is unlikely, but increasing communication with the outer world exposes these places to other diseases, such as cholera, diphtheria, scarlet fever, and typhoid. That they have fortunately been free from disease in the past is no argument for continuing to add to unsanitary local conditions. The effort to introduce water-closets without a satisfactory method of disposing of the increased liquid flow can not be sufficiently condemned, and I recommend that a system of dry-earth conservancy be used until a system of sewerage be introduced."

Lieut. Col. C. G. Sawielle, D. Q. M. G.: "Referring to your indorsement of the 24th ultimo forwarding report of the post quartermaster at Fort Marcy, N. Mex., as to the best method of disposing of house wastes, etc., I am directed by the Quartermaster-General to inform you (the chief quartermaster of the Department) that it appears to be impracticable to establish a system of sewerage at Fort Marcy. The best that can be done under the circumstances is to do away with those things that are known to be nuisances and guard as far as possible against the entrance into the buildings of gases which, confined and undiluted, must prove injurious to health. To this end it is recommended that no more water-closets be put in at Fort Marcy; that all pits be cleaned out and filled up, and that in their place dry-earth closets be constructed and care taken that dry earth of proper quality and in sufficient quantity be used in connection with them, and that boxes be emptied daily. It is estimated that where the whole of the liquid as well as the solid excretal matters are to be absorbed there will probably be required from 9 to 10 pounds of soil per head per day. While the expense of obtaining and removing this will be considerable, it is thought that the value to the scavenger of the manure obtained should in a measure lessen the expense.

"The above method will provide in a fairly satisfactory manner for the disposal of excremental matter, but there remains to be gotten rid of the water fouled by domestic use, the quantity of which will be about two hundred times that of the excremental waste, and scarcely less active than that as a promoter of disease. In the absence of drains this water could be carted away directly or after it has been collected in water-tight cesspools; but this would be a very costly operation, not justified in view of the slight sanitary advantage to result while the inhabitants of the town continue to pollute the soil. It therefore remains to adopt one of the two methods, namely, subsoil irrigation or the leaching cesspool. Where practicable, preference should be given to the former.

"The conditions necessary to subsoil irrigation are to have a level patch of garden

or lawn a short distance from and several feet lower than the house. This piece of ground to be underlaid with 2-inch absorbent tiles placed with loose joints. The house wastes would be conveyed to this absorption field through an impervious 4-inch drain-pipe. In order to work properly, the house wastes must first enter a small tank to act as a settling tank and grease-trap, and then pass into a siphon flushing tank in order that the waste may discharge into the absorption field only at times and in volume to insure its being distributed throughout all the pipes.

"The last resort, and the one which will probably have to be mostly relied upon at Fort Marcy, is the leaching cesspool. That should be constructed of stone or brick laid dry until within a few feet of the ground, when it should be arched with brick laid in cement. The depth should be determined by the nature of the soil, it being necessary to penetrate a loose, gravelly soil. It is essential that the cesspool be not simply *vented* but *ventilated*, by carrying the shaft above the top of the building. The greatest care should be taken to prevent grease entering kitchen sinks.

"The post quartermaster was called upon to submit a sketch 'showing in detail where and how it was proposed to set closets, giving all their connections, ventilating pipes,' etc. This he failed to do. Whether the method of disposal is either by sewer, cesspool, or irrigation, the matter of proper plumbing is equally important, and the system to be followed is the same. Gases which, when diluted with the outer air, give no annoyance and produce little harm, may, if allowed to enter our dwellings through defective plumbing, occasion great annoyance and danger. Whether the fixtures within the house is a kitchen sink, a bath-tub, or a water-closet, the same care in the plumbing should be taken.

"The Quartermaster-General requests that you call on the post quartermaster at Fort Marcy to submit estimates for putting into practice the methods above suggested."

FORT WASHAKIE, WYO.—*Lieut. Charles F. Mason*: "The privy vaults in use at this post are a nuisance and a constant menace to the health of the garrison. For several years past there has yearly been deposited in the subsoil of the post, in the immediate vicinity of the quarters, between 6 and 7 tons of feces and 20,000 to 25,000 gallons of urine, all this to be left slowly to decompose without removal. Earth-closets can be introduced with very little expense, and should be substituted for the pits without delay."

FORT GASTON, CAL.—*Capt. Charles E. Woodruff*: "The system of cesspools at this post is bad. * * * Cesspools should never be tolerated at any place. They are often the source of contagion, and continually infect the soil for great distances, as in the gravel of this post. Should contagious diseases ever be largely imported into this very healthy post, the cesspool may be the cause of keeping up the contagion."

FORT ADAMS, R. I.—*Maj. S. M. Horton*: "I have the honor to recommend that some good, certain method be adopted to clean out once per month the vault beneath the sinks in rear of non-commissioned staff quarters. The liquid portion of the discharges has disappeared partly by percolation through the stone wall, partly by evaporation, leaving behind the solid portions. The waste-pipe from the kitchen sink, down the outside rear wall of the quarters of Private Snyder, Battery G, is broken and disconnected, and the wash and dish water runs down upon the wall and forms pools upon the ground at its base. It is recommended that this pipe be repaired at once, and that lime be thrown upon the ground so as to purify it. The post-surgeon's attention, as the sanitary officer, has been called by Captain Mitchell and Lieutenant Wilcox to the unhealthy condition of the basements of their quarters. Upon examination of them a few days ago, I found in Lieutenant Wilcox's basement water standing in pools in some places, and in others the cemented floor was saturated with water, altogether covering the space of one-half of the basement, apparently from the soaking of the water from the rains through the stone wall on the south and west sides. In Captain Mitchell's basement I found a great portion of the cemented floor saturated with water. This part is near the north stone-wall, outside of which and very near to it is the man-hole or vault into which the pipes from the sink and kitchen of the quarters run. This vault is in a bad condition from want of connection between the different segments of terra cotta of which it is composed. It is very liable to leak and let the contents in a measure escape from it. On the side of it this foul or impure water has easy access to the stone-wall of the basement, and can readily soak through, and must then be a source of great anxiety. It is feared that this is true; that is, that some of the contents of the vault are escaping into the basement and saturating the cemented floor. Measures should at once be taken to put the vault into good condition. It is recommended that all the walls through which water is soaking be cemented on the inside, so as to prevent this soaking through, and, if possible, make the casemates dry, pure, and healthy."

WATER.

The sanitary reports for the year do not in every case refer to the condition of the water-supply. This silence may be interpreted to mean that the water is satisfactory as regards both quality and quantity, the result either of fortunate natural conditions or of an earnest agitation of the question of water-supply in previous years. When the supply was deficient in any respect post medical officers failed not to make report and recommendations, as indicated in the following summary, which represents the present condition of this important subject. The attention which the water-supply of its military stations is receiving at the hands of the Government of France, with the lessened prevalence of typhoid fever attributed thereto, has been already instanced.*

A number of the posts participate in the supply of some adjacent civil community, Fort Wayne, for example, in the water-supply of Detroit, Mich. City water supplies are, however, rarely mentioned in the sanitary reports unless some defect calls for an expression of opinion. At San Diego Barracks the only objection appears to be the high water-rates. The water of the Santa Fé supply at Fort Marcy is frequently turbid after rains and snow meltings. David's Island is supplied from New Rochelle, N. Y., but only on certain days of the week; the supply at other times is drawn from the well which was the source of supply before the introduction of the city water. The post medical officer, in this connection, urged the steady use of the latter, on the ground that the drinking alternately of hard and soft water is not advisable. The supply from the city works has to be supplemented at Benicia Barracks by rain-water cisterns, and exception has been taken to the odor and taste of both of these supplies. The impurity of the one is due to cattle ranges on the drainage area of the reservoir; of the other, to the location of the tanks beneath the quarters and to the want of a cut-off to throw to waste the first falls or roof washings. Little attention appears to be paid at military posts to this point in the collection of rain-water. Jackson Barracks, Fort Barrancas, and Fort Gibson are supplied by rain-water cisterns, all of which seem to receive the roof washings. At the first mentioned it is stated that the accumulated foulness of the shedding surfaces is collected with the supply; at the second, that there is much sediment in the cisterns; and at the last, that the hospital cistern is in foul condition and its water unfit for use. Cisterns for the storage of rain-water for drinking and kitchen use should be provided with some form of automatic cut-off if the supply cistern be not filled by the overflow from a sedimenting tank. The only other post which took exception to the city water with which it is furnished was Fort Bliss, which during the year had its system of water wagons and barrels replaced by a piped supply from the reservoir of the El Paso water-works. As the intake of the city's supply was situated 250 yards below the outfall of the post sewage, the very needful recommendation was made to have the latter carried below the pumping station of the water company.

At four posts, Mt. Vernon Barracks, Bois  Barracks, and Forts Selden and Bennett, a scarcity of water was reported. At the first mentioned the scarcity was due to defective facilities for raising the supply. The inadequate supply wagoned from Cottonwood Creek to Bois  Barracks will soon be replaced by water piped from springs about a mile distant from the post. Water is wagoned from the Rio Grande for the

*See page 36.

use of Fort Selden. This water, when plentiful, is turbid, and in the hot weather it deteriorates in quality in the time it requires for sedimentation. Moreover, in the dry season the stream becomes a succession of stagnant pools unfit for use and causative of intestinal troubles. In August a surface-well had to be cleaned out, and later a driven-well was sunk to relieve the scarcity. At Fort Bennett the Missouri River water was wagoned to the post, but in April the formation of sand-bars rendered it difficult for the wagons to keep up the supply. A spring had to be utilized and a well dug, but the water of the latter was so hard as to be unfit for any household purposes.

Distilled water was used and preferred to any other at Forts Davis and Ringgold. At Fort McIntosh the post surgeon urged the use of condensed water instead of that from a surface-well in the Rio Grande bottom. Condensed water is supplied at Fort Clark, but here the spring water is preferred by the men, particularly as a prejudice was originated against the distilled water by its uninviting appearance when first served out. The Fort Clark spring was subject to inflow of surface-water, carrying into it all the filth of the most insanitary parts of the Mexican town of Brackett. The spring which furnishes the supply of Fort Mackinac also is subject to inflow of surface-water.

A recently dug well at Fort Lowell yields water sufficient for the wants of the present garrison. A new supply from driven wells has been introduced at Fort Yates; the water appears to be somewhat hard, but its character in the last report rendered was obscured by the pitch and rust of the newly-laid distribution pipes. The supplies of Forts Sheridan and Logan are artesian.

A majority of our military stations are dependent for their water supplies on the running streams in their vicinity. The distribution by water-wagons is yet in frequent use, as at Fort Keogh and several posts already mentioned. At Fort Abraham Lincoln water is pumped from the Missouri River into a reservoir, whence it is wagoned to the various barrack buildings. Most of the posts, however, that are supplied from streams have the water piped for distribution from the reservoir, as at Forts Missoula and Pembina. Some of these river supplies are at times muddy and unpalatable. The water at Camp Poplar River, the Gila at San Carlos, and the Little Horn River at Fort Custer may be specially mentioned as illustrations. At the last-mentioned post intestinal disorders were attributed to the use of the turbid water. Many of the streams have settlements above the posts, but these are near enough, or otherwise of such a character as to become a notable contamination of the stream in four cases only. At Fort Douglas the spring supply is fouled by the drainage of camps of laborers at work in the narrow cañon through which it passes on its way to the reservoir of the post. Steps have been taken to remedy this. At Fort Assiniboine the drainage from the manured post gardens was the occasion of the suspected quality of the water. This was remedied by the removal of the gardens to ground below the post. Irrigation-water from cultivated fields was the cause of the impurity at Forts Apache and Lewis. At the latter post diarrhœa was prevalent at the time of the turbidity.

The water-supply of Fort Reno, from the North Fork of the Canadian River, contains much more saline matter than is consistent with wholesomeness. There are two settling basins at this post, but nevertheless the water has always a considerable quantity of suspended matters. The prevalence of sickness among the men, as compared with the good health of the officers and their families, has frequently been a subject of observation in connection with the fact that the latter do not use the

river water, but have their supply brought in kegs in wagons from Caddo Springs, about 4 miles distant. The springs come from sandstone with an ample flow, and the water could be readily brought to the post by piping and pumping. Capt. J. Van R. Hoff gives full expression to these points in his report, which is quoted below :

BENICIA BARRACKS, CAL.—*Maj. John H. Janeway*: "The water used at the post is not good; it is derived from two sources, namely, from cisterns which store the rain-water obtained from the house roofs, and from pipes from the water-works company which supplies the town of Benicia as well as the post. The cisterns or tanks are, with one exception, under the quarters of the officers; hence the water is not properly aerated, and the dust, etc., lodging upon the roof and in the gutters is washed off by the rains, and further contaminates the water in the tanks. The water used by the water-works company is not in very large quantity, and is obtained from the hills surrounding the dam, which latter is about $1\frac{1}{4}$ miles from the post. Cattle in great numbers range over the hills, and their fecal matter is carried down with vegetable impurities into the dam and then sent out through the pipes to consumers. Though there is an odor and taste to both of these waters, there has been no case of diarrhoea, dysentery or fever at the post during the month that I have been here."

The post commander: "The cisterns were cleaned out in 1887. It is the intention to have them cleaned again this year before the rainy season sets in. In my opinion large ventilators ought to be attached to these cisterns. The fact of their being under dwelling-houses appears to be a very bad feature. Arrangements will be made to have gutter-leaders detachable so that first rains can be run off outside cisterns, thus preventing much dirt, bird-droppings, etc., from getting into them. Most of these cisterns need repairs. * * * In addition to the sources of supply named in Major Janeway's report, a third source is from wells, the water of which is raised by wind-mills into the same tanks which hold the supply from the Benicia Water Company. That derived from the latter source is merely surface water, and the yield at this season of the year is very small; the danger of its being contaminated from covered-up cesspools, garbage drains, etc., appears to me great. The report about the water-supply, etc., merits careful and immediate attention. The defects of the system are by no means exaggerated."

FORT BLISS, TEX.—*Capt. Stevens G. Cowdrey*: "During the past month the water-supply to the post has been increased by the introduction of water from the reservoir of the El Paso Water Company. This is a great improvement upon the old system of water-wagons and barrels. This supply is not in accordance with the many recommendations during the past four years, as it was considered important that the water supply and the reservoir should be entirely under the control of the commanding officer, and should be taken from the river above the post. The evil now threatens which was referred to in this report, and in the indorsement of the commanding officer thereon for September and November, 1886; that is, the sewage of the post empties into the north channel of the Rio Grande about 250 yards above the point in the channel from which the water is pumped for use in El Paso and now for use in the post. Unless the sewage of the post is carried below the pumping station of the water company the drainage from the post will seriously affect the health of the command from using the infected water."

The Medical Director: "It is important that the sewage be carried in pipes below where the drinking-water for the town and camp is taken. An acequia on the river bank supplies water to part of the houses in town and to farmers below, and will necessitate piping in place of open drains. The post-surgeon informed me that it was proposed to dig cesspools in the arroya near the hospital; heavy rains would wash the contents of these into the acequia, and their proximity to the garrison and hospital is objectionable."

The Surgeon-General: "I have the honor to submit herewith extracts from the sanitary report of the post surgeon at Fort Bliss, Tex., for the month of May, 1889, and recommend that the commanding officer of that post be requested to prepare and forward separate plans and estimates for two systems of sewerage by which the water-pollution referred to may be avoided; one set for a permanent system, to be used in case the post is retained at its present location, the other a temporary makeshift, having in view the same object during the temporary occupancy of the post, should it be finally decided to remove it from its present station."

MOUNT VERNON BARRACKS, ALA.—*Capt. Walter Reed*: "I do not believe that the supply to the garrison for all purposes will ever be sufficient until a steam-engine is obtained. I think it is a sufficient commentary on the hydraulic ram to state that while the springs supply to the pond not less than 75,000 gallons per day, it is with the greatest effort that the garrison can obtain one-twelfth of that quantity, a quantity so limited that none can be obtained for flushing foul drain-pipes or watering vegetables in the post garden."

BOISÉ BARRACKS, IDAHO.—*Maj. A. C. Girard*: "The water-supply is insufficient in this semi-torrid climate. A water-wagon or two full, and occasional filling of the reservoirs from Cottonwood Creek, do not permit a free use of water such as is desirable for the command. The completion of the water-supply from Curlew Springs, where a supply of 20,000 gallons of water has been developed, instead of being pushed rapidly forward continues in an experimental stage. Since the springs were opened never less than 2,000 gallons daily flowed from them, and this water has been continually on the increase. It seems to me that the full amount needed to store this water and bring it into the post having been allowed by the Government, the building of the reservoir and the laying of the pipes should go on with the work at the springs. Here a whole garrison is in need of fresh water, which is in abundance within 1 mile of the post, while a few men are employed under the direction of the chief quartermaster of the department to develop more water. The supply already developed is eighteen times more than has usually been furnished the post by the water-wagon. I believe that the experimental stage is past, and more energetic steps should be taken to supply this post with water."

The post commander: "Steps will be taken to complete this work as soon as practicable."

FORT SELDEN, N. MEX.—*Acting Assistant Surgeon A. P. Frick*.—"The water-supply from the river by water-wagon is sufficient, and good when settled and filtered. In the extreme heat of summer it deteriorates in quality if left standing long enough to become quite clear. * * * Early in August the water in the river-bed gradually ceased to flow on the surface, and such supply as could be obtained was, and is now, unfit for use, being stagnant and everywhere slowly flowing and unwholesome. Stomachic and intestinal troubles began to appear among the men who used the water freely, when, at the verbal recommendation of the post surgeon, the old well in the garden, situated within a few hundred yards of the river, was thoroughly cleaned and deepened a few feet. * * * The well is now 10½ feet deep, and when not pumped out has from 3 to 4 feet of water of a better quality for all purposes than that of the river, even during seasons of high water, and when settled and filtered. This quality of water from said well will however continue only during the dry season. When the river is up, or rains prevail, it will fill up to near the surface, and will then contain the seepage through much decayed vegetable matter and other impurities on the surrounding flat. The water-supply for the post is now drawn from this well, but in its present condition it does not furnish a sufficient quantity. The question as to a permanently reliable and satisfactory supply of water for this garrison has therefore become a matter of serious concern both as to quantity and quality, and demands the prompt attention of the conservators of military hygiene. Upon extended inquiries at Las Cruces and other points, I have ascertained that in this valley driven wells reach successively three different strata of water within a depth of from 40 to 50 feet; that the first is more or less alkaline, according to the local surface conditions, the second less so, while the third furnishes a very excellent quality of water. These driven wells are not expensive, and it is to be regretted that the pure, clear, excellent water within such easy reach has not hitherto been substituted (especially for cooking and drinking purposes) for the ever turbid and undesirable waters of the Rio Grande. * * * A driven well has been sunk from the bottom of the old well described in last month's sanitary report to a depth of 24 feet below the surface of the flat on which said well is situated. The present water-supply from this well is excellent. If the same stratum of water could be reached from a point within the post, transportation (which becomes difficult or impossible during seasons of high water) would be saved."

FORT DAVIS, TEX.—*Maj. J. V. Lauderdale*: "The men have been furnished in good quantity with distilled water for drinking purposes during a portion of the year, and it is preferred to any other."

FORT RINGGOLD, TEX.—*Capt. William F. Carter*: "The water-supply is now in every respect satisfactory. The settling reservoirs recently put into operation furnish an abundant supply of clear water for general use. The immunity from typhoid fever, dysentery, and diarrhœa enjoyed by the troops at this post may, I think, be fairly ascribed to the purity of the drinking water (distilled water) which is used exclusively by the men in garrison. I think it would be well, as far as practicable, that detachments going into the field be provided with distilled water, which might be conveniently carried in the common water-keg furnished by the Quartermaster's Department."

FORT McINTOSH, TEX.—*Lieut. Paul Clendenin*: "The water-supply is not sufficient. A new tank is in process of construction. The water is very hard, as has been recently proven in a very practical manner by the scaling of the boiler of the ice-machine and the rapid accumulation of scale on the coils of the condenser in connection therewith. * * * Furthermore, the organic matter is not filtered out in the seepage from the river to the well from which the post is supplied, and the great difficulty of keeping the tanks clean adds to the impurity of the water. It is respect-

fully and strongly urged that at the earliest possible date some means be employed to supply this post with condensed water for drinking purposes. It has been found impracticable to have this condensing apparatus in connection with the ice-machine here."

FORT CLARK, TEX.—*Maj. B. F. Pope*: "The early part of the year 1888 was marked by several heavy rains, and when these occur all the animal and human excreta within a space of 1½ miles in length and one-fourth mile wide are swept by floods of water directly over its banks and into our spring. The foul ditch or ravine so frequently referred to in my sanitary reports is the natural outlet of a large valley that can be clearly traced from rising ground to the north of the post. The widest part of this valley lies to the north and east. Its direction is southwest, and it terminates in a small cut near the mouth of the spring at what may be called slack-water. A bank of loose rock and earth, varying in width from 10 to 50 feet, and in height from 1 to 8 feet, divides the spring proper from the ditch. That there is free communication between the two is evidenced by the fact that the foul water standing in the ditch ebbs and flows with the rise and fall of the spring. Along the bank of the ravine and within the area of the valley is collected a score of privies, goat and cattle pens, and a large Mexican settlement that is filthy beyond description. The only natural safeguard against so serious a danger lies in the large amount of water poured out by the spring, and the rapidity with which it is apparently purified. I say *apparently*, but this purification extends only to the water and not to the banks, nor to the enormous vegetable growth that fills the pool. For a distance of 10 and even 20 feet from the margin of the pool the polluted soil can only be gradually cleansed by subsequent rains and inevitable percolation through the soil into the spring. It may be urged that because our supply-pipe is placed deeply it is quite impossible to take up any of this surface-wash. This I think is an error, as the simple experiment of forcing a stream into the bottom of a vessel of water will clearly demonstrate. Under these conditions most of the sediment contained in the vessel is seen to be carried first to the surface by the momentum of the stream, thence to the periphery by outflowing currents, and again along its bottom to the center; so that the deepest point of the vessel is quite as liable to be polluted as the surface and margin. In order to protect our water-supply from the pollution described there seem to be but two plans. * * * Last summer condensed water from the ice-machine was offered to all companies desiring it. In a few instances company commanders placed barrels of condensed water along-side of the barrels of spring-water that were used for drinking purposes. Unfortunately the condensed water, which from motives of economy was taken from the exhaust of the engine instead of the boiler direct, was slightly milky from beeswax used as a lubricant, and showed traces of iron rust from the pipes through which it was run. Although the harmlessness was explained at the time in a published circular, the condensed water remained unused, even when all traces of iron and wax had been eliminated by taking the stream directly from the boiler. This season no attempt has been made to force the condensed water upon the troops. The condensing apparatus is able to supply about eleven barrels per day after furnishing all water necessary to the manufacture of ice, and this quantity I consider sufficient for the drinking purposes of a garrison of ten companies."

FORT LOGAN, COLO.—*Capt. Charles Richards*: "Typhoid fever is very prevalent in the vicinity of the post; and it is believed that most of the streams in this country are polluted. The water-supply of the post, however, should be free from infection, as it is obtained from an artesian well six hundred and sixty-eight feet in depth; and it is generally conceded that artesian wells can not become infected."

FORT SHERIDAN, ILL.—*Capt. A. H. Appel*: "The water-supply of the post is now obtained from a well 236 feet deep, within the garrison, and the quantity obtained during the month has been amply sufficient for all purposes."

FORT CUSTER, MONT.—*Capt. W. R. Hall*: "For the past week or two the water has been very poor. The Little Horn River is very muddy from rains on the mountains. On account of the extra alkali now contained in the water, and the hot weather, more intestinal diseases than usual are prevalent."

FORT DOUGLAS, UTAH.—*Maj. W. D. Wolberton*: "The water-supply is abundant and of good quality at its source, but much contaminated in its course to the post by the refuse, excrement, etc., from camps and quarters of laborers and teams of oxen which are located on the borders of the stream in the narrow cañon through which the water flows. Cases of typhoid fever are reported to have occurred during the summer in the camps of these laborers. * * * During the recent rain and snow fall the water supply was so much contaminated by the above cause as to be very obnoxious to sight and smell, and actually nauseating."

The post adjutant: "The water question, in relation to the pollution by the workmen and horses of the rock quarry, has been referred to the United States attorney, Salt Lake City, and will, it is expected, be speedily settled."

FORT ASSINNIBOINE, MONT.—*Capt. Louis A. LaGarde*: "The quality of the water suffers no impairment unless it does so from the manure that is dropped upon the company gardens in close proximity to the source of the supply. The creek flows through a bottom, on both sides of which the company gardens lie. It is fair to presume that more or less of this refuse matter seeps to the water-line, and thence to the creek or pond. I believe the practice pernicious and fraught with danger, and I would recommend that it be discontinued. * * * The question of increasing and maintaining the amount of water is one that should receive early attention. The post should certainly not be subjected to the risk of another dry season."

The medical director: "Nearly all the gardens are now on the creek below the post, and it would be safe to remove all of them to that locality, carefully guarding the creek above the in-take of water from every possible source of contamination, such as gardens, tents, camping, etc. The necessity of increasing and improving the water-supply of this post is a pressing one, but as it is now under consideration no further remark is deemed necessary."

FORT APACHE, ARIZ.—*Capt. Edward Everts*: "The water-supply is taken from the White River, above the post. The quantity is ample for domestic uses, and the quality is generally good. Unless precautions are taken the water supply will be contaminated, as it was last summer and fall, by the turning in above our water-supply of the irrigating water used on the Indian farms above the post."

The post commander: "It is impracticable to entirely prevent the turning in of irrigating water above the water-supply. This water comes from Indian farms above the post, and orders are given from time to time to mitigate the evil as much as possible."

FORT LEWIS, COLO.—*Lieut. N. S. Jarvis*: "In regard to the water-supply it should be stated that, owing to the use of large quantities of water from the river for irrigating purposes by farmers above the post, the garrison has not had a satisfactory water-supply. By the falling of the water large quantities of vegetable organic matter were left exposed to the action of the sun, and when the volume of the river-flow increased, this very perceptibly polluted our water-supply. Quite a number of cases of gastro-intestinal irritation were observed at that time, and the water when allowed to stand gave a very perceptible odor of decomposition."

FORT RENO, IND. T.—*Capt. J. Van R. Hoff*: "It will be observed that of one hundred and thirty-nine permanent posts of the Army, including the recruiting depots, at but ten were more sick treated than here. Of the whole number of cases of disease reported, 377, 67 were malarial, 67 catarrhal, 83 digestive, 28 headache and neuralgia. At but nine posts of the Army were more malarial cases treated than here. Over 100 per cent. more cases of malaria were treated here than the average in the Army; nearly 100 per cent. more of diseases of the respiratory system, and about 25 per cent. less of diseases of the digestive system, including diarrhoea and dysentery. As these are all preventable diseases is it pertinent to ask if there be no remedy? Considering first the two classes which appear *in extenso* on the consolidated returns of the Medical Department, the officer and the enlisted man, we are struck with the fact that, proportionately of those present at the post, 50 per cent. more enlisted men are sick than officers, and let it here be observed that this is the average proportion in the service. I can conceive of no legitimate reason for this. Viewed from a purely physical stand-point I can discover three essential reasons at this station why the officer is more healthful than the enlisted man. First, in his habitation, especially at night, the air is purer; in other words, he has greater air-space, and his quarters are comparatively salutary. 2d. The water he drinks is undeniably purer. 3d. His food is properly cooked and in sufficient variety. It may be said that the officer, being more intelligent, knows better how to preserve his health; but it is a reasonable assumption that his intelligence should as well be exerted in behalf of his men with better results than have yet obtained in the U. S. Army. The enlisted man at Fort Reno is well clothed, badly quartered, fairly well fed, and drinks detestable water; his morality is in proportion to his opportunities in the opposite direction, which are few; and he is not overworked. Hence it may be justly claimed that his habitation and the water he drinks are the important causative factors of his non-effectiveness. Steps are now being taken to improve his habitation. * * * Convinced that to the water we must look for the principal cause of non-effectiveness among the enlisted men, I would again respectfully renew my recommendation that efforts be made to improve the quality of the post water-supply. To this end but two means now suggest themselves: 1st. That the Caddo water be piped to the post, or, 2d, that a distilling apparatus be obtained: The first seems the most practicable. Looking to Caddo Springs as the ultimate source from which a permanent supply of water for this post must come, I would respectfully suggest that steps be at once taken to include these springs in the military reservation of Fort Reno. Such an effort now would probably be successful without cost to the Government, whereas delay might place the matter beyond the possibility of accomplishment. The alternative, that of a distilling apparatus, could but prove costly and comparatively unsatisfactory."

The medical director of the department, in his indorsement on this report, remarks: "Supplying the post from Caddo Springs may be expensive, but it is feasible; deep wells are an experiment that may or may not yield the desired result; distilled water, with the price of fuel at Fort Reno, would be most expensive."

FOOD SUPPLY.

The food supply appears to have given satisfaction during the year, the few complaints made in the sanitary reports serving only to emphasize this fact. The most common complaint had reference to a deficiency of vegetables. Forts Buford, Selden, and Ringgold reported a deficiency of potatoes; the medical officer at Jefferson Barracks urged the need of onions, as well as potatoes; the companies at San Antonio and Alcatraz had to purchase vegetables from private funds, 50 cents to \$1 per man per month at the latter post; and at Fort Sill a scorbutic tendency was shown as a result of defective diet during field service in the Indian Territory.

FORT SILL, IND. T.—*Lieut. R. R. Ball*: "By an inspection of the sick-reports of this post it is observed that many men of certain troops, since their return from recent field service, have developed a condition of dyscrasia, chiefly shown by successive crops of ulcers on the hands and legs. This condition exists among all those troops, in varying proportions, who were on constant field duty since the 29th March last in the Indian Territory. This condition of the system is always indicative of an absence, or an insufficient quantity, of the vegetable elements of food, thus rendering it necessary for the men to live upon a meat diet for too long a time. It is presumed that the difficulties of obtaining fresh vegetables in abundance during this long tour of field duty were very great, but I would respectfully suggest that an abundant and constant supply of the canned vegetables of the commissary department would in large measure prevent such scorbutic developments in the future."

CLOTHING.

The clothing of the men appears to have given general satisfaction to the post medical officers who have specially considered the subject. From two stations only, Fort Mojave and Camp at Eagle Pass, come reports taking exception to the undershirt as being too heavy and irritating during hot weather; and from four, Forts Wingate, Washakie, Pembina, and Marcy, complaining of the cotton drawers as an insufficient protection during cold weather.

CAMP AT EAGLE PASS, TEX.—*Capt. P. R. Egan*: "The white clothing worn by the men is suited to this season. The knit undershirt supplied by the quartermaster's department is the only article of clothing that is wholly unfit for wear in this climate during six months of the year. In Texas, during the long summer months, perspiration continues freely night and day. Skin eruptions are almost universal. To most persons the irritation of the knit undershirt is intolerable. The men all provide themselves with light, unirritating shirts in town. As this calls for an outlay from the scanty purse of the soldier, it should not be. India gauze, or some other light unirritating undershirt, ought to be supplied by the quartermaster's department for this climate during this season."

FORT WINGATE, N. MEX.—*Maj. P. J. A. Cleary*: "The clothing of the troops appears to be good and well adapted to the climate except the drawers. These latter are of cotton, and I am decidedly of the opinion that in winter at this altitude (at least 7,000 feet) and where the ground is covered with snow for at least four months, they are an insufficient protection. There were 49 cases admitted to sick report during January; 12 cases (or one-fourth of the entire number) were due to what may be termed colds, viz: catarrhs, bronchitis, sore-throat, rheumatism, etc. It needs no argument to prove that if instead of cotton the troops were furnished with good woolen drawers, it would tend to reduce the sick-list from this cause to a minimum."

FORT WASHAKIE, WYO.—*Lieut. Charles F. Mason*: "This winter, as last, the cotton-flannel drawers issued to the men have proved to be an insufficient protection, and the soldier either wears several pairs at once or purchases the woolen article from the trader."

BATHING.

A general complaint of the want of facilities for the personal cleanliness of the men comes from our military posts. At some a rude shed is dignified with the title of company bath-house. This is fitted with a few tin basins and a bath-tub extemporized out of a commissary barrel; and warm water, when it can be obtained, is brought by hand from the kitchen. More frequently the shed is provided with one or two bath-tubs, but the water supply is deficient. The value of personal cleanliness as a sanitary measure can hardly be overestimated. Each company should have a comfortable bath-room with at least four tubs, and a supply of hot and cold water sufficient for the needs of the command. A few extracts from sanitary reports are given to illustrate existing conditions. Similar extracts could be gathered from many other posts, as Forts Apache, Assiniboine, Brown, Du Chesne, Gibson, Lewis, McIntosh, Omaha, and Ringgold.

FORT GRANT, ARIZ.—*Capt. W. B. Bannister*: "The bathing facilities are entirely inadequate to accommodate the number of men in a company. The bath-rooms are rude structures without bathing-tubs, except in those instances where leaky company-made substitutes are made to do duty in that particular. The rooms are dilapidated, and frequently the floors are wet or damp, with no grating for the bathers to keep out of the water on the floor."

FORT BUFORD, N. DAK.—*Capt. V. Havard*: "The absence of a bath-house with warm and cold water, where the men could take frequent baths in private compartments is very much felt and must prevent many from being as cleanly as they would."

FORT STANTON, N. MEX.—*Capt. M. E. Taylor*: "The bath-rooms belonging to the cavalry troops are primitive even to sheds, of the poorest construction imaginable, containing in each one tub. Company B, Tenth Infantry, has no bath-room. * * * Recommendations: That each company be provided with a suitable bath-room and four tubs for each cavalry company and three for each infantry company."

FORT SILL, IND. T.—*Capt. B. D. Taylor*: "Bathing facilities for the men very inadequate, there being on an average one bath-tub and three stationary wash-basins for fifty persons. The bath-houses are entirely too small, and should be enlarged to the extent of containing four bath-tubs and twelve basins for the cavalry troop and three-fourths of that number for the infantry company. It is true that the men visit the creek for the purpose of bathing, but this is done in the midst of a malarious atmosphere, and at the time when paludal emanations are most noxious."

FORT ELLIOTT, TEX.—*Maj. James P. Kimball*: "Personal hygiene in the matter of bathing is not what it should be. Each company has one bath-tub only, and this is placed in a room, or rather shed, insufficiently warmed at this season. A large proportion of the men bathe infrequently or not at all during the winter season. Two bath-tubs per company are in my opinion the least that can furnish proper facilities for bathing."

JACKSON BARRACKS, LA.—*Lieut. F. V. Walker*: "The facilities for bathing for the men are poor, exceedingly poor. The post commander is making every effort to improve this condition. Measures should be immediately adopted to place the present bath-room in as attractive a condition as possible. Frequent ablutions, in this climate particularly, are demanded of each and every one who would preserve health and maintain his self-respect. There are many who do not appreciate the old law on the subject of cleanliness, and they will not pay the proper attention to their persons if it causes them much of an effort or inconvenience. For such men, especially, the bath-room should be made as attractive and inviting as possible. A shelter, an inferior tub, and a supply of cold water, are regarded, as far as my observation goes, as all that is essential for the convenience of men at an Army post. It is my view that to each barrack should be attached a bath-room adequate to the needs of the company, and supplied with porcelain-lined tubs, and an abundance of hot and cold water. This should not be regarded as a luxury, but as absolutely essential to the health and well-being of the men."

FORT ROBINSON, NEBR.—*Capt. J. R. Kean*: "It is recommended, if possible, to supply the bath-rooms of the barracks with either wood or coal stoves, the pipes of which can readily be carried into the same flue with the pipe of the dining-room stove. In the winter months in this latitude men can not be expected to bathe in a room which is not heated, and a comfortable bath-room is essential to the maintenance of that personal cleanliness which is necessary to preserve the comfort, health, and self-respect of the soldier."

The Post Adjutant: "In this connection the post commander would like an expression of opinion from the medical officer with regard to want of capacity and general unfitness of the bath-rooms in the barracks for affording proper facilities for bathing, and with regard to the advisability of urging that a general bath-house be erected with suitable accommodations for the entire garrison."

The Post Surgeon, George W. Adair: "The construction of a general bath-house for all the troops at the post would be a happy and perfect solution of the many difficulties incident to the effort to provide proper bathing facilities. The principal objections to the present arrangement of a bath-tub in each barrack are as follows: First, the difficulty of proper heating of the rooms. Second, the impossibility of furnishing an abundant supply of warm water from the kitchen boiler. The boilers at present furnished never become heated much above 120° Fahr.; a large fraction of their contents, from one-fifth to one-half, is taken for each bath, and as several hours are required to reheat the boiler, the number of warm baths supplied in a day is necessarily limited, the best part of a week being required to furnish each man of a large company with one bath. It is evident that this is not a sufficiently liberal provision to encourage personal cleanliness, as some men, especially the negro race, need several baths a week to prevent a disagreeable personal odor. This difficulty is apparently insurmountable, as the boilers are already too large to be efficiently heated by the water-backs of the ranges. Third, the space in barracks used for bath-rooms is cut off from the wash-rooms, and is a sacrifice of space that can ill be spared, as the wash-rooms before were none too large for a company. The advantages of a common bath-room are many: First, the supply of warm water can be made abundant; second, a cold plunge can be provided; third, a gymnasium can be provided in the same or an adjoining building and heated by the furnace of the bath-house."

The Medical Director: "The separation of the bath-room from the company barracks and the establishment of this facility for the post at large is a matter much to be desired, and of general application. Whatever other adjunct this common bath-house may have, it should be provided with a waiting-room. I am also of the opinion that on a large scale the jet system is to be preferred to the ordinary bath-tub, both as more cleanly, and as an immense economy of hot water."

HABITS, ETC.

Little is said in the sanitary reports concerning the habits of the men; but a good deal may be learned by considering the statistics of alcoholism. The admission-rate on account of the effects of intoxicating liquors was 41.43 per thousand of strength, as compared with 3.22 in the British, .35 in the German, and .04 in the Italian army. Among our colored troops the rate was 2.07; among the white troops, 45.64. With these figures before us showing the abuse of intoxicating liquors in the Army, the desirability of lessening the evil is manifest. Prohibition on the military reservation has been suggested and tried, but this has immediately invited the establishment of dens of dissipation and disease just beyond the jurisdiction of the commanding officer. License on the reservation, in the opinion of our medical officers, is infinitely preferable to unbridled license outside of it. It is believed that the canteen system will have a greater effect in reducing the statistics of alcoholism than any measure that has yet been tried.

Capt. J. Van R. Hoff's view of the subject, as given in the following extract, is that usually taken by post medical officers:

FORT RILEY, KANS.—*Capt. J. Van R. Hoff*: "Of the total number of cases treated 84 per cent. suffered from venereal disease in its various forms. * * * There are certain indirect means in the hands of the military authorities which would be instrumental in reducing the amount of non-effectiveness from this cause. * * * The principal physical predisposing causes to venery are intemperance and inactivity. Theoretically it is impossible for an enlisted man at this post to get any intoxicant to drink, since none is permitted to be sold on the reservation, and outside of it the "prohibition" law obtains; but I am told that as a matter of fact liquor of the vilest character is obtainable in any quantity at Junction City, and I have had ocular demonstration in the many cases which fall under my observation here that venereal diseases of the same character exist there in equal amount. Most men occasionally crave a stimulant; if they can get it of good quality so much the better, but good or bad they will have it. Since this is the case, it seems better that proper facilities

should be furnished them for a temperate indulgence in stimulants under control of military authority than that the men should be forced to seek to satisfy their craving by the occasional inordinate use of bad liquor, under conditions which must almost inevitably lead to further debauchery. A temperate man whose passions are not appealed to by obscene suggestions and whose body is actively employed is not greatly prone to incontinence. The enlisted man in garrison is not as a rule actively employed. The question of what constitutes active employment is not easily answered. Parke's Manual of Hygiene states: 'We can perhaps say, as an approximate, that every healthy man ought, if possible, to take a daily amount of exercise equivalent to a walk of 9 miles.' But he further says: 'As the trade of the soldier is *par excellence* an athletic one, he ought to do easily 12 miles daily for a long time; this of course, with his pack of 60 pounds.' But the soldier should also be prepared to endure much greater exertion; in fact, 'ought always to be in a state of training.' To meet this requirement, to keep up the balance between the intake and the outgo, it seems to me most desirable that a gymnasium should be established at this post, and that gymnastics should be systematically taught.

"The ration is a subject pregnant with suggestions to writers upon the ills of the body military, but I have yet to see that any of them have called attention to the fact that good food and plenty of it is not an unalloyed blessing. A full belly is an absolute detriment unless counteracted by hard work, and this hard work in garrison can not be more satisfactorily done than by gymnastic exercise. Certainly this is not a novel suggestion; 'all military nations have used in their armies a system of athletics,' and I believe there is no dissent to its utility.

"To recapitulate, I would respectfully suggest that non-effectiveness from venereal diseases at this station may be lessened by the sale of liquor at the post, the establishment of a gymnasium, and the systematic instruction of the enlisted men in athletic exercises."

APPENDED PAPERS.

In closing I have the honor to invite attention to a series of tables which give in detail the statistical data on which the statements of this report are based. They consist of—

I. A numerical view of the effects of disease and injury on the Army during the calendar year 1889, as compared with the corresponding data from the reports of 1888 and of the decade ending December 31, 1887.

II. The relative sickness of the troops, white and colored, in the various Military Departments.

III. The military posts in each Department, alphabetically arranged, with mean strength, admissions for disease and injury; also deaths and discharges, with ratios per thousand of strength for admissions and non-effectiveness, the averages of daily sickness, and the meteorological data for the year 1889.

IV. A general view of the results of disease and injury at each of the various military stations, arranged in the order of their mean strength.

V. Twenty posts having the highest rates of admission for the year; the said rates compared with those of 1884-'88, inclusive.

VI. Twenty posts having the highest rates of non-effectiveness during the year; the said rates compared with those of 1884-'88, inclusive.

VII. Twenty posts having the highest admission-rates for *disease*, excluding venereal diseases, vaccina, and alcoholism, together with their ratios for deaths, discharges, and constant non-effectiveness; also the corresponding average rates of the Army.

VIII. Twenty posts having the highest non-effective rates for *disease*, excluding venereal diseases, vaccina, and alcoholism, together with the average number sick daily, and average duration of each case; also the corresponding average rates of the Army.

IX. The military posts in each Department, showing the rates of admission, death, discharge, and non-effectiveness for *disease*, not including venereal diseases, vaccina, nor alcoholism.

X. The monthly prevalence of disease among the white and the colored troops in the Army and its several Departments,

XI. The rates per thousand of strength of admission, death, discharge, and non-effectiveness of the Army, and of the troops in the several Departments, for the year, as compared with those of the decade 1878-'87, and of certain foreign armies.

XII. Admission-rates for specific febrile diseases in various armies.

XIII. Distribution of specific febrile diseases at U. S. military posts during the year.

XIV. Twenty posts giving the largest admission-rates for malarial diseases, rheumatism, diarrhœal and venereal diseases, respectively.

XV. Twenty posts giving the highest non-effective rates for malarial diseases, rheumatism, diarrhœal and venereal diseases, respectively.

XVI. The distribution of pneumonia at United States military posts during the year.

XVII. The causes and ratios of rejection among 20,787 recruits examined during the year; white 19,342, colored 1,445.

Respectfully submitted.

JNO. MOORE,
Surgeon-General.

Hon. REDFIELD PROCTOR,
Secretary of War.

APPENDED PAPERS.

STATISTICAL TABLES.

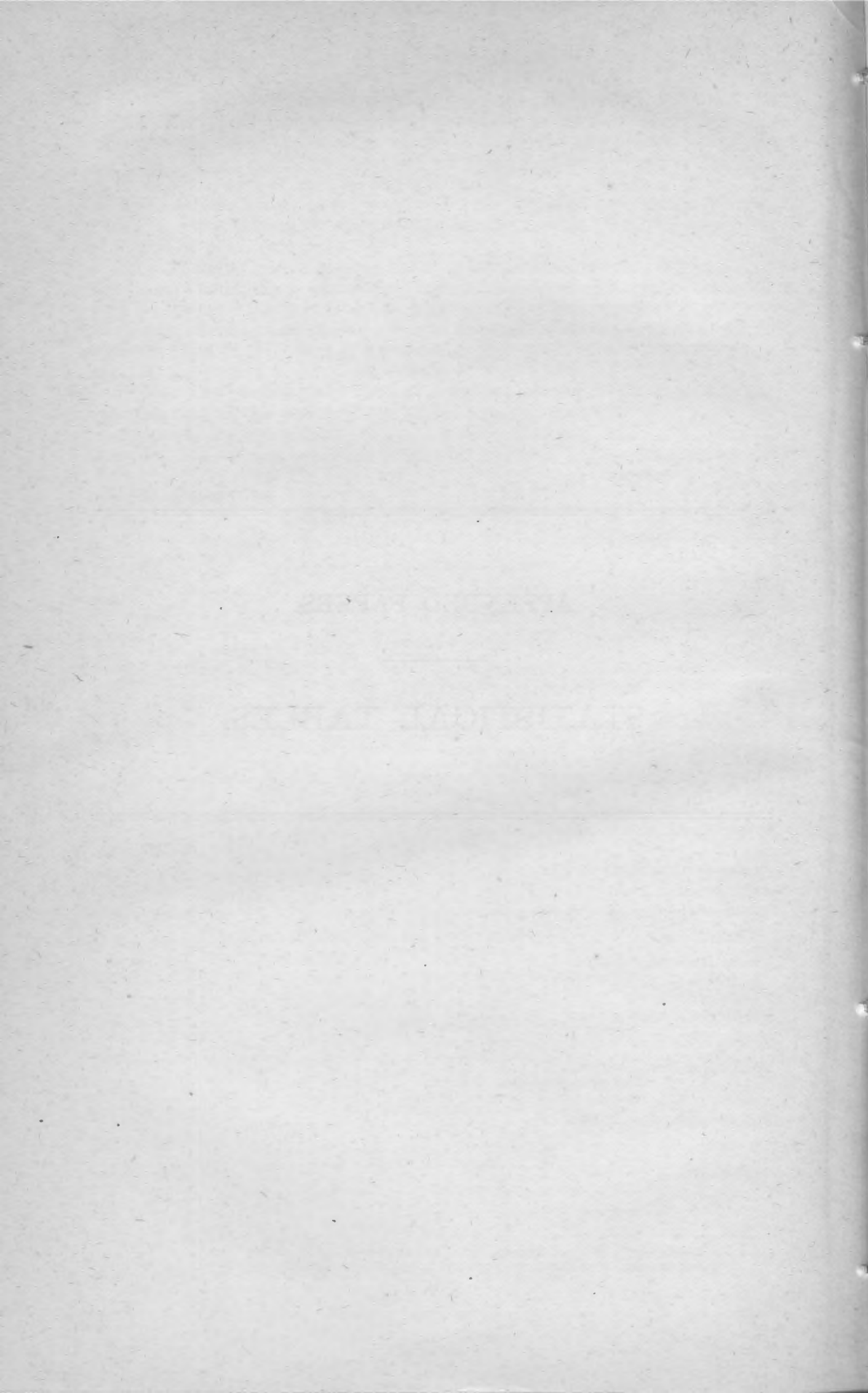


TABLE I.—A numerical view of the effects of disease and injury on the Army during the calendar year 1889, as compared with the corresponding data from the reports of 1888 and of the decade ending December 31, 1887.

United States Army.	White.	Colored.	Total.
Average strength as shown by returns of the Adjutant-General.....	*24,723	*2,610	*27,333
as shown by reports of the Medical Department.....	†22,591	†2,417	†25,008
All admissions to sick report during the year.....	29,790	3,096	32,886
treated in hospital.....	14,286	1,689	15,975
treated in quarters.....	13,302	1,260	14,562
treated in field.....	2,202	147	2,349
Ratios of all admissions per 1,000 of mean strength.....	1,318.67	1,280.93	1,318.02
for the previous year.....	1,249.71	1,464.82	1,270.73
for the preceding decade.....	1,370.45	1,742.77	1,586.65
Admissions for disease.....	24,256	2,410	26,666
ratios per 1,000 of mean strength.....	1,073.70	997.10	1,068.30
for the previous year.....	1,013.09	1,164.32	1,027.87
for the preceding decade.....	1,328.17	1,470.78	1,341.58
Admissions for injury.....	5,534	686	6,220
ratios per 1,000 of mean strength.....	244.96	283.82	248.72
for the previous year.....	236.62	300.50	242.86
for the preceding decade.....	242.28	271.99	245.07
Ratios per 1,000 of mean strength of cases treated in hospital.....	632.38	698.80	638.80
of cases treated in quarters.....	588.82	521.81	582.29
of cases treated in field.....	97.47	60.82	93.93
Number constantly non-effective during the year.....	1,003.94	99.81	1,103.25
ratios per 1,000 of mean strength.....	44.44	41.09	44.12
for the previous year.....	41.62	44.56	41.91
for the preceding decade.....	43.59	43.00	43.54
Number of days lost on account of sickness during the year.....	366,439	36,248	402,687
average for each man of the Army.....	16.2	15.0	16.1
for the previous year.....	15.2	16.3	15.3
for the preceding decade.....	15.9	15.7	15.9
Average number of days each case was treated.....	12.3	11.7	12.2
for the previous year.....	12.2	11.1	12.1
for the preceding decade.....	10.1	9.0	10.0
Average days treatment for patients returned to duty.....	10.5	9.7	10.4
discharged for disability.....	87.9	74.6	86.6
who died.....	37.2	55.0	40.4
Number of discharges for disability.....	560	63	623
ratios per 1,000 of mean strength.....	22.65	24.14	22.79
for the previous year.....	27.67	28.45	27.75
for the preceding decade.....	31.92	32.53	31.96
Number of discharges for disease.....	478	58	536
ratios per 1,000 of mean strength.....	19.33	22.22	19.61
for the previous year.....	24.39	23.52	24.31
for the preceding decade.....	28.08	27.74	28.05
Number of discharges for injury.....	82	5	87
ratios per 1,000 of mean strength.....	3.32	1.92	3.18
for the previous year.....	3.28	4.93	3.44
for the preceding decade.....	3.83	4.64	3.90
Number of deaths from all causes.....	148	25	173
ratios per 1,000 of mean strength.....	5.99	9.58	6.33
for the previous year.....	7.55	13.66	8.16
for the preceding decade.....	9.24	12.44	9.52
Number of deaths from disease.....	90	18	108
ratios per 1,000 of mean strength.....	3.64	6.90	3.95
for the previous year.....	5.00	10.02	6.09
for the preceding decade.....	5.92	7.24	6.03
Number of deaths from injury.....	58	7	65
ratios per 1,000 of mean strength.....	2.35	2.68	2.38
for the previous year.....	1.95	3.04	2.06
for the preceding decade.....	3.32	5.20	3.49

* Used in computing the ratios of deaths and discharges for the whole Army.

† Used in computing all ratios for the Army except those of deaths and discharges.

TABLE II.—The relative sickness among the troops, white and colored, in the various military departments during the year 1889.

Army by departments.	Mean strength of command.	Admissions during the year 1889.						Admission-rate per 1,000 of mean strength.	Troops per 1,000 of mean strength constantly non-effective from sickness.	
		Quarters.	Hospital.	Field.	Disease.	Injury.	Total.			
East.....	W.....	5,292	3,469	4,408	141	6,898	1,120	8,018	1,515.12	45.85
	C.....	80	26	123	.....	138	11	149	2,483.33	93.79
	T.....	5,352	3,495	4,531	141	7,036	1,131	8,167	1,525.97	46.39
Platte.....	W.....	2,799	1,612	1,289	440	2,635	706	3,341	1,193.64	36.61
	C.....	654	441	493	57	747	244	991	1,515.29	33.60
	T.....	3,453	2,053	1,782	497	3,382	950	4,332	1,254.56	36.04
Dakota.....	W.....	3,725	2,168	2,056	259	3,433	1,050	4,483	1,202.52	42.06
	C.....	440	150	275	11	325	111	436	990.91	33.53
	T.....	4,168	2,318	2,331	270	3,758	1,161	4,919	1,180.18	41.16
Missouri.....	W.....	4,309	2,138	2,729	856	4,844	879	5,723	1,328.15	43.03
	C.....	127	26	153	.....	162	27	179	1,409.45	55.57
	T.....	4,436	2,164	2,882	856	4,996	906	5,902	1,330.48	43.30
Texas.....	W.....	1,778	931	1,408	135	2,030	444	2,474	1,391.45	50.28
California.....	W.....	1,241	825	496	219	1,185	355	1,540	1,240.93	41.20
Columbia.....	W.....	1,423	1,150	625	83	1,406	452	1,858	1,305.69	38.50
Arizona.....	W.....	1,974	1,009	1,258	69	1,808	528	2,336	1,183.38	41.66
	C.....	1,132	617	643	79	1,046	293	1,339	1,182.86	40.83
	T.....	3,106	1,626	1,901	148	2,854	821	3,675	1,183.19	41.35
Hot Springs, Ark.....	W.....	47	.....	.....	.....	.....	.....	.....	.....	.....
	C.....	4	.....	.....	.....	.....	.....	.....	.....	.....
	T.....	51	.....	.....	.....	.....	.....	.....	.....	.....
At large: Miscellaneous deaths and discharges.	W.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	C.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	T.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total for the Army.....	W.....	22,591	13,302	14,286	2,202	24,256	5,534	29,790	1,318.67	44.44
	C.....	2,417	1,260	1,689	147	2,410	686	3,096	1,280.93	41.09
	T.....	25,008	14,562	15,975	2,349	26,666	6,220	32,886	1,315.02	44.12

Army by departments.	Deaths.	Annual death-rate per 1,000 of mean strength.	Discharges for disability.	Annual discharge-rate per 1,000 of mean strength.	Average duration of treatment among patients.			Death-rate per 1,000 of admissions.	Discharge-rate per 1,000 of admissions.	Recoveries per 1,000 of admissions.	Average sick daily.	Average duration of treatment among all admissions.	
					Who died.	Discharged for disability.	Recovered.						
East.....	W.....	84	6.42	124	23.43	29.2	63.5	9.5	4.24	15.47	933.77	242.64	11.0
	C.....	1	16.67	6	100.00	2.0	26.0	12.4	6.71	40.27	832.21	5.63	13.8
	T.....	35	6.54	130	24.29	28.0	61.6	9.5	4.29	15.92	931.92	248.27	11.1
Platte.....	W.....	15	5.36	83	29.65	46.4	60.7	9.3	4.49	24.84	964.68	102.47	11.2
	C.....	7	10.70	12	18.35	40.7	50.9	7.5	7.06	12.11	967.71	21.96	8.1
	T.....	22	6.37	95	27.51	44.4	59.5	8.9	5.08	21.93	965.37	124.44	10.5
Dakota.....	W.....	15	4.02	78	20.92	21.1	94.9	10.5	3.35	17.40	970.33	156.79	12.8
	C.....	4	9.09	9	20.45	111.2	69.9	10.1	9.17	20.64	940.37	14.75	12.4
	T.....	19	4.56	87	20.87	48.8	92.1	10.5	3.86	17.69	967.68	171.55	12.7
Missouri.....	W.....	26	6.03	95	22.05	30.0	74.8	10.4	4.54	16.60	951.42	185.42	11.8
	C.....	1	7.87	5	39.37	.....	59.8	12.8	5.59	27.93	932.96	7.06	14.4
	T.....	27	6.09	100	22.54	30.0	74.0	10.5	4.57	16.94	950.86	192.47	11.9
Texas.....	W.....	13	7.31	28	15.75	9.0	80.6	11.8	5.25	11.32	962.81	89.40	13.2
California.....	W.....	15	12.09	33	26.59	83.9	70.2	10.8	9.74	21.43	944.16	51.13	12.1
Columbia.....	W.....	8	5.62	31	21.79	31.7	112.8	8.8	4.31	16.68	961.79	54.78	10.8
Arizona.....	W.....	13	6.59	47	23.81	45.3	105.0	10.5	5.57	20.12	933.65	82.23	12.8
	C.....	12	10.60	28	24.73	45.4	78.6	10.2	8.96	20.91	764.90	46.22	12.6
	T.....	25	8.05	75	24.15	45.4	95.9	10.4	6.80	20.41	945.03	128.44	12.8
Hot Springs, Ark.....	W.....	1	.....	21	.....	175.0	31.6	181.4	.....	.....	.....	39.08	.....
	C.....	.....	.....	2	.....	.....	364.0	127.0	.....	.....	.....	3.68	.....
	T.....	1	.....	23	.....	175.0	307.0	178.3	.....	.....	.....	42.76	.....
At large: Miscellaneous deaths and discharges.	W.....	8	.....	20	.....	.....	.....	.....	.....	.....	.....	.....	.....
	C.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
	T.....	8	.....	21	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total for the Army.....	W.....	148	5.99	560	22.65	37.2	87.9	10.5	4.97	18.80	952.70	1,003.94	12.3
	C.....	25	9.58	63	24.14	55.0	74.6	9.7	8.07	20.35	954.78	99.31	11.7
	T.....	173	6.33	623	22.79	40.4	86.6	10.4	5.26	18.94	952.72	1,103.25	12.2

TABLE III.—Military posts in each Department alphabetically arranged with mean strength, admissions for disease and injury, also deaths and discharges, with ratios per thousand of strength for admissions and non-effectiveness, the averages of daily sickness and meteorological data for 1889.

DEPARTMENT OF THE EAST.

Names of stations.	Mean strength.	Cases.			Admission-rate per 1,000 of mean strength.	Average number of sick daily.	Constantly non-effective per 1,000 of mean strength.	Discharges for disability.	Deaths.	Altitude of stations.	Temperature.			Total precipitation.
		Disease.	Injury.	Total.							Mean.	Max.	Min.	
										Feet.	°	°	°	Inches.
Fort Adams, R. I.	199	186	30	216	1,085.43	5.96	29.97	6	2	30				
Allegheny Arsenal, Pa.	29	12	6	18	620.69	.44	15.12		1	704		94	-3	
Augusta Arsenal, Ga.	26	16	4	20	769.23	.98	37.51		1	600	64.5	100	20	49.25
Fort Barrancas, Fla.	61	76	7	83	1,360.66	2.95	48.42	1		30	68.3	94	29	52.74
Fort Brady, Mich.	78	133	24	157	2,012.82	2.58	33.05	1	1	600	40.2	87	-23	81.61
Fort Columbus, N. Y. Harbor.	147	131	19	150	1,020.41	6.49	44.15	6		200	52.2	91	1	55.92
Columbus Barracks, Ohio.	599	1,302	87	1,389	2,318.86	55.55	92.74	35	2	740		98	0	
David's Island, N. Y.	579	647	82	729	1,259.07	24.90	43.01	6	7	30	50.8	90	-1	60.65
Frankford Arsenal, Pa.	37	34	2	36	972.97	1.21	32.73			50		95	-2	
Fort Hamilton, N. Y.	190	234	61	295	1,552.63	7.87	41.40	3	2	47	52.6	87	2	52.16
Indianapolis Arsenal, Ind.	26	52	2	54	2,076.92	1.90	73.23			698	53.1	92	-1	38.41
Jackson Barracks, La.	40	68	7	75	1,875.00	1.43	35.75	1	2	10	68.8	95	32	48.45
Kennebec Arsenal, Me.	18	33	2	35	1,944.44	.37	20.39			200	45.0	90	-1	29.19
Fort McHenry, Md.	106	169	23	192	1,811.32	5.69	53.71	2		36	55.2	90	3	66.38
Fort McPherson, Ga.	156	479	54	533	3,416.67	11.36	72.80	4	2	1,078	61.1	95	14	54.75
Fort Mackinac, Mich.	81	102	24	126	1,555.56	1.72	21.24	2	2	728	41.4	82	-18	
Madison Barracks, N. Y.	240	267	68	335	1,395.83	10.54	43.93	2	2	262	44.8	92	-26	55.73
Fort Monroe, Va.	367	506	106	612	1,667.57	19.06	51.94	11	3	8	58.1	92	15	68.38
Mount Vernon Barracks, Ala.	87	93	24	117	1,344.83	4.77	54.86	4	2	155	65.9	100	22	44.07
Fort Myer, Va.	129	111	42	153	1,186.05	4.32	33.47	1		200	54.5	95	2	59.59
Newport Barracks, Ky.	52	54	5	59	1,134.62	1.73	33.25	1		588	54.1	98	6	37.33
Fort Niagara, N. Y.	93	51	29	80	860.22	3.21	34.47	2		271	49.1	93	-6	28.82
Fort Ontario, N. Y.	44	41	13	54	1,227.27	1.82	41.34		1	282	46.0	90	-5	40.10
Plattsburgh Barracks, N. Y.	48	40	9	49	1,020.83	1.95	40.64	1	1	186	46.3	92	-25	30.69
Fort Porter, N. Y.	83	53	6	59	710.84	3.29	39.64	1		660	46.6	89	-11	38.96
Fort Preble, Me.	44	46	12	58	1,318.18	1.13	25.78			38	46.4	92	-8	41.92
Fort Schuyler, N. Y.	71	85	16	101	1,422.54	3.43	48.27	1	2	25	51.7	88	0	55.01
Springfield Armory, Mass.	30	9	1	10	333.33	.41	13.52	1	1	250	50.6			46.40
St. Francis Barracks, Fla.	58	81	10	91	1,568.97	1.88	32.40	2		15	68.1			41.22
Fort Trumbull, Conn.	54	63	9	72	1,333.33	2.10	38.81	1		25	51.3	86	-1	49.70
Fort Wadsworth, N. Y.	105	76	17	93	885.71	3.27	31.15	4	2	140	52.8	92	1	60.41
Fort Warren, Mass.	78	77	19	96	1,230.77	3.43	44.01			38	49.0	89	-1	44.55
Washington Barracks, D. C.	251	254	32	286	1,139.44	11.10	44.21	12	1	106	55.1	93	4	61.33
Watertown Arsenal, Mass.	34	26	6	32	941.18	1.14	33.60			100				
Watervliet Arsenal, N. Y.	64	51	18	69	1,078.12	1.55	24.14			50	48.6	92	-8	40.78
Fort Wayne, Mich.	178	183	37	220	1,235.96	7.48	42.02	2	1	580		94	-7	25.92
West Point, N. Y.	354	272	66	338	954.80	8.85	25.01	4	1	167	49.3	89	-4	56.67

SURGEON-GENERAL.

TABLE III.—Military posts in each Department alphabetically arranged with mean strength, admissions for disease and injury, etc.—Continued.

DEPARTMENT OF THE EAST—Continued.

Names of stations.	Mean strength	Cases.			Admission-rate per 1,000 of mean strength.	Average number of sick daily.	Constantly non-effective per 1,000 of mean strength.	Discharges for disability.	Altitude of stations.	Temperature.			Total precipitation.	
		Disease.	Injury.	Total.						Mean.	Max.	Min.		
Willets Point, N. Y.	381	784	126	910	2,388.45	18.45	48.42	11	1	Feet. 80	° 52.0	° 88	° 1	Inches. 55.93
Fort Wood, N. Y. Harbor.....	37	22	2	24	648.65	.21	5.8	.....	.....	.....	53.5	90	2	58.68
Field	98	117	24	141	1,438.78	1.76	17.95	.....	.....	.....	.....	.....	.....	.....
Total	5,352	7,036	1,131	8,167	1,525.97	248.27	46.39	130	35	.....	.....	.....	.....	.....

DEPARTMENT OF DAKOTA.

Fort A. Lincoln, N. Dak.	101	67	35	102	1,009.90	4.56	45.19	5	.....	1,914	41.9	104	-30	10.26
Fort Assiniboine, Mont.	433	436	115	551	1,272.52	21.10	48.73	9	4	2,720	43.4	99	-22	9.75
Fort Bennett, S. Dak.	47	26	11	37	787.23	1.34	28.56	.....	.....	1,510	46.1	108	-27	.....
Fort Buford, N. Dak.	305	387	112	499	1,636.07	17.94	58.82	13	1	1,930	42.8	104	-34	8.45
Fort Custer, Mont.	341	316	116	432	1,266.86	16.96	49.72	5	2	3,040	46.1	100	-24	7.44
Fort Keogh, Mont.	410	267	89	356	868.29	14.02	34.20	6	3	2,536	45.3	104	-25	9.84
Fort Maginnis, Mont.	137	149	42	191	1,394.16	5.33	38.92	2	1	4,340	44.5	92	-28	13.89
Fort Meade, S. Dak.	519	533	148	681	1,312.14	18.55	35.73	8	.....	3,624	45.9	100	-20	18.00
Fort Missoula, Mont.	204	127	50	177	867.65	6.12	30.00	7	2	3,375	43.6	96	-21	9.15
Fort Pembina, N. Dak.	80	107	22	129	1,612.50	2.51	31.37	2	.....	900	38.2	97	-43	11.75
Camp Poplar River, Mont.	96	85	28	113	1,177.08	2.79	29.05	.....	.....	2,030	41.6	103	-35	13.32
Fort Randall, S. Dak.	178	118	54	172	966.29	8.57	48.16	3	1	1,245	49.2	105	-24	19.02
Fort Sisseton, S. Dak.	21	10	3	13	619.05	.17	8.22	.....	.....	2,000	.....	.....	.....	.....
Fort Sully, S. Dak.	174	144	37	181	1,040.23	8.07	46.35	.....	.....	1,678	46.5	107	-22	15.29
Fort Shaw, Mont.	179	123	38	161	899.44	5.33	29.75	3	.....	3,550	46.6	95	-29	4.85
Fort Snelling, Minn.	301	337	91	428	1,421.93	16.98	56.40	15	2	840	44.8	100	-29	14.81
Camp Sheridan, Wyo.	61	74	27	101	1,655.73	3.82	62.56	.....	.....	.....	40.9	91	-15	20.63
Fort Totten, N. Dak.	89	56	10	66	741.57	1.61	18.07	1	2	1,487	41.4	98	-36	10.55
Fort Yates, N. Dak.	308	192	67	259	840.91	13.07	42.43	5	.....	1,670	.....	107	-26	13.68
Field	184	204	66	270	1,467.39	2.72	14.79	.....	.....	.....	.....	.....	.....	.....
Total	4,168	3,758	1,161	4,919	1,180.18	171.55	41.16	87	19	.....	.....	.....	.....	.....

DEPARTMENT OF THE PLATTE.

Fort Bridger, Wyo.	190	152	61	213	1,121.05	5.12	26.92	2	1	6,670	.....	.....	-24	.....
Fort D. A. Russell, Wyo.	841	280	80	364	1,055.73	14.75	43.26	19	2	6,021	43.5	100	-35	.....
Fort Douglas, Utah	572	260	53	313	841.40	11.87	31.90	4	1	4,004	53.9	103	6	14.89

Fort Du Chesne, Utah.....	255	330	96	426	1, 670.59	10.00	39.22	8	1		46.0	103	-22	6.23
Fort Laramie, Wyo.....	160	129	46	175	1, 093.75	5.64	35.24	10		4, 241		106	-21	10.88
Fort McKinney, Wyo.....	177	79	25	104	587.57	4.36	24.63	1	2	5, 175	47.1	95	-13	5.27
Fort Niobrara, Nebr.....	381	410	106	516	1, 354.33	10.91	28.64	11	4	2, 750	46.3	110	-16	18.16
Fort Omaha, Nebr.....	377	328	81	409	1, 084.88	18.92	50.19	17	4	960	51.2	94	-10	22.97
Camp Pilot Butte, Wyo.....	79	68	28	96	1, 215.19	2.65	33.57	1	1		44.8	97	-30	4.31
Fort Robinson, Nebr.....	427	485	136	621	1, 454.33	17.76	41.60	4	4	3, 675	48.9	106	-17	13.90
Fort Sidney, Nebr.....	214	292	57	349	1, 630.84	11.11	51.93	12	1	4, 322	48.3	109	-10	14.06
Fort Washakie, Wyo.....	126	174	79	253	2, 007.94	6.20	49.23	6	1	5, 462	43.0	94	-24	8.40
Field.....	354	395	102	497	1, 403.95	5.15	14.54							
Total.....	3, 453	3, 382	950	4, 332	1, 254.56	124.44	36.04	95	22					

DEPARTMENT OF THE MISSOURI.

Chicago (Headquarters), Ill.....	59	15	4	19	322.03	.38	6.41			661	48.8	90	-11	34.95
Fort Crawford, Colo.....	91	69	14	83	912.09	2.72	29.93	4	1	6, 200	49.6	99	-10	
Fort Elliott, Tex.....	147	197	62	259	1, 761.91	9.94	67.64	1	1	2, 650	58.5	106	3	19.25
Fort Gibson, Ind. T.....	84	89	14	103	1, 226.19	3.47	41.26	1		600	60.3	100	8	33.09
Fort Hays, Kans.....	120	155	28	183	1, 525.00	6.45	53.72	2	1	2, 107		108	0	
Jefferson Barracks, Mo.....	636	543	72	615	966.98	30.94	48.65	34	4	475	53.1	100	-10	30.00
Fort Leavenworth (post), Kans.....	598	730	117	847	1, 416.39	26.14	43.71	12	2	844	54.4			36.61
Fort Leavenworth (prison guard), Kans.....	118	122	7	129	1, 093.22	1.98	16.74	1		844	52.5	92	-6	
Fort Leavenworth (Headquarters), Kans.....	37		1	1	27.03	.07	2.00			844	54.4			36.61
Fort Lewis, Colo.....	291	324	58	382	1, 312.71	10.59	36.39	4	2	3, 500	43.7	88	-18	21.81
Little Rock Barracks, Ark.....	95	212	14	226	2, 378.95	8.06	84.82	10	2	290	62.1	97	17	50.79
Fort Logan, Colo.....	151	237	32	269	1, 781.46	10.69	70.78	1	2		50.5	101		
Fort Lyon, Colo.....	111	93	18	111	1, 000.00	4.02	36.21	3	1	3, 800				
Fort Reno, Ind. T.....	255	306	70	376	1, 474.51	15.70	61.55	8	1		59.6	103	0	31.91
Fort Riley, Kans.....	548	430	114	544	992.70	21.52	39.28	2	5	1, 900	53.9	98	-10	30.47
Rock Island Arsenal, Ill.....	59	70	5	75	1, 271.19	2.41	40.77	2	1	528	50.1	92	-11	41.63
Fort Sheridan, Ill.....	97	73	18	91	938.14	2.87	29.57	1			46.3	95	-17	
Fort Sill, I. T.....	276	422	74	496	1, 797.10	12.40	44.93	11	2	1, 200				
Fort Supply, Ind. T.....	213	172	65	237	1, 112.68	6.41	30.10	1	1	2, 300	57.6	111	-1	23.61
Field.....	450	737	119	856	1, 902.22	15.73	34.95	2	1					
Total.....	4, 436	4, 996	906	5, 902	1, 330.48	192.47	43.39	100	27					

DEPARTMENT OF TEXAS.

Fort Bliss, Tex.....	118	106	20	126	1, 067.80	2.81	23.78	2	1	3, 600	64.0	107	18	
Fort Brown, Tex.....	145	440	98	538	3, 710.34	16.59	114.44	4	3	50		95	35	
Fort Clark, Tex.....	349	396	77	473	1, 355.30	20.96	60.05	8	2	1, 000	66.7	103	11	30.54
Fort Concho, Tex.....	28	8	1	9	321.43	.50	17.81			1, 950				
Fort Davis, Tex.....	102	77	25	102	1, 000.00	3.04	29.79	3		4, 928	61.2	96	11	11.34
Camp Del Rio, Tex.....	13	16	1	17	1, 307.69	.30	23.39			820				

TABLE III.—Military posts in each Department alphabetically arranged with mean strength, admissions for disease and injury, etc.—Continued.

DEPARTMENT OF TEXAS—Continued.

Names of stations.	Mean strength.	Cases.			Admission-rate per 1,000 of mean strength.	Average number of sick daily.	Constantly non-effective per 1,000 of mean strength.	Discharges for disability.	Deaths.	Altitude of stations.	Temperature.			Total precipitation.
		Disease.	Injury.	Total.							Mean.	Max.	Min.	
Camp Eagle Pass, Tex.....	55	48	15	63	1,145.45	3.31	60.17	1	.....	Feet. 800	° 70.0	° 106	° 20	Inches. 29.47
Fort Hancock, Tex.....	46	58	20	78	1,695.65	2.75	59.68	1	1	3,000	61.3	111	10	.....
Camp Langtry, Tex.....	13	4	4	8	615.38	.18	13.70	.....	.....	.....	.....	.....	.....	.....
Fort McIntosh, Tex.....	129	168	35	203	1,573.64	6.93	53.75	.....	1	380	.....	104	28	.....
Camp Pena Colorado, Tex.....	55	16	16	32	581.82	2.06	37.46	.....	.....	3,800	.....	102	9	21.59
Fort Ringgold, Tex.....	144	67	14	81	562.50	3.36	23.34	2	.....	521	73.0	110	25	21.67
San Antonio (post), Tex.....	476	506	95	601	1,262.61	24.11	50.64	7	4	781	68.9	106	29	.....
San Antonio (Headquarters), Tex.....	33	5	3	8	242.42	.68	20.59	.....	1	781	68.9	106	29	.....
Field.....	72	115	20	135	1,875.00	1.82	25.34	.....	.....	.....	.....	.....	.....	.....
Total.....	1,778	2,030	444	2,474	1,391.45	89.40	50.28	28	18	.....	.....	.....	.....	.....

DEPARTMENT OF CALIFORNIA.

Alcatraz Island, Cal.....	95	54	12	66	694.74	2.26	23.82	1	1	136	55.6	88	38	37.25
Angel Island, Cal.....	153	69	17	86	562.09	3.01	19.68	5	2	820	59.1	95	30	35.36
Benicia Arsenal, Cal.....	52	25	4	29	557.69	.71	13.70	.....	1	64	59.4	100	28	29.06
Benicia Barracks, Cal.....	73	54	18	72	986.30	2.71	37.16	4	1	64	59.4	100	28	29.06
Fort Bidwell, Cal.....	131	139	42	181	1,381.68	3.63	27.69	1	1	4,680	50.2	99	2	23.39
Fort Gaston, Cal.....	35	18	12	30	857.14	1.91	54.43	2	1	397	53.9	110	13	56.88
Fort McDermitt, Nev.....	20	7	9	16	800.00	.86	18.22	2	.....	4,700	.....	.....	.....	.....
Fort Mason, Cal.....	66	59	7	66	1,000.00	2.92	44.25	1	2	113	55.6	85	37	35.23
Presidio, San Francisco, Cal.....	491	608	167	775	1,578.41	29.75	60.60	14	6	60	55.3	90	31	34.96
Field.....	125	152	67	219	1,752.00	3.86	30.88	3	.....	.....	.....	.....	.....	.....
Total.....	1,241	1,185	355	1,540	1,240.93	51.13	41.20	33	15	.....	.....	.....	.....	.....

DEPARTMENT OF THE COLUMBIA.

Boisé Barracks, Idaho.....	101	109	42	151	1,495.05	2.91	28.83	.....	1	2,880	51.2	102	2	8.13
Fort Canby, Wash.....	28	32	13	45	1,607.14	.95	34.05	1	.....	179	51.9	86	30	53.44
Fort Klamath, Oregon.....	37	31	7	38	1,027.03	.39	10.44	.....	1	4,200	.....	.....	.....	.....
Fort Sherman, Idaho.....	246	255	67	322	1,308.94	8.55	34.75	5	2	2,198	48.6	94	2	18.41

Fort Spokane, Wash.....	219	240	77	317	1,447.49	8.78	40.11	6	3	1,600	50.0	102	-8	12.93
Fort Townsend, Wash.....	50	36	14	50	1,000.00	1.10	21.92	1	-----	135	51.0	88	24	15.00
Vancouver Barracks, Wash.....	383	402	100	502	1,310.70	17.56	45.84	10	1	50	53.6	95	19	29.52
Fort Walla Walla, Wash.....	317	260	90	350	1,104.10	13.56	42.78	8	-----	1,018	54.3	100	9	14.53
Field.....	42	41	42	83	1,976.19	.98	23.42	-----	-----	-----	-----	-----	-----	-----
Total.....	1,423	1,406	452	1,858	1,305.69	54.78	38.50	31	8	-----	-----	-----	-----	-----

DEPARTMENT OF ARIZONA.

Fort Apache, Ariz.....	272	205	75	280	1,029.41	9.94	36.53	7	4	5,050	55.0	102	5	13.90
Fort Bayard, N. Mex.....	810	356	80	436	1,406.45	14.82	47.82	13	5	6,040	-----	95	6	-----
Fort Bowie, Ariz.....	102	97	36	133	1,303.92	5.13	50.34	5	-----	4,826	61.2	101	14	11.56
Fort Grant, Ariz.....	311	231	70	301	967.85	14.76	47.45	6	5	4,856	61.6	100	20	13.32
Fort Huachuca, Ariz.....	248	173	57	230	927.42	8.32	33.56	7	2	5,173	60.4	96	21	15.39
Fort Lowell, Ariz.....	149	181	55	236	1,583.89	7.37	49.44	7	-----	2,530	-----	111	22	16.92
Fort McDowell, Ariz.....	93	128	30	158	1,698.92	4.59	49.34	3	-----	1,800	69.6	117	25	13.67
Fort Marcy, N. Mex.....	150	196	45	241	1,606.67	6.67	44.47	6	1	6,846	49.8	90	-1	7.89
Fort Mojave, Ariz.....	53	67	8	75	1,415.09	3.74	70.51	1	-----	600	70.6	120	28	21.38
San Diego Barracks, Cal.....	53	43	6	49	924.53	4.08	77.07	2	2	150	62.8	92	36	-----
San Carlos, Ariz.....	199	171	48	219	1,100.50	5.78	29.05	1	1	2,156	-----	-----	-----	13.06
Fort Selden, N. Mex.....	20	10	3	13	650.00	.27	13.42	-----	-----	4,250	-----	109	-9	-----
Fort Stanton, N. Mex.....	152	129	53	185	1,217.11	5.95	39.13	2	-----	7,500	51.3	92	5	14.49
Fort Thomas, Ariz.....	101	83	26	109	1,079.21	5.58	55.23	1	-----	2,710	-----	-----	-----	-----
Fort Union, N. Mex.....	140	82	28	110	735.71	3.44	24.56	-----	-----	6,700	-----	90	-10	12.08
Fort Verde, Ariz.....	98	28	23	51	520.41	2.68	27.40	3	-----	3,160	60.9	116	14	16.06
Whipple Barracks, Ariz.....	203	231	72	303	1,492.61	11.41	56.20	7	2	5,340	53.1	100	-8	20.83
Fort Wingate, N. Mex.....	384	309	89	398	1,036.46	12.68	33.03	4	2	6,649	-----	-----	-----	-----
Field.....	68	134	14	148	2,176.47	1.23	18.09	-----	-----	-----	-----	-----	-----	-----
Total.....	3,106	2,854	821	3,675	1,183.19	128.44	41.35	75	25	-----	-----	-----	-----	-----

SURGEON-GENERAL.

TABLE IV.—Giving a general view of the results of disease and injury at each of the various military stations, arranged in the numerical order of their mean strength.

GROUP I.—Eleven stations, garrisoned by 400 to 700 men each. Average, 520.

Military stations.	Mean strength.	Admissions.		Constant non-effective.		Deaths.		Discharges	
		No.	Ratio per 1,000.	No.	Ratio per 1,000.	No.	Ratio per 1,000.	No.	Ratio per 1,000.
Jefferson Barracks, Mo	636	615	966.98	30.94	48.05	4	6.29	34	53.46
Columbus Barracks, Ohio	599	1389	2,318.86	55.55	92.74	2	3.34	35	58.43
Fort Leavenworth, Kans	598	847	1,416.35	26.14	43.71	2	3.34	12	20.07
David's Island, N. Y	579	729	1,259.07	24.90	43.01	7	12.09	6	10.36
Fort Riley, Kans	548	544	992.70	21.52	39.28	5	9.12	2	3.65
Fort Meade, S. Dak	519	681	1,312.14	18.55	35.73	---	---	8	15.41
Presidio of San Francisco, Cal	491	775	1,578.41	29.75	60.60	6	12.22	14	28.51
San Antonio (post) Tex	476	601	1,262.61	24.11	50.64	4	8.40	7	14.71
Fort Assiniboine, Mont	433	551	1,272.52	21.10	48.73	4	9.24	9	20.79
Fort Robinson, Nebr	427	621	1,454.33	17.76	41.60	4	9.37	4	9.37
Fort Keogh, Mont	410	356	868.29	14.02	34.20	3	7.32	6	14.63
Summary	5,716	7,709	1,348.67	284.35	49.75	41	7.17	187	23.96

GROUP II.—Seventeen stations, garrisoned by 300 to 400 men each. Average, 346.

Fort Wingate, N. Mex	384	398	1,036.46	12.68	33.03	2	5.21	4	10.42
Vancouver Barracks, Wash	383	502	1,310.70	17.56	45.84	1	2.61	10	26.11
Fort Niobrara, Nebr	381	516	1,354.33	10.91	28.64	4	10.50	11	28.87
Willetts Point, N. Y	381	910	2,388.45	18.45	48.42	1	2.62	11	28.87
Fort Omaha, Nebr	377	409	1,084.88	18.92	50.19	4	10.61	17	45.09
Fort Douglas, Utah	372	313	841.40	11.87	31.90	1	2.69	4	10.75
Fort Monroe, Va	367	612	1,667.57	19.06	51.94	3	8.17	11	29.97
West Point, N. Y	354	338	954.80	8.85	25.01	1	2.82	4	11.30
Fort Clark, Tex	349	473	1,355.30	20.96	60.05	2	5.73	8	22.92
Fort Custer, Mont	341	432	1,266.86	16.96	49.72	2	5.87	5	14.66
Fort D. A. Russell, Wyo	341	360	1,055.72	14.75	43.26	2	5.87	19	55.72
Fort Walla Walla, Wash	317	350	1,104.10	13.56	42.78	---	---	8	25.24
Fort Grant, Ariz	311	301	967.85	14.76	47.45	5	16.08	6	19.29
Fort Bayard, N. Mex	310	436	1,406.45	14.82	47.82	5	16.13	13	41.94
Fort Yates, N. Dak	308	259	840.91	13.07	42.43	---	---	5	16.23
Fort Buford, N. Dak	305	499	1,636.07	17.94	58.82	1	3.28	13	42.62
Fort Snelling, Minn	301	428	1,421.93	16.98	56.40	2	6.64	15	49.83
Summary	5,882	7,536	1,281.19	262.10	44.56	36	6.12	164	27.88

GROUP III.—Fourteen stations, garrisoned by 200 to 300 men each. Average, 242.

Fort Lewis, Colo	291	382	1,312.71	10.59	36.39	2	6.87	4	13.75
Fort Sill, Ind. T	276	496	1,797.10	12.40	44.93	2	7.25	11	39.86
Fort Apache, Ariz	272	280	1,029.41	9.94	36.53	4	14.71	7	25.74
Fort Du Chesue, Utah	255	426	1,670.59	10.00	39.22	1	3.92	8	31.37
Fort Reno, Ind. T	255	376	1,474.51	15.70	61.55	1	3.92	8	31.37
Washington Barracks, D. C	251	286	1,139.44	11.10	44.21	1	3.98	12	47.81
Fort Huachuca, Ariz	248	230	927.42	8.32	33.56	2	8.06	7	28.23
Fort Sherman, Idaho	246	322	1,308.94	8.65	34.75	2	8.13	5	20.33
Madison Barracks, N. Y	240	335	1,395.83	10.54	43.93	---	---	2	8.33
Fort Spokane, Wash	219	317	1,447.49	8.78	40.11	3	13.70	6	27.40
Fort Sidney, Nebr	214	349	1,630.84	11.11	51.93	1	4.67	12	56.07
Fort Supply, Ind. T	213	237	1,112.68	6.41	30.10	1	4.69	1	4.69
Fort Missoula, Mont	204	177	867.65	6.12	30.00	2	9.80	7	34.31
Whipple Barracks, Ariz	203	303	1,492.61	11.41	56.20	2	9.85	7	34.48
Summary	3,387	4,518	1,333.33	140.97	41.96	24	7.09	97	28.63

TABLE IV.—Giving a general view of the results of disease and injury at each of the various military stations, etc.—Continued.

GROUP IV.—Thirty-seven stations, garrisoned by 100 to 200 men each. Average, 143.

Military stations.	Mean strength.	Admissions.		Constant non-effective.		Deaths.		Discharges.	
		No.	Ratio per 1,000.	No.	Ratio per 1,000.	No.	Ratio per 1,000.	No.	Ratio per 1,000.
Fort Adams, R. I.	199	216	1,085.43	5.96	29.97	2	10.05	6	30.15
San Carlos, Ariz.	199	219	1,100.50	5.78	29.05	1	5.03	1	5.03
Fort Bridger, Wyo.	190	213	1,121.05	5.12	26.92	1	5.26	2	10.53
Fort Hamilton, N. Y.	190	295	1,552.63	7.87	41.40	2	10.53	3	15.79
Fort Shaw, Mont.	179	161	899.44	5.33	29.75	.....	.....	3	16.76
Fort Randall, S. Dak.	178	172	966.29	8.57	48.16	1	5.62	3	16.85
Fort Wayne, Mich.	178	220	1,235.96	7.48	42.02	1	5.62	2	11.24
Fort McKinney, Wyo.	177	104	587.57	4.36	24.63	2	11.30	1	5.65
Fort Sully, S. Dak.	174	181	1,040.23	8.07	46.95	.....	.....	3	17.24
Fort Laramie, Wyo.	160	175	1,093.75	5.64	35.24	.....	.....	10	62.50
Fort McPherson, Ga.	156	533	3,416.67	11.36	72.80	2	12.82	4	25.64
Angel Island, Cal.	153	86	562.09	3.01	19.68	2	13.07	5	32.68
Fort Stanton, N. Mex.	152	185	1,217.11	5.95	39.13	.....	.....	2	13.16
Fort Logan, Colo.	151	269	1,781.46	10.69	70.78	2	13.25	1	6.62
Fort Marcy, N. Mex.	150	241	1,606.67	6.67	44.47	1	6.67	6	40.00
Fort Lowell, Ariz.	149	236	1,583.89	7.37	49.44	.....	.....	7	46.98
Fort Columbus, N. Y.	147	150	1,020.41	6.49	44.15	.....	.....	6	40.82
Fort Elliott, Tex.	147	259	1,761.91	9.94	67.64	1	6.80	1	6.80
Fort Brown, Tex.	145	538	3,710.34	16.59	114.44	3	20.69	4	27.59
Fort Ringgold, Tex.	144	81	562.50	3.36	23.34	.....	.....	2	13.89
Fort Union, N. Mex.	140	110	785.71	3.44	24.56	1	7.14	.....	.....
Fort Maginnis, Mont.	137	191	1,394.16	5.33	39.92	1	7.30	2	14.60
Fort Bidwell, Cal.	131	181	1,381.68	3.63	27.69	1	7.63	1	7.63
Fort McIntosh, Tex.	129	203	1,573.64	6.93	53.75	1	7.75	.....	.....
Fort Myer, Va.	129	153	1,186.05	4.32	33.47	.....	.....	1	7.75
Fort Washakie, Wyo.	126	258	2,007.94	6.20	49.23	1	7.94	6	47.62
Fort Hays, Kans.	120	183	1,525.00	6.45	53.72	1	8.33	2	16.67
Fort Bliss, Tex.	118	126	1,067.80	2.81	23.78	1	8.47	2	16.95
Fort Leavenworth (prison guard), Kans.	118	129	1,093.22	1.98	16.74	.....	.....	1	8.47
Fort Lyon, Colo.	111	111	1,000.00	4.02	36.21	1	9.01	3	27.03
Fort McHenry, Md.	106	192	1,811.32	5.69	53.71	.....	.....	2	18.87
Fort Wadsworth, N. Y.	105	93	885.71	3.27	31.15	2	19.05	4	38.10
Fort Bowie, Ariz.	102	133	1,303.92	5.13	50.34	.....	.....	5	49.02
Fort Davis, Tex.	102	102	1,000.00	3.04	29.79	.....	.....	3	29.41
Fort A. Lincoln, N. Dak.	101	102	1,009.90	4.56	45.19	.....	.....	5	49.50
Boisé Barracks, Idaho.	101	151	1,495.05	2.91	28.83	1	9.90	.....	.....
Fort Thomas, Ariz.	101	109	1,079.21	5.58	55.23	.....	.....	1	9.90
Summary	5,295	7,056	1,332.58	220.89	41.72	32	6.04	110	20.77

GROUP V.—Fifty-nine stations garrisoned by 1 to 100 men each. Average, 56.

Fort Verde, Ariz.	98	51	520.41	2.68	27.40	.....	.....	3	30.61
Fort Sheridan, Ill.	97	91	938.14	2.87	29.57	.....	.....	1	10.31
Camp Poplar River, Mont.	96	113	1,177.08	2.79	29.05	1	10.42	.....	.....
Alcatraz Island, Cal.	95	66	694.74	2.26	23.82	1	10.53	1	10.53
Little Rock Barracks, Ark.	95	226	2,378.95	8.06	84.82	2	21.05	10	105.26
Fort McDowell, Ariz.	93	158	1,698.92	4.59	40.34	.....	.....	3	32.26
Fort Niagara, N. Y.	93	80	860.22	3.21	34.47	.....	.....	2	21.51
Fort Crawford, Colo.	91	83	912.09	2.72	29.93	1	10.99	4	43.96
Fort Totten, N. Dak.	89	66	741.57	1.61	18.07	2	22.47	1	11.24
Mount Vernon Barracks, Ala.	87	117	1,344.83	4.77	54.86	2	22.99	4	45.98
Fort Gibson, Ind. T.	84	103	1,226.19	3.47	41.26	.....	.....	1	11.90
Fort Porter, N. Y.	83	59	710.84	3.29	39.64	.....	.....	1	12.05
Fort Mackinac, Mich.	81	126	1,565.56	1.72	21.24	.....	.....	2	24.69
Fort Pembina, N. Dak.	80	129	1,612.50	2.51	31.87	.....	.....	2	25.00
Camp Pilot Butte, Wyo.	79	96	1,215.19	2.65	33.57	1	12.66	1	12.66
Fort Brady, Mich.	78	157	2,012.82	2.58	33.05	1	12.82	1	12.82
Fort Warren, Mass.	78	96	1,230.77	3.43	44.01	.....	.....	.....	.....
Benicia Barracks, Cal.	73	72	986.30	2.71	37.16	1	13.70	4	54.79
Fort Schuyler, N. Y.	71	101	1,422.54	3.43	48.27	2	28.17	1	14.08
Fort Mason, Cal.	66	66	1,000.00	2.92	44.25	2	30.30	1	15.15
Water-vliet Arsenal, N. Y.	64	69	1,078.12	1.55	24.14	.....	.....	.....	.....
Fort Barrancas, Fla.	61	83	1,360.66	2.95	48.42	.....	.....	1	16.39
Camp Sheridan, Wyo.	61	101	1,655.73	3.82	62.56	.....	.....	.....	.....
Chicago, Ill.	59	19	322.03	.38	6.41	.....	.....	.....	.....
Fort Island Arsenal, Ill.	59	75	1,271.19	2.41	40.77	1	16.95	2	33.90
St. Francis Barracks, Fla.	58	91	1,568.97	1.88	32.40	.....	.....	2	34.48
Camp Pena Colorado, Tex.	55	32	581.82	2.06	37.46	.....	.....	.....	.....
Camp Eagle Pass, Tex.	55	63	1,145.45	3.31	60.17	.....	.....	1	18.18
Fort Trumbull, Conn.	54	72	1,333.33	2.10	38.81	.....	.....	1	18.52
Fort Mojave, Ariz.	53	75	1,415.09	3.74	70.51	.....	.....	1	18.87
San Diego Barracks, Cal.	53	49	924.53	4.08	77.07	2	37.74	2	37.74

TABLE IV.—Giving a general view of the results of disease and injury at each of the various military stations, etc.—Continued.

GROUP V—Continued.

Military stations.	Mean strength.	Admissions.		Constant non-effective.		Deaths.		Discharges.	
		No.	Ratio per 1,000.	No.	Ratio per 1,000.	No.	Ratio per 1,000.	No.	Ratio per 1,000.
Benicia Arsenal, Cal.	52	29	557.69	.71	13.70	1	19.23	.....	.....
Newport Barracks, Ky.	52	59	1,134.62	1.73	33.25	.....	.....	1	19.23
Fort Townsend, Wash.	50	50	1,000.00	1.10	21.92	.....	.....	1	20.00
Plattsburg Barracks, N. Y.	48	49	1,020.83	1.95	40.64	1	20.83	1	20.83
Fort Bennett, S. Dak.	47	37	787.23	1.34	28.56	.....	.....	.....	.....
Fort Hancock, Texas.	46	78	1,695.65	2.75	59.63	1	21.74	1	21.74
Fort Ontario, N. Y.	44	54	1,227.27	1.82	41.34	1	22.73	.....	.....
Fort Preble, Me.	44	58	1,318.18	1.13	25.73	.....	.....	.....	.....
Jackson Barracks, La.	40	75	1,875.00	1.43	35.75	2	50.00	1	25.00
Frankford Arsenal, Pa.	37	36	972.97	1.21	32.73	.....	.....	.....	.....
Fort Klamath, Oregon.	37	38	1,027.03	.39	10.44	1	27.03	.....	.....
Fort Leavenworth (a'tt'd'g surg.), Kans.	37	1	27.03	.07	2.00	.....	.....	.....	.....
Fort Wood, N. Y. Harbor.	37	24	648.65	.21	5.78	.....	.....	.....	.....
Fort Gaston, Cal.	35	30	857.14	1.91	54.48	1	28.57	2	57.14
Watertown Arsenal, Mass.	34	32	941.18	1.14	33.60	.....	.....	.....	.....
San Antonio (hdqrs.), Tex.	33	8	242.42	.68	20.59	1	30.30	.....	.....
Springfield Armory, Mass.	30	10	333.33	.41	13.52	.....	.....	1	33.33
Allegheny Arsenal, Pa.	29	18	620.69	.44	15.12	1	34.48	.....	.....
Fort Concho, Tex.	23	9	321.43	.50	17.81	.....	.....	.....	.....
Fort Canby, Wash.	28	45	1,607.14	.95	34.05	.....	.....	1	35.71
Augusta Arsenal, Ga.	26	20	769.23	.98	37.51	1	38.46	1	38.46
Indianapolis Arsenal, Ind.	26	54	2,076.92	1.90	73.23	.....	.....	1	38.46
Fort Sisseton, S. Dak.	21	13	619.05	.17	8.22	.....	.....	.....	.....
Fort McDermit, Nev.	20	16	800.00	.36	18.22	.....	.....	2	100.00
Fort Selden, N. Mex.	20	13	650.00	.27	13.42	.....	.....	.....	.....
Kennebec Arsenal, Me.	18	35	1,944.44	.37	20.39	.....	.....	.....	.....
Camp Del Rio, Tex.	13	17	1,307.69	.30	23.39	.....	.....	.....	.....
Camp Langtry, Tex.	13	8	615.38	.18	13.70	.....	.....	.....	.....
Summary.	3,284	3,701	1,126.98	118.94	36.22	30	9.14	66	20.10

GROUP VI.—Field.

Department of the Missouri.	450	856	1,902.22	15.73	34.95	1	2.22	2	4.44
Department of the Platte.	354	497	1,403.95	5.15	14.54	.....	.....	.....	.....
Department of Dakota.	181	270	1,497.39	2.72	14.79	.....	.....	.....	.....
Department of California.	125	219	1,752.00	3.86	30.88	.....	.....	3	24.00
Department of the East.	98	141	1,438.78	1.76	17.85	.....	.....	.....	.....
Department of Texas.	72	135	1,875.00	1.82	35.34	.....	.....	.....	.....
Department of Arizona.	68	148	2,176.47	1.23	18.09	.....	.....	.....	.....
Department of the Columbia.	42	83	1,976.19	.98	23.42	.....	.....	.....	.....
Summary.	1,393	2,349	1,686.29	33.25	21.91	1	.72	5	3.59
Hot Springs, Ark.	51	19	372.55	42.76	838.36	1	19.61	23	450.98
At large. ....	.....	.....	.....	.....	.....	8	.....	21	.....
Total for the Army.	25,008	32,886	1,315.02	1,103.25	44.12	173	6.33	6,23	22.79

Range of the several means in each group.	Number of posts in each group and average strength of each.		Mean strength.	Ratios per 1,000 of mean strength.				Daily average sick.	
	No.	Average strength.		Admissions.	Constant non-effective.	Deaths.	Discharges.	All posts.	Average for each post.
Group 1, 400 to 700 men.	11	520	5,716	1,348.67	49.75	7.17	23.26	284.35	25.85
Group 2, 300 to 400 men.	17	346	5,882	1,281.19	44.56	6.12	27.88	262.10	15.42
Group 3, 200 to 300 men.	14	242	3,387	1,333.33	41.96	7.09	28.63	140.97	10.07
Group 4, 100 to 200 men.	37	143	5,295	1,332.58	41.72	6.04	20.77	220.89	5.97
Group 5, 1 to 100 men.	59	56	3,284	1,126.98	36.22	9.14	20.10	118.94	2.02
Group 6, Field. ....	.....	.....	1,393	1,686.29	21.91	.72	3.59	33.25	.....

TABLE V.—Twenty posts having the highest admission-rates for the year 1889, also their admission-rates for the years 1884 to 1888, inclusive.

Names of stations.	Mean strength.	Ratios per 1,000 of mean strength.			Admission-rates per 1,000 of mean strength.					
		Admissions.	Deaths.	Discharges for disability.	Constantly non-effective.	1888.	1887.	1886.	1885.	1884.
Fort Brown, Tex.....	145	3, 710.34	20.69	27.59	114.44	3, 812.50	1, 583.33	1, 797	2, 181	2, 646
Fort McPherson, Ga.....	156	3, 416.67	12.82	25.64	72.80					
Willets Point, N. Y.....	381	2, 388.45	2.62	28.87	48, 422	2, 243.70	2, 342.13	2, 055	2, 782	1, 915
Little Rock Barracks, Ark.....	95	2, 378.95	21.05	105.26	84, 821	1, 467.29	1, 740.38	1, 589	1, 028	1, 321
Columbus Barracks, Ohio.....	599	2, 318.86	3.34	58.43	92.74	2, 075.66	1, 942.36	1, 550	1, 832	1, 918
Indianapolis Arsenal, Ind.....	26	2, 076.92	.....	38.46	73.23	2, 518.52	2, 037.04	3, 538	3, 407	2, 741
Fort Brady, Mich.....	78	2, 012.82	12.82	12.82	33.05	1, 546.67	1, 500.00	800	1, 299	1, 462
Fort Washakie, Wyo.....	126	2, 007.94	7.94	47.62	49, 231	1, 706.35	1, 129.03	1, 008	1, 277	2, 211
Kennebec Arsenal, Me.....	18	1, 944.44	.....	.....	20, 393	777.78	2, 500.00	2, 941	1, 687	.....
Jackson Barracks, La.....	40	1, 875.00	50.00	25.00	35.75	910.45	884.61	937	1, 247	2, 208
Fort McHenry, Md.....	106	1, 811.32	.....	18.87	53.71	1, 407.08	1, 632.48	1, 173	1, 339	1, 276
Fort Sill, Ind. T.....	276	1, 797.10	7.25	39.86	44, 931	1, 592.06	1, 744.68	1, 642	2, 211	2, 611
Fort Logan, Colo.....	151	1, 781.46	13.25	6.63	70.78	2, 556.70	1, 571.43	.....	.....	.....
Fort Hancock, Tex.....	46	1, 695.65	21.74	21.74	59.68	1, 591.84	1, 222.22	1, 677	1, 712	2, 556
Fort Du Chesne, Utah.....	255	1, 670.59	3.92	31.37	39, 221	1, 057.66	1, 004.48	1, 135	.....	.....
Camp Sheridan, Wyo.....	61	1, 655.73	.....	.....	62.56	1, 392.86	923.08	.....	.....	.....
Fort Buford, N. Dak.....	305	1, 636.07	3.28	42.62	58, 821	1, 207.12	935.25	921	853	1, 235
Fort Sidney, Nebr.....	214	1, 630.84	4.67	56.07	51, 931	1, 652.41	1, 871.13	1, 790	2, 096	1, 827
Fort Pembina, N. Dak.....	80	1, 612.50	.....	25.00	31.37	976.19	1, 988.10	916	1, 588	1, 511
Fort Canby, Wash.....	28	1, 607.14	.....	35.71	34.05	.....	969.70	671	325	1, 439
U. S. Army.....	25, 008	1, 815.02	6.33	22.79	44.12	1, 270.73	1, 246.88	1, 263	1, 355	1, 522

TABLE VI.—Twenty posts having the highest non-effective rates during the year 1889, also their non-effective rates for the years 1884 to 1888, inclusive.

Names of stations.	Mean strength.	Constantly non-effective per 1,000 mean strength.	Average sick, daily.	Average of days each case was treated.	Constantly non-effective per 1,000 of mean strength.				
					1888.	1887.	1886.	1885.	1884.
Fort Brown, Tex.....	145	114.44	16.59	11.3	104.17	78.94	75	79	94
Columbus Barracks, Ohio.....	599	92.74	55.65	14.6	81.87	74.51	63	82	99
Little Rock Barracks, Ark.....	95	84.82	8.06	13.0	50.07	38.30	45	53	40
San Diego Barracks, Cal.....	53	77.07	4.08	30.4	53.87	54.31	96	132	121
Indianapolis Arsenal, Ind.....	26	73.23	1.90	12.9	53.23	55.41	62	59	48
Fort McPherson, Ga.....	156	72.80	11.36	7.8	.....	.....	.....	.....	.....
Fort Logan, Colo.....	151	70.78	10.69	14.5	76.95	26.03	.....	.....	.....
Fort Mojave, Ariz.....	53	70.51	3.74	13.2	59.24	26.39	34	26	22
Fort Elliott, Tex.....	147	67.64	9.94	14.0	29.95	29.73	18	18	32
Camp Sheridan, Wyo.....	61	62.56	3.82	13.8	50.25	57.69	14	.....	.....
Fort Reno, Ind. T.....	255	61.55	15.70	15.2	46.85	46.81	37	56	36
Camp Eagle Pass, Tex.....	55	60.17	3.31	19.2	38.15	37.57	23	.....	.....
Presidio of San Francisco, Cal.....	491	60.60	29.75	14.0	54.43	32.64	34	41	55
Fort Clark, Tex.....	349	60.05	20.96	16.2	51.71	36.45	57	57	40
Fort Hancock, Tex.....	46	59.68	2.75	12.8	42.04	33.01	45	54	68
Fort Buford, N. Dak.....	305	53.82	17.94	13.1	42.50	42.18	30	29	43
Fort Snelling, Minn.....	301	56.40	16.98	14.5	33.39	23.41	23	32	33
Whipple Barracks, Ariz.....	203	56.20	11.41	13.7	46.37	35.05	23	34	51
Fort Thomas, Ariz.....	101	55.23	5.58	18.7	56.35	74.54	46	49	73
Mount Vernon Barracks, Ala.....	87	54.86	4.77	14.9	37.82	36.71	41	48	51
U. S. Army.....	25, 008	44.12	1, 103.25	12.2	41.91	42.38	39	41	44

TABLE VII.—Twenty posts having the highest admission-rates for disease, excluding venereal diseases, vaccina, and alcoholism, together with their ratios for deaths, discharges, and constant non-effectiveness; also the corresponding average rates of the Army, year 1889.

Names of stations.	Mean strength.	Ratios per 1,000 of mean strength.			
		Admissions.	Deaths.	Discharges.	Constantly non-effective.
Fort Brown, Tex.	145	2,634.48	.....	20.69	67.54
Fort McPherson, Ga.	156	2,403.83	6.41	19.23	42.07
Indianapolis Arsenal, Ind.	26	2,000.00	.....	38.46	71.12
Kennebec Arsenal, Me.	18	1,833.33	.....	.....	18.87
Willets Point, N. Y.	381	1,690.28	2.62	23.65	29.24
Little Rock Barracks, Ark.	95	1,494.72	21.05	42.11	40.76
Fort Sill, Ind. T.	276	1,456.51	3.62	18.12	28.81
Jackson Barracks, La.	40	1,425.00	50.00	25.06	26.51
Columbus Barracks, Ohio.	599	1,370.62	.....	16.69	36.01
Fort Logan, Colo.	151	1,351.00	13.25	6.62	53.47
Fort McHenry, Md.	106	1,320.76	.....	18.87	39.26
Fort Washakie, Wyo.	126	1,293.65	7.94	31.75	31.89
Fort Sidney, Nebr.	214	1,275.71	4.67	46.73	36.71
Fort Du Chene, Utah.	255	1,266.68	3.92	27.45	26.41
Fort Elliott, Tex.	147	1,258.51	.....	.....	45.30
Fort McDowell, Ariz.	93	1,225.80	.....	10.75	31.87
Fort Pembina, N. Dak.	80	1,200.00	.....	12.50	26.21
Fort Mojave, Ariz.	53	1,188.68	.....	.....	62.04
Fort Brady, Mich.	78	1,179.51	.....	12.82	10.84
Fort Monroe, Va.	367	1,163.48	5.45	21.80	28.89
U. S. Army*	25,008	907.30	3.53	15.94	28.33

* Excluding venereal diseases, vaccina, alcoholism and results, and injuries.

TABLE VIII.—Twenty posts having the highest non-effective rates for disease, excluding venereal diseases, vaccina, and alcoholism, together with the average number sick daily, and average duration of each case; also, the corresponding average rates of the Army, year 1889.

Names of stations.	Mean strength.	Constantly non-effective.	Average number sick daily.	Average number of days each case was treated.
San Diego Barracks, Cal.	53	71.80	3.81	37.54
Indianapolis Arsenal, Ind.	26	71.12	1.85	12.98
Fort Brown, Tex.	145	67.54	9.79	9.36
Fort Mojave, Ariz.	53	62.04	3.29	19.05
Fort Logan, Colo.	151	53.47	8.07	14.45
Fort Reno, Ind. T.	255	48.09	12.26	16.28
Camp Sheridan, Wyo.	61	47.25	2.88	15.70
Fort Elliott, Tex.	147	45.30	6.66	13.14
Fort McPherson, Ga.	156	42.07	6.56	6.41
Whipple Barracks, Ariz.	203	41.64	8.45	16.50
Fort Buford, N. Dak.	305	41.52	12.66	13.21
Little Rock Barracks, Ark.	95	40.76	3.87	9.95
Fort Clark, Tex.	349	39.89	13.91	16.49
Fort McHenry, Md.	106	39.26	4.16	10.85
Fort Snelling, Minn.	301	39.08	11.77	13.63
Fort Hays, Kans.	120	38.88	4.67	12.61
Fort Sidney, Nebr.	214	36.71	7.85	10.50
Camp Eagle Pass, Tex.	55	36.40	2.00	20.31
Mount Vernon Barracks, Ala.	87	36.07	3.14	15.47
Columbus Barracks, Ohio.	599	36.01	21.58	9.59
U. S. Army*	25,008	28.33	922.14	14.83

* Excluding venereal diseases, vaccina, alcoholism and results, and injuries.

TABLE IX.—The military posts in each department showing the rates of admission, death, discharge, and constant non-effectiveness for disease, not including venereal diseases, vaccina, nor alcoholism, year 1889.

DEPARTMENT OF THE EAST.

Names of stations.	Mean strength.	Admission-rate per 1,000 of mean strength.	Death-rate.	Discharge-rate.	Constantly non-effective.
Fort McPherson, Ga.....	156	2,403.83	6.41	19.23	42.07
Indianapolis Arsenal, Ind.....	26	2,000.00	.....	38.46	71.12
Keenebec Arsenal, Me.....	18	1,833.33	.....	.....	18.87
Willets Point, N. Y.....	381	1,690.28	2.62	23.63	29.24
Jackson Barracks, La.....	40	1,425.00	50.00	25.00	26.51
Columbus Barracks, Ohio.....	599	1,370.62	.....	16.69	36.01
Fort McHenry, Md.....	106	1,320.76	.....	18.87	39.26
Fort Brady, Mich.....	78	1,179.51	.....	12.82	10.81
Fort Monroe, Va.....	367	1,163.48	5.45	21.80	28.89
St. Francis Barracks, Fla.....	58	1,137.94	.....	34.48	20.86
Fort Schuyler, N. Y.....	71	1,126.77	.....	14.08	31.30
Fort Hamilton, N. Y.....	190	1,115.79	10.53	15.79	30.07
Fort Barrancas, Fla.....	61	1,016.39	.....	.....	30.58
Fort Trumbull, Conn.....	54	1,000.00	.....	18.52	31.05
Fort Preble, Me.....	44	954.53	.....	.....	17.56
Madison Barracks, N. Y.....	240	933.32	.....	8.33	23.50
Fort Mackinac, Mich.....	81	925.94	.....	24.69	13.70
Frankford Arsenal, Pa.....	37	918.92	.....	.....	31.40
Fort Adams, R. I.....	199	884.41	10.05	30.15	22.03
Washington Barracks, D. C.....	251	876.61	3.98	43.83	31.74
Mount Vernon Barracks, Ala.....	87	850.60	22.99	23.00	36.06
David's Island, N. Y.....	579	830.73	10.36	3.45	27.44
Fort Columbus, N. Y.....	147	802.72	.....	20.41	33.63
Fort Warren, Mass.....	78	782.06	.....	.....	28.03
Fort Wayne, Mich.....	178	758.43	5.62	11.24	27.95
West Point, N. Y.....	354	757.06	2.82	11.30	18.95
Fort Myer, Va.....	129	751.95	.....	.....	15.31
Newport Barracks, Ky.....	52	749.99	.....	19.23	16.28
Watervliet Arsenal, N. Y.....	64	708.13	.....	.....	18.26
Fort Ontario, N. Y.....	44	659.07	.....	.....	21.60
Watertown Arsenal, Mass.....	34	617.66	.....	.....	27.48
Fort Wadsworth, N. Y.....	105	609.53	.....	28.57	23.84
Augusta Arsenal, Ga.....	26	576.93	38.46	.....	11.06
Fort Porter, N. Y.....	83	554.21	.....	12.05	30.11
Plattsburgh Barracks, N. Y.....	48	541.66	.....	20.83	24.50
Fort Niagara, N. Y.....	93	475.14	.....	21.50	24.87
Fort Wood, N. Y.....	37	405.40	.....	.....	3.71
Allegheny Arsenal, Pa.....	29	344.83	34.48	.....	12.00
Springfield Armory, Mass.....	30	300.00	.....	33.33	11.14
Department of the East.....	3,352	1,044.85	4.30	15.88	27.31

DEPARTMENT OF DAKOTA.

Fort Pembina, N. Dak.....	80	1,200.00	.....	12.50	26.21
Fort Buford, N. Dak.....	305	1,147.53	3.28	32.78	41.52
Camp Sheridan, Wyo.....	61	1,098.36	.....	.....	47.25
Fort Snelling, Minn.....	301	1,046.50	6.64	39.87	39.08
Fort Maginnis, Mont.....	137	1,036.49	7.30	7.30	22.00
Fort Meade, S. Dak.....	519	901.75	.....	11.56	22.05
Camp Poplar River, Mont.....	96	802.08	.....	.....	18.04
Fort Assiniboine, Mont.....	433	764.43	6.93	13.86	30.52
Fort Custer, Mont.....	341	762.47	5.87	5.87	29.06
Fort Sully, S. Dak.....	174	724.13	.....	5.75	30.03
Fort Shaw, Mont.....	179	653.63	.....	16.76	22.43
Fort Randall, S. Dak.....	178	589.89	.....	11.24	26.31
Fort Totten, N. Dak.....	89	584.27	.....	9.75	12.47
Fort Keogh, Mont.....	410	578.05	.....	.....	21.91
Fort Missoula, Mont.....	204	568.63	9.80	24.51	37.33
Fort Yates, N. Dak.....	308	545.48	.....	6.48	26.90
Fort A. Lincoln, N. Dak.....	101	514.86	.....	19.80	18.71
Fort Sisseton, S. Dak.....	21	428.58	.....	.....	6.52
Fort Bennett, S. Dak.....	47	404.25	.....	.....	20.16
Department of Dakota.....	4,168	791.75	2.64	13.91	26.33

TABLE IX.—The military posts in each Department, showing the rate of admission, death, discharge, etc.—Continued.

DEPARTMENT OF THE PLATTE

Names of stations.	Mean strength.	Admission-rate per 1,000 of mean strength.	Death-rate.	Discharge-rate.	Constantly non-effective.
Fort Washakie, Wyo	126	1,293.65	7.94	31.75	31.89
Fort Sidney, Nebr.	214	1,275.71	4.67	46.73	36.71
Fort Du Chesne, Utah	255	1,266.68	3.92	27.45	26.41
Fort Robinson, Nebr.	427	1,028.09	4.63	9.37	29.41
Fort Niobrara, Nebr.	381	997.39	5.25	21.00	19.99
Camp Pilot Butte, Wyo	79	746.84	.....	12.66	21.47
Fort Bridger, Wyo	190	742.11	5.26	5.26	18.66
Fort D. A. Russell, Wyo.	341	724.34	5.87	44.00	29.35
Fort Omaha, Nebr.	377	724.14	2.65	34.49	34.51
Fort Laramie, Wyo.	160	712.50	.....	50.00	25.33
Fort Douglas, Utah	372	634.42	2.69	5.38	25.22
Fort McKinney, Wyo	177	423.73	11.30	.....	17.94
Department of the Platte	3,453	898.05	4.34	21.14	25.23

DEPARTMENT OF THE MISSOURI

Little Rock Bks, Ark	95	1,494.72	21.05	42.11	40.76
Fort Sill, Ind. T.	276	1,456.51	3.62	18.12	28.81
Fort Logan, Colo	151	1,351.00	13.25	6.62	53.47
Fort Elliott, Tex	147	1,258.61	.....	.....	45.30
Fort Hays, Kans	120	1,125.00	8.33	16.67	38.88
Rock Island Arsenal, Ill.	59	1,101.69	16.95	33.90	34.63
Fort Reno, Ind. T.	255	1,078.43	3.92	27.45	48.09
Fort Leavenworth (post) Kans	598	1,026.75	1.67	16.72	27.87
Fort Lewis, Colo	291	1,003.42	6.87	10.31	26.39
Fort Leavenworth (prison guard) Kans	118	889.84	.....	8.47	12.12
Fort Gibson, Ind. T.	84	809.52	.....	.....	20.95
Fort Supply, Ind. T.	213	751.18	4.69	4.69	18.23
Fort Lyon, Colo	111	702.70	9.01	27.03	24.98
Fort Crawford, Colo	91	692.30	10.99	43.96	26.08
Fort Riley, Kans	548	691.61	1.82	1.82	22.98
Jefferson Barracks, Mo	636	668.23	3.14	26.73	29.20
Fort Sheridan, Ill.	97	536.07	.....	10.31	13.92
Chicago (headquarters), Ill.	59	237.28	.....	.....	4.55
Fort Leavenworth (Headquarters), Kans	37	.....	.....	.....	.....
Department of the Missouri	4,436	976.55	3.33	14.19	28.40

DEPARTMENT OF TEXAS.

Fort Brown, Tex.	145	2,634.48	.....	20.69	67.54
Camp Del Rio, Tex.	13	1,000.00	.....	.....	18.12
Fort Hancock, Tex.	46	1,000.00	.....	21.74	30.19
Fort McIntosh, Tex.	129	906.98	7.75	.....	24.97
San Antonio (post), Tex.	476	899.17	4.20	12.60	33.53
Fort Clark, Tex.	349	882.52	.....	20.05	39.89
Fort Bliss, Tex.	118	694.93	.....	16.95	15.58
Camp Eagle Pass, Tex.	55	654.54	.....	18.18	36.40
Fort Davis, Tex.	102	617.65	.....	29.41	21.17
Fort Ringgold, Tex.	144	312.51	.....	6.94	11.42
Camp Langtry, Tex.	13	307.69	.....	.....	4.22
Camp Pena Colorado, Tex.	55	272.73	.....	.....	28.24
Fort Concho, Tex.	28	178.58	.....	.....	6.35
San Antonio (Headquarters), Tex.	33	151.51	30.30	.....	15.44
Department of Texas	1,778	929.14	2.25	13.50	31.28

TABLE IX.—The military posts in each Department, showing the rate of admission, death, discharge, etc.—Continued.

DEPARTMENT OF CALIFORNIA.

Names of stations.	Mean strength.	Admission-rate per 1,000 of mean strength.	Death-rate.	Discharge-rate.	Constantly non-effective.
Fort Bidwell, Cal	131	1,007.63	7.63	7.63	16.65
Presidio, San Francisco, Cal.....	401	981.68	6.11	24.43	35.09
Fort Mason, Cal	66	681.82	.....	15.15	25.32
Benicia Barracks, Cal	73	602.75	13.70	41.09	27.85
Alcatraz Island, Cal	95	505.26	10.53	10.53	14.48
Benicia Arsenal, Cal	52	461.54	19.23	.....	12.07
Fort Gaston, Cal	35	400.00	.....	28.57	18.47
Fort McDermitt, Nev.....	20	350.00	.....	100.00	3.84
Angel Island, Cal	153	320.27	.....	32.68	11.07
Department of California.....	1,241	786.47	5.64	21.75	23.65

DEPARTMENT OF THE COLUMBIA.

Boisé Barracks, Idaho.....	101	980.19	9.90	.....	11.82
Fort Canby, Wash.....	28	904.28	.....	35.71	16.83
Fort Spokane, Wash	219	940.65	4.57	9.13	19.04
Fort Sherman, Idaho	246	926.81	.....	12.20	21.01
Vancouver Barracks, Wash	383	900.79	2.61	20.89	34.35
Fort Klamath, Oregon	37	810.81	27.03	.....	8.59
Fort Walla Walla, Wash.....	317	697.16	.....	9.47	20.90
Fort Townsend, Wash	50	620.00	.....	20.00	13.57
Department of the Columbia.....	1,423	858.74	2.81	12.65	22.62

DEPARTMENT OF ARIZONA.

Fort McDowell, Ariz.....	93	1,225.80	.....	10.75	31.87
Fort Mojave, Ariz	53	1,188.68	.....	.....	62.04
Fort Lowell, Ariz	149	1,087.25	.....	26.85	21.78
Fort Marcy, N. Mex	150	1,079.99	6.67	33.33	31.39
Fort Bayard, N. Mex	310	1,061.29	16.13	29.03	32.92
Whipple Barracks, Ariz.....	203	921.18	4.93	34.48	41.64
Fort Bowie, Ariz	102	813.73	.....	.....	23.22
Fort Thomas, Ariz	101	752.48	.....	9.90	35.86
San Carlos, Ariz	199	748.75	.....	.....	16.83
Fort Apache, Ariz	272	705.88	7.35	18.38	27.31
San Diego Barracks, Cal.....	53	698.11	.....	37.74	71.80
Fort Stanton, N. Mex.....	152	690.79	.....	.....	22.02
Fort Wingate, N. Mex.....	384	674.49	2.60	2.60	17.26
Fort Grant, Ariz	311	649.53	12.86	19.29	30.29
Fort Huachuca, Ariz	248	592.75	.....	16.13	19.53
Fort Union, N. Mex	140	478.57	.....	.....	9.94
Fort Selden, N. Mex	20	400.00	.....	.....	3.15
Fort Verde, Ariz	98	275.51	.....	20.41	9.84
Department of Arizona.....	3,106	804.57	4.51	15.14	26.11

TABLE X.—The monthly prevalence of disease among the white and the colored troops in the Army and its several departments during the year 1889.

THE U. S. ARMY.

Months.	Admitted to sick report.						Constantly non-effective.						
	Number.		Ratios per 1,000 of mean strength.				Mean strength.	Days.			Ratios per 1,000 of mean strength.		
	Veneral, alcoholism, and injuries.	Other diseases.	All diseases and injuries.	Veneral, alcoholism, and injuries.	Other diseases.	All diseases and injuries.		Veneral, alcoholism, and injuries.	Other diseases.	All diseases and injuries.	Veneral, alcoholism, and injuries.	Other diseases.	All diseases and injuries.
Jan..	W 727	1,698	2,425	31.58	73.75	105.33	23,024	10,373	18,640	29,013	14.53	28.12	40.65
	C 108	209	317	43.17	83.53	126.70	2,502	1,317	2,373	3,590	16.98	29.31	46.29
	T 835	1,907	2,742	32.72	74.71	107.42	25,526	11,690	20,913	32,603	14.77	28.43	41.20
Feb..	W 597	1,744	2,341	25.00	74.79	100.39	23,318	9,402	19,584	28,786	14.40	29.69	44.09
	C 69	176	245	27.78	70.85	98.63	2,484	1,227	2,277	3,504	17.64	32.74	50.98
	T 686	1,920	2,586	25.81	74.41	100.22	25,802	10,629	21,861	32,290	14.71	29.98	44.69
Mar..	W 695	1,886	2,581	29.92	81.20	111.12	23,227	10,275	22,287	31,562	14.27	30.95	45.22
	C 74	207	281	30.24	84.59	114.83	2,447	1,037	2,323	3,360	13.67	30.62	44.29
	T 769	2,093	2,862	29.95	81.52	111.47	25,674	11,312	24,610	35,922	14.21	30.92	45.13
Apr..	W 740	1,723	2,463	32.52	75.71	108.23	22,768	10,423	20,424	30,847	15.27	29.91	45.18
	C 64	209	333	26.34	110.70	137.04	2,430	971	2,428	3,399	13.32	33.31	46.63
	T 804	1,992	2,796	31.92	79.08	111.01	25,188	11,394	22,852	34,246	15.08	30.24	45.32
May..	W 778	1,668	2,446	34.64	74.27	108.91	22,459	10,329	20,298	30,627	14.84	29.15	43.99
	C 82	187	269	34.64	79.00	113.64	2,307	1,153	2,029	3,182	15.72	27.65	43.37
	T 860	1,855	2,715	34.64	74.72	109.36	24,826	11,482	22,327	33,809	14.92	29.01	43.93
June..	W 698	1,566	2,264	30.97	69.47	100.44	22,541	10,672	18,360	29,032	15.78	27.15	42.93
	C 66	144	210	27.16	59.26	86.42	2,430	1,114	1,882	2,996	15.28	25.82	41.10
	T 764	1,710	2,474	30.59	68.48	99.07	24,971	11,786	20,242	32,028	15.73	27.02	42.75
July..	W 842	1,986	2,828	37.43	88.29	125.72	22,495	11,368	20,473	31,841	16.30	29.36	45.66
	C 83	189	272	33.82	77.02	110.84	2,454	1,240	1,684	3,924	16.30	22.14	38.44
	T 925	2,175	3,100	37.07	87.17	124.25	24,949	12,608	22,157	34,765	16.30	28.65	44.95
Aug..	W 690	1,993	2,683	31.81	90.44	121.75	22,037	9,906	21,443	31,344	14.50	31.69	45.89
	C 76	143	219	31.67	59.58	91.25	2,400	1,086	1,545	2,631	14.00	20.76	35.36
	T 766	2,136	2,902	31.34	87.41	118.75	24,437	10,992	22,988	33,980	14.51	30.35	44.86
Sept..	W 691	1,968	2,659	31.86	90.72	122.58	21,692	9,386	22,813	32,199	14.42	35.06	49.48
	C 63	165	228	26.44	69.24	95.68	2,383	864	1,464	2,328	12.09	20.47	32.56
	T 754	2,133	2,887	31.82	88.59	101.92	24,075	10,250	24,277	34,527	14.17	33.63	47.80
Oct..	W 692	1,692	2,384	31.08	76.00	107.08	22,263	9,526	22,480	32,006	13.81	32.57	46.38
	C 47	154	201	19.86	65.09	84.95	2,366	855	1,837	2,692	11.66	23.04	36.70
	T 739	1,846	2,585	29.77	74.36	104.13	24,629	10,381	24,317	34,698	13.60	31.85	45.45
Nov..	W 670	1,524	2,194	29.80	67.78	97.58	22,484	9,026	19,500	28,526	13.38	28.91	42.29
	C 67	137	204	28.62	58.52	87.14	2,341	863	1,591	2,454	12.29	22.65	34.94
	T 737	1,661	2,398	29.69	66.91	96.60	24,825	9,889	21,091	30,980	13.28	28.32	41.60
Dec..	W 662	1,860	2,522	29.04	81.59	110.63	22,796	9,236	20,421	29,651	13.06	28.90	41.96
	C 92	223	317	38.35	93.79	132.14	2,399	1,228	1,960	3,188	16.51	26.36	42.87
	T 754	2,083	2,839	29.92	82.76	112.68	25,195	10,458	22,381	32,839	13.39	28.65	42.04
Army	W 8,482	21,308	29,790	37.54	943.21	1,318.67	22,591	119,916	246,523	366,439	14.54	29.90	44.44
	C 891	2,205	3,096	36.84	912.29	1,280.93	2,417	12,953	23,293	36,248	14.69	26.40	41.09
	T 9,373	23,513	32,886	37.4.80	940.22	1,315.02	25,008	132,871	269,816	402,687	14.56	29.56	44.12

DEPARTMENT OF THE EAST.

Jan..	W 173	457	630	32.22	85.10	117.32	5,370	2,419	4,608	7,027	14.53	27.68	42.21
	C 6	15	21	100.00	250.00	350.00	60	122	110	232	65.59	59.14	24.73
	T 179	472	651	32.97	86.92	119.89	5,430	2,541	4,718	7,259	15.09	28.03	43.12
Feb..	W 160	457	617	29.84	85.21	115.05	5,363	2,307	4,634	6,941	15.36	30.86	46.22
	C 3	6	9	54.55	109.09	163.64	55	75	55	130	48.70	35.72	84.42
	T 163	463	626	30.09	85.45	115.54	5,418	2,382	4,689	7,071	15.70	30.91	46.61
Mar..	W 179	515	694	33.55	96.53	130.08	5,335	2,680	5,468	8,148	16.21	34.06	49.27
	C 2	5	7	46.51	116.28	162.79	43	14	29	43	10.50	21.76	32.26
	T 181	520	701	33.66	96.69	130.39	5,378	2,694	5,497	8,191	16.16	32.97	49.13
Apr..	W 171	483	654	33.56	94.78	128.34	5,096	2,665	5,155	7,820	17.43	33.72	51.15
	C 1	3	4	34.48	103.45	137.93	29	52	64	116	59.77	73.56	133.33
	T 172	486	658	33.56	94.83	128.39	5,125	2,717	5,219	7,936	17.67	33.95	51.62
May..	W 200	414	614	39.40	81.56	120.96	5,076	2,371	4,979	7,350	15.07	31.64	46.71
	C 3	20	23	78.95	526.31	605.26	38	10	234	244	8.49	198.64	207.13
	T 203	434	637	39.70	84.86	124.56	5,114	2,381	5,213	7,594	15.02	32.88	47.90
June..	W 161	471	632	31.87	91.78	123.15	5,132	2,296	4,497	6,793	14.91	29.21	44.12
	C 5	7	12	87.72	132.81	210.53	57	60	185	245	35.09	108.19	143.28
	T 166	478	644	31.99	92.12	124.11	5,189	2,356	4,682	7,038	15.18	30.08	45.21

TABLE X.—The monthly prevalence of disease among the white and the colored troops in the Army, etc.—Continued.

DEPARTMENT OF THE EAST—Continued.

Months.	Admitted to sick report.						Mean strength.	Constantly non-effective.						
	Number.			Ratios per 1,000 of mean strength.				Days.			Ratios per 1,000 of mean strength.			
	Veneral, alcoholism, and injuries.	Other diseases.	All diseases and injuries.	Veneral, alcoholism, and injuries.	Other diseases.	All diseases and injuries.		Veneral, alcoholism, and injuries.	Other diseases.	All diseases and injuries.	Veneral, alcoholism, and injuries.	Other diseases.	All diseases and injuries.	
July.	W.	220	571	791	42.44	110.17	152.61	5,183	2,749	4,957	7,706	17.11	30.85	47.96
	C.	6	2	8	90.91	30.30	121.21	66	85	79	164	41.55	38.61	80.16
	T.	226	573	799	43.06	109.16	152.22	5,249	2,834	5,036	7,870	17.42	30.95	48.37
Aug.	W.	188	538	726	35.67	102.07	137.74	5,271	2,366	5,117	7,483	14.48	31.32	45.80
	C.	5	9	14	72.46	130.44	202.90	69	83	87	170	38.80	40.68	79.48
	T.	193	547	740	36.14	102.44	138.58	5,340	2,449	5,204	7,653	14.79	31.44	46.23
Sept.	W.	171	495	666	32.12	92.97	125.09	5,324	2,276	5,377	7,653	14.25	33.67	47.92
	C.	3	6	9	44.12	88.23	132.35	68	64	62	156	31.37	45.10	76.47
	T.	174	501	675	32.27	92.92	125.19	5,392	2,340	5,469	7,809	14.47	33.81	48.28
Oct.	W.	186	430	616	34.07	78.75	112.82	5,460	2,453	4,958	7,411	14.29	29.29	43.78
	C.	7	7	7	.....	109.38	109.38	64	54	116	170	47.22	58.47	85.69
	T.	186	437	623	33.67	79.11	112.78	5,524	2,507	5,074	7,581	14.64	29.63	44.27
Nov.	W.	188	418	606	34.44	76.57	111.01	5,459	2,304	4,221	6,525	14.07	25.77	39.94
	C.	2	11	13	27.78	152.78	180.56	72	31	119	150	14.35	55.09	69.44
	T.	190	429	619	34.35	77.56	111.91	5,531	2,335	4,340	6,675	14.02	26.16	40.23
Dec.	W.	165	607	772	30.38	111.77	142.15	5,431	2,410	5,299	7,709	14.32	31.47	45.79
	C.	6	16	22	57.69	153.85	211.54	104	108	126	234	33.50	39.08	72.58
	T.	171	623	794	30.89	112.56	143.45	5,535	2,518	5,425	7,943	14.67	31.62	46.29
Year.	W.	2,162	5,856	8,018	408.54	1,106.58	1,515.12	5,292	29,296	59,270	88,566	15.17	30.68	45.85
	C.	42	107	149	700.00	1,783.33	2,483.33	60	758	1,296	2,054	34.61	59.18	93.79
	T.	2,204	5,963	8,167	411.81	1,114.16	1,525.97	5,352	30,054	60,566	90,620	15.38	31.01	46.39

DEPARTMENT OF DAKOTA.

Jan.	W.	132	264	396	34.76	69.53	104.29	3,797	1,936	2,736	4,672	16.45	23.24	39.69
	C.	13	34	47	28.45	74.40	102.84	457	142	384	526	10.02	27.10	37.13
	T.	145	298	443	34.09	70.05	104.13	4,254	2,078	3,120	5,198	15.76	23.66	39.41
Feb.	W.	91	223	314	23.83	58.39	82.22	3,819	1,894	2,648	4,542	17.71	24.76	42.47
	C.	7	21	28	15.55	46.67	62.22	450	67	384	451	5.32	30.47	35.79
	T.	98	244	342	22.95	57.15	80.11	4,269	1,961	3,032	4,993	16.40	25.36	41.77
Mar.	W.	100	283	383	26.48	74.93	101.41	3,777	1,921	3,276	5,197	16.42	23.00	44.42
	C.	11	28	39	24.44	62.22	86.67	450	141	399	540	10.11	28.60	38.71
	T.	111	311	422	26.26	73.58	99.83	4,227	2,062	3,675	5,737	15.74	28.04	43.78
Apr.	W.	142	285	427	37.60	75.48	113.08	3,776	1,846	3,316	5,162	16.30	29.27	45.57
	C.	10	44	54	22.03	96.92	118.94	454	169	375	544	12.41	27.53	39.94
	T.	152	329	481	35.93	77.78	113.71	4,230	2,015	3,691	5,706	15.88	28.08	44.96
May.	W.	130	254	384	35.04	68.47	103.50	3,710	1,804	3,296	5,100	15.69	28.66	44.35
	C.	9	29	38	19.82	63.88	83.70	454	117	242	359	8.31	17.19	25.51
	T.	139	283	422	33.38	67.97	101.34	4,164	1,921	3,538	5,459	14.88	27.41	42.29
June.	W.	134	188	322	36.31	50.95	87.26	3,690	1,832	2,829	4,361	16.55	22.85	39.39
	C.	9	15	24	20.13	33.56	53.69	447	87	529	567	6.49	20.88	27.37
	T.	143	203	346	34.57	49.07	83.64	4,137	1,919	2,809	4,728	15.46	22.63	38.09
July.	W.	152	323	475	41.35	87.87	129.22	3,676	1,877	3,171	5,048	16.47	27.83	44.30
	C.	9	33	42	21.08	77.28	98.36	427	234	256	459	17.68	19.26	36.94
	T.	161	356	517	39.24	86.77	126.01	4,103	2,111	3,426	5,587	16.60	26.94	43.54
Aug.	W.	109	295	404	30.21	81.76	111.97	3,608	1,450	3,122	4,572	12.96	27.91	40.87
	C.	18	13	31	43.17	31.17	74.34	417	272	215	457	21.04	16.93	37.67
	T.	127	308	435	31.55	76.52	108.07	4,025	1,722	3,337	5,059	13.80	26.74	40.54
Sept.	W.	97	310	407	27.46	87.76	116.22	3,532	1,354	3,289	4,643	12.78	31.04	43.82
	C.	14	9	23	32.79	21.08	53.87	427	235	195	433	18.58	15.22	33.80
	T.	111	319	430	28.04	80.57	108.61	3,959	1,592	3,484	5,076	13.40	29.33	42.74
Oct.	W.	102	240	342	27.63	65.00	92.63	3,692	1,251	4,112	5,363	10.93	35.93	46.86
	C.	10	8	18	23.04	18.43	41.48	434	243	185	433	18.43	13.75	32.18
	T.	112	248	360	27.14	60.10	87.25	4,126	1,499	4,297	5,796	11.72	33.59	45.31
Nov.	W.	96	224	320	25.31	59.05	84.36	3,793	1,251	3,268	4,519	10.99	28.72	39.71
	C.	13	13	26	29.68	29.68	59.36	438	209	118	327	15.91	8.98	24.89
	T.	109	237	346	25.76	56.01	81.78	4,231	1,460	3,386	4,846	11.50	26.67	38.17
Dec.	W.	89	220	309	23.05	56.98	80.03	3,861	1,177	2,874	4,051	9.83	24.01	33.85
	C.	14	52	66	33.02	122.64	155.67	424	179	250	429	13.62	19.02	32.63
	T.	103	272	375	24.04	63.48	87.52	4,285	1,356	3,124	4,480	10.21	23.52	33.73
Year.	W.	1,374	3,109	4,483	368.56	833.96	1,202.52	3,728	19,593	37,637	57,230	14.40	27.66	42.06
	C.	137	299	431	311.36	679.55	990.91	440	2,103	3,980	5,385	13.09	20.44	33.53
	T.	1,511	3,408	4,919	362.52	817.66	1,180.18	4,168	21,696	40,919	62,615	14.26	26.90	41.16

TABLE X.—The monthly prevalence of disease among the white and the colored troops in the Army, etc.—Continued.

DEPARTMENT OF THE PLATTE.

Months.	Admitted to sick report.						Constantly non-effective.						
	Number.			Ratios per 1,000 of mean strength.			Mean strength.	Days.			Ratios per 1,000 of mean strength.		
	Veneral alcoholism, and injuries.	Other diseases.	All diseases and injuries.	Veneral alcoholism, and injuries.	Other diseases.	All diseases and injuries.		Veneral alcoholism, and injuries.	Other diseases.	All diseases and injuries.	Veneral alcoholism, and injuries.	Other diseases.	All diseases and injuries.
Jan..	W. 82	287	369	27.08	94.78	121.86	3,028	996	2,879	3,875	10.61	30.67	41.28
	C. 38	63	101	54.52	90.39	144.91	697	408	592	1,000	18.88	27.40	46.28
	T. 120	350	470	32.21	93.96	126.17	3,725	1,404	3,471	4,875	12.16	30.06	42.22
Feb..	W. 64	182	246	21.42	60.91	82.33	2,988	750	2,472	3,231	9.07	29.55	38.62
	C. 20	55	75	29.68	81.60	111.28	674	376	542	918	19.92	28.72	48.64
	T. 84	237	321	22.94	64.72	87.66	3,662	1,135	3,014	4,149	11.07	29.39	40.46
Mar.	W. 83	212	295	27.81	71.02	98.83	2,985	794	2,591	3,385	8.58	28.00	36.58
	C. 26	56	82	39.15	84.34	123.49	664	325	479	804	15.79	23.27	39.06
	T. 109	268	377	29.87	73.45	103.32	3,649	1,119	3,070	4,189	9.89	27.14	37.03
Apr.	W. 87	231	312	29.24	77.65	106.89	2,975	879	2,520	3,399	9.85	28.23	38.08
	C. 22	95	117	33.43	144.38	177.81	652	256	593	849	12.97	30.04	43.01
	T. 109	326	435	30.00	89.74	119.74	3,633	1,135	3,113	4,248	10.42	28.66	38.98
May.	W. 117	195	312	40.14	66.89	107.03	2,915	956	2,232	3,188	10.58	24.70	35.28
	C. 30	75	105	44.91	112.28	157.19	668	258	581	839	12.46	28.06	40.52
	T. 147	270	417	41.03	75.35	116.38	3,583	1,214	2,813	4,027	10.93	25.33	36.26
June	W. 83	140	223	29.38	49.56	78.94	2,825	977	1,799	2,776	11.53	21.23	32.76
	C. 21	49	70	81.25	72.92	103.17	672	181	336	517	8.98	16.66	25.64
	T. 104	189	293	29.74	54.05	83.79	3,497	1,158	2,135	3,293	11.04	20.35	31.39
July.	W. 79	196	275	28.44	70.55	98.99	2,778	1,132	2,028	3,160	13.14	23.55	36.69
	C. 37	80	117	56.31	121.77	178.08	657	176	335	511	8.64	16.45	25.09
	T. 116	276	392	33.77	80.35	114.12	3,435	1,308	2,363	3,671	12.28	22.19	34.47
Aug.	W. 69	207	276	26.28	78.86	105.14	2,625	751	2,055	2,806	9.23	25.25	34.48
	C. 21	47	68	35.00	78.33	113.23	600	184	250	434	9.89	13.44	23.33
	T. 90	254	344	27.91	78.76	106.67	3,225	935	2,805	3,240	9.35	23.06	32.41
Sept.	W. 72	268	340	27.43	102.09	129.52	2,619	803	2,672	3,475	10.22	34.01	44.23
	C. 16	35	51	26.31	57.57	83.88	608	192	186	378	10.52	10.20	20.72
	T. 88	303	391	27.27	93.90	121.17	3,227	995	2,858	3,853	10.28	29.52	39.80
Oct..	W. 85	163	220	22.00	62.91	84.91	2,591	677	2,231	2,908	8.43	27.77	36.20
	C. 15	40	55	22.97	61.26	84.23	653	192	297	489	9.49	14.67	24.16
	T. 72	203	275	22.19	62.58	84.77	3,244	869	2,528	3,397	8.64	25.14	33.78
Nov.	W. 78	117	195	29.79	44.69	74.48	2,618	773	1,594	2,367	9.84	20.30	30.14
	C. 22	35	57	33.90	53.93	87.83	649	253	254	507	12.99	13.05	26.04
	T. 100	152	252	30.61	46.52	77.13	3,267	1,026	1,848	2,874	10.47	18.85	29.32
Dec.	W. 58	214	272	21.95	81.00	102.95	2,642	913	1,918	2,831	11.15	23.42	34.57
	C. 22	71	93	33.85	109.23	143.08	650	295	480	775	14.64	23.82	38.46
	T. 80	285	365	24.30	86.57	110.87	3,292	1,208	2,398	3,606	11.84	23.50	35.34
Year	W. 929	2,412	3,341	331.90	861.74	1193.64	2,799	10,410	26,991	37,401	10.19	26.42	36.61
	C. 290	701	991	443.42	1071.87	1515.29	654	3,096	4,925	8,021	12.97	20.63	33.60
	T. 1,219	3,113	4,332	353.03	901.53	1254.56	3,453	13,506	31,916	45,422	10.72	25.32	36.64

DEPARTMENT OF THE MISSOURI.

Jan..	W. 122	303	425	27.71	68.84	96.55	4,402	1,881	3,224	5,105	13.78	23.62	37.41
	C. 8	14	22	51.28	89.74	141.02	156	146	132	278	30.19	27.30	57.49
	T. 130	317	447	28.52	69.55	98.07	4,558	2,027	3,356	5,383	14.35	23.75	38.10
Feb..	W. 87	362	449	19.51	81.16	100.67	4,460	1,565	3,731	5,296	12.53	29.88	42.41
	C. 5	13	18	85.46	92.20	127.66	141	119	113	232	30.14	28.62	58.76
	T. 92	375	467	20.00	81.50	101.50	4,601	1,684	3,844	5,528	13.07	29.84	42.91
Mar.	W. 111	398	504	24.80	87.82	112.63	4,475	1,505	4,292	5,797	10.85	30.94	41.79
	C. 3	17	20	22.73	128.79	151.52	132	106	212	318	25.90	31.81	77.71
	T. 114	410	524	24.74	88.99	113.73	4,607	1,611	4,504	6,115	11.28	31.54	42.82
Apr.	W. 98	306	404	22.75	71.05	93.80	4,307	1,650	3,377	5,027	12.77	26.13	33.90
	C. 3	9	12	30.00	90.00	120.00	100	84	135	219	24.00	45.00	73.00
	T. 101	315	416	22.92	71.48	94.40	4,407	1,734	3,512	5,246	13.12	28.66	39.68
May.	W. 105	339	444	24.38	78.73	103.11	4,306	1,806	3,596	5,402	13.53	26.94	40.47
	C. 5	5	10	53.19	53.19	106.38	94	90	105	195	30.88	36.03	66.92
	T. 110	344	454	25.00	78.19	103.18	4,400	1,896	3,701	5,597	13.29	27.13	41.05
June.	W. 107	309	416	24.13	69.69	98.82	4,434	1,983	3,329	5,312	14.91	25.03	39.93
	C. 3	11	14	29.41	107.84	137.25	102	124	128	252	40.52	41.83	82.93
	T. 110	320	430	24.25	70.55	94.80	4,536	2,107	3,457	5,564	15.46	25.40	40.83

TABLE X.—The monthly prevalence of disease among the white and the colored troops in the Army, etc.—Continued.

DEPARTMENT OF THE MISSOURI—Continued.

Months.	Admitted to sick report.							Constantly non-effective						
	Number.			Ratios per 1,000 of mean strength.				Days.			Ratios per 1,000 of mean strength.			
	Veneral alcoholism, and injuries.	Other diseases.	All diseases and injuries.	Veneral alcoholism, and injuries.	Other diseases.	All diseases and injuries.	Mean strength.	Veneral alcoholism, and injuries.	Other diseases.	All diseases and injuries.	Veneral alcoholism, and injuries.	Other diseases.	All diseases and injuries.	
July	W.	134	369	503	30.44	83.82	114.26	4,402	1,997	3,308	5,305	14.63	24.24	38.89
	C..	2	10	12	17.09	85.47	102.56	117	1	121	162	11.39	33.36	44.67
Aug	W.	136	379	515	30.09	83.87	113.96	4,519	2,038	3,429	5,467	14.55	24.48	39.03
	C..	117	469	586	26.85	107.62	134.47	4,358	1,953	4,324	6,277	14.46	32.01	46.47
Sept.	W.	120	474	594	26.63	105.16	131.79	4,507	2,003	4,378	6,381	14.34	31.33	45.61
	C..	112	506	618	26.35	119.03	145.38	4,251	1,707	5,232	6,939	13.38	41.02	54.40
Oct.	W.	117	518	635	26.59	117.73	144.32	4,400	1,778	5,299	7,077	13.47	40.14	53.61
	C..	124	407	531	29.57	97.07	126.64	4,192	1,897	4,533	6,430	14.59	34.87	49.46
Nov.	W.	125	425	550	28.83	98.02	126.85	4,336	1,953	4,752	6,705	14.53	35.35	49.88
	C..	96	307	403	23.84	76.26	100.10	4,026	1,716	3,795	5,511	14.21	31.42	45.63
Dec.	W.	100	311	411	24.15	75.11	99.25	4,141	1,740	3,935	5,675	14.00	31.67	45.67
	C..	113	327	440	27.57	79.77	107.34	4,099	1,957	3,619	5,276	13.04	28.49	41.52
Year.	W.	1,326	4,397	5,723	307.73	1020.42	1328.15	4,309	21,817	46,360	67,677	13.55	29.48	43.03
	C..	52	127	179	409.45	1000.00	1409.45	127	1,008	1,568	2,576	21.74	33.83	55.57
	T.	1,378	4,524	5,902	310.64	1019.84	1330.48	4,436	22,325	47,928	70,253	13.79	29.60	43.39

DEPARTMENT OF TEXAS.

Jan., W...	66	113	179	37.80	64.72	102.52	1,746	1,021	1,253	2,274	18.86	23.15	42.01
Feb., W...	63	139	202	34.31	75.71	110.02	1,836	933	1,418	2,351	17.15	26.06	43.21
Mar., W...	68	111	179	37.16	60.65	97.81	1,830	1,007	1,383	2,390	17.75	24.38	42.13
Apr., W...	67	130	197	37.51	72.79	110.30	1,786	791	1,328	2,119	14.76	24.78	39.55
May, W...	68	126	194	40.00	74.12	114.12	1,700	995	1,492	2,487	18.88	28.31	47.19
June, W...	66	164	230	40.07	99.57	139.64	1,647	1,032	1,591	2,623	20.89	32.20	53.09
July, W...	60	168	232	35.42	99.17	134.59	1,694	1,004	2,295	3,299	19.12	43.70	62.82
Aug., W...	48	146	194	31.54	95.93	127.47	1,522	1,125	2,173	3,298	23.84	46.08	69.92
Sept., W...	49	107	156	30.47	66.54	97.01	1,608	872	1,810	2,682	10.35	21.49	31.84
Oct., W...	76	148	224	40.62	79.10	119.72	1,871	1,070	1,704	2,774	18.45	29.38	47.83
Nov., W...	74	167	241	36.89	83.25	120.14	2,006	1,111	2,090	3,201	18.46	34.73	53.19
Dec., W...	73	177	250	34.86	84.53	119.39	2,094	1,112	2,021	3,133	17.13	31.18	48.26
Year, W...	778	1,696	2,474	437.57	958.88	1391.45	1,778	12,073	20,558	32,631	18.60	31.68	50.28

DEPARTMENT OF CALIFORNIA.

Jan., W...	40	51	91	32.36	41.26	73.62	1,236	630	641	1,271	16.44	16.73	33.17
Feb., W...	55	89	144	42.34	63.51	110.85	1,299	574	819	1,393	15.78	22.52	38.30
Mar., W...	49	91	140	37.84	70.27	108.11	1,295	745	1,106	1,851	18.56	27.55	46.11
Apr., W...	50	68	118	39.40	53.59	92.99	1,269	732	984	1,716	19.23	25.85	45.07
May, W...	37	98	135	29.11	77.10	106.22	1,271	560	821	1,381	14.21	20.84	35.05
June, W...	46	78	124	38.17	64.73	102.90	1,205	648	934	1,582	17.93	25.84	43.76
July, W...	51	93	144	41.56	75.79	117.36	1,227	755	994	1,640	19.83	23.50	43.35
Aug., W...	57	91	148	46.23	73.80	120.03	1,233	882	861	1,848	23.08	25.14	48.22
Sept., W...	59	92	151	48.76	76.03	124.79	1,210	804	1,006	1,810	22.15	27.71	49.86
Oct., W...	44	80	124	36.36	66.12	102.48	1,210	646	1,076	1,722	17.22	28.69	45.91
Nov., W...	28	77	105	23.08	63.48	86.66	1,213	440	818	1,258	12.09	22.48	31.57
Dec., W...	41	75	116	33.58	61.43	95.00	1,221	480	707	1,187	12.68	18.68	31.36
Year, W...	557	983	1,540	448.83	792.10	1240.93	1,241	7,896	10,767	18,663	17.43	23.77	41.20

TABLE X.—The monthly prevalence of disease among the white and the colored troops in the Army, etc.—Continued.

DEPARTMENT OF THE COLUMBIA.

Months.	Admitted to sick report.						Constantly non-effective.						
	Number.			Ratios per 1,000 of mean strength.			Mean strength.	Days.			Ratios per 1,000 of mean strength.		
	Veneral, alcoholism, and injuries.	Other diseases.	All diseases and injuries.	Veneral, alcoholism, and injuries.	Other diseases.	All diseases and injuries.		Veneral, alcoholism, and injuries.	Other diseases.	All diseases and injuries.	Veneral, alcoholism, and injuries.	Other diseases.	
Jan., W	49	99	148	33.15	66.98	100.13	1,478	667	987	1,654	14.56	21.54	36.10
Feb., W	36	121	157	24.54	82.48	107.02	1,467	704	1,012	1,716	17.14	24.64	41.78
Mar., W	48	96	144	33.57	67.13	100.70	1,430	766	985	1,751	17.28	22.22	39.50
Apr., W	65	97	162	45.49	67.88	113.37	1,429	773	989	1,762	18.03	23.07	41.10
May, W	55	106	161	38.06	73.36	111.42	1,445	731	1,120	1,851	16.31	25.00	41.31
June, W	43	91	134	29.29	61.99	91.28	1,468	667	1,050	1,717	15.15	23.84	38.99
July, W	64	145	209	45.75	103.64	149.39	1,399	647	1,063	1,710	14.69	24.14	38.83
Aug., W	44	106	150	32.28	77.77	110.05	1,363	473	1,015	1,488	11.19	24.02	35.21
Sept., W	72	75	147	52.59	54.79	107.38	1,369	703	933	1,636	17.12	22.72	39.84
Oct., W	56	98	154	40.12	70.20	110.32	1,396	711	995	1,706	16.43	22.99	39.42
Nov., W	43	83	126	30.26	58.41	88.67	1,421	674	763	1,437	15.81	17.90	33.71
Dec., W	58	108	166	41.16	76.65	117.81	1,409	717	850	1,567	16.42	19.46	35.88
Year, W	633	1,225	1,858	44.83	860.86	1305.69	1,423	8,233	11,762	19,995	15.85	22.65	38.50

DEPARTMENT OF ARIZONA.

Jan..	W	63	122	185	32.66	63.25	95.90	1,929	823	1,290	2,113	13.76	21.57	35.34
	C	43	83	126	38.12	73.58	111.70	1,128	499	938	1,437	14.27	26.82	41.09
	T	106	205	311	34.67	67.06	101.73	3,057	1,322	2,228	3,550	13.95	23.51	37.46
	W	41	171	212	20.10	83.82	103.92	2,040	666	1,532	2,198	11.66	26.82	38.48
Feb..	C	34	80	114	29.28	68.91	98.19	1,161	590	1,095	1,685	18.15	33.68	51.83
	W	75	251	326	23.43	78.41	101.84	3,201	1,256	2,627	3,883	14.01	29.31	43.32
	T	56	184	240	27.28	89.63	116.90	2,053	838	1,976	2,814	13.17	31.05	44.22
Mar..	C	32	101	133	27.70	87.44	115.14	1,155	451	1,111	1,562	12.59	31.03	43.62
	W	89	285	373	27.43	83.84	116.27	3,208	1,289	3,087	4,376	12.96	31.04	44.00
	T	60	122	182	28.94	58.85	87.79	2,073	1,083	1,993	2,676	17.41	25.62	43.03
Apr.	C	28	118	146	23.61	99.49	123.10	1,186	410	1,166	1,576	11.52	32.77	44.29
	W	88	240	328	27.00	73.64	100.63	3,259	1,493	2,759	4,252	15.27	28.22	43.49
	T	64	136	200	32.24	68.51	100.75	1,985	1,022	1,554	2,576	16.61	25.25	41.86
May.	C	35	58	93	31.56	52.30	83.86	1,109	678	745	1,423	19.72	21.67	41.39
	W	99	194	293	32.00	62.70	94.70	3,094	1,700	2,209	3,999	17.72	23.97	41.69
	T	58	123	181	27.72	58.79	86.52	2,092	1,207	1,483	2,690	19.23	23.63	42.86
June.	C	28	62	90	24.37	53.96	78.33	1,149	662	863	1,525	19.20	25.04	44.24
	W	86	185	271	28.53	67.08	83.61	3,241	1,899	2,346	4,215	19.22	24.13	43.35
	T	82	120	202	39.36	57.61	96.97	2,083	1,163	1,434	2,597	18.01	21.21	40.22
July.	C	29	64	93	24.49	54.05	78.55	1,184	699	805	1,504	19.05	22.93	40.98
	W	111	184	295	33.98	56.32	90.30	3,267	1,862	2,239	4,101	18.39	22.11	40.50
	T	58	139	197	28.86	69.15	98.01	2,010	844	1,538	2,402	13.55	25.00	38.55
Aug.	C	29	69	98	24.98	59.43	84.41	1,161	462	846	1,308	12.84	23.50	36.34
	W	87	208	295	27.44	65.60	93.93	3,171	1,306	2,404	3,710	13.28	24.45	37.74
	T	59	114	173	33.93	65.56	99.48	1,739	817	1,599	2,416	15.66	30.65	46.31
Sept.	C	25	102	127	22.18	60.50	112.68	1,127	239	851	1,090	7.07	25.17	32.24
	W	84	216	300	29.32	75.36	104.68	2,866	1,056	2,450	3,506	12.28	23.63	40.78
	T	47	125	172	26.08	69.37	95.45	1,802	790	1,673	2,463	14.14	29.95	44.09
Oct..	C	21	81	102	19.66	75.84	95.50	1,068	245	943	1,186	7.34	28.48	35.82
	W	68	206	274	23.69	71.78	95.47	2,870	1,033	2,616	3,649	11.61	29.40	41.01
	T	67	130	197	35.28	68.46	103.74	1,899	738	1,736	2,474	12.95	30.47	43.42
Nov.	C	26	74	100	24.46	63.62	94.07	1,065	900	900	1,186	8.97	28.23	37.19
	W	93	204	297	31.40	68.87	100.27	2,962	1,024	2,636	3,660	11.52	29.66	41.39
	T	65	130	195	32.70	65.39	98.09	1,985	764	1,830	2,594	12.40	29.69	42.09
Dec..	C	40	77	117	36.40	70.06	106.46	1,089	487	900	1,387	14.40	26.42	40.71
	W	105	207	312	34.01	67.06	101.07	3,087	1,251	2,730	3,951	13.07	23.53	41.60
Year.	W	720	1,616	2,336	364.74	818.64	1,183.38	1,974	10,755	19,258	30,013	14.92	26.73	41.65
	C	370	969	1,339	326.85	856.01	1,182.86	1,132	5,706	11,163	16,869	13.81	27.02	40.83
	T	1,090	2,585	3,675	360.93	832.20	1,183.19	3,106	16,461	30,421	46,882	14.52	26.83	41.35

TABLE XI.—The rates per 1,000 of strength of admission, death, discharge, and non-effectiveness of the United States Army, and of the troops in the several departments, for the year 1889 as compared with those of the decade, 1878-'87, and of certain foreign armies

Names of army or departments.	U. S. Army, 1889.				U. S. Army, white, 1889.				U. S. Army, colored, 1889.			
	25, 008.				22, 591.				2, 417.			
Mean strength (corrected for time).												
Causes of admission to sick report.	Admissions.	Deaths.	Discharges.	Constantly non-effective.	Admissions.	Deaths.	Discharges.	Constantly non-effective.	Admissions.	Deaths.	Discharges.	Constantly non-effective.
	Enteric fever	5.32	.5579	5.75	.5786	1.24	.38	.....	.08
Other specific contagious and infectious diseases, including erysipelas	22.75	.04	.....	.84	20.67	.04	.....	.79	42.20	.....	.....	1.27
Malarial fevers and resulting conditions	120.20	.15	.04	3.25	126.20	.12	.04	3.38	64.13	.38	.....	2.09
Typho-malarial fever	.....	.32	.07	.03	.....	.31	.08	.03	.....	.41	.....	.....
Diarrhoea, including cholera morbus	111.36	.07	.15	1.13	114.03	.08	.12	1.17	86.47	.....	.38	.78
Dysentery	7.40	.07	.15	.38	7.30	.08	.16	.39	8.27	.....	.....	.28
Other miasmatic diseases	.....	.16	.04	.....	.....	.13	.....	.....	.....	.41	.38	.....
Gonorrhoea and results	38.44	.....	.59	2.16	40.06	.....	.65	2.28	23.17	.....	.....	1.03
Syphilis and results	22.07	.....	2.89	1.97	21.56	.....	2.55	1.95	26.89	.....	6.13	2.14
Other venereal diseases	24.15	.....	.04	1.48	23.24	.....	.04	1.45	32.69	.....	.....	1.75
Vaccina	32.91	.....	.....	1.23	33.33	.....	.....	1.25	28.96	.....	.....	1.11
Other enthetic diseases	1.96	.....	.....	.07	1.90	.....	.....	.06	2.48	.....	.....	.16
Alcoholism	41.43	.22	.15	.40	45.04	.24	.12	.44	2.07	.....	.38	.03
Other dietic diseases	1.12	.04	.04	.05	1.24	.04	.04	.06	.....	.....	.....	.....
Rheumatism (including muscular)	92.89	.....	1.98	4.78	91.81	.....	1.98	4.87	103.02	.....	1.53	3.93
Other constitutional diseases	3.80	.07	.29	.41	3.62	.04	.32	.41	5.38	.38	.....	.42
Developmental diseases	.....	.84	.....	.99	.....	.93	.....	1.05	.....	.....	.38	.....
Parasitic diseases	2.92	.....	.....	.06	3.19	.....	.....	.07	.....	.41	.....	.01
Headache and neuralgia	50.35	.....	.15	.91	49.40	.....	.16	.90	59.16	.....	.....	.93
Other diseases of the nervous system	10.80	.33	2.56	1.01	11.20	.32	2.59	1.06	7.03	.38	2.30	.58
Diseases of the eye	18.71	.....	1.02	.92	18.50	.....	1.05	.90	20.69	.....	.77	1.10
Diseases of the ear	8.16	.....	.77	.37	8.72	.....	.81	.39	2.90	.....	.38	.12
Catarrhs and common colds	21.23	.....	.....	.20	20.85	.....	.....	.19	24.82	.....	.....	.24
Bronchitis	76.58	.....	.22	1.48	78.21	.....	.20	1.54	61.23	.....	.38	1.00
Pneumonia	5.20	.70	.....	.55	5.00	.61	.....	.54	7.03	1.53	.....	.65
Pulmonary phthisis	3.32	.44	1.50	.74	3.28	.28	1.46	.72	3.72	1.92	1.92	.94
Pleuritis	2.56	.04	.07	.19	2.35	.04	.08	.19	4.51	.....	.....	.11
Other diseases of the respiratory system	7.20	.15	.18	.28	6.77	.12	.20	.30	11.17	.38	.....	.14
Diseases of the heart and valves	6.68	.37	1.43	.54	6.95	.40	1.50	.57	4.14	.....	.77	.27
Other diseases of the circulatory system	1.20	.07	.29	.11	1.24	.....	.32	.10	.83	.77	.....	.17
Tonsillitis	45.51	.....	.....	.68	43.60	.....	.....	.66	63.30	.....	.....	.95
Dyspepsia, colic and constipation	58.82	.....	.37	.96	58.52	.....	.40	.96	61.65	.....	.....	.90
Other diseases of the digestive system	84.97	.33	1.72	2.37	83.22	.36	1.62	2.36	101.36	.....	2.68	2.46
Diseases of the kidneys	2.00	.11	.22	.17	1.86	.12	.16	.17	3.31	.....	.77	.14
Other diseases of the genito-urinary system (non-venereal)	17.11	.04	.62	1.10	16.42	.04	.65	1.05	23.58	.....	.38	1.63
Diseases of the locomotor system (excluding muscular rheumatism)	5.56	.04	.73	.47	5.58	.04	.65	.42	5.38	.....	1.53	.88
Diseases of the integumentary system	82.37	.....	.11	2.26	85.21	.....	.04	2.30	55.85	.....	.77	1.88
All other diseases	27.95	.04	.40	1.16	25.90	.....	.36	1.17	47.17	.38	.38	1.11
Heat-stroke	1.84	.04	.04	.07	2.04	.04	.04	.07	.....	.....	.....	.....
Frost-bite and general freezing	1.36	.....	.07	.08	.97	.....	.08	.09	4.96	.....	.....	.08
Contusions and sprains	131.57	.04	.48	3.39	129.92	.....	.44	3.37	146.88	.38	.77	3.56
Dislocations	3.08	.....	.18	.26	3.19	.....	.20	.27	2.07	.....	.....	.16
Fractures (not gunshot)	7.20	.22	.77	1.17	7.17	.20	.82	1.20	7.45	.38	.38	.91
Incised, lacerated, contused, and punctured wounds	54.67	.04	.26	1.61	52.72	.....	.24	1.54	72.82	.38	.38	2.24
Shot wounds	3.76	.80	.55	.70	3.10	.81	.61	.59	9.93	.77	.....	1.70
All other injuries	45.27	1.24	.84	1.26	45.86	1.29	.93	1.28	39.72	.77	.38	1.09
Total for disease	1,066.30	3.75	19.61	35.57	1,073.70	3.64	19.34	36.02	997.10	6.90	22.22	31.35
Total for injuries	248.72	2.38	3.18	8.55	244.96	2.35	3.32	8.42	283.82	2.68	1.92	9.74
Total for all causes	1,315.02	6.33	22.79	44.12	1,318.67	5.99	22.66	44.44	1,280.93	9.58	24.14	41.09

TABLE XI.—The rates per 1,000 of strength of admission, death, discharge, and non-effectiveness of the United States Army, and of the troops in the several departments, for the year 1889 as compared with those of the decade, 1878-'87, and of certain foreign armies.

Names of army or departments.	U. S. Army, 1878-'87.				U. S. Army, white, 1878-'87.				U. S. Army, colored, 1878-'87.						
	Mean strength (corrected for time).				23, 698.				21, 470.				2, 228.		
Causes of admission to sick report.	Admissions.	Deaths.	Discharges.	Constantly non-effective.	Admissions.	Deaths.	Discharges.	Constantly non-effective.	Admissions.	Deaths.	Discharges.	Constantly non-effective.			
	Enteric fever.....	4.80	.74	.03	4.98	.73	.04	3.10	.78		
Other specific contagious and infectious diseases, including erysipelas.....	16.84	.22	.02	.....	15.91	.19	.01	.....	25.85	.35	.04	.....		
Malarial fevers and resulting conditions.....	173.87	.26	.18	.....	174.63	.26	.19	.....	166.52	.30	.09	.....		
Typho-malarial fever.....	2.60	.34	.004	.....	2.66	.31	.004	.....	1.97	.69	.....	.....	
Diarrhoea, including cholera morbus.....	181.06	.09	.31	.....	180.21	.09	.31	.....	189.23	.09	.39	.....		
Dysentery.....	16.66	.24	.21	.....	15.02	.23	.21	.....	32.45	.26	.17	.....		
Other miasmatic diseases.....	.03	.03	.....	.....	.03	.03	.....	.....	.04	.04	.....	.....	
Gonorrhoea and results.....	44.69	.004	.68	.....	44.24	.004	.70	.....	49.01	.....	.48	.....		
Syphilis and results.....	38.79	.03	3.62	.....	36.68	.03	3.54	.....	59.07	.04	4.42	.....		
Other venereal diseases.....	.89	.....	.....	.....	.85	.....	.....	.....	1.35	.....	.....	.....
Vaccina.....	7.10	.....	.....	.....	7.11	.....	.....	.....	7.00	.....	.....	.....
Other enthetic diseases.....	2.52	.004	.03	.....	2.35	.004	.03	.....	4.13	.....	.....	.....
Alcoholism.....	58.65	.17	.65	.....	64.28	.18	.71	.....	4.44	.....	.....	.....
Other dietetic diseases.....	.35	.01	.03	.....	.26	.01	.03	.....	1.21	.....	.....	.....
Rheumatism (including muscular).....	113.13	.05	2.98	.....	109.65	.05	2.91	.....	146.63	.04	3.68	.....		
Other constitutional diseases.....	8.49	.21	.72	.....	8.37	.20	.66	.....	9.65	.30	1.34	.....		
Parasitic diseases.....	3.22	.....	.01	.....	3.33	.....	.01	.....	2.15	.....	.....	.....
Headache and neuralgia.....	98.18	.....	.43	.....	94.98	.....	.43	.....	128.99	.....	.39	.....		
Other diseases of the nervous system.....	11.05	.55	3.63	.....	11.22	.57	.367	.....	9.47	.35	3.25	.....		
Diseases of the eye.....	25.01	.....	1.24	.....	24.45	.....	.122	.....	30.34	.....	1.47	.....		
Diseases of the ear.....	8.37	.01	.82	.....	8.79	.01	.87	.....	4.31	.....	.30	.....		
Catarrhs and common colds.....	110.37	.....	.03	.....	107.45	.....	.03	.....	138.55	.....	.04	.....		
Bronchitis.....	66.49	.12	.61	.....	65.53	.13	.63	.....	75.72	.04	.43	.....		
Pneumonia.....	4.42	.77	.15	.....	4.22	.71	.14	.....	6.28	1.43	.22	.....		
Pulmonary phthisis.....	3.57	.59	2.10	.....	3.56	.56	2.09	.....	3.64	.91	2.25	.....		
Pleuritis.....	4.09	.03	.12	.....	3.75	.03	.12	.....	7.36	.04	.13	.....		
Other diseases of the respiratory system.....	7.98	.09	.46	.....	7.52	.09	.47	.....	12.34	.13	.35	.....		
Diseases of the heart and valves.....	6.67	.53	2.20	.....	6.88	.53	2.28	.....	4.58	.56	1.39	.....		
Other diseases of the circulatory system.....	1.16	.10	.34	.....	1.23	.11	.37	.....	.40	.09	.13	.....		
Tonsillitis.....	55.08	.....	.01	.....	53.50	.....	.01	.....	70.29	.....	.....	.....
Dyspepsia, colic, and constipation.....	87.45	.....	.23	.....	83.54	.....	.25	.....	125.13	.....	.09	.....		
Other diseases of the digestive system.....	44.19	.56	2.26	.....	44.41	.56	2.30	.....	42.05	.52	1.91	.....		
Diseases of the kidneys.....	1.40	.20	.26	.....	1.42	.20	.25	.....	1.26	.17	.35	.....		
Other diseases of the genito-urinary system (non-venereal).....	14.02	.04	1.09	.....	13.73	.05	1.03	.....	16.88	.....	1.69	.....		
Diseases of the locomotor system (excluding muscular rheumatism).....	5.11	.01	1.28	.....	5.12	.004	1.25	.....	4.98	.09	1.60	.....		
Diseases of the integumentary system.....	103.14	.....	.43	.....	105.92	.....	.42	.....	76.26	.....	.48	.....		
All other diseases.....	10.15	.05	.87	.....	10.36	.05	.89	.....	8.12	.....	.65	.....		
Heat-stroke.....	1.79	.03	.03	.....	1.85	.04	.03	.....	1.26	.....	.....	.....
Frost-bite and general freezing.....	8.20	.11	.11	.....	6.39	.11	.09	.....	25.67	.04	.30	.....		
Contusions and sprains.....	152.51	.03	.66	.....	152.79	.03	.65	.....	149.87	.04	.74	.....		
Dislocations.....	2.40	.01	.17	.....	2.39	.01	.17	.....	2.47	.....	.17	.....		
Fractures (not gunshot).....	6.79	.16	.77	.....	7.11	.16	.80	.....	3.73	.13	.48	.....		
Incised, lacerated, contused, and punctured wounds.....	43.92	.16	.34	.....	42.56	.15	.34	.....	57.05	.26	.43	.....		
Shot wounds.....	5.87	1.35	1.31	.....	5.16	1.20	1.23	.....	12.70	2.86	2.04	.....		
All other injuries.....	23.59	1.63	.52	.....	24.04	1.60	.52	.....	19.25	1.86	.48	.....		
Total for disease.....	1,341.58	6.03	28.05	.....	1,328.17	5.92	28.08	.....	1,470.78	7.24	27.74	.....		
Total for injuries.....	245.07	3.49	3.90	.....	242.28	3.32	3.83	.....	271.99	5.20	4.64	.....		
Total for all causes.....	1,586.65	9.52	31.96	.....	1,570.45	9.24	31.92	.....	1,742.77	12.44	32.38	.....		

TABLE XI.—The rates per 1,000 of strength of admission, death, discharge, and non-effectiveness of the United States Army, and of the troops in the several departments, for the year 1889 as compared with those of the decade, 1878-87, and of certain foreign armies.

Army of.....	Great Britain, 1887.				Italy 1887.				Prussia, Saxony, Würtemberg, 1883-1884.			
Mean strength, (corrected for time.)	101, 114.				212, 898.				383, 021.			
Causes of admission to sick report.	Admissions.	Deaths.	Discharges.	Constantly non-effective.	Admissions.	Deaths.	Discharges.	Constantly non-effective.	Admissions.	Deaths.	Discharges.	Constantly non-effective.
Enteric fever.....	1.35	.27			5.06	1.26			5.47	.48		
Other specific contagious and infectious diseases, including erysipelas.....	8.64	.17			20.45	1.26			13.54	.09		
Malarial fevers and resulting conditions.....	4.20				25.02	.18	.27		12.89			
Typho-malarial fever.....												
Diarrhœa, including cholera morbus.....	5.50	.02			7.96				21.52	.01		
Dysentery.....	.94	.03	.01		.22				1.49	.04		
Other miasmatic diseases.....	.06	.02	.01			.02			.02	.02		
Gonorrhœa and results.....	103.02		.05		19.85				18.66			
Syphilis and results.....	116.39	.03	.64		5.68	.01	.01		8.74	.01	.03	
Other venereal diseases.....	33.51				26.72	.01			7.06			
Vaccina.....	2.59								.06			
Other enthetic diseases.....					.11	.01						
Alcoholism.....	3.22	.05	.01		.04	.01			.35	.03		
Other dietic diseases.....	.14				.51	.01	.01		.13	.01		
Rheumatism (including muscular).....	38.82	.03	.66		17.58	.06	.17		34.03	.03		1.24
Other constitutional diseases.....	26.81	.35	.47		8.33	.14	.71		15.66	.07		
Developmental diseases.....	6.89	.01	.88			.01	.46		.27	.13		1.86
Parasitic diseases.....	.71	.01			4.33				11.35			
Headache and neuralgia.....												
Other diseases of the nervous system.....	8.86	.36	2.21		5.78	.52	1.24		4.88	.18	1.06	
Diseases of the eye.....	12.43		.66		14.83		.77		34.11		3.23	
Diseases of the ear.....	6.62		.48		5.93	.03	.12		11.27	.01	1.29	
Bronchitis.....	43.37	.10			32.59	.69	.85		48.28	.02		
Pneumonia.....	6.99	.67			6.80	1.19	.88		10.27	.53		
Pulmonary phthisis.....	4.24	1.21			.81	.80	1.11		3.47	.71		
Pleuritis.....	3.41	.06	2.36		11.03	.69	1.34		4.22	.13	6.40	
Other diseases of the respiratory system inclusive of catarrhs and common colds.....	3.06	.06			1.20	.15	.04		14.06	.02		
Diseases of the heart and valves.....	7.55	.24			.91	.09	.94		1.52	.07		2.57
Other diseases of the circulatory system.....	2.19	.13	3.12		.16	.06	.15		1.31			
Tonsillitis and other diseases of mouth and throat.....	65.03				12.43		.07		70.90	.01		4.43
Diseases of the digestive system.....	29.90	.34	.91		24.72	.55	3.06		58.62	.19		
Diseases of the kidneys.....					.42	.07	.09		.60	.09		
Other diseases of the genito-urinary system (non-venereal).....	22.13	.22	.47		4.34	.01	.18		6.52	.01		.45
Diseases of the locomotor system (excluding muscular rheumatism).....	6.75	.02	.73		3.19	.05	.99		22.70	.05	4.76	
Diseases of the integumentary system.....	103.85	.02	.31		19.92	.12	.10		200.93	.02	.39	
All other diseases.....	9.39	.01			53.36	.10			9.15			
Heat-stroke.....									.26	.03		
Frost-bite and general freezing.....									8.81			
Contusions and sprains.....					8.65				97.71	.02		
Dislocations.....					.27		.08		1.09			
Fractures (not gunshot).....	98.19	.71	.82		1.19	.02	.18					.79
Incised, lacerated, contused, and punctured wounds.....					4.12	.01			2.54	.03		
Shot wounds.....					.52	.22	.10		25.30	.03		
All other injuries.....					4.46	.41	.07		44.05	.71		
Total for disease.....	688.61	4.43	13.98		322.29	8.05	13.58		654.88	2.95	28.62	
Total for injuries.....	98.19	.71	.82		19.21	.66	.43		175.23	1.11	.79	
Total for all causes.....	786.80	5.14	14.80		341.50	8.74	14.01		830.11	4.10	29.41	

TABLE XI.—The rates per 1,000 of strength of admission, death, discharge, and non-effectiveness of the United States Army, and of the troops in the several departments, for the year 1889 as compared with those of the decade, 1878-87, and of certain foreign armies.

Names of army or departments.	Department of the East.				Department of the Platte.				Department of Dakota.			
	5,352.				3,452.				4,168.			
Mean strength (corrected for time).												
Causes of admission to sick report.	Admissions.	Deaths.	Discharges.	Constantly non-effective.	Admissions.	Deaths.	Discharges.	Constantly non-effective.	Admissions.	Deaths.	Discharges.	Constantly non-effective.
	Enteric fever	5.23	.56		.79	4.92	.29		.72	13.68	.96		2.00
Other specific contagious and infectious diseases, including erysipelas	30.45			.69	36.20	.29		1.10	11.52			.70
Malarial fevers and resulting conditions	124.81	.19		3.09	62.26			1.44	36.71			1.17
Typho-malarial fever									.48	.24		.06
Diarrhoea, including cholera morbus	143.87			1.22	122.22	.29	.29	1.02	95.25			.73
Dysentery	6.73			.14	8.67			.34	2.88			.17
Other miasmatic diseases					.29	.29		.01				.24
Gonorrhoea and results	63.53	1.12	3.33		15.35		.87	.92	23.75		.24	1.37
Syphilis and results	32.51	4.86	2.26		14.48		2.32	.95	12.48		2.64	1.16
Other venereal diseases	34.19		2.03		15.35			1.03	21.11			1.30
Vaccina	69.32		3.69		3.48			.08	25.91			.57
Other enthetic diseases	1.31		.05		2.03			.08	.72			.02
Alcoholism	70.25	.37		.67	32.73		.20	.33	26.63			.24
Other dietic diseases	1.12	.19		.02	.58			.04	.96			.07
Rheumatism (including muscular)	97.35		1.49	3.64	121.63		2.90	5.08	93.57		1.20	4.11
Other constitutional diseases	4.11	.19	.37	.25	4.05		.29	.31	5.28		.48	.59
Developmental diseases	1.31		.93	.09	.87		1.16	.07	.96		.96	.08
Parasitic diseases	4.11			.11	2.03			.04	2.64			.04
Headache and neuralgia	59.79		.56	.87	48.08			1.09	58.78			.86
Other diseases of the nervous system	12.52	.37	1.68	.75	7.82	.29	2.90	1.27	11.28		2.16	1.47
Diseases of the eye	17.56		.75	.81	19.40		2.61	.87	17.75		.72	.87
Diseases of the ear	9.34		.56	.48	8.11		1.16	.29	11.52		.48	.44
Cataracts and common colds	19.62			.21	29.25			.22	14.40			.15
Bronchitis	127.61		.19	2.18	79.64		.58	1.36	58.78		.24	1.55
Pneumonia	5.42	.93		.57	7.82	.45		.80	5.52	.24		.54
Pulmonary phthisis	4.11	.56	2.06	.61	3.19	.29	1.16	.73	2.88	.48	1.68	.54
Pleuritis	2.43		.19	.46	2.32			.05	1.92		.24	.19
Other diseases of the respiratory system	7.47	.19	.19	.31	6.37	.29		.33	7.44		.48	.29
Diseases of the heart and valves	7.47	.56	1.68	.76	6.66	.29	2.32	.44	6.96		1.68	.64
Other diseases of the circulatory system	1.12			.17	2.03		1.45	.12	.96	.24	.24	.09
Tonsillitis	49.52			.77	55.31			.83	53.75			.83
Dyspepsia, colic, and constipation	62.04		.37	.79	60.82			.64	68.38		.48	.91
Other diseases of the digestive system	110.80	.37	1.87	2.80	98.47	.58	1.16	2.14	77.50	.24	1.20	2.14
Diseases of the kidneys	1.49	.19	.37	.12	.87			.07	1.20		.24	.15
Other diseases of the genito-urinary system (non-venereal)	16.26		1.12	.96	15.06		.87	.71	18.47		.72	1.22
Diseases of the locomotor system (excluding muscular rheumatism)	5.61		1.12	.61	7.53		1.45	.46	6.00		.48	.29
Diseases of the integumentary system	77.35		.19	1.96	59.66			1.63	73.42			2.33
All other diseases	26.91		.19	1.02	13.90		.87	.95	30.23	.24	.24	1.09
Heat-stroke	1.12		.19	.06	2.32	.29		.02	4.08			.09
Frost-bite and general freezing.	.56			.01	2.61			.08	4.08			.24
Contusions and sprains	111.17		.56	3.13	147.70	.29	.58	3.18	146.82		.48	4.23
Dislocations	2.62		.37	.30	1.45			.06	3.12		.24	.25
Fractures (not gunshot)	5.42	.19	.75	.83	4.05	.29	.58	.23	7.68		.96	1.24
Incised, lacerated, contused, and punctured wounds	45.40	.19		1.56	61.11		.87	1.84	60.46		.24	1.77
Shot wounds	.93	.19	.37	.30	4.34	.58	.29	.84	3.36	.72	.72	.77
All other injuries	44.09	1.27	.19	.91	51.55	.58	.58	1.25	48.95	1.20	1.20	1.50
Total for disease	1,314.65	4.67	21.86	39.29	979.44	4.34	24.62	23.54	901.63	2.64	16.79	30.97
Total for injuries	211.32	1.87	2.43	7.10	275.12	2.03	2.90	7.49	278.55	1.92	4.08	10.19
Total for all causes	1,525.97	6.54	24.29	46.39	1,254.56	6.37	27.51	36.04	1,180.18	4.56	20.87	41.16

TABLE XI.—The rates per 1,000 of strength of admission, death, discharge, and non-effectiveness of the United States Army, and of the troops in the several departments, for the year 1889 as compared with those of the decade, 1878-'87, and of certain foreign armies.

Names of army or departments.	Department of the Missouri.				Department of Texas.				Department of California.			
	4,436.				1,778.				1,241.			
Mean strength (corrected for time).												
Causes of admission to sick report.	Admissions.	Deaths.	Discharges.	Constantly non-effective.	Admissions.	Deaths.	Discharges.	Constantly non-effective.	Admissions.	Deaths.	Discharges.	Constantly non-effective.
Enteric fever	3.16	.45	.....	.59	6.19	.56	.....	.79	.81	.....	.....	.30
Other specific, contagious, and infectious diseases, including erysipelas	27.95	.....	.....	1.61	6.75	.....	.....	.31	3.22	.....	.....	.10
Malarial fevers and resulting conditions	247.52	.23	.23	6.63	282.90	.56	.....	7.86	75.74	.....	.....	1.69
Typho-malarial fever	.23	.....	.....	.02	1.69	.....	.....	.22	.....	.....	.....	.....
Diarrhea, including cholera morbus	115.42	.23	.....	1.37	102.92	.....	.56	1.24	68.49	.....	.....	.62
Dysentery	9.69	.23	.68	.52	14.06	.....	.....	.83	2.42	.....	.....	.95
Other miasmatic diseases	.....	.....	.....	.....	1.69	.....	.....	.02	.....	.....	.....	.....
Gonorrhoea and results	40.81	.....	.90	2.39	54.55	.....	.....	2.90	56.40	.....	.....	3.43
Syphilis and results	25.47	.....	3.38	2.15	30.37	.....	1.12	3.94	24.98	.....	2.42	3.13
Other venereal diseases	23.90	.....	3.23	1.47	42.74	.....	.....	2.89	15.31	.....	.....	.78
Vaccina	43.28	.....	.....	1.20	24.75	.....	.....	.40	5.64	.....	.....	.12
Other enthetic diseases	2.93	.....	.....	.12	2.81	.....	.....	.07	2.42	.....	.....	.03
Alcoholism	16.23	.23	.23	.15	60.18	.....	.....	.71	66.08	1.61	.....	.60
Other dietetic diseases	.68	.....	.....	.04	2.25	.....	.....	.06	.....	.....	.....	.....
Rheumatism (including muscular)	67.85	.....	1.58	2.76	62.42	.....	.56	2.58	87.03	.....	1.61	3.19
Other constitutional diseases	3.16	.....	.....	.13	2.81	.....	.....	.75	2.42	.....	.....	.13
Developmental diseases	.45	.....	1.35	.02	.....	.....	.....	.56	2.42	.....	.....	.13
Parasitic diseases	3.38	.....	.....	.06	3.37	.....	.....	.13	3.22	.....	.....	.11
Headache and neuralgia	37.42	.....	.....	.47	28.12	.....	.....	.53	57.21	.....	.....	.82
Other diseases of the nervous system	11.50	.45	1.13	.87	10.69	.....	2.25	1.13	15.31	.81	4.03	.88
Diseases of the eye	15.78	.....	.80	.77	19.68	.....	1.69	1.71	21.76	.....	1.61	.93
Diseases of the ear	4.28	.....	.68	.14	9.56	.....	1.12	.95	8.86	.....	2.42	.73
Catarrhs and common colds	8.12	.....	.....	.06	16.87	.....	.....	.14	98.30	.....	.....	.92
Bronchitis	54.10	.....	.45	1.22	27.56	.....	.....	.59	72.52	.....	.....	1.89
Pneumonia	5.18	.68	.....	.46	2.81	.....	.....	.49	4.83	1.61	.....	.52
Pulmonary phthisis	2.25	.....	2.03	.73	3.37	.56	1.12	.85	5.64	.81	1.61	1.68
Pleuritis	4.28	.....	.....	.16	2.81	.....	.....	.05	.81	.81	.....	.04
Other diseases of the respiratory system	7.21	.....	.45	.27	4.50	.....	.....	.15	4.83	.81	.....	.19
Diseases of the heart and valves	4.06	.45	.68	.27	5.62	.56	.56	.82	13.70	.....	4.03	1.37
Other diseases of the circulatory system	.90	.....	.23	.10	2.25	.....	.56	.05	.....	.....	.....	.....
Tonsillitis	35.62	.....	.....	.52	15.75	.....	.....	.31	14.50	.....	.....	.18
Dyspepsia, colic, and constipation	55.00	.....	.....	1.01	55.68	.....	.....	.98	43.51	.....	.81	.35
Other diseases of the digestive system	79.81	.45	3.16	2.20	51.18	.....	1.12	1.41	48.35	.....	2.42	2.29
Disease of the kidneys	1.58	.45	.23	.13	2.25	.....	.56	.58	4.83	.....	.....	.09
Other diseases of the genito-urinary system (non-venereal)	16.23	.23	.23	1.06	19.12	.....	1.12	1.32	7.25	.....	.....	.68
Diseases of the locomotor system (excluding muscular rheumatism)	2.25	.....	.....	.13	6.75	.....	.56	.51	12.09	.81	.81	1.25
Diseases of the integumentary system	114.07	.....	.....	2.68	102.92	.....	.....	3.31	89.44	.....	.....	2.02
All other diseases	34.49	.....	.23	1.28	51.74	.....	1.12	2.17	14.50	.....	.....	.99
Heat-stroke	2.25	.....	.....	.09	2.81	.....	.....	.28	.....	.....	.....	.....
Frost-bite and general freezing	.45	.....	.....	.01	.....	.....	.....	.....	.....	.....	.....	.....
Contusions and sprains	110.69	.....	.45	2.86	127.12	.....	.....	3.23	159.53	.....	.81	3.93
Dislocations	3.61	.....	.....	.15	3.37	.....	.....	.15	1.61	.....	.....	.25
Fractures (not gunshot)	6.09	.45	.68	1.37	12.37	.56	.56	1.52	8.06	.....	.81	1.64
Incised, lacerated, contused, and punctured wounds	42.61	.....	.23	1.19	57.37	.....	.....	1.50	47.54	.....	.....	1.28
Shot wounds	4.51	.68	.90	.74	4.50	1.69	.56	.54	2.42	2.42	.....	.21
All other injuries	34.08	.90	1.35	1.22	42.18	2.81	.....	.94	66.88	2.42	.81	2.19
Total for disease	1,126.24	4.06	18.93	35.76	1,141.73	2.25	14.62	42.12	954.87	7.25	24.17	31.71
Total for injuries	204.24	2.03	3.61	7.63	249.72	5.06	1.12	8.17	286.06	4.83	2.42	9.49
Total for all causes	1,330.48	6.09	22.54	43.39	1,391.45	7.31	15.75	50.29	1,240.93	12.09	26.59	41.20

TABLE XI.—The rates per 1,000 of strength of admission, death, discharge, and non-effectiveness of the United States Army, and of the troops in the several departments, for the year 1889 as compared with those of the decade, 1873-'87, and of certain foreign armies.

Names of army or departments.	Department of the Columbia.				Department of Arizona.			
	1,423.				3,106.			
Mean strength (corrected for time).								
Causes of admission to sick-report.	Admissions.	Deaths.	Discharges.	Constantly non-effective.	Admissions.	Deaths.	Discharges.	Constantly non-effective.
Enteric fever					1.29	.97		.04
Other specific contagious and infectious diseases, including erysipelas	6.32			.17	27.04			.79
Malarial fevers and resulting conditions	60.44			1.52	60.85	.32		2.34
Typho-malarial fever					.64			.04
Diarrhœa, including cholera morbus	108.22			.99	84.35		.64	1.15
Dysentery	.70			.01	10.62	.32		.60
Gonorrhœa and results	24.60		.70	1.34	27.69		.32	1.71
Syphilis and results	25.30		.70	3.42	12.56		3.22	.92
Other venereal diseases	8.43			.55	21.57			1.20
Vaccina	2.11			.03	27.69			.72
Other enthetic diseases	.70			.01	3.22			.16
Alcoholism	68.87			.62	24.79	.32	.64	.25
Other dietic diseases	4.92		.70	.28	.64			.01
Rheumatism (including muscular)	108.22		2.81	4.14	100.45		.97	3.29
Other constitutional diseases	1.41			.68	4.19	.32		.57
Developmental diseases			.70		.64			.12
Parasitic diseases	2.11			.02	1.61			.02
Headache and neuralgia	75.20			1.29	42.82			1.07
Other diseases of the nervous system	10.54		2.11	1.15	7.73	.32	.97	.27
Diseases of the eye	9.84		.70	.18	28.01		.64	1.31
Diseases of the ear	8.43			.21	6.12		1.29	.42
Catarrhs and common colds	21.79			.21	14.81			.17
Bronchitis	113.84			1.43	54.73			1.15
Pneumonia	2.11			.67	4.51	.97		.27
Pulmonary phthisis	5.62		1.41	.96	2.25	.64	1.29	1.00
Pleuritis	1.41			.05	2.58			.09
Other diseases of the respiratory system	9.14			.21	9.02	.32		.22
Diseases of the heart and valves	11.24	2.11	.70	.36	4.51		1.29	.44
Other diseases of the circulatory system	.70			.13	1.29	.32		.10
Tonsillitis	36.54			.46	65.04			.93
Dyspepsia, colic, and constipation	68.87		.70	1.85	47.97			.63
Other diseases of the digestive system	77.30	.70	2.11	1.85	81.13		2.25	2.69
Diseases of the kidneys	1.41			.21	4.83		.32	.22
Other diseases of the genito-urinary system (non-venereal)	18.27		.70	1.07	22.86		.32	1.80
Diseases of the locomotor system (excluding muscular rheumatism)	5.62			.19	4.19		1.61	.73
Diseases of the integumentary system	81.52			1.49	69.86		.64	2.28
All other diseases	6.32			.81	34.77		.64	1.20
Frost-bite and general freezing	.70		.70	.27	.64			.01
Contusions and sprains	167.96			3.73	134.90			3.38
Dislocations	7.03		.70	.53	3.54		.32	.51
Fractures (not gunshot)	9.14		2.11	.99	10.62	.32	.97	2.16
Incised, lacerated, contused, and punctured wounds	59.73		1.41	1.98	72.77			1.87
Shot wounds	3.51	1.41	.70	.56	7.73	1.61	.97	1.44
All other injuries	69.57	1.41	2.11	1.86	34.13	1.29	1.61	1.07
Total for disease	988.05	2.81	14.05	28.58	918.87	4.83	19.32	30.91
Total for injuries	317.64	2.81	7.73	9.92	264.33	3.22	4.83	10.44
Total for all causes	1,305.69	5.62	21.79	38.50	1,183.19	8.05	24.15	41.35

TABLE XII.—Specific, febrile, and infectious diseases in various armies.

[Admission-rates per 1,000 of strength.]

Diseases.	United States.			Great Britain, 1887.	Italy, 1887.	Prussia, Saxony, Württemberg, 1883-1884.
	1889.	1888.	1878 to 1887.			
Typhoid fever	5.32	3.28	4.80	1.35	5.06	5.47
Typhus fever .....			.03	.01	.01	.04
Small-pox .....	.16	.08	.16	.07		
Varicoid .....	.08	.12	.16			.03
Chicken-pox .....	.04	.16	.14		.14	
Measles	3.76	8.70	2.60	2.49	8.51	.78
Scarlet fever .....	.08	.36	.14	1.83	.45	1.03
Mumps	8.32	4.89	2.89	.75	5.25	(*)
Diphtheria .....	.16	.12	.49	.07	.04	1.08
Whooping-cough .....	.04	.16	.07			
Cerebro-spinal fever .....		.04	.08	.01	.11	.01
Cholera .....					.75	.01
Yellow fever .....			.27			
Other diseases of this nature	†.92			.33	.13	2.82
Total	18.88	17.91	11.83	6.97	21.00	11.27

NOTE.—Epidemic influenza and quinsy have been excluded from the above statement.

*Mumps are enumerated under the digestive system.

†Other diseases of this nature are represented by twenty-two cases of rōtheln and one case of relapsing fever.

TABLE XIII.—Distribution of specific febrile diseases, etc., at United States military posts during the year 1889.

Posts.	Specific febrile and acute infectious diseases, excluding influenza, quinsy, and erysipelas.										Influenza.	Quinsy.	Erysipelas.	Total.	Ratios per 1,000 of mean strength.	
	Enteric fever.	Chicken-pox.	Diphtheria.	Measles.	Scarlet fever.	Small-pox.	Varicoid.	Whooping-cough.	Other infectious diseases.	Total.						Ratios per 1,000 of mean strength.
Jefferson Barracks, Mo.	1		21	38						60	94.34		5	65	102.20	
Fort Robinson, Nebr.	1		2	47						50	117.10		1	51	119.44	
Fort Snelling, Minn.	20		6							26	86.38			26	86.38	
Fort Bayard, N. Mex.				23						23	74.19			23	74.19	
Columbus Barracks, Ohio			13	6						19	31.72	2	5	26	43.41	
Fort Assinniboine, Mont.	19									19	43.88		4	23	53.12	
Fort D. A. Russell, Wyo.	3			16						19	55.72		2	21	61.59	
Fort Niobrara, Nebr.				18						18	47.24	1		19	49.87	
San Antonio post, Tex.	8		9							17	35.72			17	35.72	
Fort Riley, Kans.	2			13			1			16	29.20			16	29.20	
Fort Logan, Colo.	5			10						15	99.34		1	16	105.96	
David's Island, N. Y.	5		8		1					14	24.18	41		2	57	98.45
Fort Leavenworth, Kans.	2							10		12	20.07		1	14	23.41	
Fort Monroe, Va.	10			1						11	29.97		2	13	35.42	
Fort Randall, S. Dak.			11							11	61.79			11	61.79	
Field Department of Dakota.	10									10	54.35			10	54.35	
Fort Yates, N. Dak.	3		5							8	25.98		2	10	32.47	
Field Dep't of the Platte	7			1						8	23.60			9	25.42	
Camp Pilot Butte, Wyo.	2			3						6	75.95		1	7	88.60	
Fort Buford, N. Dak.	3		2					1		5	16.39			5	16.39	
Fort Keogh, Mont.				4	1					5	12.19		1	6	14.63	
Fort Marcy, N. Mex.	1			4						5	33.33		2	7	46.67	
Fort McKinney, Wyo.				5						5	28.25			5	28.25	
Fort Washakie, Wyo.				5						5	39.68			5	39.68	
Fort Custer, Mont.	3			1						4	11.73		1	5	14.66	
Fort Grant, Ariz.	1					3				4	12.86			4	12.86	
Fort Hamilton, N. Y.			1	3						4	21.05			4	21.05	
Madison Barracks, N. Y.	3		1							4	16.67	20	1	25	104.17	
Vancouver Barracks, Wash.			1							4	10.44			4	10.44	
Fort Wingate, N. Mex.	1			3						4	10.44	9	3	16	41.67	

TABLE XIII.—Distribution of specific febrile diseases, etc., at United States military posts during the year 1889—Continued.

Posts.	Specific febrile and acute infectious diseases, excluding influenza, quinsy, and erysipelas.										Influenza.	Quinsy.	Erysipelas.	Total.	Ratios per 1,000 of mean strength.		
	Enteric fever.	Chicken-pox.	Diphtheria.	Measles.	Mumps.	Scarlet fever.	Small-pox.	Varioloid.	Whooping-cough.	Other infectious diseases.						Total.	Ratios per 1,000 of mean strength.
Angel Island, Cal								1	2	3	19.61			3	19.61		
Fort Laramie, Wyo	1				2					3	18.75			3	18.75		
Fort Omaha, Nebr			2	1						3	7.96	6		9	23.87		
Fort Porter, N. Y.	1	1							1	3	36.14	1		4	48.19		
Fort Sidney, Nebr			3							3	14.02	3		6	37.37		
Fort Douglas, Utah	2									2	5.38		2	4	10.75		
Fort Clark, Tex	1		1							2	5.73			2	5.73		
Fort Hays, Kans	2									2	16.67			2	16.67		
Kennebec Arsenal, Me.				1					1	2	111.11			2	111.11		
Fort McPherson, Ga	1								1	2	12.82		1	3	19.23		
Presidio of San Francisco, Cal.	1							1		2	4.07			2	4.07		
Fort Reno, Ind. T	1			1						2	7.84			2	7.84		
Fort Trumbull, Conn									2	2	37.04		1	3	55.26		
Washington Barracks, D. C	1			1						2	7.97		1	3	11.95		
Field, Dep't of the Missouri				1					1	2	4.44		1	3	6.67		
Field, Department of Texas	2									2	27.78			2	27.78		
Fort Adams, R. I.	1									1	5.03	10		11	55.29		
Fort Bennett, S. Dak			1							1	21.28			1	21.28		
Fort Brady, N. Y.		1								1	12.82			1	12.82		
Fort Columbus, N. Y.	1									1	6.80		1	2	13.61		
Frankford Arsenal, Pa.	1									1	27.03	1		2	54.06		
Fort Gibson, Ind. T.				1						1	11.90			1	11.90		
Hot Springs, Ark.	1									1	19.61			1	19.61		
Fort Huachuca, Ariz.				1						1	4.03	32		33	133.06		
Jackson Barracks, La				1						1	25.00	6		7	175.00		
Leavenworth Prison Guard, Kans	1									1	8.47			1	8.47		
Little Rock Barracks, Ark			1							1	10.53			1	10.53		
Fort McDowell, Ariz.				1						1	10.75			1	10.75		
Fort McHenry, Md.			1							1	9.43			1	9.43		
Fort Meade, S. Dak.		1								1	1.93			1	1.93		
San Carlos, Ariz.				1						1	5.03			1	5.03		
Fort Sill, Ind. T.				1						1	3.62		2	3	10.87		
Field, Department of the East.	1									1	10.20			1	10.20		
Fort Stanton, N. Mex.						1				1	6.58		1	2	13.16		
Fort Sully, S. Dak.			1							1	5.75			1	5.75		
Fort Supply, Ind. T.				1						1	4.69		1	2	9.39		
Fort Warren, Mass.	1									1	12.82			1	12.82		
Watervliet Arsenal, N. Y.	1									1	15.62			1	15.62		
West Point, N. Y.	1									1	2.82	3		5	14.12		
Whipple Barracks, Ariz.	1									1	4.93			1	4.93		
Fort Bridger, Wyo.													1	1	5.26		
Fort Brown, Tex.													1	1	6.90		
Chicago Headquarters, Ill.												1		1	16.95		
Fort Wayne, Mich.												5		6	33.71		
Fort Elliott, Tex.													1	1	6.80		
Fort Hancock, Tex.													1	1	21.74		
Fort Klamath, Oregon.												3		3	81.08		
Fort Lewis, Colo.												4	1	9	30.93		
Fort Myer, Va.												1	4	1	7.76		
Fort Niagara, N. Y.													1	1	10.75		
Fort Pembina, N. Dak.													1	1	12.50		
Fort Preble, Me.												5		5	113.64		
Willets Point, N. Y.												3	1	4	10.50		
Fort Shaw, Mont.												4		4	22.35		
Camp Sheridan, Wyo.													1	1	16.39		
Fort Sheridan, Ill.													1	1	10.31		
Fort Sherman, Idaho.													1	1	4.07		
Fort Spokane, Wash.													1	1	4.57		
Watertown Arsenal, Mass.												2		2	58.82		
Army	133	1	4	94	208	2	4	2	1	23	472	18.87	160	8	62	702	28.07

TABLE XIV.—Twenty posts giving the highest admission-rates for malarial diseases, rheumatism, diarrhœal, and venereal diseases, respectively.

I.—MALARIAL DISEASES.

Names of stations.	Mean strength.	Ratios per 1,000 of mean strength.			
		Admissions.	Deaths.	Discharges for disability.	Constantly non-effective.
Fort Brown, Tex.....	145	1, 675. 86	.....	.....	38. 58
Fort Sill, Ind. T.	276	692. 03	.....	.....	7. 85
Little Rock Barracks, Ark.....	85	547. 37	.....	.....	10. 79
Fort Reno, Ind. T.	255	415. 70	.....	.....	21. 93
Camp Del Rio, Tex.....	13	384. 62	.....	.....	5. 90
Jackson Barracks, La.....	40	350. 00	.....	.....	4. 11
St. Francis Barracks, Fla.....	58	344. 84	.....	.....	6. 99
Fort Gibson, Ind. T.	84	333. 33	.....	.....	3. 62
Columbus Barracks, Ohio.....	599	273. 79	.....	.....	5. 76
Fort Clark, Tex.....	349	266. 48	.....	.....	7. 94
Jefferson Barracks, Mo.....	636	254. 71	.....	1. 57	8. 60
Fort Hamilton, N. Y.....	190	231. 58	.....	.....	6. 42
Fort Bidwell, Cal.....	131	229. 01	.....	.....	3. 12
Willets Point, N. Y.....	381	225. 72	2. 62	.....	2. 70
Fort Leavenworth (post), Kans.....	598	207. 37	.....	.....	4. 91
Fort Barrancas, Fla.....	61	196. 71	.....	.....	5. 75
Washington Barracks, D. C.....	251	195. 21	.....	.....	3. 36
Indianapolis Arsenal, Ind.....	26	192. 31	.....	.....	1. 48
Fort Klamath, Oregon.....	37	189. 19	.....	.....	1. 41
Frankford Arsenal, Pa.....	37	189. 19	.....	.....	10. 96

II.—RHEUMATISM.

[Muscular and articular.]

Kennebec Arsenal, Me.....	18	388. 89	.....	.....	7. 76
Camp Del Rio, Tex.....	13	307. 70	.....	.....	3. 58
Fort McPherson, Ga.....	156	237. 19	.....	.....	6. 04
Fort McHenry, Md.....	106	235. 85	.....	.....	6. 00
Willets Point, N. Y.....	381	202. 11	.....	.....	3. 65
Fort Washakie, Wyo.....	126	198. 41	.....	.....	8. 02
Fort Marcy, N. Mex.....	150	193. 33	.....	6. 67	6. 63
Indianapolis Arsenal, Ind.....	26	192. 31	.....	.....	7. 48
Benicia Barracks, Cal.....	73	178. 08	.....	.....	3. 72
Fort Lowell, Ariz.....	149	167. 78	.....	.....	3. 82
Fort Du Cheane, Utah.....	255	164. 71	.....	.....	3. 76
Frankford Arsenal, Pa.....	37	162. 16	.....	.....	2. 96
Fort Columbus, N. Y.....	147	156. 46	.....	.....	5. 22
Fort Sidney, Nebr.....	214	154. 21	.....	14. 02	5. 59
Fort Lyon, Colo.....	111	153. 15	.....	9. 01	4. 74
Whipple Barracks, Ariz.....	203	152. 71	.....	.....	5. 92
Rock Island Arsenal, Ill.....	59	152. 54	.....	.....	7. 75
Fort Meade, S. Dak.....	519	152. 22	.....	1. 93	5. 66
Camp Pilot Butte, Wyo.....	79	151. 90	.....	.....	4. 75
Camp Sheridan, Wyo.....	61	147. 53	.....	.....	16. 03

III.—DIARRHŒAL DISEASES.

Fort McPherson, Ga.....	156	820. 51	.....	.....	6. 78
Indianapolis Arsenal, Ind.....	26	461. 55	.....	.....	2. 84
Fort Monroe, Va.....	367	283. 40	.....	.....	2. 19
Fort Brady, Mich.....	78	282. 04	.....	.....	1. 90
Kennebec Arsenal, Me.....	18	277. 78	.....	.....	1. 22
Fort Hancock, Tex.....	46	239. 13	.....	.....	3. 63
Fort McDowell, Ariz.....	93	225. 81	.....	.....	2. 62
St. Francis Barracks, Fla.....	58	224. 14	.....	.....	1. 18
Fort Elliott, Tex.....	147	210. 89	.....	.....	4. 92
Willets Point, N. Y.....	381	204. 72	.....	.....	1. 65
Fort Sill, Ind. T.	276	202. 91	.....	.....	3. 55
Fort Snelling, Minn.....	301	202. 66	.....	.....	1. 33
Jackson Barracks, La.....	40	200. 00	.....	.....	3. 90
Augusta Arsenal, Ga.....	26	192. 31	.....	.....	1. 90
Fort Niobrara, Nebr.....	381	191. 61	.....	.....	. 96
Little Rock Barracks, Ark.....	95	189. 49	.....	.....	2. 31
Fort Du Cheane, Utah.....	255	184. 31	.....	.....	. 97
San Antonio (post), Tex.....	476	180. 66	.....	.....	1. 68
Fort McHenry, Md.....	106	179. 23	.....	.....	1. 16
Fort Mojave, Ariz.....	53	169. 81	.....	.....	1. 24

TABLE XIV.—Twenty posts giving the highest admission-rates for malarial diseases, rheumatism, diarrhœal, and venereal diseases, respectively.

IV.—VENEREAL DISEASES.

Names of stations.	Mean strength.	Ratios per 1,000 of mean strength.			
		Admissions.	Deaths.	Discharges for disability.	Constantly non-effective.
Columbus Barracks, Ohio	599	462.44	.....	40.07	28.99
Little Rock Barracks, Ark	95	421.06	.....	42.10	29.58
Fort McPherson, Ga	156	403.85	.....	.....	15.27
Fort Brady, Mich	78	294.86	.....	.....	15.39
Newport Barracks, Ky	52	230.77	.....	.....	15.07
Fort McIntosh, Tex	129	217.05	.....	.....	16.27
Fort Wayne, Mich	178	213.48	.....	.....	9.25
Fort Brown, Tex	145	200.00	.....	6.90	26.36
Camp Eagle Pass, Tex	55	181.82	.....	.....	12.61
Fort Clark, Tex	349	169.06	.....	2.87	12.34
Fort Monroe, Va	367	166.22	.....	8.17	11.20
Fort Assiniboine, Mont	433	150.12	.....	2.31	8.66
Fort Barrancas, Fla	61	147.55	.....	.....	7.01
Plattsburgh Barracks, N. Y	48	145.84	.....	.....	8.90
Fort Gibson, Ind. T.	84	142.86	.....	11.90	12.16
Fort Oyster, Mont	341	140.76	.....	5.86	9.79
Presidio, San Francisco, Cal	491	138.49	.....	2.04	11.49
Fort Mason, Cal	66	136.36	.....	.....	15.94
Fort Leavenworth (post), Kans	598	120.41	.....	.....	7.63
San Antonio (post), Tex	476	119.75	.....	.....	9.09

TABLE XV.—Twenty posts giving the highest non-effective rates for malarial diseases, rheumatism, diarrhœal and venereal diseases, respectively, during 1889.

I.—MALARIAL DISEASES.

Names of stations.	Mean strength.	Constantly non-effective per 1,000 of mean strength.	Average number sick daily.	Average number of days each case was treated.
Fort Brown, Tex	145	38.58	5.59	8.40
Fort Reno, Ind. T.	255	21.93	5.59	19.25
Frankford Arsenal, Pa	37	10.96	.41	21.14
Little Rock Barracks, Ark	95	10.79	1.02	7.19
Fort Thomas, Ariz	101	10.47	1.06	25.73
Fort Wadsworth, N. Y	105	10.12	1.06	25.87
Jefferson Barracks, Mo	636	8.60	5.47	12.32
Fort Columbus, N. Y	147	8.42	1.24	45.20
Mount Vernon Barracks, Ala	87	8.22	.72	23.73
Fort McIntosh, Tex	129	8.03	1.04	17.18
Fort Clark, Tex	349	7.94	2.77	10.88
Fort Sill, Ind. T.	276	7.85	2.17	4.14
Fort Myer, Va	129	7.65	.99	20.00
Fort Logan, Colo	151	7.17	1.08	49.37
St. Francis Barracks, Fla	58	6.99	.41	7.40
Fort Huachuca, Ariz	248	6.84	1.70	25.79
San Antonio (post), Tex	476	6.82	3.25	15.39
Fort Hamilton, N. Y	190	6.42	1.22	10.11
Camp Del Rio, Tex	13	5.90	.08	5.60
Fort Mojave, Ariz	53	5.89	.31	14.25

TABLE XV.—Twenty posts giving the highest non-effective rates for malarial diseases, rheumatism, diarrheal and venereal diseases, respectively, during 1889.

II.—RHEUMATISM.

[Muscular and articular.]

Names of stations.	Mean strength.	Constantly non-effective per 1,000 of mean strength.	Average number sick daily.	Average number of days each case was treated.
Camp Sheridan, Wyo.....	61	16.03	.98	39.67
San Diego Barracks, Cal.....	53	12.82	.68	35.43
Fort Hays, Kans.....	120	12.49	1.50	54.70
Fort Trumbull, Conn.....	54	9.23	.50	36.40
Fort Washakie, Wyo.....	126	8.02	1.01	14.76
Kennebec Arsenal, Me.....	18	7.76	.14	7.29
Rock Island Arsenal, Ill.....	59	7.75	.46	18.56
Indianapolis Arsenal, Ind.....	26	7.48	.19	14.20
Fort D. A. Russell, Wyo.....	341	7.43	2.53	25.00
Fort Spokane, Wash.....	219	6.70	1.47	19.85
Fort Marcy, N. Mex.....	150	6.63	.99	12.52
Fort Yates, N. Dak.....	308	6.57	2.02	35.19
Fort Davis, Tex.....	102	6.28	.64	18.00
Fort Mojave, Ariz.....	53	6.25	.33	17.29
Fort McPherson, Ga.....	156	6.04	.94	9.30
Fort McHenry, Md.....	106	6.00	.64	9.28
Fort Omaha, Nebr.....	377	5.95	2.24	21.55
Whipple Barracks, Ariz.....	203	5.92	1.20	14.16
Little Rock Barracks, Ark.....	95	5.85	.56	20.30
Fort Logan, Colo.....	151	5.84	.88	16.10

III.—DIARRHEAL DISEASES.

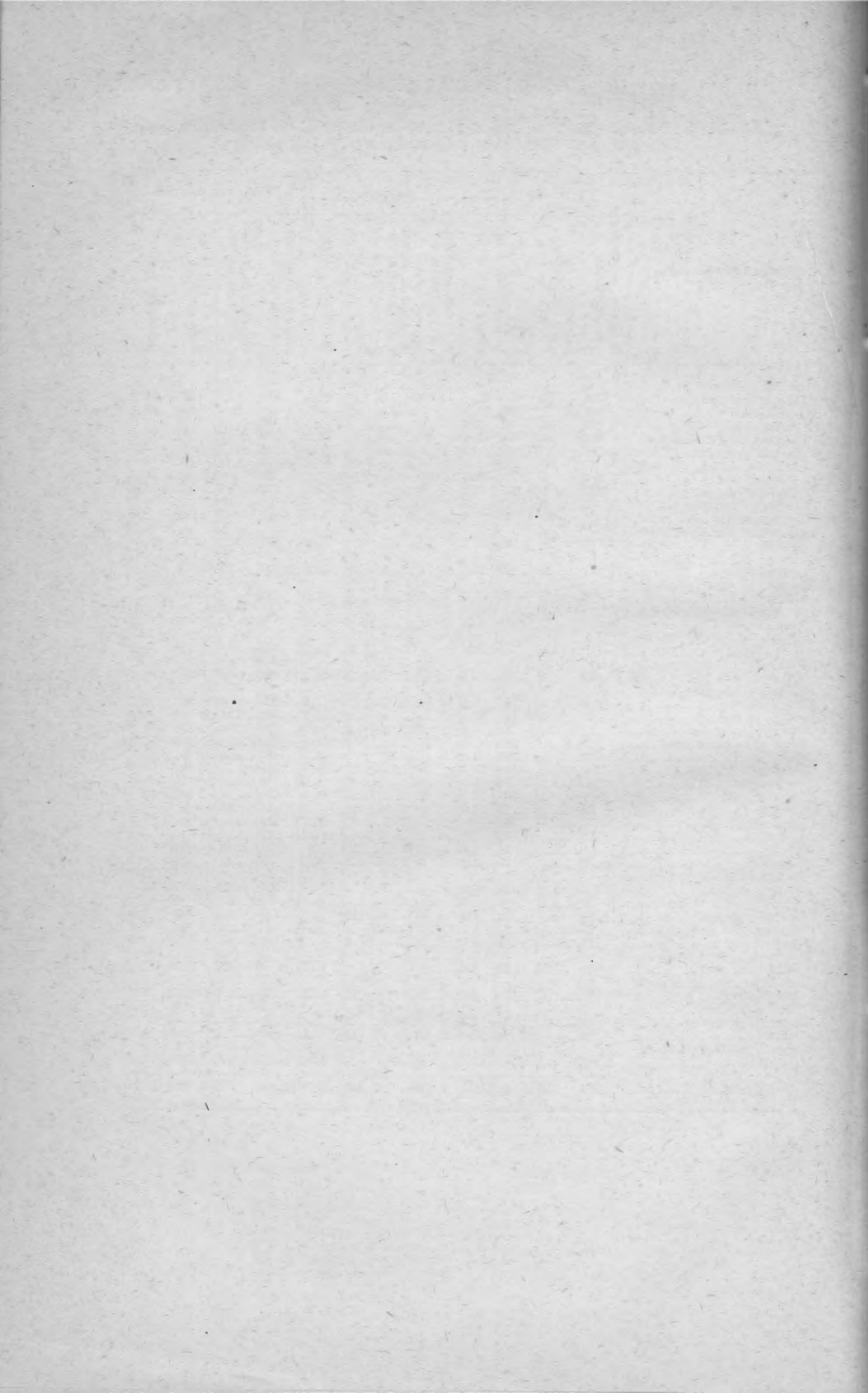
San Diego Barracks, Cal.....	53	14.52	.77	281.00
Fort McPherson, Ga.....	156	6.78	1.06	3.02
Fort Elliott, Tex.....	147	4.92	.73	8.52
Jackson Barracks, La.....	40	3.90	.16	7.12
Fort Hancock, Tex.....	46	3.63	.17	5.55
Fort Sill, Ind. T.....	278	3.55	.98	6.39
Indianapolis Arsenal, Ind.....	26	2.84	.07	2.25
Fort McDowell, Ariz.....	93	2.62	.24	4.24
Fort Maginnis, Mont.....	137	2.40	.33	9.23
Little Rock Barracks, Ark.....	95	2.31	.22	4.44
Fort Monroe, Va.....	367	2.19	.80	2.62
Fort Bayard, N. Mex.....	310	1.94	.60	9.12
Fort Brady, Mich.....	78	1.90	.15	2.45
Augusta Arsenal, Ga.....	26	1.90	.05	3.60
Fort Sidney, Nebr.....	214	1.75	.38	4.89
Newport Barracks, Ky.....	52	1.75	.09	5.50
Camp Langtry, Tex.....	13	1.69	.02	4.00
San Antonio (post), Tex.....	476	1.68	.80	3.40
Fort Reno, Ind. T.....	255	1.68	.43	5.57
Fort Robinson, Nebr.....	427	1.67	.72	4.58

IV.—VENEREAL DISEASES.

Little Rock Barracks, Ark.....	95	29.58	2.81	25.65
Columbus Barracks, Ohio.....	599	28.99	17.36	22.87
Fort Brown, Tex.....	145	26.36	3.82	48.10
Fort McPherson, Ga.....	156	18.27	2.85	16.52
Fort McIntosh, Tex.....	129	16.27	2.10	27.36
Fort Mason, Cal.....	66	15.94	1.05	42.67
Fort Brady, Mich.....	78	15.39	1.20	19.04
Newport Barracks, Ky.....	52	15.07	.78	23.83
Camp Eagle Pass, Tex.....	55	12.61	.69	25.30
Fort Clark, Tex.....	349	12.34	4.31	26.66
Fort Gibson, Ind. T.....	84	12.16	1.02	31.08
Presidio, San Francisco, Cal.....	491	11.49	5.64	30.29
Fort Monroe, Va.....	367	11.20	4.11	24.61
Fort Walla Walla, Wash.....	317	10.34	3.28	35.21
Fort McDowell, Ariz.....	93	9.81	.91	41.62
Fort Custer, Mont.....	341	9.79	3.34	25.40
Jefferson Barracks, Mo.....	636	9.50	6.04	29.39
Fort Wayne, Mich.....	178	9.25	1.65	15.82
San Antonio (post), Tex.....	476	9.00	4.32	27.68
Plattsburgh Barracks, N. Y.....	48	8.90	.43	22.29

TABLE XVII.—Showing the causes and ratios of rejection among 20,787 recruits examined during the year 1889 (white, 19,342; colored, 1,445).

Causes of rejection.	White.				Colored.				White and colored.			
	Rejected on primary examination.	Rejected on secondary examination.	Total.	Ratios per 1,000.	Rejected on primary examination.	Rejected on secondary examination.	Total.	Ratios per 1,000.	Rejected on primary examination.	Rejected on secondary examination.	Total.	Ratios per 1,000.
Malarial diseases	1	1	2	.1					1	1	2	.1
Enthetic diseases	465	11	476	24.6	89	1	90	62.3	554	12	566	27.2
Dietic diseases	406		406	21.0	3		3	2.1	409		409	19.7
Constitutional diseases	25	6	31	1.6	3		3	2.1	28	6	34	1.6
Developmental diseases	812	3	815	42.1	87		87	60.2	899	3	902	43.4
Parasitic diseases	10		10	.5	1		1	.7	11		11	.5
Nervous diseases	55	27	82	4.2	15		15	10.4	70	27	97	4.7
Diseases of the eye	1,716	7	1,723	89.1	112		112	77.5	1,828	7	1,835	88.3
Diseases of the ear	166	9	175	9.0	8		8	5.5	174	9	183	8.8
Diseases of the nose	10	1	11	.6	1		1	.7	11	1	12	.6
Respiratory diseases	31	3	34	1.8					31	3	34	1.6
Diseases of the circulatory system	717	22	739	38.2	20		20	13.8	737	22	759	36.5
Diseases of the digestive system	1,080	15	1,095	56.6	71		71	49.1	1,151	15	1,166	56.1
Diseases of the lymphatic system	34	1	35	1.8	8		8	5.5	42	1	43	2.1
Diseases of the urinary system	6	1	7	.4	1		1	.7	7	1	8	.4
Diseases of the reproductive system	737	6	743	38.4	26		26	18.0	763	6	769	37.0
Diseases of the locomotor system	594	5	599	31.0	58		58	40.1	652	5	657	31.6
Diseases of the integumentary system	218	4	222	11.5	17		17	11.8	235	4	239	11.5
Results of injuries	142	5	147	7.6	19		19	13.1	161	5	166	8.0
Over age	111		111	5.7	9		9	6.2	120		120	5.8
Under age	625		625	32.3	55		55	38.1	680		680	32.7
Over height	44		44	2.3	7		7	4.8	51		51	2.5
Under height	200		200	10.3	27		27	18.7	227		227	10.9
Over weight	106		106	5.5	10		10	6.9	116		116	5.6
Under weight	577		577	29.8	28		28	19.4	605		605	29.1
Over size	14		14	.7	1		1	.7	15		15	.7
Under size	337		337	17.4	27		27	18.7	364		364	17.5
Obesity	19		19	1.0					19		19	.9
Delicate	11		11	.6					11		11	.5
Illiterate	8		8	.4	9		9	6.2	17		17	.8
Imperfect knowledge of English	318		318	16.4	1		1	.7	319		319	15.3
Unintelligent	5		5	.3					5		5	.2
Moral depravity	124		124	6.4	19		19	13.1	143		143	6.9
Character bad and doubtful	21		21	1.1	3		3	2.1	24		24	1.2
Deserters and ex-convicts	12		12	.6	1		1	.7	13		13	.6
Discharged for disability and by order	6	23	29	1.5		1	1	.7	6	24	30	1.4
Married or having dependent relatives	132		132	6.8	23		23	15.9	155		155	7.5
Unfit for cavalry	2		2	.1					2		2	.1
No previous service	29		29	1.5	2		2	1.4	31		31	1.5
Declined	86		86	4.4	11		11	7.6	97		97	4.7
General unfitness and unclassified	1,267		1,267	65.5	93		93	64.4	1,360		1,360	65.4
Aggregate	11,279	150	11,429	590.9	865	2	867	600.0	12,144	152	12,296	591.5



REPORT OF THE PAYMASTER-GENERAL.



REPORT

OF

THE PAYMASTER-GENERAL.

WAR DEPARTMENT,
PAYMASTER-GENERAL'S OFFICE,
Washington, D. C., October 10, 1890.

SIR: I have the honor to submit the following report of the transactions of the Pay Department of the Army during the past fiscal year, and to offer some suggestions thought appropriate to this branch of the public service:

From the statements appended is drawn an exhibit of receipts and expenditures during the fiscal year which ended June 30, 1890, as follows:

Balance charged to paymasters July 1, 1889	\$1,291,540.86
Amount received from—	
Treasury during fiscal year	13,947,949.83
Soldiers' deposits	395,128.82
Paymasters' collections	288,805.54
Total to be accounted for	15,923,424.87

Accounted for as follows:

Expended:	
Pay of Army	\$13,548,454.34
Pay of Military Academy	206,317.60
Pay of Signal Service	46,543.48
Pay of volunteers (on Treasury certificates)	624,010.75
Total expended	14,425,326.17
Surplus funds deposited to credit U. S. Treasurer	45,233.19
Paymasters' collections deposited to credit U. S. Treasurer	288,805.54
Balance charged to paymasters June 30, 1890	1,164,059.97

Total accounted for

	15,923,424.87
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A comparison of the expenditures of the last fiscal year with those of the preceding year shows a net decrease of \$361,294.74:

Decrease in expenditures to the Signal Corps	\$140,352.02
Decrease in expenditures to the Volunteers	599,641.06
Total decrease	739,993.08
Increase in expenditures to the Army	378,145.84
Increase in expenditures to the Military Academy	552.50
Total increase	378,698.34
Net decrease	361,294.74

The decrease in expenditures to the Signal Corps is due to the fact that by act of Congress, approved March 2, 1889, the enlisted men of that corps have not been paid by Army paymasters since June 30, 1889.

The decrease in expenditures to volunteers (Treasury certificates) is largely due to the fact that on July 1, 1889, there were but few certificates from the preceding year unpaid. The appropriation for the settlement of claims of this character allowed during the past fiscal year did not become available until April last, and though unusual means were resorted to to hasten their adjustment, certificates representing fully \$300,000 remained unpaid at the close of the fiscal year. On the 1st of September practically all this class of claims which had been received from the Treasury Department, and which could be settled without further correspondence, had been adjusted.

The increase in expenditures to the Army during the last fiscal year is accounted for as follows:

In the month of July, 1890, the disbursements exceeded those made in June, 1889, by \$241,064.28. This was largely owing to the fact that June 30, 1889, was Sunday, and accounts which would otherwise have been paid in that month were carried over into the succeeding month, and so into another year. There was, however, an actual increase in demands against the Army pay appropriations for the year ended June 30, 1890, which resulted in part from greater length of service of both officers and enlisted men, and an increase in the number of retired officers and enlisted men; also a somewhat increased hospital corps.

The payments to the troops at the various posts have been promptly effected, and the duty with which paymasters have been charged has been cheerfully and acceptably performed.

Otherwise than the changes resulting from the retirement in February last of the Paymaster-General, the Pay Corps is constituted as it was at the date of the last annual report. Of the officers of the Pay Corps of the Army, one is employed in the payment of Treasury certificates, and two others are physically disabled so far as not to be available for duty, thus reducing the number of officers to be relied upon for paying the Army to thirty-five. The two disabled officers, Majors Hall and Thomas, have done no duty for over six years, and both express their belief that their disability is permanent in having asked to be retired under the provisions of an act of Congress approved July 5, 1884. I therefore repeat the recommendations made by my predecessor in October, 1886, that these two officers be placed upon the retired list. They are now practically retired on full pay. This action now recommended would work no injustice to the officers named, and would effect an annual saving to the Army Pay appropriation of \$1,750.

While bearing testimony to the faithful service rendered by the commissioned force of the Pay Department, I desire also to commend to favorable consideration the corps of paymasters' clerks. The clerk accompanies the paymaster on his official tours and assists in the payments. Thus, of necessity, he may often fill a place of financial trust and responsibility. There are notably few instances in which this trust has been betrayed. Some of these officials have spent over a quarter of a century in the service. As a measure of reward and a token of appreciation, as well as an incentive to better service, it would be but a graceful and deserved recognition to allow to them for length of service the increase provided generally for length of service to commissioned officers. In their behalf I recommend that such a provision be secured.

During the past year the system of monthly payments has been somewhat extended, so that on June 30 last there were but fifty-one posts

remaining at which monthly payments were not made. Should it be thought advantageous, a large share of these fifty-one posts could be safely added to the list of posts at which the troops are paid monthly.

As early as last February it was apprehended the appropriation for the pay of the Army for the last fiscal year would be found insufficient. This was clearly apparent as to the allowance for mileage. Acting on this belief an estimate as to the probable deficiency was submitted, and Congress was asked to supply the amount it was believed would be required. Quite recently ample provision has been made for this deficiency.

October 1, 1890, there had been received in this office for payment mileage accounts chargeable to the appropriation for the last fiscal year an aggregate of \$22,117.73, for the payment of which no funds were available. In addition to this there were unpaid accounts for mileage pertaining to the fiscal year which ended June 30, 1889, aggregating \$10,019.66. While these sums in the aggregate are large, fortunately for the officers who carried them, they were divided among a large number of individuals. Notwithstanding this fact there were many cases of hardship and embarrassment resulting from these conditions. Not many days passed without inquiry from officers interested, as to the probable time at which they might hope to have restored to them advances they had been compelled to make in the performance of duty requiring travel.

Within a few years the occasions for travel required of Army officers have visibly increased. This results from various causes. The following analysis of mileage disbursements during the past fiscal year shows in considerable detail the character of the duty upon which mileage disbursements are based:

For change of stations	\$36, 009. 71
European travel	2, 733. 61
Recruiting duty	14, 849. 57
Engineer Corps: Inspection of works; Boards to examine Engineer officers	1, 487. 96
Board of Ordnance and Fortifications	1, 890. 83
Ordnance Department: Gun construction; foundry, steel, powder, and proving ground inspection	2, 448. 31
Inspection: Disbursing officers' accounts; colleges; national cemeteries; battle-fields; horses; public buildings	13, 545. 95
Medical Boards and inspection by medical officers	2, 778. 74
Military Prison Commission and Inspection of Military Prisons	407. 96
Instruction and inspection of National Guard	1, 561. 20
Retiring boards: Officers retired and ordered home	2, 848. 76
Payment of troops	17, 098. 82
Treasurer and professors Military Academy; Military Academy duty	233. 63
Courts-martial (to and from)	12, 754. 44
Returning from conducting prisoners and insane men	199. 53
Boards of survey	122. 12
Commanding generals and aides	5, 163. 67
Rifle teams	14, 527. 74
Summer encampments	1, 399. 20
Instructions of Secretary of War—duty not defined by orders	7, 985. 85
On public business—duty not defined by orders	9, 941. 00
Total	149, 993. 60

It will be seen that nearly one-fourth of the aggregate expenditures of this character results from change of stations.

There has been recently a more inflexible adherence to the rule that officers not serving with appropriate commands shall change stations at intervals not exceeding four years.

Within three years past, at nearly two-thirds of the military posts, the troops have been paid monthly instead of bi-monthly.

A very conspicuous item of mileage expenditure is upon a duty inaugurated in the Army at a comparatively recent date—rifle competition.

Inspections are made more frequently and generally. So that expenditures resulting from this duty rank next in amount to those for change of stations.

The detail of Army officers at colleges and summer encampments with the militia of the several States is an increasing requirement and involves a considerable outlay.

A still more recent illustration is that regimental commanders are now required to make an annual inspection of the several companies composing their respective regiments, at the various posts at which those companies are stationed.

And more recently still, the recruiting fund has been relieved of the burden of such expenditures for mileage as have heretofore constituted a charge against that fund, and such accounts will hereafter be settled by paymasters.

In recognition of these facts the estimate for mileage expenditures for the next fiscal year has been materially increased.

There is no class of accounts that come within the realms of the Pay Department as difficult of satisfactory adjustment as those involving mileage. A large share of these accounts that are submitted require remodeling before payment—items of expense are reduced or rejected and irritation ensues. Even after the account has been framed to meet the requirements of the paymaster, the officials of the Treasury Department subject it to still further reduction. It can not be presumed that in stating accounts of this character officers make claims which they do not believe are fairly due, nor that paymasters will not allow all they hold the laws contemplate, nor that the auditing officers of the Treasury Department are intentionally unjust in disallowing items in such accounts. It is believed that the dissatisfaction consequent upon a settlement of this class of accounts results largely from the fact, if not wholly due to it, that they are based, under the statute, upon the two elements of actual cost of transportation and distance traveled.

As a rule the allotted distance is accepted without question, and the cause of irritation is the transportation feature of the account. Railroad rates for passenger fare frequently vary, and charges between the same points, over different routes, are far from uniform. The points of view occupied by the traveling officer and the accountant in Washington are widely separated; matters of difference are not easily reconciled, and should a stoppage of his pay result finally, the officer feels he has not been fairly considered. A large share of the objections raised in the settlement of the accounts of those paymasters who pay mileage accounts arise in accounts for mileage. In addition to this difficulty of adjustment, frequent complaints are made that the allowance for mileage is inadequate. This complaint is conspicuously well founded in case of officers who are required to change stations. In such cases, particularly in long journeys, the proceeds of his mileage account go but a little way toward meeting the outlay for himself and his household effects, if he has such impediments.

To remove friction, to relieve this office of no inconsiderable share of correspondence, and to restore more fully to officers their necessary outlay when traveling under orders, I recommend a return to the system of accounts for mileage based wholly upon distance, and that 10 cents per mile be fixed as the allowance for mileage. Less than this I am satisfied will not in the aggregate restore to officers expenses incident to travel under orders. This was the rate fixed by act of Congress ap-

proved July 15, 1870. Four years later "actual expenses" became the rule for two years; in 1876 mileage was fixed at 8 cents a mile. The present system with variations has been in force for four years past and is in my opinion but slight improvement upon the "actual expense" account, which was abandoned after a trial of two years.

The following table exhibits the source from which orders directing travel emanated during the past fiscal year and the amounts disbursed for mileage pursuant to such orders:

Division, Department, etc.	Four cents per mile.	Cost of transportation.	Mileage.
Division of the Atlantic.....	\$6,619.28	\$4,229.01	\$10,848.29
Department of California.....	2,972.00	2,233.90	5,205.90
Department of the Columbia.....	2,775.04	2,765.71	5,541.35
Department of Arizona.....	5,607.40	6,524.56	12,131.96
Department of Dakota.....	6,624.48	5,970.10	12,594.58
Division of the Missouri.....	4,282.40	2,856.24	7,138.64
Department of the Missouri.....	4,856.26	3,437.87	8,294.13
Department of the Platte.....	5,740.89	2,694.01	8,434.90
Department of Texas.....	3,509.72	2,765.16	6,274.88
Adjutant-General's Office.....	46,004.32	27,516.65	73,520.97
Total.....	89,001.39	60,993.21	149,994.50

In July, 1889, authority was given to courts-martial to direct that portions of the monthly pay of soldiers should be retained, and it was also provided that amounts so withheld should be restored to such soldiers upon their discharge from the service. Pursuant to this authority the sum of \$12,147.56 was retained during the past fiscal year; \$601 of this sum was restored to the men entitled to receive it.

Reports from the several divisions of this office show that during the past fiscal year 5,342 Treasury certificates were paid, involving an expenditure of \$648,399.14, leaving on hand unpaid June 30 last 3,055 certificates. Since that date all these claims have been adjusted except some four hundred, and these require correspondence before they can be paid.

The clerical work required to be done in this office is shown in part by the following summary:

Paymasters' accounts on hand July 1, 1889.....	47
Paymasters' accounts received since, up to June 30, 1890.....	432
Paymasters' accounts examined and sent to the Second Auditor.....	412
Paymasters' accounts on hand June 30, 1890.....	67
Paymasters' vouchers recorded.....	59,461
Paymasters' vouchers examined.....	55,870
Letters received and entered.....	6,119
Letters and indorsements written.....	11,058

During the last fiscal year there were 236 stoppages entered against the pay of officers as follows:

By request of the Quartermaster-General.....	\$3,243.90
By request of the Commissary-General.....	100.21
By request of the Chief of Ordnance.....	963.96
By request of the Chief Signal Office.....	197.48
Reported by accounting officers of Treasury, Sec. 1766 R. S.....	55,524.52
Ordered by the Secretary of War.....	410.15
Disallowed in Paymaster-General's Office.....	3,444.37

Total..... 63,884.59

Of this amount there was collected.....	\$4,908.47
Of this amount there was withdrawn.....	3,887.85
Leaving a balance to be collected of.....	55,088.27

Total..... 63,884.59

Of this large balance of uncollected stoppages, \$52,077.43 was disallowed in settlement of the accounts of an officer of the Engineer Department, and the sum of \$665.05 is charged against an officer who is now out of the service.

There have been recently transferred from this office to the Record and Pension Division of the War Department two clerks in addition to the eight clerks who formerly constituted the "Division of Volunteer Records of this office." While this transfer of records has sensibly reduced the volume of work required of the clerical force employed in this office, this reduction in work has not proved to be full compensation for the loss in number of clerks. In addition to this fact, recent legislation concerning retained pay and deposits, and the orders relating to the retention of portions of the monthly pay of soldiers, have contributed to swell the clerical requirements so very considerably as to induce the division chiefs of this Bureau to unite in requesting an increase in the number of clerks now allowed. The reasonableness of this request is more than emphasized by the difficulty felt at intervals in the office of the paymaster who is employed in the payment of Treasury certificates.

These claims are based largely on service in the volunteer Army. Many of the claimants are aged and helplessly dependent, and their appeals for prompt payment of claims, based on service rendered a quarter of a century ago, are often touching. As has already been stated there were 3,055 claims of this kind on hand June 30 last awaiting payment. I have therefore deemed it my duty in submitting the estimate for the coming year to ask for three additional clerks of the \$1,000 class. Such an increase in the number of clerks will afford the means for a more prompt settlement of paymasters' accounts, and secure for those accounts the rigid revision demanded.

Since assuming charge of this office, in March last, it has been very gratifying to note the efficiency, industry, and commendable zeal which have characterized the service of the several clerks in the performance of the duties allotted to them.

Very respectfully,

WM. SMITH,
Paymaster-General, U. S. A.

The SECRETARY OF WAR.

Statement by appropriations of approved and suspended disbursements in paymasters' accounts rendered during the fiscal year ending June 30, 1890, showing also the balance of suspensions remaining June 30, 1889, amount removed during the year, and the balance remaining June 30, 1890.

Titles of appropriations.	Disbursements.			Suspensions.			
	Total.	Approved.	Suspended.	Amount of suspensions remaining on books June 30, 1889.	Totalsuspensions.	Amount of suspensions removed during fiscal year ending June 30, 1890.	Amount of suspensions remaining on books June 30, 1890.
Pay, etc., of the Army, 1890.....	\$12,596,238.36	\$12,391,568.17	\$4,675.19	.....	\$4,675.19	\$2,359.07	\$2,316.12
Pay of the Military Academy, 1890.....	189,427.64	179,182.63	245.01	.....	245.01	.....	245.01
Signal Service, pay, etc., 1890.....	36,723.81	36,723.81	.....	.....	.....	.....	.....
Pay, etc., of the Army, 1889.....	1,145,579.58	1,144,794.67	784.91	\$1,655.12	2,440.03	1,943.13	496.90
Pay of the Military Academy, 1889.....	26,770.80	26,770.80	.....	.....	.....	.....	.....
Signal Service, pay 1889.....	9,765.16	9,765.16	.....	48.52	48.52	.....	48.52
Pay of the Army, 1888.....	6,524.24	6,524.24	.....	318.79	318.79	165.50	153.29
Signal Service, pay, 1888.....	54.51	54.51	.....	.....	.....	.....	.....
Pay of the Army, 1887, and prior years.....	.....	.....	.....	6,859.95	6,959.95	835.23	6,124.72
Signal Service pay, 1887, and prior years.....	.....	.....	.....	21.82	21.82	.....	21.82
Pay, etc., of the Army, certified claims.....	231.32	231.32	.....	.....	.....	.....	.....
Pay of two and three year volunteers, certified claims.....	279,171.66	279,171.66	.....	115.61	115.61	.....	115.61
Bounty to volunteers, widows, and legal heirs, certified claims.....	234,897.32	234,897.32	.....	120.00	120.00	.....	120.00
Bounty, act of July 28, 1866, certified claims.....	32,154.39	32,154.39	.....	.....	.....	.....	.....
Pay of two and three year volunteers, certified claims, 1890.....	42,753.43	42,753.43	.....	.....	.....	.....	.....
Bounty to volunteers, widows and legal heirs, certified claims, 1890.....	27,564.52	27,564.52	.....	.....	.....	.....	.....
Bounty, act of July 28, 1866, certified claims, 1890.....	3,639.48	3,639.48	.....	.....	.....	.....	.....
Pay of volunteers in Mexican War, certified claims.....	36.50	36.50	.....	.....	.....	.....	.....
Three months pay proper, act of July 3, 1884.....	693.33	693.33	.....	.....	.....	.....	.....
Bounty to fifteen and sixteen months volunteers.....	769.96	769.96	.....	.....	.....	.....	.....
Extra pay to officers and men, who served in Mexican War.....	2,330.16	2,330.16	.....	.....	.....	.....	.....
Total.....	14,425,328.17	14,419,621.06	5,705.11	9,239.81	14,944.92	5,302.93	9,641.99

PAYMASTER-GENERAL.

Statement showing the balance in the hands of each of the disbursing officers of the Pay Department on the 1st of July, 1889; the amount remitted to each from the Treasury, or turned over by other agents during the fiscal year ending June 30, 1890; the amount accounted for by accounts and vouchers of expenditures or by transfers or replacements in the Treasury, and the balance remaining in the hands of paymasters to be accounted for in the next fiscal year.

Rank and name.	Balance in hands of each paymaster June 30, 1889.	Remitted from Treasury in the year ending June 30, 1889.	Received from other paymasters.	Soldiers' deposit.	Army paymasters' collections.	Total received and to be accounted for.	Surplus funds replaced in the Treasury.	Army paymaster's collections deposit'd.	Expenditures.	Transferred to other paymasters.	Balance in hands of each paymaster June 30, 1890.	Total accounted for.
<i>Paymaster-General.</i>												
Smith, William	\$50,316.19	\$636,000.00	\$100,260.79	\$2,833.40	\$3,330.47	\$792,740.85	\$4,000.00	\$3,330.47	\$260,412.93	\$524,997.45	.....	\$792,740.85
<i>Colonel and assistant paymasters-general.</i>												
Smith, Rodney	126,327.07	2,494,000.00	485,483.66	5,457.00	7,587.69	3,118,855.42	466.71	7,587.69	745,553.12	2,294,770.57	70,677.33	3,118,855.42
Rucker, W. A.	15,053.83	953,000.00	191,296.17	1,710.00	1,358.65	1,162,418.65	4,000.00	1,358.65	272,207.82	871,887.03	12,965.15	1,162,418.65
<i>Lieutenant-colonel and deputy paymasters-general.</i>												
Gibson, W. R. ....	.....	460,000.00	74,923.19	1,615.00	2,391.33	5,438,929.52	4,000.00	2,391.33	260,251.02	259,658.21	12,628.96	538,929.52
Terrell, C. M.	67,129.72	962,000.00	124,538.72	9,947.66	4,235.23	1,142,851.33	10,000.00	4,235.33	519,127.88	590,872.74	43,615.48	1,142,851.33
Stanton, T. H.	28,209.02	475,000.00	148,628.13	3,637.00	5,813.11	661,287.32	2.50	5,813.11	501,079.47	95,036.38	59,355.86	661,287.32
<i>Major and paymaster.</i>												
Glenn, George E.	39,177.65	450,000.00	211,048.37	2,258.00	4,350.70	706,834.72	.....	4,350.70	298,581.58	316,237.55	87,064.89	706,834.72
Canby, J. P.	30,254.42	239,000.00	27,856.07	4,223.56	1,257.18	302,591.83	2,000.00	1,257.18	185,719.84	91,435.93	22,178.88	302,591.83
Candee, George W.	50,982.25	361,000.00	80,592.14	19,540.00	9,630.52	521,744.91	.....	9,630.52	361,210.87	123,313.01	27,590.51	521,744.91
Carey, A. B.	61,571.17	220,000.00	639,830.98	4,357.00	5,953.90	931,703.05	.....	5,953.90	548,370.40	361,392.92	15,985.83	931,703.05
Willard, J. P.	13,151.35	525,000.00	222,511.37	5,085.60	1,999.60	767,116.22	.....	1,999.60	311,642.88	367,421.15	86,584.29	767,116.22
Coxe, F. M.	23,516.47	657,000.00	20,560.00	17,533.28	8,573.18	727,122.93	.....	8,573.18	476,713.47	220,199.75	21,636.53	727,122.93
Bates, A. E.	31,598.62	130,000.00	388,304.45	16,264.88	9,347.25	575,505.20	.....	9,347.25	305,462.90	186,651.24	74,043.91	575,505.20
Wilson, C. I.	40,593.30	506,000.00	72,000.00	14,836.65	16,799.02	650,228.97	.....	16,799.02	487,535.00	122,306.33	23,588.62	650,228.97
Eckels, W. H.	28,964.86	40,000.00	296,089.42	17,140.66	7,850.26	390,045.20	.....	7,850.26	354,885.43	12,756.50	14,553.01	390,045.20
Roche, James R.	9,895.53	115,000.00	26,200.00	6,622.00	3,218.36	160,935.89	.....	3,218.36	133,478.13	10,494.23	13,745.17	160,935.89
Towar, A. S.	25,310.92	98,000.00	339,375.24	21,210.00	14,196.93	498,093.09	.....	14,196.93	421,124.20	55,771.96	7,000.00	498,093.09
Maynadier, W. M.	43,877.16	376,000.00	64,344.52	28,864.66	14,149.21	527,235.55	.....	14,149.21	472,590.15	48.89	40,447.80	527,235.55
Arthur, William	41,333.23	195,000.00	123,332.82	10,281.50	9,935.78	379,883.33	.....	9,935.78	293,112.18	76,835.37	.....	379,883.33
Keefer, J. B.	10,355.12	224,000.00	30,000.00	11,187.00	7,104.74	582,646.86	.....	7,104.74	261,178.05	1,172.45	13,191.62	582,646.86
Wham, J. W.	43,806.63	43,000.00	159,160.00	5,477.50	8,466.44	259,910.57	.....	8,466.44	173,405.88	49,693.15	28,345.10	259,910.57
Sniffen, C. C. ....	.....	85,000.00	248,068.93	5,776.00	1,664.69	340,509.62	.....	1,664.69	205,179.66	133,665.27	.....	340,509.62
Baird, G. W.	59,163.42	192,000.00	152,000.00	2,857.00	2,402.06	408,422.48	.....	2,402.06	349,603.60	56,416.82	.....	408,422.48
Larned, D. R.	24,395.42	815,949.83	116,418.90	.....	524.74	957,288.89	4,703.98	524.74	678,179.32	70,846.98	208,533.87	957,288.89

Robinson, Geo. F.....	6,843.29	7,000.00	239,012.81	8,388.66	6,810.14	267,875.90	6,810.14	253,708.26	4,500.00	2,857.50	267,875.90
Creary, W. E.....	28,981.03	289,500.00	4,500.00	18,317.94	11,358.24	352,657.21	11,358.24	315,316.55	700.00	25,282.42	352,657.21
Dodge, F. S.....	60,000.00	700,000.00	700,000.00	13,688.86	5,272.48	778,961.34	5,272.48	756,139.45	17,549.41	778,961.34	778,961.34
McClure, Chas.....	35,847.49	225,000.00	119,371.55	23,961.00	8,932.77	413,072.81	8,932.77	294,620.74	69,054.55	40,464.75	413,072.81
Witcher, J. S.....	46,713.63	161,000.00	179,136.40	2,573.00	10,912.37	400,335.40	10,912.37	356,222.33	11,569.16	21,631.54	400,335.40
Whipple, Chas. H.....	26,814.59	9,500.00	258,000.00	23,012.76	10,630.79	327,958.14	10,630.79	268,412.34	25,724.62	23,190.89	327,958.14
Comegys, W. H.....	34,973.61	200,000.00	118,000.00	7,763.15	7,401.31	368,138.07	7,401.31	319,154.00	12,800.00	28,782.76	368,138.07
Bash, D. N.....	32,898.56	249,000.00	90,869.00	14,566.40	12,210.19	399,544.15	60.00	12,210.19	352,818.52	447.12	34,008.32
Tucker, W. F.....	74,907.96	1,148,000.00	200,085.88	10,262.70	12,649.09	1,445,905.63	14,000.00	12,649.09	1,122,844.09	279,290.93	1,445,905.63
Muhlenberg, J. C.....	10,785.35	210,000.00	54,538.51	5,249.00	5,191.98	285,764.84	2,000.00	5,191.98	253,597.51	6,684.22	18,291.13
Poole, D. C.....	17,329.48	121,093.48	5,043.25	6,574.97	150,041.18	6,574.97	128,498.78	3,546.82	11,420.61	150,041.18	150,041.18
Smith, Geo. R.....	26,139.43	35,000.00	704,708.28	22,636.00	20,572.13	809,055.84	20,572.13	698,392.23	40,658.98	49,432.50	809,055.84
Baker, John P.....	21,302.85	162,000.00	314,426.31	21,210.75	18,148.04	537,087.95	18,148.04	429,195.59	80,500.00	9,244.32	537,087.95
Crozier, Wm., 1st Lt., Ord. Dpt..	3,000.00					3,000.00				3,000.00	3,000.00
Total	1,291,540.68	13,947,949.83	7,446,507.69	395,128.82	288,805.54	23,369,932.56	45,233.19	288,805.54	14,425,326.17	7,446,507.69	1,164,059.97
											23,369,932.56

Statement of the account of the Pay Department, U. S. Army, with the several appropriations subject to its control during the fiscal year ending June 30, 1890.

Appropriations.	In account with the Treasury.					Total.
	Balance in the Treasury July 1, 1889.	Amount of appropriations.	Unexpended balances deposited by paymasters.	Collections deposited by paymasters.	Repayment in settlement of accounts.	
Pay, etc., of the Army, 1890.....		\$12,759,415.73	\$60.00	\$134,543.11	\$65.23	\$12,894,084.07
Pay of Military Academy, 1890.....		223,755.08			154.27	223,909.35
Signal Service, pay, etc., 1890.....		38,852.00				38,852.00
Pay, etc., of the Army, 1889.....	\$344,550.05		17,000.00	28,102.19	31.30	389,683.54
Pay of Military Academy, 1889.....	18,496.58				1.50	18,498.08
Signal Service, pay, 1889.....	6,722.03		5,000.00			11,722.03
Pay, etc., of the Army, 1888.....	422,394.20		18,002.50	317.80		440,714.50
Pay of Military Academy, 1888.....	16,293.81		466.71			16,760.52
Signal Service, pay, 1888.....	8,696.87		5,468.68			14,165.55
Pay, etc., of the Army, 1887, and prior years.....			12,569.36	1,162.35		13,731.71
Signal Service, pay, 1887, and prior years.....					16.00	16.00
Pay, etc., of the Army, certified claims.....	433.15		95.07			528.22
Pay of two and three years' volunteers, 1871, and prior years.....					1,054.83	1,054.83
Pay of two and three years' volunteers, certified claims.....	6,954.67	284,090.25			250.91	291,295.83
Pay of two and three years' volunteers, certified claims, 1890.....		95,013.99				95,013.99
Bounty to volunteers, their widows, and legal heirs, 1871, and prior years.....					510.61	510.61
Bounty to volunteers, their widows, and legal heirs, certified claims.....	27,256.52	243,883.11			797.26	271,937.19
Bounty to volunteers, their widows, and legal heirs, certified claims, 1890.....		80,100.00				80,100.00
Bounty to Fifteenth and Sixteenth Missouri Cavalry Volunteers.....						
Bounty under act of July 28, 1866.....					1,192.55	1,192.55
Bounty under act of July 28, 1866, certified claims.....	1,984.97	33,926.77	87.60		185.00	36,184.34
Bounty under act of July 28, 1866, certified claims, 1890.....		15,050.00				15,050.00
Extra pay to officers and men who served in the Mexican war.....						
Three months' pay proper, act of July 3, 1884.....						
Pay of volunteers (Mexican war), certified claims.....	36.50					36.50
TRANSFER ACCOUNTS.						
Pay, etc., of the Army, 1887, and prior years.....		478.22				478.22
Signal Service, pay, 1887, and prior years.....					248.00	248.00
Pay of two and three years' volunteers, 1871, and prior years.....		970.76				970.76
Bounty to volunteers, their widows, and legal heirs, 1871, and prior years.....		139.44				139.44
Bounty to volunteers and regulars on enlistment, 1871, and prior years.....					325.00	325.00
COLORED CLAIMS.						
Collection and payment of bounty, etc., due colored soldiers and sailors, 1888.....	1,565.06					1,565.06
Total	855,384.71	13,755,675.35	58,749.92	164,125.45	4,832.46	14,868,767.89

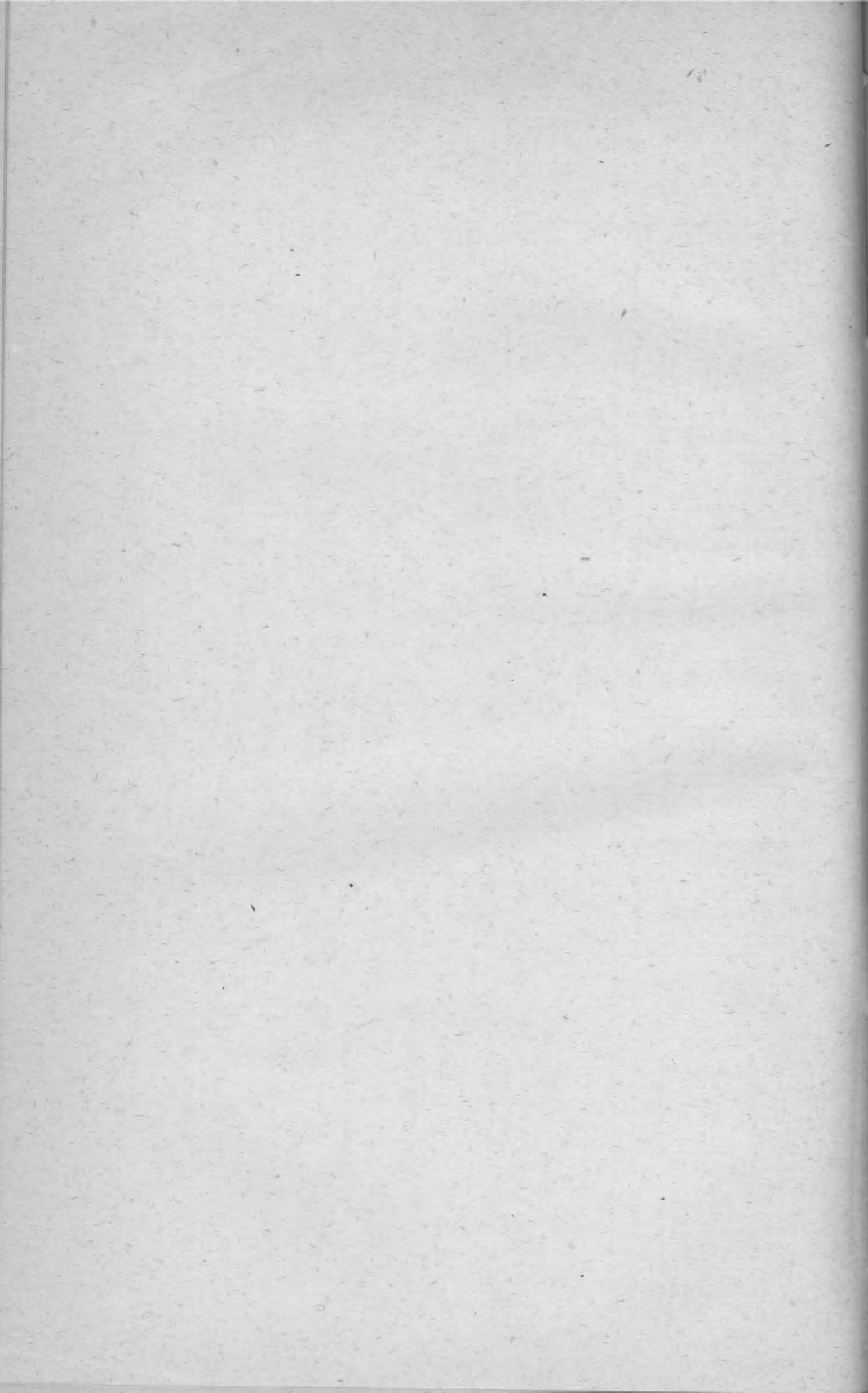
Statement of the account of the Pay Department, U. S. Army, with the several appropriations subject to its control during the fiscal year ending June 30, 1890—Continued.

Appropriations	In account with the Treasury.				Balance in hands of paymasters June 30, 1890.	Total balances June 30, 1890.		
	Amount drawn by requisition of Pay Department.	Amount drawn by requisition of War Department.	Amount covered into surplus fund, act of June 20, 1874.	Total.				
Pay, etc., of the Army, 1890	\$12,887,900.00	\$495.67		\$12,888,395.67	\$5,688.40	\$886,473.85	\$892,162.25	
Pay of Military Academy, 1890	212,000.00			212,000.00	11,909.35	32,453.20	44,362.55	
Signal Service, pay, etc., 1890	37,100.00			37,100.00	1,752.00	376.19	2,128.19	
Pay, etc., of the Army, 1889	15,000.00	407.94		15,407.94	374,275.60	47,801.42	422,077.02	
Pay of Military Academy, 1889					18,498.08	445.41	18,943.49	
Signal Service, pay, 1889					11,722.03	570.60	12,298.63	
Pay, etc., of the Army, 1888	7,000.00	54.14	\$433,660.36	440,714.50		17,388.16	17,388.16	
Pay of Military Academy, 1888			16,760.52	16,760.52				
Signal Service, pay, 1888	54.51	148.67	13,962.37	14,165.55				
Pay, etc., of the Army, 1887 and prior years			18,731.71	13,731.71				
Signal Service, pay, 1887 and prior years			16.00	16.00				
Pay, etc., of the Army, certified claims	433.15	16.00		449.15	79.07	254.93	334.00	
Pay of two and three years volunteers, 1871 and prior years			1,054.83	1,054.83				
Pay of two and three years volunteers, certified claims	290,859.00	321.79		291,180.79	115.04	14,155.21	14,270.25	
Pay of two and three years volunteers, certified claims, 1890	95,000.00	13.99		95,013.99		52,246.57	52,216.57	
Bounty to volunteers, their widows, and legal heirs, 1871 and prior years			510.61	510.61				
Bounty to volunteers, their widows, and legal heirs, certified claims	271,469.93	160.00		271,629.93	307.26	39,174.63	39,481.89	
Bounty to volunteers, their widows, and legal heirs, certified claims, 1890	80,000.00	100.00		80,100.00		52,435.48	52,435.48	
Bounty to Fifteenth and Sixteenth Missouri Cavalry Volunteers						566.53	566.53	
Bounty under act of July 28, 1866			1,192.55	1,192.55				
Bounty under act of July 28, 1866, certified claims	36,096.74	87.60		36,184.34		5,516.34	5,516.34	
Bounty under act of July 28, 1866, certified claims, 1890	15,000.00	50.00		15,050.00		11,360.52	11,360.52	
Extra pay to officers and men who served in the Mexican war						160.79	160.79	
Three months' pay proper, act of July 3, 1884						2,674.14	2,674.14	
Pay of volunteers (Mexican war), certified claims	36.50			36.50				
TRANSFER ACCOUNTS.								
Pay, etc., of the Army, 1887 and prior years		478.22		478.22				
Signal Service, pay, 1887 and prior years			248.00	248.00				
Pay of two and three years volunteers, 1871 and prior years		970.76		970.76				
Bounty to volunteers, their widows, and legal heirs, 1871 and prior years		139.44		139.44				
Bounty to volunteers and regulars on enlistment, 1871 and prior years			325.00	325.00				
COLORED CLAIMS.								
Collection and payment of bounty, etc., due colored soldiers and sailors, 1888			1,565.06	1,565.06				
Total	13,947,949.83	3,444.22	483,027.01	14,434,421.06	424,346.83	1,164,059.97	1,588,406.80	

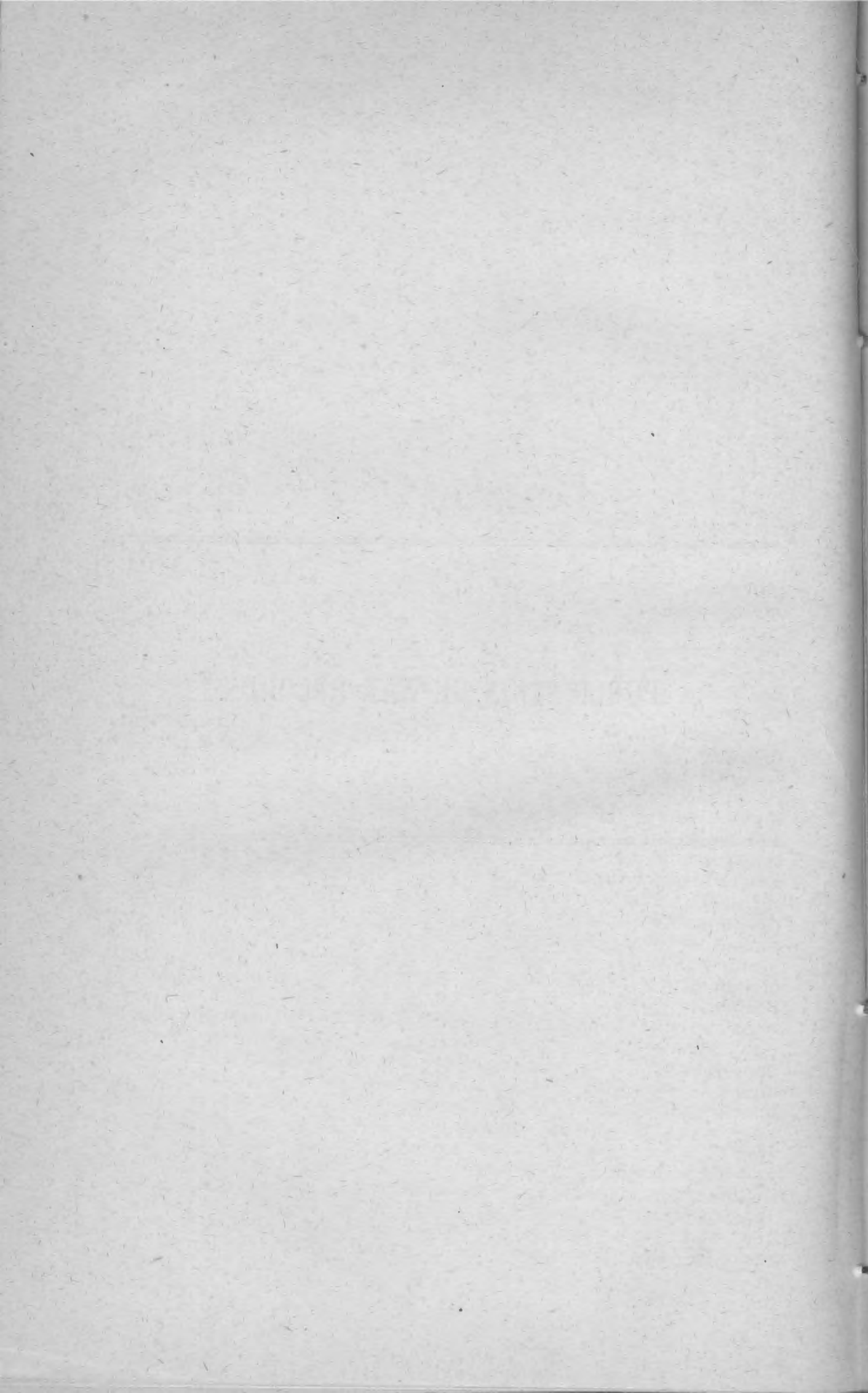
Statement showing the number of pay trips made, number of days consumed in travel, posts paid, miles traveled, and amount of field and office disbursements made by each disbursing officer of the Pay Department during the fiscal year ending June 30, 1890.

	Paymasters.	No. of pay trips.	Days consumed.	No. of posts paid.	Miles traveled.					Total.	Payments.		
					Railroad.	Stage.	Steamer.	Ambulance.	Other conveyance.		In field.	In office.	Total.
PAYMASTER-GENERAL.													
1	Smith, William	8	25	10	2,092			156		2,248	\$37,053.89	\$223,359.04	\$260,412.93
ASSISTANT PAYMASTERS-GENERAL.													
2	Smith, Rodney	12	60	44	6,950		52	33		7,035	178,092.35	567,260.77	745,353.12
3	Rucker, W. A.	11	13	10	856			66		922	20,008.23	252,199.59	272,207.82
DEPUTY PAYMASTER-GENERAL.													
4	Gibson, Wm. R.	5	5	7				32		32	54,666.96	205,584.06	260,151.02
5	Terrell, Chas. M.	10	15	17	18			134		152	71,321.46	447,806.42	519,127.88
6	Stanton, T. H.	13	76	42	11,840		96	52	44	12,032	112,298.16	388,781.31	501,079.47
PAYMASTERS.													
7	Glenn, George E.	10	33	25	9,553				10	9,563	78,305.37	229,276.21	298,581.58
8	Canby, J. P.	18	70	18	7,950		2,475	57		10,482	25,945.53	159,774.31	185,719.84
9	Candee, Geo. W.	10	114	40	8,049			1,446		9,495	287,242.47	128,963.40	262,210.87
10	Carey, A. B.	37	64	62	4,000		1,167	40	5	5,212	292,231.68	256,138.72	548,370.40
11	Willard, J. P.	10	37	13	4,964			346	50	5,360	46,905.48	264,737.40	311,642.88
12	Coxe, F. M.	22	57	39	2,638		600	14		3,262	136,617.19	340,096.28	476,713.47
13	Bates, A. E.	10	66	33	11,113		14	28		11,890	160,876.42	144,586.48	305,462.90
14	Wilson, C. I.	18	86	51	9,587			1,070		10,657	267,750.49	219,775.51	487,526.00
15	Eckels, W. H.	10	76	32	11,178		8	20		11,884	144,951.04	209,934.39	354,885.43
16	Roche, J. R.	11	46	48	6,126			680		6,806	80,857.73	52,620.40	133,478.13
17	Towar, A. S.	14	123	53	4,763			2,154	159	7,076	314,515.59	106,608.61	421,124.20
18	Maynadier, W. M.	12	169	56	13,561		18	1,914	59	15,552	290,255.33	182,334.82	472,590.15
19	Arthur, Wm	19	65	47	7,237		261	572		8,069	209,163.05	83,949.13	293,112.18
20	Keefer, J. B.	24	73	31	6,595			186		7,093	179,127.68	820,050.37	261,178.05
21	Wham, J. W.	7	55	21	2,340			312		3,652	135,784.15	37,621.73	173,405.88
22	Sniffen, C. C.	2	9	9	887			70		937	29,641.69	175,537.97	205,179.66
23	Baird, Geo. W.	6	46	46	3,306			460		3,782	57,939.75	291,643.85	349,603.60
24	Larned, D. R.											678,179.32	678,179.32
25	Robinson, Geo. F.	24	68	43	2,324	900	1,298	39	80	4,641	114,806.06	138,902.20	253,708.26
26	Creary, W. E.	30	103	42	7,212			1,356		8,568	198,534.06	116,782.49	315,316.55
27	Dodge, F. S.	43	49	58	6,107		455		48	6,610	176,687.26	579,452.19	756,139.45

28 McClure, Chas	15	105	38	10,957	70	122	1,610	8	12,767	225,553.03	69,067.71	294,620.74
29 Witcher, J. S	13	63	44	11,029			79	73	11,181	127,837.41	228,438.92	356,222.33
30 Whipple, Chas. H	17	101	47	6,393	1,322		727		8,442	181,967.13	86,445.21	268,412.34
31 Comegys, W. H.	11	78	40	11,160		96		36	11,292	123,258.17	195,895.83	319,154.00
32 Bash, D. N.	6	113	35	14,216	16		684		14,916	243,741.54	109,076.98	352,818.52
33 Tucker, W. F.	12	48	48	2,868		2,052	216		5,136	164,709.54	958,134.55	1,122,844.09
34 Muhlenberg, J. C.	11	65	25	8,114		912	188		9,214	104,615.07	148,982.44	253,597.51
35 Poole, D. C.	11	63	33	5,348	316		286		6,476	113,627.84	14,870.94	128,498.78
36 Smith, George R.	26	69	48	6,590			241		6,831	343,746.84	354,645.39	698,392.23
37 Baker, J. P.	12	122	45	15,332	656		1,312		17,300	355,039.60	74,155.99	429,195.59
Total	530	2,430	1,299	243,253	4,181	10,361	18,424	731	276,950	5,635,650.24	8,789,675.93	14,425,328.17



PUBLICATION OF WAR RECORDS.



REPORT
OF
PUBLICATION OF WAR RECORDS.

WAR DEPARTMENT, WAR RECORDS OFFICE,
Washington, October 8, 1890.

SIR: The board to whom, under your direction, the publication of the Official Records of the Union and Confederate Armies has been entrusted, respectfully submits the following report of its operations during the fiscal year ending June 30, 1890.

On July 1, 1889, the state of the work was as follows: Thirty-five books had been published in previous years, and fourteen books had been stereotyped, of which eight were indexed ready for publication. The manuscript of ten volumes was also on hand in various stages of preparation.

The act of March 2, 1889, which went into effect at the beginning of the fiscal year, changed materially the existing methods of publication and provided that the work should be carried on in the future by a Board of Publication, composed of three members, to be appointed by the Secretary of War. Two of the members were to be civilian experts, and one an army officer. The statute also provided that the publication was to be completed in five years, and the sum of \$100,000 was set apart for the operations of the board during the fiscal year.

Under the authority conferred by the act, Maj. George B. Davis, of the Judge-Advocate-General's Department, was selected on July 1 as the military member. On July 15 Mr. Leslie J. Perry, and on July 22 Mr. Joseph W. Kirkley were appointed by the Secretary of War as the civilian experts, thus completing the composition of the Board of Publication.

As the chief purpose of the act of March 2, 1889, was to expedite the publication of the work, it was determined to devote a large part of the appropriation for the year to the printing and distribution of volumes already in type. With this end in view, ten books were published and distributed, containing the accounts of the Chancellorville and Gettysburg campaigns and the important sieges of Vicksburg and Port Hudson. The other departments of the work, however, were not neglected, and the force employed in stereotyping, indexing, and compilation was kept steadily at work during the entire fiscal year. As a result, seven books were stereotyped, carrying the official accounts to the end of 1863, and twelve books were indexed, of which eleven were practically ready for publication at the close of the fiscal year.

The compilation of the second series, relating to prisoners of war, and the volumes of the first series, relating to the operations of the year 1864, were carried forward as rapidly as possible by the limited force which was available for that purpose. The records and files of the War Department and other original sources of information have been examined and consulted, and no pains have been spared which would contribute in the slightest degree to accuracy and completeness in the preparation of the volumes for publication.

Respectfully submitted.

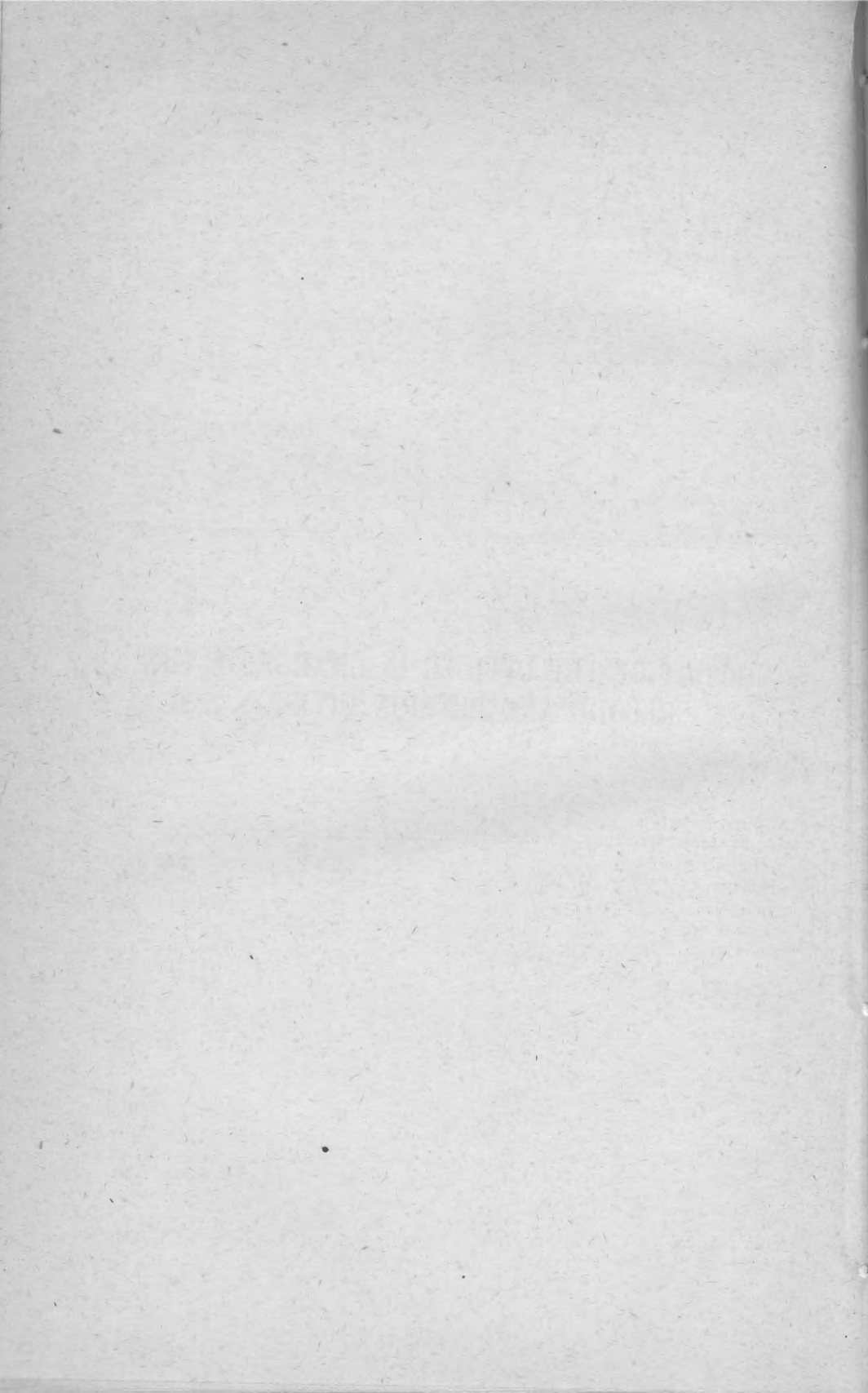
GEO. B. DAVIS,
Major and Judge-Advocate, U. S. Army, Member.

LESLIE J. PERRY,
Member.

J. W. KIRKLEY,
Member.

The SECRETARY OF WAR.

REPORT OF THE OFFICER IN CHARGE OF THE
RECORD AND PENSION DIVISION.



REPORT

OF THE

OFFICER IN CHARGE OF THE RECORD AND PENSION DIVISION.

WAR DEPARTMENT,
RECORD AND PENSION DIVISION,
Washington, October 25, 1890.

SIR: The following report of the business of the Record and Pension Division of the War Department during the fiscal year ended June 30, 1890, is respectfully submitted:

At the beginning of the fiscal year the officer now in charge of this division was in charge of that branch of the Surgeon-General's Office which contained the hospital records of the Army, and made reports therefrom, in the claims of soldiers and their heirs to the Pension Office and other bureaus of the Government. Calls in these claims were answered, as a rule, on the day of receipt. At the close of business on the 30th of June, 1889, there was no unanswered call remaining in the office.

By your orders of the 8th and 16th of July, 1889, this division of the Surgeon-General's Office, and thirteen divisions of the Adjutant-General's Office, containing the muster rolls and other military records of volunteers, were consolidated, the whole being designated the Record and Pension Division of the War Department and placed under your immediate control.

The work of the division as now constituted embraces subjects of every conceivable nature relating to the service of organizations, officers, and enlisted men, including inquiries for information from records dating from the earliest history of the Government; applications for certificates of discharge by soldiers who failed to receive them upon leaving the service; for certificates of service in lieu of lost discharges, authorized by act of Congress approved March 3, 1873; for recognition as veteran volunteers by reason of previous service; for medals of honor for meritorious and distinguished services rendered, authorized by acts of Congress approved July 12, 1862, and March 3, 1863; for change or amendment of record for various causes; for removal of charges of desertion under act of Congress approved March 2, 1889; for names of comrades to enable applicants to obtain evidence for completion of pension and other claims; for recognition of officers as of higher grades under the acts of Congress approved June 3, 1884, February 3, 1887, and August 13, 1883; inquiries from parents, widows, children, and other relatives or friends of soldiers as to their fate; calls from the Second, Third, and Fourth Auditors and the Second Comptroller of the Treasury, the Commissioner of Pensions, Commissary-

General of Subsistence, Court of Claims, and other official sources, for the history of organizations and individuals in the military service to be used in the adjudication of claims against the Government; applications from governors of homes for disabled volunteer soldiers for information to be used in admitting soldiers to the various homes; from the Grand Army of the Republic, Sons of Veterans, and Loyal Legion for records of service to enable those societies to determine the title of soldiers or their sons to admission thereto; from adjutants-general of States for data necessary to the completion of the military records of the several States; and from State, county, and municipal authorities for information to be used in prosecuting claims against the Government, or in litigation connected with the payment of bounties or other matters incident to the raising of troops during the late war. In short, nearly all the business pertaining to the service record of the volunteer soldier is transacted in this office.

In the divisions transferred from the Adjutant-General's Office 40,550 cases of all kinds were found on hand awaiting action at the time of transfer.

In five of these divisions record books of letters received, letters sent and indorsements, and corresponding index books, were kept. In order to simplify the business of recording the receipt of cases and action thereon, the card record system was introduced. All these books were discontinued. The 37 clerks engaged upon them were assigned to the work of getting out the delayed cases, and all the work of receiving, numbering, briefing, recording, and sending out mail was assigned to a single division in which 20 men now do the work, not alone of the foregoing 37, but also of 7 men formerly required on the mail received in the medical branch, or 44 in all.

In the remuster division there were found 29 men employed in adjudicating claims of officers for recognition as of advanced grades under the act of Congress of June 3, 1884, and acts amendatory thereof. Before any step could be taken in one of these cases it was necessary to search the indexes of the old letter books in order to find any previous correspondence in the case, and this work of searching for previous papers was found to be months in arrears. The next step was to send the case to one of the two rolls divisions for information from the muster rolls. As each of these divisions was over 10,000 cases in arrears there was here still further delay. Although only certain definite items in the officer's history are ordinarily needed to decide his particular claim, it was the custom to search for and furnish extensive information from the rolls, a good portion of which was either already in the case or not pertinent to the claim. After careful consideration of the subject the remuster division was discontinued, the clerks were transferred to the rolls division, where they had direct access to the records from which they needed information, and it was found that instead of the former long histories transcribed from these records a few extracts sufficed. As a consequence, 7 clerks now do the work of at least 40, and, as the information which forms the basis for the adjudication of this class of cases is now contained in condensed form on a suitable printed blank, the work can now be more speedily and accurately done than under the former practice in which one set of clerks laboriously searched out and transcribed pages of relevant and irrelevant matter, and another set as laboriously culled out from this matter the pertinent items necessary to fully adjudicate the case.

On July 8, 1889, there were 4,365 of these remuster cases unacted on. Many of them had been in the office for years. By the 30th of Sep-

tember all were disposed of, including 725 received up to that date. From October 1, 1889, to June 30, 1890, 3,601 cases of this class were received and disposed of, leaving none on hand at the close of the fiscal year, and making a total of 8,691 acted on during the year.

On the 8th of July, 1889, there were on hand and unacted on 1,342 cases requiring investigation of the charge of desertion with a view to its removal under act of March 2, 1889. The bulk of these cases had been in the office for months, the main cause of delay being the arrearage of work in the deserters' division and the inability of other divisions of the office to furnish necessary information from the records because each was also clogged with an arrearage of work on hand.

As in the remuster work, these cases, together with current receipts [2,193 regular applications and 1,087 miscellaneous cases involving charges of desertion], were all disposed of by the 30th of September, 1889. From October 1, 1889, to June 30, 1890, 6,316 regular applications and 5,197 miscellaneous cases involving charges of desertion were received and acted on, leaving none on hand at the end of the fiscal year, and making a total of 16,135 cases of this class disposed of during the year.

The work of the deserters' division has been greatly facilitated by the promptness with which business is dispatched in other branches of the office. Although a clerk having a desertion case in hand may require information from three or four other divisions, he can now obtain it all in one or two hours, and apply it while the whole case is fresh in his mind. Under the old system he perhaps received a reply to each request for information in one or two months, and, consequently, every time the case was returned to him he was obliged to take up the mass of papers and study them anew in order to get at the salient points which, of course, had escaped his recollection. Three or four tedious reviews of the case were thus rendered necessary under the old system where one is sufficient now.

It was found to be the practice to inform applicants for removal of the charge of desertion that their claims had been filed in order of date and would be taken up for action when that date was reached. This waste of clerical labor no longer occurs; the applicant is now informed of the decision of the Department in his case in much less time than it formerly required to explain to him why the office was not prepared to act upon it. In the deserters' division, as in all the others, clerks have been required to study up and become thoroughly acquainted with the different branches of the work, so that no clerk need sit idle waiting for work pertaining to his particular specialty while a clerk on his right or left is buried in arrears with another specialty.

Calls from the Pension Office, although greatly increased in number since the creation of this division, are answered within twenty-four hours in nearly every instance. This work has been greatly facilitated by a new printed form of call for the military and medical history of volunteers, containing also a form for the reply of this office, which was prepared under your direction and approved by the Secretary of the Interior and the Commissioner of Pensions.

Prior to the adoption of this form two calls and two separate replies were made in each case, one for the military history and one for the medical history. The change reduced four official papers to one, and as the call and reply have been reduced in verbiage to what is needed for the proper adjudication of the case, much work has been saved both the Pension Office and this office.

On the 8th of July, 1889, there were on hand and unanswered 23,424 calls from the Pension Office. By the 30th of September, 1889, these were all disposed of, together with the current receipts up to that date (39,029), leaving none on hand on the 30th of September, 1889. From October 1, 1889, to June 30, 1890, 160,330 cases of this class were received and disposed of, leaving none on hand on the 30th of June, 1890, and making a total of 222,783 acted on during the year.

For the business coming from the Second Auditor of the Treasury a new form of call and reply was also adopted with his approval. This resulted in a material saving of unnecessary work in both offices by reducing verbiage, limiting the reply to the actual needs of the case, and condensing two or more papers into one. On the 8th of July, 1889, there were on hand and unanswered 5,007 calls. These were all disposed of by the 30th of September, 1889, together with the current receipts (6,912) up to that date. From October 1, 1889, to June 30, 1890, there were received and acted on 28,575 cases, leaving none on hand at the close of the year, and making a total of 40,494 disposed of during the year, calls being answered in nearly every instance within twenty-four hours after their receipt.

Of all other classes of cases there were found on hand and unanswered 6,516. These were all disposed of by the 30th of September, 1889, together with current receipts (9,868) up to that date. During the remainder of the fiscal year there were received and acted on of this miscellaneous class 43,689 cases, leaving none on hand June 30, 1890, and making a total of 60,073 disposed of during the year.

Altogether there were received 301,238 calls from all sources from July 8, 1889, to June 30, 1890. These added to the 40,550 on hand July 8, 1889, in the divisions transferred from the Adjutant-General's Office, and 104 in the division transferred from the Surgeon-General's Office, made a total of 341,892, which were all disposed of, leaving none on hand at the end of the fiscal year. The largest number of cases received in any one day was 2,167, on the 31st of March, 1890, 1,688 of them coming from the Pension Office, yet this mail was all disposed of promptly, and with much greater ease than an ordinary mail of five hundred cases could have been under the old system with many more clerks than are now employed upon this work.

As the substitution of record and index cards in the place of books of letters received, letters sent, and indorsements has been demonstrated to be a great improvement upon older methods of record keeping, and is being introduced into other public offices, a description of the method of using the cards in this division, where they were first devised, and all the details of the system of which they form a part worked out and practically applied, may not be out of place.

As soon as the mail received from the post office is opened the mail clerks take the letters, which, for convenience, will be designated cases, place with each a record card and an index card, both being printed blanks of uniform size, 8 by 3½ inches. They are taken immediately by a constantly moving messenger to the desks of ten or more clerks who brief the communications, if not already briefed and enter in appropriate spaces on both the record and index cards the source and the nature of the cases. If necessary, the briefers also prepare cross reference index cards. As soon as briefed, each case is carried to the stamping desk where it and the accompanying cards—record, index, and cross reference—are stamped with the office or file number, and the date of receipt, the same number being given to the case and all the cards. The index and cross reference cards are here withdrawn

from the case, the latter card being placed on the alphabetical index files, the former, without filing, being arranged numerically for a purpose to be explained further on.

The case and the record card are taken with the same celerity from the stamp desk to the index clerks, who search the index card files for record of previous action. If there has been any previous action it is ascertained instantly, as the index cards are filed in perfect dictionary order with suitable projecting tag cards showing subject or surname, and, where advisable, the Christian name also. The index card thus found shows the number of the former record card in the case, which is taken from the files and also placed with the case, the two record cards, the old and the new, being connected by writing the number of each on the other. This stage is reached within fifteen minutes after the receipt of the paper from the post office. The case is next sent, by a five-minute messenger service, to the files division on the next floor, where the papers corresponding to the file number of the previous record card are immediately withdrawn from the files and placed with the case, and the whole, viz, case, new record card, old record card, and previous papers, are forwarded to the division to which the subject involved pertains. Here, if it is found that information is needed from any other division of the office, the request for such information is written on the record card and the case sent there with the card. The desired information if found, or the reply, is also written on the record card following the request. In fact, everything that is done with or about the case until it is completed appears upon the record card. Should this be filled on both sides an extension slip is pasted to it. The office letter, or indorsement, finally disposing of the case is also draughted thereon, and from this draught, after approval, the formal letter or indorsement is prepared for signature by the copyist or typewriter.

After letters and indorsements are signed they must all go to one desk, still accompanied by the record cards. Here the letters or cases are separated from their accompanying cards and mailed. The cards are stamped with date of disposition of the case, then arranged numerically and compared or tallied with their respective index cards which have also been so arranged and have been awaiting in the mail-room the return of the cases that they represent. The record cards are finally placed on file in numerical order for future reference and their corresponding index cards distributed in the general alphabetical file.

The index cards remaining untallied at the close of the day show exactly what cases have not gone out of the office, as each index card remaining over represents a case still in the office. This furnishes at the close of each day instantaneous, positive, and definite information, including name, source, and nature of each case not answered on the day of receipt, and readily enables inquiry to be made into the cause of delay. Temporary duplicates are made of the index cards remaining over at the close of the day, to be used for tallying their respective record cards next day, the originals being placed in the regular alphabetical index files.

The record card, being filed under its proper number, is easily found by means of the alphabetical index or cross reference card, and whenever referred to will not alone show in compact form all concerning the case which it represents that books of letters received, letters sent, and indorsements could have shown, but also what clerks dealt with it, and all the internal office action so necessary to a full understanding of the subject involved.

It will thus be seen that the record card is practically a miniature individual record book—letters received, letters sent, and indorsements, all in one—and that it is no longer necessary to send a case to a particular room or desk to record action in an unwieldy volume or to ascertain previous action. On the contrary, the book in the form of a record card is always found with the case wherever it may be undergoing action.

Under this system any number of clerks can be utilized in briefing, recording, and indexing letters received, and as many are withdrawn from other work as are needed to get the mail under action immediately after its receipt. As soon as this is done they return to their regular work. The cases are briefed, recorded, numbered, and indexed, the former record cards, if any, are found and placed with them, and the cases themselves commence to flow rapidly in a continuous stream from the mail division, ready for action in the other divisions, *within fifteen minutes after the mail is received* from the post office, whereas under the former method of recording in books, and moving mail from desk to desk only once or twice a day, several days were required to bring the case to this stage.

Quick messenger service is then all-important to carry this mail to and from all parts of the office until final action is had in each case. For this purpose a regular five minute mail service has been established, and deserves a full description, as it has proved a remarkable success, silently and promptly moving papers and packages in all directions every five minutes in the day, with automatic precision, accuracy, and dispatch, and without the necessity of calling or ringing for messengers, giving them any directions or addressing communications or packages with pen or pencil, and without any addition to the messenger force employed in the office under the former system.

The rooms of the Record and Pension Division, 75 in number, in the State, War, and Navy Building, are located on four floors, and on all four sides of this large building. In these rooms 93 mail boxes or stations are established. Each box contains three compartments, each 5 inches square and 5 inches deep, the opening being at the top so that a case placed in it can be readily seen. In one compartment is placed all out-going mail intended to move in one direction, designated, for convenience, "up;" in another is placed all out-going mail to go in the other direction, designated "down." In the middle compartment is placed the mail addressed to the desk or room in which the box is located. All mail to be sent from a station is inclosed in office mail cards, having the number of the room from which sent plainly printed in red on one side, and the number of the room to which it is to go printed in black on the other. Where there are several mail boxes in a room the names of the clerks on whose desks they are located are also printed on the cards.

Ten of the messengers who formerly sat at the doors of different rooms and carried individual special messages, or armfuls of accumulated cases at long intervals of time, are detailed for this messenger service. Each starts from the first station, goes along a fixed route designated the "up" route, which leads past every one of the 93 mail boxes to the most remote one in the division, and returns by the same route to the first. On the "up" trip he picks up all out-going mail found in the "up" compartments and stands it in the respective receiving compartments on his route according to direction on the mail card. On his return trip he picks up all mail from the "down" compartments and delivers it in the same manner.

As these men start regularly and punctually five minutes apart and all go over the same route, the result is a perfect and uninterrupted five-minute communication between all the important desks in every room throughout the whole division, and in no case under any circumstances can lie idle longer than five minutes. In fact the average delay is only two and a half minutes.

By means of clearly marked boxes and plainly addressed mail cards the messengers collect and deliver mail without halting in their steps. An actual count on an ordinary business day showed that they carried 9,020 mail cards.

In order to obtain the full benefit of this means of speedy communication every clerk is required to be diligent in his work, and is not permitted to have more than one case under consideration at a time; and as soon as he has finished his part of the work on this case, or finds that he needs information from records in another branch of the division, he immediately dispatches it to the proper desk or room. For this purpose he is provided with suitably addressed mail cards, placed in a convenient box, each set of cards being clearly indicated by projecting tags so that he can pick out the desired card as readily as a typewriter can touch a particular key. He then draws his next case out of the receiving box on his desk or in his room.

One of the important advantages of this system of mail boxes is that all cases not actually undergoing action in any room or section of the office stand in full view in the receiving boxes. In fact, an hourly report is made to the officer in charge by every division. From this report can be seen at a glance the number of cases awaiting action in each room at any hour of the day, and whenever it appears that a room or division can not dispose of its mail before the day is over clerks are drawn from some other division that is closer up with its work, so that all shall be clear at the close of the day. The fact that each clerk has only one case in hand at a time instead of from ten to fifty as under the old system, and the ease and rapidity with which he can send for information from the records filed in the remotest portions of the office, enable him to give his work more careful consideration and to exhaust more thoroughly the records bearing on a case than was possible under the former practice wherein the ever-vexatious question to be answered in almost every complicated case was, "Shall this case be subjected to a further delay of weeks or months in order to have a doubtful point cleared up?" Under the present method of work he knows that every inquiry he addresses to any branch of the office whatever will be taken up within a few minutes after it leaves his hands and as promptly returned to him, and he feels a pleasure in causing every available source of information to be exhausted before allowing his work to finally leave his desk.

The fact that every case awaiting action is always in full view is sufficient guard against its being overlooked or forgotten, as all pigeon holes have been abolished. But should a case by any possibility be mislaid, the fact that the corresponding index card in the mail room comes to the top of the untallied cards next day will cause immediate search to be made for it. Thus there are two checks against cases being overlooked or neglected; the first is almost all-sufficient; the other is absolutely so.

There is another way, however, in which many cases have been buried for years under the old book system. For instance, in a certain case it becomes necessary to write to the adjutant-general of a State for information, or to another department of the Government, or to any

third party, before further action can be taken by the office. The invariable custom was to file the papers pending the receipt of a reply. If no reply was received the case was absolutely buried until the claimant called it up again, there being no method by which it could be unearthed otherwise. To guard against this only possible cause of delay, whenever any case is referred, or any letter written, to an office or person other than the one filing the case, a "temporary card" is made for such case and kept in a separate "temporary file," which is carefully scrutinized each day with a view to bringing up any case in which the call of the office has not elicited a reply within a reasonable time. If no reply is received within a reasonable time the request is renewed, or other measures are taken to obtain the information desired and settle the claim. When a reply is received the temporary card is destroyed and the case immediately taken up for further action. By means of this little "temporary" card file it is possible to see at a glance what cases are awaiting replies from persons not under the control of this office, and it is made impossible for such cases to be overlooked or forgotten and allowed to slumber indefinitely upon the files, as is sure to happen frequently under the old system in any office the work of which is at all extensive.

MEDICAL AND MILITARY INDEX RECORD CARDS.

As soon as the arrearage of delayed cases was cleared off in the divisions transferred from the Adjutant-General's Office two hundred of the clerks engaged thereon were assigned to the work of carding the medical records then nearing completion. This work was practically completed early in the year, 2,057,968 cards having been added to the files, making the total number of cards filed 6,817,439, so that now the complete medical record of a soldier can be found with remarkable facility, and the invaluable original hospital records, which had become worn and tattered from incessant use before they were carded, are now saved from further destruction.

The carding of the medical records having been completed it was determined to apply the same system to the military records.

The military history of a volunteer is found on company muster rolls which were made out every two months, on company and regimental monthly returns, and on company morning report books, also on the company and regimental descriptive books, and on several other records as well.

The rolls and returns having been in constant use for twenty-five years are actually in tatters, and their reproduction and preservation is an absolute necessity. If copied upon sheets of similar form the copies would, in the course of years, be subjected to the same mutilation from incessant unfolding and refolding incident to the work of searching them for the desired information.

If all the military history of a soldier found on the numerous rolls and other records could be collected and transcribed in chronological order on one sheet, and that sheet filed under the soldier's name in alphabetical order under his regiment, it could readily be found whenever wanted, and would no doubt endure for all future purposes, as it would be subjected to but little wear and tear. But in order to collect the many entries comprising the history of a soldier the only feasible method is to copy each entry found on every record on a separate slip or card, then to arrange these cards by regiments, next by individual names, and finally in chronological order. All the cards relating to a

soldier would thus fall together and would show his history in consecutive order from muster in to termination of service. From these the desired consolidated sheet could be readily prepared. It is also apparent that until everyone of the widely-scattered records in which a soldier's name may be found, be they the records of a company, detachment, camp, or a rendezvous, are thus copied on cards the consolidated sheet can not be prepared.

It has therefore been deemed expedient to copy the rolls and other records on permanent record cards, each separate name and accompanying remarks on a separate card of the same size as the medical index record cards, and the correspondence record cards, viz, 8 by 3½ inches, and as soon as they are made, compared, and arranged, to file those that pertain to the same individual in chronological order in an envelope bearing his name and regiment. The advantage of this method is that the file is useful from the time the first roll is copied and increases in value each day. Finally, when all the rolls and records are copied, the history of every soldier can be consolidated on one sheet, if desired, or it can be consolidated in type directly from the cards, if it should be decided to print these records.

In order to thoroughly card the records of the Volunteer Army it became necessary to catalogue them, as it was found that there was no index of the most important of these records. In fact one or all of the muster rolls of a regiment could have been abstracted and the office would have had no record evidence to show that they were ever on file. The careful examination given each roll or record as the cataloguing progresses has disclosed the fact that hundreds of rolls, returns, and other records had been lost to the office by having been misfiled, some of them perhaps for twenty years; these are now being refiled in their proper places and carded with the records of the organizations to which they belong. As the work progresses all missing rolls are also supplied by loan from the office of the Second Auditor, and are carded. About six hundred rolls have already been obtained from that office for this purpose.

It will thus be seen that as the work progresses the military histories of soldiers will be constantly made more nearly complete, and the Department will be able to furnish more extended and accurate information therefrom than it has ever been able to do in the past.

In conclusion it may be briefly stated that the first year's history of the Record and Pension Division of the War Department fully justifies the radical measures which were taken for its creation. Not only has it been found possible to extricate an important branch of the office from an enormous arrearage of work under which it was hopelessly buried at the time of transfer, but this has been done without the addition of a single clerk to the force, or a dollar to the regular appropriation. Besides the arrearage of work with which the office was burdened at the beginning of the year the current daily receipts have been promptly acted upon, although these latter have been very much larger than they were ever known to be in the previous history of any branch of the office, the total number of cases disposed of during the year being 341,892. All applications, whether coming from soldiers, widows, or orphans living in the remotest sections of the country, with no one to urge speedy action in their behalf, or from the most distinguished citizens occupying positions of dignity and honor, have each received exactly the same careful and prompt consideration, and to each applicant notification of the result has been sent, as a rule, within twenty-four hours after the receipt of the communication. In short it may be safely

said that there is no delay in that portion of the work of adjudicating the claims of volunteer soldiers or their dependents which devolves upon the War Department.

As stated heretofore it was not found necessary to increase the clerical force to accomplish the results stated above. On the contrary, of the 646 clerks allowed by law to this division during the last fiscal year it was found possible by the end of the year to employ 449 on the work of reproducing and preserving, by the index record card system, the military records of the Volunteer Army, the current work of the office, which the whole clerical force was formerly unable to cope with, being kept up as stated above by 197 clerks. The full extent of this virtual reduction of force can be better appreciated, perhaps, when it is considered that the salaries alone of the clerks who have been taken off the regular work of the office and assigned to that of reproducing the old records amount to more than half a million dollars. In other words, a saving of this amount annually has been made possible by the methods of this division.

But the value of the records of the Volunteer Army can not be estimated in dollars and cents or measured by the mere business needs of the Government. They are the memorials of the nation's defenders, and as such alone are worth every effort that can be made for their preservation. From a purely business standpoint, however, and aside from all sentimental considerations, these records are simply invaluable, and the child is not yet born who will live to see the day when reference to them will no longer be necessary. Made on the poorest of paper, and having undergone the wear and tear of more than a quarter of a century of constant usage, it is no wonder that the old rolls are in tatters and fast crumbling away. It is safe to say that, had it not been possible to institute the vigorous measures now being carried out for their reproduction and preservation, most of them would have been practically destroyed within a very few years. But with the force now available for that work it is confidently believed that the carding of the most important of these records can be pushed to completion within three years, after which the originals can be stored away in safety, all demands upon them being met by the record cards which represent them, and which will enable a very small force of clerks to answer all the inquiries which can be made. It is believed that the additional clerks appropriated for by Congress since the close of the fiscal year will enable the division to meet promptly all demands made upon it under the new pension law without diminishing the force employed upon carding the old records.

It is due to the clerks in charge of the several divisions to state that almost without exception they entered upon the work of reform in business methods and discipline with a heartiness and zeal deserving of special commendation. They not alone aided the officer in charge by fully carrying out suggested improvements, but recognizing and appreciating the beneficial results already attained, they diligently sought out and brought to his attention instances of unnecessary work and delays which owing to long custom and familiarity had not theretofore attracted their attention, and in fact had always been looked upon as necessary incidents of the work. The zeal displayed by the clerks in charge of divisions was naturally communicated to the subordinate clerks and the messengers, and each vied with the other to bring about in a short time the satisfactory condition of the office in which it is now found.

And finally it should be added that of all the causes which have con-

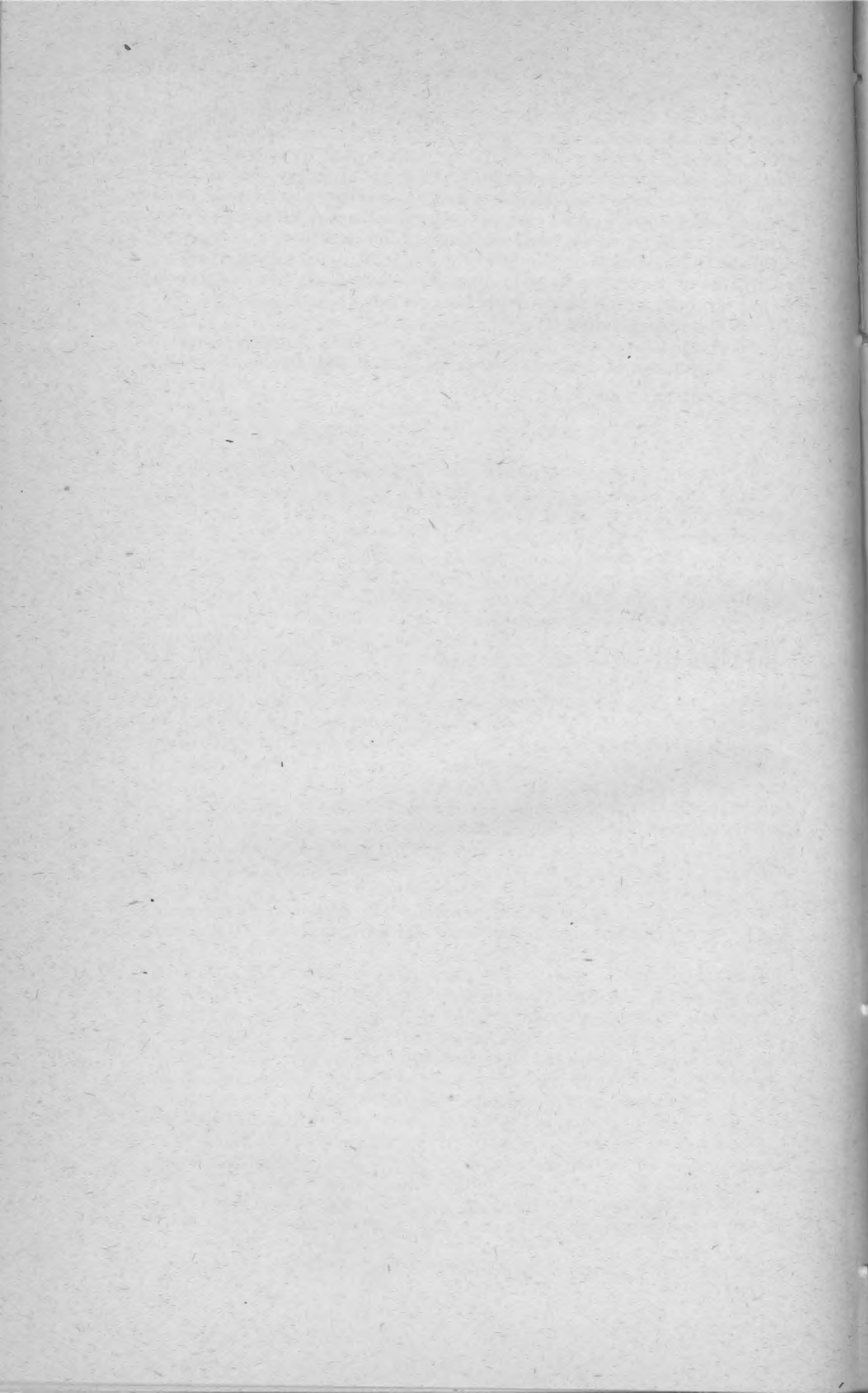
tributed to the measure of success attained by this division in the first year of its existence the most potent and far-reaching one has been the active personal interest and sympathy manifested by the Secretary of War, who has upheld the hands of the officer in charge and constantly aided him by advice and encouragement when these were most needed. Without such support and assistance no man could hope to succeed in an undertaking so formidable as that which confronted the officer in charge of this division on the 8th of July, 1889, and he now avails himself of this opportunity to make grateful acknowledgment of the value of that support which alone made success possible.

Very respectfully,

F. C. AINSWORTH,

Captain and Assistant Surgeon U. S. Army, Officer in Charge.

The SECRETARY OF WAR.



BOARD OF COMMISSIONERS OF THE SOLDIERS' HOME.



R E P O R T
OF
BOARD OF COMMISSIONERS OF THE SOLDIERS' HOME.

OFFICE OF THE BOARD OF COMMISSIONERS
OF THE SOLDIERS' HOME,
Washington, D. C., October 18, 1890.

SIR: I have the honor to submit for your information, as required by section 1 of the act of Congress approved March 3, 1883, making regulations for the Soldiers' Home in the District of Columbia, the following as the report of the Commissioners of the Home for the year ending September 30, 1890, "of all receipts and disbursements of money, of the manner in which the funds are invested, of any changes in the investments and the reasons therefor, and of all admissions and discharges, and generally all the facts that may be necessary to a full understanding of the condition and management of the Home."

The admissions and discharges of inmates have been as follows:

	Regular.	Tempo- rary.	Total.
Number on the rolls September 30, 1889.....	1, 147	53	1, 200
Admitted during the year.....	272	215	487
Re-admitted during the year.....	90		90
	1, 515	269	1, 783
Discharged, dropped, etc.....	260	70	336
Dismissed for cause.....	8	1	9
Died.....	64	3	67
Transferred to the regular rolls.....		128	128
	332	208	540
Number on the rolls September 30, 1890.....	1, 183	60	1, 243

The number of men receiving the benefits as resident inmates September 30, 1890, was 751, and the number absent on out-door relief was 492. The number of deaths occurring at the Home was 39, including two inmates drowned in the lake within the Home grounds. It could not be ascertained whether these were cases of accidental drowning or of suicide.

The number of inmates who receive pensions shows a decrease of sixteen from the number reported one year ago, although one hundred and fifteen new pension certificates were received by inmates during the year. This is due to the fact that an accumulation of pension money in the hands of the treasurer of the Home enables the pensioners to with-

draw from the Home and go where they feel disposed until the saving becomes exhausted, when they are ready to return for another period of accumulation. The amount of money received during the year by the treasurer on account of inmate pensioners was \$76,451.73, which, with \$33,404.84 in the treasury September 30, 1889, made his accountability for this fund \$109,859.57. Of this amount he has paid over to individual pensioners and to legal heirs of deceased pensioners \$65,566.73, and has transferred to the Home fund, under section 4, act approved March 3, 1883, as pension money due the estates of deceased pensioners, unclaimed for three years, the sum of \$621.30, leaving in the treasury \$43,671.54.

The building operations of the year have been the completion of an additional story upon the center wing of the Scott building, the particulars of which were given in the last annual report of the Commissioners; the commencement and partial construction of an additional story upon the Scott building; the erection and completion of a dead-house, and the erection of a small building (nearly completed) for hospital steward's quarters. The work in progress upon the Scott building is under contract with D. J. Macarty for \$86,887, and the erection of the dead-house was under contract with Frank N. Carver for \$3,620. Both contracts were approved by the Secretary of War February 1, 1890. The hospital steward's quarters are under contract with James V. Yates for \$4,229. The building was commenced in July last and is about completed.

The only changes during the year in the investment of the Home funds was the collection of a note for \$3,000 which had been received by the Home in the final settlement of the affairs of the Joint Stock Company of the Young Men's Christian Association of Washington City, and the deposit of the amount to the credit of the permanent fund. The Home has now no money invested in any kind of notes, stocks, or bonds, the whole capital being in the permanent fund in the Treasury of the United States, where it draws interest at the rate of 3 per centum per annum.

The state of the permanent fund, as shown by an exhibit furnished by the U. S. Treasurer, is:

Balance October 1, 1889		\$2,269,462.65
Deposited during the year	\$257,766.78	
Withdrawn by requisition for expenses of the Home	173,700.00	
		<u>79,066.78</u>

Balance September 30, 1890	2,348,529.43
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The report of the treasurer of the Home shows the following respecting the funds of the Home for which he has been accountable:

On hand October 1, 1889	\$9,092.37	
Received during the year—		
From the permanent fund	173,700.00	
Interest on the permanent fund	68,135.73	
Effects of deceased inmates	3,056.91	
Miscellaneous receipts	2,310.07	
Collection of note and interest	3,015.00	
		<u>\$264,310.08</u>

Disbursed during the year on account of—		
Current expenses	186,003.22	
For new buildings	72,247.02	
For other permanent improvements	2,057.56	
Deposited in the permanent fund	3,015.00	
		<u>263,322.80</u>

Balance remaining September 30, 1890	987.28
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The items of current expense with an aggregate each in excess of \$5,000 are—

Subsistence	\$44,735.60
Out-door relief.....	34,310.81
Expense of farm, garden, and grounds	26,622.40
Extra-duty pay to inmates.....	23,970.63
Clothing	16,344.20
Fuel	8,032.76

“The average cost of maintaining an inmate of the Home” is made by law the maximum limit to which the Commissioners may go in furnishing out-door relief to men who are entitled to the benefits of the Home. The maximum rate for out-door relief has been held for years at \$8 per month, and there is no reason to question the correctness or justice of the rate. The Commissioners have been as liberal as seems to be proper or expedient, in view of the current income of the Home, in extending aid in the form of out-door relief.

The accounts kept with the farm and the dairy show that the value of the products from the farm, at regular wholesale market prices, was \$3,224.03 greater than all expenses chargeable to that account; the value of the dairy products \$3,500.11 greater than all expenses of the dairy; while the garden account, which includes the expenses of the care and improvement of the grounds, shows that the value of products was less than the expenses by \$736.52.

The report of the attending surgeon, herewith, gives in good form a statement of all matters of interest connected with his department.

The changes which have occurred during the year in the Board of Commissioners and the officers of the Home are as follows:

The Quartermaster-General: Brig. Gen. Richard N. Batchelder, appointed June 26, 1890, vice Brig. Gen. Samuel B. Holabird, retired June 16, 1890.

The Commissary-General of Subsistence: Brig. Gen. Beekman Du Barry, appointed July 10, 1890, vice Brig. Gen. Robert Macfeely, retired July 1, 1890.

The Surgeon-General: Brig. Gen. Jedediah H. Baxter, appointed August 16, 1890, vice Brig. Gen. John Moore, retired the same date.

Capt. Richard C. Parker, brevet major, U. S. Army, retired, relieved Capt. Benjamin F. Rittenhouse, brevet major, U. S. Army, retired, as secretary and treasurer of the Home, March 27, 1890, under assignment published in Special Orders, No. 4, January 6, 1890, Headquarters of the Army, Adjutant-General's Office.

Maj. William Forwood, surgeon, U. S. Army, relieved Lient. Col. Charles C. Byrne, surgeon, U. S. Army, May 27, 1890, under assignment published in Special Orders, No. 113, May 14, 1890, Headquarters of the Army, Adjutant-General's Office.

Captain Rittenhouse merits special commendation for the faithful and conscientious performance of his duties as secretary and treasurer of the Home for a period of seven and one-half years, and the same recognition is due to Lieutenant-Colonel Byrne for the capable management of his department in the care and medical treatment of the infirm, sick, and disabled inmates during his service of five years at the Home.

The papers accompanying this report are the reports of the governor, the treasurer, and the attending surgeon; a statement of receipts and expenditures; statements of the permanent fund and the account of interest thereon; the account of the treasurer with the pension money of inmates; a statement of the number of inmate pensioners and their rates of pension; the debit and credit accounts with the farm, the gar-

den, and the dairy, and a list of the names, etc., of men who have been admitted to the Home during the year.

It is necessary that this report and accompanying papers be published for distribution to the Army, as required by an act of Congress approved March 3, 1883.

I am, sir, very respectfully, your obedient servant,
 J. M. SCHOFIELD,
*Major-General commanding the Army,
 President Board of Commissioners.*

The SECRETARY OF WAR.

GOVERNOR'S OFFICE, U. S. SOLDIERS' HOME,
 Washington, D. C., October 16, 1890.

SIR: I have the honor to forward herewith the annual reports of the surgeon and treasurer of the Home and the tables of library and delinquency statistics prepared by the deputy governor, and I beg to commend the care, industry, and good management of these gentlemen.

The signs of improvement in all branches of the Home are manifest and the conduct of the inmates has been on the whole very soldierly and good.

I have very little to add to my last year's remarks, except that there is no improvement outside the grounds in alcoholic restraint or temptations, while the Home Temperance Society, under the auspices of Miss Chase and the Woman's Christian Temperance Union, has been active and useful. There seems to be no way yet discovered by which the sale of intoxicants under present United States district laws can be restrained much, if at all, so that the Home has to bear its share of the terrible evil, an evil which falls with still greater calamity on the citizen population around us.

Considerable good has been done at the Home to veterans of both regular and volunteer service of the war in the way of temporary shelter, food, and relief, as follows:

Transient inmates of the regular service not entitled to admission	52
Transient inmates of the volunteer service	135
Total number of transients	187
The aggregate increase for the year of inmates and commutars has been	43
Total number of regular admissions and commutars (see schedule)	1,515
Temporary inmates	215
Transient of both services	187
Aggregate of veterans who have received accommodation	1,917

Besides above the number of extra meals furnished to veterans of the volunteer service was 2,218.

The accommodations in quarters will be sufficient for any increased number expected during the coming year, as soon as the present Scott building alterations are completed.

No opportunity has yet occurred for getting in the city water-works, particularly fire-plugs, and the electric lights for the buildings and grounds, but as soon as works of both kinds come near enough to our limits to warrant connection therewith, I will invite attention thereto with the necessary estimates.

No new laundry plant seems, on the whole, advisable until receipts from the United States Treasury coming from the settlement of our back accounts will allow the increased expense thereof.

Very respectfully your obedient servant,

O. B. WILLCOX,
Brigadier-General, Governor.

The PRESIDENT OF THE BOARD OF COMMISSIONERS
OF THE SOLDIERS' HOME.

REPORT OF THE ATTENDING SURGEON.

BARNES HOSPITAL, U. S. SOLDIERS' HOME,
Washington, D. C., September 30, 1890.

SIR: I have the honor to submit the following report of the medical department of the Home for the past year, ending September 30, 1890.

	1890.	1889.	1888.	1887.
Patients remaining in hospital from last report	65	57	80	70
Patients admitted to hospital during the year	352	275	281	254
Total treated in the hospital	417	332	361	324
Returned to the Home, recovered, mostly acute cases	159	89	116	96
Returned to the Home, improved, mostly chronic cases	124	112	119	93
Returned to the Home, unimproved, incurable	10	22	19	18
Sent to the United States Hospital for the Insane	6	5	11	5
Deserted from hospital	4			1
Died in hospital	37	37	37	29
Dead when brought to hospital	2	2	2	2
Remaining in hospital at present date	75	65	57	80
Total	417	332	361	324

Ages of patients admitted.

	1890.	1889.	1888.	1887.
Between 20 and 30 years	38	33	26	27
Between 30 and 40 years	55	42	38	38
Between 40 and 50 years	72	63	72	57
Between 50 and 60 years	78	70	62	83
Between 60 and 70 years	76	51	58	34
Between 70 and 80 years	26	15	20	15
Between 80 and 90 years	6	1	4	0
Between 90 and 100 years	1	0	1	0
Of these patients the age of the youngest was	21	21	23	23
The age of the oldest was	93	81	83	77
Average age of patients admitted	50.65	48.92	49.50	48.70
Greatest number of patients at one time	80	70	80	82
Least number of patients at one time	61	57	55	62
Daily average of patients in hospital	72.30	65.24	69.00	68.50

Diseases for which patients were admitted to hospital.

Disease.	No.	Disease.	No.
Abscess:		Gastralgia	1
Abdominal	1	Gastritis:	
Alveolar	1	Subacute	1
Gluteal	1	Chronic	4
Of leg	1	Gastro-enteritis	1
Ischeo-rectal	2	Glands, enlarged cervical	3
Alcoholism	20	Gonorrhoea, acute	6
Amputation:		Hemorrhoids	2
Arm	1	Hemorrhage, cerebral	1
Hand	1	Hemiplegia	7
Anthrax (carbuncle)	2	Hernia, inguinal:	
Aneurism:		Complete	1
Aortic arch	2	Incomplete	1
Sub-clavian	2	Heart, valvular disease of	14
Appendicitis, acute	2	Herpes zoster	1
Asthma	7	Hydrocele, radical operation for	2
Atony of bladder	1	Influenza (la grippe)	10
Atrophy of optic nerve	1	Intestinal obstruction, acute	1
Brain, softening of	2	Inflammation:	
Bronchitis, acute	4	Knee joint, chronic	1
Blindness, total	3	Prostate, chronic	1
Catarrh:		Ingrowing toe nail	1
Bronchial	1	Iritis	2
Gastric	2	Keratitis	1
Chronic intestinal	2	Lumbago	2
Cataract, removal of	1	Locomotor ataxy	3
Carcinoma:		Mania, acute	1
Larynx	2	Meningitis, cerebral	1
Pylorus	3	Melancholia	2
Superior and inferior maxilla	1	Myalgia	2
Cholera morbus	4	Neuralgia	1
Chancroids	2	Neurasthenia	1
Cellulitis of hand	1	Nephritis, chronic (Bright's disease)	4
Congestion:		Ophthalmia, purulent	1
Cerebral	4	Orochitis	2
Hepatic	3	Oxyuris vermicularis	1
Pulmonary	1	Paresis, general	1
Contusion:		Paraplegia	1
Arm	1	Pericarditis, chronic	5
Hand	1	Periostitis	1
Colic:		Phimosis, operation for	2
Biliary	1	Pharyngitis acute	1
Intestinal	2	Phtthisis pulmonalis	33
Conjunctivitis	3	Pleuritis	7
Constipation, chronic	3	Pleurodynia	2
Cirrhosis of liver	1	Pneumonia	6
Cystitis, acute	1	Poisoning:	
Debility:		Rhus Toxicodendron	2
Senile	11	Insect	1
General	1	Proctitis	3
Delirium tremens	1	Rh-umatism:	
Dementia	1	Subacute	11
Diarrhea:		Chronic	13
Acute	6	Rheumatoid arthritis	1
Chronic	6	Sciatica, chronic	1
Dislocation of shoulder	2	Sclerosis, cerebro-spinal	1
Drowned	2	Sprain:	
Dyspepsia, chronic	5	Ankle	4
Emphysema, pulmonary	1	Back	1
Epididymitis	1	Spermatorrhea	1
Epithelioma, lip, removal of	1	Sycosis mentis	1
Erysipelas:		Syphilis:	
Face	2	Primary	1
Legs	1	Secondary	2
Eczema:		Tertiary	2
Face	1	Stricture:	
Leg	1	Rectum	1
Eye, enucleation of	1	Urethra	3
Fever:		Tonsillitis	2
Intermittent	4	Tuberculosis, general glandular	1
Typhoid	1	Urine, suppression of	2
Fistula, anal	1	Ulcer:	
Fracture:		Cornea	1
Clavicle	2	Heel	1
Scapula	1	Leg	4
Tibia	1	Varicose veins	1
Tibia and fibula	1		
Furunculosis	1		

This list exhibits only the diseases complained of by the patients at the time of admission to the hospital, and does not include the numerous complications nor secondary affections arising during the course of treatment. The principal troubles are chronic rheumatism, heart disease, consumption, hernia, catarrh, dyspepsia, and constipation. Many of the men are affected with two or more of these diseases at the same time, and yet may be admitted to hospital for some minor complaint not connected with either.

The 5,224 cases treated at sick-call are not included in the above list of diseases.

Necrology.

Name.	Age.	Nativity.	Last served in—		Died.	Cause of death.
			Co.	Regiment.		
1889.						
Maguire, Andrew	45	Ireland	2d Inf.	Oct. 2	Consumption.	
King, James S.	77	Scotland	B	2d Drag.	Congestion of brain.	
Morse, Hiram	61	United States	C	2d Cav.	Do.	
Bowers, Charles	44	do	B	5th Cav.	Consumption.	
Wyles, Edward	28	Ireland	H	5th Cav.	Cirrhosis of liver.	
Robinson, Charles	37	United States	H	25th Inf.	Chronic inflammation of brain.	
Cunningham, Thomas	54	Ireland	E	5th Inf.	Softening of brain.	
1890						
Kinny, Michael	34	do	G	11th Inf.	Consumption.	
Wielenburg, Henry	62	Germany	F	9th Cav.	Heart disease.	
Cosgrove, John	90	Ireland	H	1st Inf.	Old age.	
Gehrke, George J.	60	Germany	G	12th Inf.	Tumor of brain.	
Gallagher, James	70	Ireland	B	44th Inf.	Inflammation of heart.	
Williams, John	50	United States		1st N. Y.	Consumption.	
Allen, W. H.	43	do	G	23d Inf.	Cancer of stomach	
Renss, Michael	74	Germany	Bd.	6th Art.	Gangrene of lungs	
Donovan, Denis	55	Ireland	B	11th Inf.	Spinal disease.	
McCusker, Philip	54	do	F	5th Cav.	Pneumonia.	
Kerr, Denis	70	do	A	7th Cav.	Aneurism of aorta.	
Schworm, John F.	53	Germany	F	6th Inf.	Cancer of stomach.	
Courtney, W. B.	58	Ireland	L	5th Art.	Congestion of lungs.	
Cass, John	55	do		2d Inf.	Drowned.	
Boreham, Arthur	29	England	E	12th Inf.	Consumption.	
White, Denis A.	70	Ireland	A	Ordnance.	Heart disease.	
Price, Samuel	74	United States	I	2d Cav.	Congestion of lungs.	
Bausmith, Frederick	45	do	D	8th Cav.	Pneumonia.	
Canniff, James	59	Ireland	K	5th Cav.	Heart disease.	
McWade, James	48	United States	H	7th Cav.	Consumption.	
Devlin, John	54	Ireland	D	10th Inf.	Softening of brain.	
Picken, John	36	England	C	4th Art.	Consumption.	
Peter, John	57	France	E	6th Inf.	Cancer of stomach.	
Gannon, James	63	Ireland	A	5th Inf.	Softening of brain.	
Lowell, Edward	44	United States	L	7th Cav.	Paralysis.	
Snyder, Charles	45	Prussia	Bd.	8th Cav.	Consumption.	
Stein, William	63	United States	I	8th Inf.	Pneumonia.	
Houck, Phillip	63	Germany	A	17th Inf.	Aneurism of aorta.	
Tubman, W. C.	58	United States	K	3d Inf.	Consumption.	
Bryson, Michael	58	Ireland	E	6th Inf.	Drowned.	
Devereux, James	50	do	A	7th Inf.	Inflammation of bowels.	
Griffith, Charles	70	United States	H	1st Art.	Abscess of the kidney	

The daily average of inmates present at the Home was: For 1886, 626; for 1887, 651; for 1888, 676; for 1889, 688; for 1890, 689.

Proportion of deaths to 100 inmates per annum.

Year.	Percent.	Year.	Percent.	Year.	Percent.
1890	5.30	1888	5.76	1886	5.43
1889	5.66	1887	4.76	1885	6.12

Number of prescriptions compounded during the year 14,054
 Number of applications for treatment at sick-call 5,224
 Number of out-patients (connected with the Home) treated 202

Annual statement of expenses from Treasurer's records.

	1890.	1889.	1888.	1887.
Average number of men, including attendants.....	100.55	90.24	96.33	100.23
Subsistence.....	\$8,324.84	\$7,707.48	\$8,074.24	\$9,443.10
Subsistence, inmates Government Insane Asylum.....	2,206.43	3,168.58	2,111.43	1,947.42
Cost of medicines.....	1,441.17	841.86	779.03	970.48
Attendants.....	4,634.00	4,043.97	3,772.26	4,113.00
Ice.....	345.97	342.22	231.80	121.96
Fuel.....	1,567.77	54.00	2,777.53	1,243.69
Gas.....	791.25	787.01	712.25	621.79
Laundry.....	180.13	178.85	796.97	695.70
Stationery.....	76.02	40.35	73.33	88.37
Spectacles.....	72.16	136.75	109.50	133.00
Coffins.....	409.91	421.08	227.76	124.62
Bedding.....	132.00	399.60	789.55	304.80
Repairs.....	444.11	12.32	708.00	480.00
Forage for ambulance horses.....	190.77	198.51	206.24	182.96
Instruments and appliances.....	93.69	2.63	17.00	46.05
Books.....	44.80	4.00	15.00	.....
Furniture.....	306.72	326.40	.....	.....
Miscellaneous.....	102.88	90.01	415.10	238.96
Total.....	21,364.62	18,755.02	22,496.49	20,873.45
Cost per man per day.....cents..	58.21	56.94	63.52	58.65

Monthly statement of expenses, Barnes Hospital, from October 1, 1889, to September 30, 1890—furnished by the treasurer.

	Amount.		Amount.
<i>October, 1889.</i>		<i>December, 1889.</i>	
Gas.....	\$52.00	1 gross matches.....	\$1.75
Lumber for cots.....	130.00	6 carbolic soap.....	1.25
Forage, ambulance horses.....	17.00	2 bath brick.....	.18
868 pounds hay.....	6.73	1 sheet emery paper.....	.05
27 tons coal, at \$5.49.....	148.23	Gas.....	95.00
1 gross matches.....	1.75	Forage, ambulance horses.....	9.04
24 pieces sapollo.....	1.02	868 pounds hay.....	6.73
Pay clinical assistant.....	100.00	5,300 pounds ice at 42 cents.....	22.26
Extra washing.....	14.78	Subsistence.....	678.18
Repairing steam boilers.....	147.00	Government Hospital for Insane.....	707.86
5,810 pounds ice, at 42 cents.....	24.40	Pay, clinical assistant.....	100.00
Subsistence.....	688.86	Paul F. Corn, attendant.....	3.00
Pay, ambulance driver.....	18.00	Freight and drayage on 6 boxes drugs.....	3.54
Shoeing horses.....	3.00	Extra washing.....	12.47
Pay-roll, extra duty.....	478.75	Pay, ambulance driver.....	18.00
Total.....	1,832.42	Pay-roll extra duty.....	466.30
		Horseshoeing.....	3.00
<i>November, 1889.</i>		Total.....	2,128.59
Gas.....	85.75	<i>January, 1890.</i>	
6 pounds insect powder.....	3.00	Medical and hospital supplies.....	165.70
24 pieces sapollo.....	1.80	5 pairs spectacles.....	9.83
1 box tapers.....	1.25	1 tube cleaner.....	3.00
213½ tons hard coal.....	1,106.74	Repairs, Pottit & Dripps.....	150.00
Forage, ambulance horses.....	12.00	5½ tons coal.....	30.80
868 pounds hay.....	6.73	Stationery.....	14.90
6 chair bottoms, perforated.....	1.28	Gas.....	108.75
2 papers nails.....	.35	Forage, ambulance horses.....	4.84
Stationery.....	2.87	868 pounds hay.....	6.73
6,400 pounds ice, at 42 cents.....	26.88	Matches, etc., Hume & Co.....	7.40
Subsistence.....	701.24	Repairing surgical instruments.....	55.28
Pay, clinical assistant.....	100.00	4,600 pounds ice, at 42 cents.....	19.32
Extra washing.....	11.35	Subsistence.....	689.16
Repair of surgical instruments.....	4.00	Pay of clinical assistant.....	100.00
John Clare, attendant.....	9.00	Extra washing.....	15.56
Lewis Seibold, attendant.....	7.50	Pay, ambulance driver.....	18.00
Pay of ambulance driver.....	18.00	Horse shoeing.....	3.00
Horseshoeing.....	3.00	Total.....	1,402.21
Total.....	2,101.74		

Monthly statement of expenses, Barnes Hospital, from October 1, 1880, to September 30, 1890—furnished by the treasurer—Continued.

	Amount.		Amount.
<i>February, 1890.</i>		<i>May, 1890—Continued.</i>	
Medical and hospital supplies.....	\$49.76	868 pounds hay.....	\$6.73
Coffin material.....	76.06	Pay, clinical assistant.....	100.00
Lumber for coffins.....	73.15	Pay, ambulance driver.....	18.00
2 pairs spectacles.....	3.44	Medical and hospital supplies.....	11.03
200 cotton sheets, at 49 cents.....	98.00	Do.....	75.91
200 pillow cases, at 17 cents.....	34.00	Stationery.....	12.05
50 roller towels, at 30 cents.....	15.00	Kitchen utensils, etc.....	76.75
Kitchen utensils.....	24.32	Medical books.....	30.80
Forage, ambulance horses.....	8.32	Matches, soap, etc.....	3.60
868 pounds hay.....	6.73	Repairs in fan-house.....	.85
Matches, etc., Burchell.....	5.66	Freight, medical stores.....	4.50
Gas.....	99.50	Extra duty, inmate employed.....	1.00
5,600 pounds ice, at 42 cents.....	23.52	Horseshoeing.....	3.00
Subsistence.....	627.30		
Pay, clinical assistant.....	100.00	Total	1,196.20
Pay, ambulance driver.....	18.00		
Wm. Kingsbery, chief dining-room.....	14.33	<i>June, 1890.</i>	
Extra washing.....	12.90	Subsistence.....	748.32
Removing ashes.....	14.38	Gas.....	43.25
Pay-roll, extra duty.....	501.84	Ice.....	57.12
Total	1,806.21	Extra washing.....	17.52
		Forage, ambulance horses.....	8.82
<i>March, 1890.</i>		868 pounds hay.....	6.73
Subsistence.....	650.75	Pay, clinical assistant.....	100.00
Gas.....	92.00	Pay, ambulance driver.....	18.00
3,600 pounds ice, at 42 cents.....	15.12	Improvement, water supply, C ward.....	17.90
Extra washing.....	12.04	Spectacles.....	11.89
Forage, ambulance horses.....	9.04	Repairs to instruments, etc.....	15.50
868 pounds hay.....	6.73	6 broom-handles.....	1.25
Pay, clinical assistant.....	100.00	2 volumes medical dictionary.....	14.00
Pay, ambulance driver.....	18.00	Kerosene oil.....	.20
Government Hospital for Insane.....	707.14	Stationery.....	18.15
Medical and hospital supplies.....	294.91	Insect powder, matches, etc.....	10.56
1 dozen dish-pan handles.....	1.25	Government Hospital for Insane.....	791.43
50 pairs slippers.....	37.00	Pay, hospital attendants.....	21.80
Medical and hospital supplies.....	24.08	Pay-roll, hospital employes, May and June.....	501.88
Stationery.....	24.50	Horseshoeing.....	3.00
Lye, matches, sapollo, etc.....	3.53	2 20-gallon boilers, at \$10.....	20.00
One half-inch Chapman valve.....	.91		
Repair of clocks.....	4.50	Total	2,426.82
Labor and extra duty pay.....	13.75		
Horseshoeing.....	3.00	<i>July, 1890.</i>	
Total	2,018.25	Box, tin-lined, made at Home.....	3.00
		Subsistence.....	709.72
<i>April, 1890.</i>		Gas.....	36.50
Subsistence.....	702.37	Ice.....	39.83
Gas.....	76.00	Extra washing.....	26.56
6,400 pounds ice, at 42 cents.....	26.88	Forage, ambulance horses.....	7.68
Extra washing.....	13.16	868 pounds hay.....	6.73
Forage for ambulance horses.....	8.83	Pay, clinical assistant.....	100.00
868 pounds hay.....	6.73	Pay, ambulance driver.....	18.00
Pay, clinical assistant.....	100.00	Horseshoeing.....	3.00
Pay, ambulance driver.....	18.00	Desk.....	45.00
Coal.....	244.50	Trimmings for coffins.....	75.28
Medical and hospital supplies.....	22.85	Kitchen utensils, etc.....	13.15
Artificial teeth for Thomas Horan.....	7.00	Repairs to boilers, etc.....	3.60
Lumber for coffins.....	27.72	Refrigerator.....	110.00
Spectacles.....	14.44	Repairing elevator.....	28.75
Matches, soap, etc.....	9.49	Medicines, etc.....	19.04
Pay-roll, extra duty, March and April.....	485.49	Hospital supplies, rubber tube, etc.....	10.26
Hospital attendants, extra duty.....	9.00	Matches, sapollo, etc.....	4.55
Horseshoeing.....	3.00	Freight and drayage, etc.....	18.60
Total	1,775.46	Pay of attendants, extra duty.....	6.00
		Total	1,285.23
<i>May, 1890.</i>		<i>August, 1890.</i>	
Subsistence.....	731.18	Subsistence.....	704.76
Gas.....	57.25	Gas.....	45.25
Ice.....	39.90	Ice.....	50.74
Extra washing.....	14.77	Extra washing.....	29.06
Forage, ambulance horses.....	8.88	Forage, ambulance horses.....	7.90

Monthly statement of expenses, Barnes Hospital, from October 1, 1889, to September 30, 1890—furnished by the treasurer—Continued.

	Amount.		Amount.
<i>August, 1890—Continued.</i>		<i>September, 1890.</i>	
Hay	\$6. 73	Subsistence	\$693. 00
Pay, clinical assistant	100. 00	Forage, ambulance horses	7. 66
Pay, ambulance driver	18. 00	Hay	6. 73
Horseshoeing	3. 00	Pay, clinical assistant	100. 00
Spectacles	11. 93	Pay, ambulance driver	18. 00
Medical and hospital supplies	37. 26	Horseshoeing	3. 00
10 tons coal	37. 50	Medical and hospital supplies	705. 44
1 gland for fan-house	3. 00	Lumber for coffins	27. 72
Shampooing cock	1. 00	5 gallons coal oil	1. 50
1 doz-n burners .....	. 50	Ball cock for tank .....	. 60
Repairs to plumbing material	2. 20	1 truss (Castleman)	2. 00
Spectacles	13. 63	Instruments, appliances, etc	16. 91
Lye, matches, sapollo, soap, etc	7. 16	Stationery	3. 55
Pay-roll, hospital employes, July and August	696. 46	6 grates for furnaces	6. 60
3-yard drill .....	. 30	Drayage on medical supplies	8. 55
		Repairs to elevator	11. 43
		Pay-roll, hospital attendant	2. 40
Total	1, 776. 40	Total	1, 615. 09

The sanitary condition of the hospital and the Home and grounds has remained good. The care and the surroundings of the inmates are favorable to health, and to the prolongation of life under the pressure of age and chronic afflictions which bring them here. There has been no occurrence of prevalent or epidemic disease among them, except the influenza, which swept over the country in the winter of 1889 and 1890. With this, four officers, eighty inmates, fourteen civil employes, nine women, and eight children of the Home, were attacked. All these one hundred and fifteen cases terminated in recovery, notwithstanding the unfavorable physical condition of many of the patients. The symptoms and peculiarities of the malady as it affected this locality were carefully studied throughout its various interesting details, and published in the current medical journals, by Dr. Penrose, resident surgeon.

The drainage from the Home buildings is conducted through 8-inch terra-cotta sewer-pipe, about half a mile to a point in front of the hospital, where there are three large catch-basins, and from there to the city sewer at the boundary of the Home grounds, through 6-inch pipe. The 8-inch portion of this drain has worked perfectly; the 6-inch portion has been dug up at various points from time to time on account of choking. By extending the larger-sized pipe in place of the latter this difficulty might be remedied, and the unwholesome catch-basins abolished. From the officers' quarters there are two separate drains, which run a short distance under-ground to catch-basins overflowing into open ditches.

The water, collected from three wells into under-ground reservoirs and pumped up to the tanks in the various buildings, is of excellent quality for drinking and cooking purposes. It carries in solution rather more than the usual amount of iron carbonates, which cause it to have a damaging effect on the conducting pipes, reducing their caliber by firm deposits on the inner surfaces. The supply was quite deficient in June and July, but since the renewal of some of the old pipe and the increased rain-fall it has been ample for all ordinary purposes.

The plumbing in the water-closets and lavatories at the hospital was reported defective in 1886, and this difficulty has grown more and more serious during the past four years. From careful investigation it appears that the water-pipes throughout the building are being gradually filled up by iron deposits, while many of the smaller ones, with their valves and connections, are practically worn out in long service. The remedy for these existing ills may be stated as palliative and radical. The latter, owing to the situation of pipes buried in the walls and under the floors, becomes, in the constantly crowded condition of the building, a formidable undertaking, hardly practicable except in mild weather, when the patients could be removed to tents outside. The former method of treatment has been faithfully applied for years past, and now requires the services of a plumber three or four times a week.

The arrangements for ventilating the hospital are excellent. The heating apparatus has given entire satisfaction in the past, but is now in need of some repairs. A full description of these in detail and a long series of experimental observations with the thermometer and anemometer are on file for convenient reference.

The elevator is of fair capacity and well situated, but is not available for the general use of patients, and it was probably not designed for that purpose. It is run

by water from an open tank at the top of the building. With a cylinder 25 feet long and 1 foot in diameter the quantity of water required to make one trip is 150 gallons. The water is not returned to the tank to be used again, but runs off through the drain-pipe to the sewers. With this arrangement and with the limited water supply of the Home, the amount of waste becomes so great that the elevator can only be run two or three trips a day, to carry necessary fuel and provisions to the kitchen on the third floor.

The outside wood-work of the building is in need of a coat of paint to preserve it from decay. The dining-room and kitchen should also be painted. This has not been done since the hospital was opened.

The chances of fire have been reduced to the minimum, by a thorough overhauling of every part of the house, and the introduction of a system of watching and inspections; but as there seemed to be no provision at hand to meet such a serious calamity, rendered more liable by the mental condition of some of the patients, it was deemed best to ask for a suitable number of fire buckets and barrels, and arrange them at convenient points for that purpose.

The new dead-house, so long and so urgently needed at this hospital, has been completed since last report. Both the plan and the construction of the building are entirely satisfactory, and the result is as near perfection as could well be attained. A new cottage for the hospital steward is also in course of construction.

The cooks, nurses, and attendants in hospital, taken from among the inmates of the Home, have, with few exceptions, done all that could be expected of men in their mental and physical condition. Those in attendance upon the sick, occupy a position of the first importance. The number of serious cases and helpless invalids intrusted to their care is proportionately large and constant. The labor demanded of them is severe and unremitting. Faithfulness and efficiency on their part are indispensable to the proper care of the patients. The difficulty of getting and retaining suitable men to be trained for this purpose, owing to increase of pensions and the small inducements offered, was so great that this department of the hospital had, until very recently, become very defective. Under the able and economical administration of Surgeon Byrne this was the one great source of annoyance and trouble. The same difficulty has arisen in the National Homes for Disabled Volunteer Soldiers, as appears from their reports for 1889 and from letters received here asking information and advice as to the best means to overcome it. Through the wise and liberal action of the Commissioners of the Home in increasing the compensation for nurses, a better and more permanent class of men has been secured and the service has been greatly improved.

The food and medicines supplied have been sufficient and of good quality. Fresh milk and vegetables are furnished in abundance from the farm.

A diet table is prepared from week to week on printed blanks, setting forth in detail each article for each meal according to season and the tastes and needs of the patients, copies of which are retained on file.

The records of the hospital have been enlarged by the addition of detailed medical histories in systematic form, of every case admitted to the Home. The large number of permanent invalids at this and other Homes for disabled soldiers furnish valuable material and rare opportunities for the observation of chronic affections and the secondary results of injuries that can not be too highly appreciated. These advantages have not been overlooked at this hospital. The small chemical laboratory and the fine microscope belonging to the Home are brought into daily use in the diagnosis of disease and in the study of special cases. All matters of interest or value to medical science are diligently noted and contributed from time to time to the Army Medical Museum or to the general fund of medical literature.

The discipline of the hospital and the care and attention on the part of employes are good. I desire in this connection to commend the excellence of Dr. George H. Penrose, resident surgeon, for ability and zealous attention to duty, and of Hospital Steward James Smith, U. S. A., for efficient and faithful service.

Very respectfully, your obedient servant,

W. H. FORWOOD,
Surgeon U. S. Army, Attending Surgeon.

THE GOVERNOR OF THE HOME.

REPORT OF THE TREASURER.

TREASURER'S OFFICE, U. S. SOLDIERS' HOME,
Washington, D. C., October 13, 1890.

GENERAL: I have the honor to report that pursuant to paragraph 5, Special Orders, No. 4, dated Headquarters of the Army, January 6, 1890, I assumed the duties of secretary and treasurer of the Home on March 27, 1890, relieving Brevet Major B. F. Rittenhouse, U. S. Army.

I herewith inclose the following reports for the year ending September 30, 1890: Statement of receipts and expenditures, with comparative statement for previous year.

Statement of permanent fund, and interest account, as shown by the warrant division of the Treasury Department.

Statement of treasurer's account with inmate pensioners, with balance-sheet of moneys due pensioners.

Statement of pensioners in the Home, rates of pensions, etc.

Statement of the number of inmates receiving outdoor relief, rates of relief pensions, etc.

Receipts and expenditures on account of the farm, garden, and dairy.

The improvement of the Scott building, under Contractor D. J. Macarty, is progressing well, and from present appearances will be completed in the time specified in the contract.

The work on the tower was delayed some on account of not being able to procure the stone; a number of indifferent ones have been rejected by the Supervising Architect.

The dead-house at Barnes' Hospital has been completed, and the hospital steward's quarters is about completed.

The small pipe connecting the upper and middle cisterns was removed, it being clogged with rust, etc., and 4-inch-cast iron pipe put down, together with a 4-inch drain-pipe, which has added very much to the water supply.

Very respectfully,

RICH. C. PARKER,

Brevet Major, U. S. Army, Secretary and Treasurer.

THE GOVERNOR OF THE HOME.

Annual report of receipts and expenditures on account of the United States Soldiers' Home, District of Columbia, from October 1, 1889, to September 30, 1890, by Bvt. Maj. R. C. Parker, U. S. Army, secretary and treasurer.

Receipts and expenditures.	1889.			1890.								Total.	
	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.		September.
RECEIPTS.													
From the United States Treasurer, upon a resolution of the Board of Commissioners, approved by the Secretary of War.....	\$20,000.00	\$13,000.00	\$32,250.00										\$178,700.00
Interest on the permanent fund.....	17,100.48			\$17,221.42									68,135.73
Effects of deceased inmates, subject to the demand of legal heirs.....	1,388.11	1.67	82.00	60.18	106.91	339.98	45.53	252.51	10.46	126.00	.22	\$643.34	3,056.91
From miscellaneous sources.....	200.91	89.44	53.80	65.87	132.59	905.55	300.92	78.12	123.24	134.25	99.28	126.10	2,310.07
Proceeds of a note of Ascension Church, Washington, D. C., for \$3,000, with interest at 6 per cent. per annum, taken in part payment for Y. M. C. A. stock.....						3,015.00							3,015.00
Total receipts.....	38,689.50	13,091.11	32,385.80	17,347.47	5,239.50	23,840.53	23,047.84	25,800.63	37,033.70	21,872.69	16,099.50	709.44	255,217.71
EXPENDITURES.													
Furniture for officers' quarters, and expenses thereof.....	92.59	139.20	167.50	.85		.85	89.86	89.80	2.75	10.80	14.75		608.75
Compensation of the treasurer of the Home fund, and of the clerk of the Board of Commissioners.....	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	175.00	2,100.00
Transportation furnished inmates en route to the Home.....	31.66	12.89	183.54	85.99	17.50		20.30	18.00	74.97	138.92		81.96	660.73
Fuel.....	3,878.66	2,395.50		1,437.60			283.50					37.50	8,032.76
Expenses of the hospital for medicines, medical stores, spectacles, false teeth, materials for coffins, etc.....	130.00	4.00		230.81	202.41	318.99	44.29	86.94	41.39	100.87	62.82	760.62	1,983.14
Expenses of the hospital for mess and kitchen utensils, and all running expenses and pay of the clinical assistant.....	103.67	109.55	103.21	122.30	291.36	172.44	109.49	228.55	160.91	327.34	151.66	123.68	2,003.26
Refunded to claimants as heirs of deceased soldiers.....				15.00	62.29		529.07		46.56	328.73	58.91	67.17	1,107.67
Refunded to claimants as heirs of deceased inmates.....	41.60	212.63	82.00				1,231.08			237.28		56.65	1,861.19

Annual report of receipts and expenditures, etc., on account of the United States Soldiers' Home, District of Columbia, from October 1, 1889, to September 30, 1890, by Bvt. Maj. R. C. Parker, U. S. Army, secretary and treasurer.

1032

REPORT OF THE SECRETARY OF WAR.

Receipts and expenditures.	1889.			1890.									Total.
	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	
EXPENDITURES—continued.													
Clothing for inmates	\$680.00	\$9,482.74	-----	-----	-----	-----	-----	-----	\$6,181.46	-----	-----	-----	\$16,344.20
Subsistence stores, including special diet and stimulants for sick, and ice.	4,398.03	4,566.34	\$4,176.29	\$4,011.54	\$3,642.50	\$3,693.91	\$3,959.20	4,100.21	\$3,693.52	\$3,189.36	\$2,991.78	\$2,312.92	44,735.60
Articles for Home bakery, except flour, salt, hops, and potatoes.	52.53	6.68	4.00	-----	-----	13.56	-----	-----	-----	5.86	-----	-----	82.63
Bedding for inmates, bedsteads, blankets, upholstering materials, etc.	194.29	-----	6.25	-----	38.39	-----	-----	21.91	-----	-----	26.90	-----	287.74
Farm and garden utensils, seeds, guano, manure, etc.; cultivation of garden, ornamentation of grounds, and pay of farm, garden, dairy, and other employes.	2,566.21	2,411.07	2,150.20	1,737.16	1,983.98	1,829.32	2,589.24	2,068.45	3,474.96	1,939.53	2,003.12	1,869.16	26,622.40
Mess and kitchen utensils and other articles (except bedding) for the Home.	51.19	131.97	1.35	2.00	79.57	14.16	84.75	20.90	33.03	112.97	208.23	2.30	742.42
Material and labor for general repairs to buildings, repair of roads and fences, purchase and repair of harness, vehicles, etc., and purchase of mechanical tools.	646.21	381.11	396.78	238.83	212.02	250.77	269.84	280.20	309.42	177.03	735.35	245.53	4,123.09
Forage and medicines for Home animals, articles used in the stables, straw used as bedding for inmates.	219.99	230.41	189.65	164.65	197.41	214.83	207.96	163.97	136.35	160.37	150.36	99.86	2,135.81
Expenses of the library, governor's and treasurer's offices, postage and post-office box rent; stationery, etc., for commissioners' office, freight, telegrams, amusements.	41.14	71.42	77.86	409.20	21.22	213.90	196.48	51.89	44.18	60.63	133.27	51.35	1,372.54
Incidental expenses: Rent of telephone, hack-hire, advertising, traveling expenses, professional services, expenses of the Home chapel.	52.25	50.00	84.00	50.00	51.50	50.00	125.65	55.17	136.50	53.00	50.00	92.00	850.07
Religious services.	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	130.00	130.00	130.00	1,740.00
Laundry work.	434.39	449.55	447.26	447.18	-----	441.83	847.17	408.06	395.02	413.93	436.32	-----	4,720.71
Extra duty pay and monthly allowance to inmates.	3,931.20	199.83	3,825.51	149.20	187.19	3,741.39	3,624.88	207.64	3,740.09	166.20	4,008.10	189.40	23,970.63
Commutations to members of the Home residing outside.	334.00	374.80	6,688.60	369.60	366.00	6,793.66	506.67	709.09	8,036.80	887.00	720.74	8,523.94	34,310.81

Gas	264.13	366.88	379.50	324.50	361.50	286.75	260.75	229.38	164.25	122.75	160.75	.....	2,020.64
Board and medical treatment of members of the Home in the Government Hospital for the Insane			707.86				707.14		791.43			.....	2,206.43
Funeral expenses of members of the Home residing outside				25.00		25.00	100.00	50.00		50.00	50.00	.....	300.00
New buildings	167.50	13,823.43	356.00	9,473.37	550.00	15,049.91	187.84	2,702.14	13,542.58	14,550.00	164.25	1,680.00	72,247.02
Permanent improvements: New fences, wells, repair of bridges, lamp-posts, gas-lamps, etc., paving, sewerage, etc.	178.85	58.57	202.60	12.44		7.50	13.75	81.31	1,036.96	309.19	80.81	75.58	2,057.56
Purchase of animals								180.00					180.00
Deposited in U. S. treasury to the credit of the permanent fund, proceeds of a note of Ascension Church, Washington, D. C., for \$3,000, with interest, taken in part payment for Y. M. C. A. stock							3,015.00						3,015.00
Total expenditures	18,815.09	35,803.07	20,534.96	19,632.22	8,589.78	33,443.57	18,097.83	19,466.01	36,185.77	23,646.76	12,513.12	16,574.62	263,322.80

RECAPITULATION.

RECEIPTS.

Balance on hand September 30, 1889	\$9,092.87
From the United States Treasurer, upon a resolution of the Board of Commissioners, approved by the Secretary of War	178,700.00
Interest on the permanent fund	68,135.73
Effects of deceased inmates, subject to the demand of legal heirs	3,056.01
From miscellaneous sources	2,310.07
Proceeds of a note of Ascension Church, Washington, D. C., for \$3,000, with interest at 6 per cent. per annum, taken in part payment for Young Men's Christian Association stock	3,015.00
Total	264,310.08

EXPENDITURES.

Furniture for officers' quarters, etc.	\$608.75
Compensation of the secretary and treasurer, and clerk of the Board of Commissioners ..	2,100.00
Transportation furnished inmates en route to the Home	660.73
Fuel	8,032.76
Expenses of the hospital for medicines, medical stores, spectacles, false teeth, etc., and material for coffins	1,983.14
Expenses of the hospital mess and kitchen utensils, pay of clinical assistant, and all contingent expenses	2,003.26
Refunded to claimants, effects of deceased soldiers	1,107.67
Refunded to claimants, effects of deceased inmates	1,861.19
Subsistence stores, including special diet and stimulants for the sick, and ice	44,735.60
Articles for home bakery, except flour, salt, hops, and potatoes	82.63
Clothing	10,344.20
Bedding for inmates, bedsteads, blankets, upholstering materials, etc	287.74
Farm and garden utensils, seeds, guano, manure, etc., cultivation of garden, ornamentation of grounds, and pay of farm, garden, dairy, and other employes	26,622.40
Mess and kitchen utensils, and other articles, except bedding for the home	742.42
Material and labor for general repairs to buildings, repair of roads and fences, repair and purchase of harness and vehicles, mechanical and other tools	4,123.09
Forage and medicines for animals, articles used in the stables, straw for bedding for inmates	2,135.81
Expenses of the library, governor's and treasurer's offices, postage, post-office box rent, stationery, etc., for Commissioners' office, freight, telegrams, amusements	1,372.54
Incidental expenses, rent of telephone, hack hire, advertising, traveling expenses, professional services, expenses of chapel	850.07
Religious services	1,740.00
Laundry work	4,720.71
Extra-duty pay and monthly allowances to inmates	23,670.63
Out-door relief to members of the Home residing outside	34,310.81
Gas	2,020.04
Board and medical treatment of members of the Home in the Government Hospital for the Insane	2,206.43
Funeral expenses of members of the Home residing outside	300.00
New buildings	72,247.02
Permanent improvements, new fences, wells, bridges, paving, etc	2,057.56
Purchase of animals	180.00
Deposited in United States Treasury to the credit of the permanent fund, proceeds of a note of Ascension Church, Washington, D. C., for \$3,000 with interest at 6 per cent. per annum, taken in part payment for Young Men's Christian Association stock	3,015.00
Balance on hand September 30, 1890	987.28
Total	264,310.08

I certify that the foregoing account is correct.

RICH. C. PARKER,
Brevet Major, U. S. Army, Secretary and Treasurer.

Comparative statement of money received and disbursed on account of the United States Soldiers' Home, D. C., for two years, October 1, 1888, to September 30, 1890.

Received from October 1, 1888, to September 30, 1889	\$294,558.69
Of this amount \$32,000 was realized from sale of Young Men's Christian Association stock.	
Received from October 1, 1889, to September 30, 1890	264,310.08
Of this amount \$3,015 are the proceeds of a note of Ascension Church, Washington, D. C., taken in part payment for Young Men's Christian Association stock.	
Expended from October 1, 1888, to September 30, 1889	285,466.32
Of this amount \$32,000 was the sum realized from the sale of Young Men's Christian Association stock, and re-deposited to the credit of the permanent fund, the actual expenditures of the Home for the year ending September 30, 1889, being \$253,466.32.	
Expended from October 1, 1889, to September 30, 1890	263,322.80
Of this amount \$3,015 are the proceeds of a note of Ascension Church, Washington, D. C., taken in part payment for Young Men's Christian Association stock, and re-deposited to the credit of the permanent fund, the actual expenditures of the Home for the year ending September 30, 1890, being \$260,307.80.	
The expenditures during the year ending September 30, 1889, for new buildings and permanent improvements were	67,780.60
The running expenses of the Home for the year were	185,655.72
	253,466.32
The expenditures during the year ending September 30, 1890, for new buildings and permanent improvements, were	74,304.58
The running expenses of the Home for the year were	186,002.22
	260,307.80

Average number of inmates for the year, 686.
 Average cost of ration per month, including milk, vegetables, and fruit raised on the Home grounds, \$6.5744.
 Average cost of ration per day, 21.61 cents.
 I certify that the foregoing statement is correct.

RICH. C. PARKER,
Brevet Major, U. S. Army, Secretary and Treasurer.

Statement of the Soldiers' Home permanent fund account from October 1, 1889, to September 30, 1890.

Date.	Partial amounts.	Dr.	Cr.
1889.			
Oct. 1 Balance			\$2,269,462.65
Oct. 28 Amount of deposits	\$12,728.34		
Nov. 26 ..do	18,796.06		
Dec. 17 ..do	14,243.94		
Dec. 28 ..do	2,285.62		
1890.			
Jan. 16 ..do	18,233.57		
Feb. 15 ..do	5,662.72		
Feb. 26 ..do	8,659.94		
Mar. 15 ..do	15,876.83		
Mar. 28 ..do	3,592.72		
Apr. 18 ..do	17,755.46		
May 15 ..do	16,317.23		
June 13 ..do	24,774.76		
June 26 ..do	1,797.11		
July 25 ..do	25,620.31		
Aug. 25 ..do	49,282.80		
Sept. 16 ..do	22,135.37		
			257,766.78
<i>Less amounts paid from permanent fund.</i>			
1889.			
Oct. 26	20,000.00		
Nov. 29	13,000.00		
Dec. 16	32,250.00		
1890.			
Feb. 27	5,000.00		
Mar. 25	19,580.00		
Apr. 26	6,000.00		
May 28	25,470.00		
June 9	9,900.00		
June 19	27,000.00		
July 25	4,500.00		
Aug. 23	16,000.00		
Sept. 30 Balance		\$178,700.00 2,348,529.43	
		2,527,229.43	2,527,229.43

Statement of the Soldiers' Home interest account from October 1, 1889, to September 30, 1890.

	Partial amounts.	Dr.	Cr.
Balance Oct. 1, 1889			\$17,100.48
Interest on balance, \$2,269,462.65, Oct. 1 to Dec. 31, 1889	\$17,157.14		
Interest on deposits, Oct. 28 to Dec. 31, 1889	87.06		
Interest on deposits, Nov. 26 to Dec. 31, 1889	55.64		
Interest on deposits, Dec. 17 to Dec. 31, 1889	17.50		
Interest on deposits, Dec. 28 to Dec. 31, 1889 .....	.75		
Interest on balance, \$2,272,266.61, Jan. 1 to Mar. 31, 1890	16,803.41		17,299.08
Interest on deposits, Jan. 16 to Mar. 31, 1890	112.40		
Interest on deposits, Feb. 15 to Mar. 31, 1890	20.97		
Interest on deposits, Feb. 26 to Mar. 31, 1890	24.20		
Interest on deposits, Mar. 15 to Mar. 31, 1890	22.14		
Interest on deposits, Mar. 28 to Mar. 31, 1890	1.18		
Interest on balance, \$2,279,716.39, Apr. 1 to June 30, 1890	17,052.28		16,984.30
Interest on deposits, Apr. 18 to June 30, 1890	107.95		
Interest on deposits, May 15 to June 30, 1890	63.06		
Interest on deposits, June 13 to June 30, 1890	36.66		
Interest on deposits, June 26 to June 30, 1890 .....	.74		
Interest on balance, \$2,271,990.95, July 1 to Sept. 30, 1890	17,176.25		17,260.69
Interest on deposits, July 25 to Sept. 30, 1890	143.27		
Interest on deposits, Aug. 25 to Sept. 30, 1890	149.81		
Interest on deposits, Sept. 16 to Sept. 30, 1890	27.34		
Less interest on principal paid:			17,490.67
Fourth quarter, 1889	77.66		
First quarter, 1890	282.91		
Second quarter, 1890	148.25		
Third quarter, 1890	83.83		
		\$592.65	
Less interest paid:			
Fourth quarter, 1889	17,100.48		
First quarter, 1890	17,231.42		
Second quarter, 1890	16,701.39		
Third quarter, 1890	17,112.44		
		68,135.73	
<i>Balance, September 30, 1890</i>		17,412.84	
		86,141.22	86,141.22

The treasurer of the U. S. Soldiers' Home, District of Columbia, in account with the inmate pensioners for the moneys received under section 4, act approved March 3, 1883, and deposited with the Treasurer of the United States.

Date.	Moneys received.	Amount.	Date.	Moneys disbursed.	Amount.
1889.			1889.		
Sept. 30	To balance on hand	\$33,404.84	Oct. 5	By amount paid the estate of B. Dunhaft, deceased.	\$80.00
			Oct. 10	By amount paid the estate of Hamilton Hunter, deceased.	28.00
Oct. 31	To S. L. Willson's checks....	2,255.27	Oct. 28	By amount paid Lorenz Bergen, pensioner.	400.00
			Oct. 31	By pensioners' pay-roll for October, 1889.	1,189.42
Nov. 30	...do.....	673.17	Nov. 12	By amount paid the estate of A. Vidua, deceased.	62.00
			Nov. 16	By amount paid the estate of Thomas Mathers, deceased.	121.55
Dec. 31	...do.....	15,743.63	Nov. 20	By amount paid the estate of H. A. Gordon, deceased.	32.00
			Nov. 30	By amount to Charles Pallan, pensioner.	42.00
1890.			Nov. 30	By pensioners' pay-roll for November, 1889.	603.53
Jan. 31	...do.....	2,158.31	Dec. 31	By pensioners pay-roll for December, 1889.	9,687.40
			1890.		
Feb. 28	...do.....	1,220.61	Jan. 11	By amount paid the estate of Thomas Mathers, deceased.	55.25
Mar. 31	...do.....	16,699.57	Jan. 31	By pensioners' pay-roll for January, 1890.	876.17
			Feb. 20	By amount paid to Daniel Connery, pensioner.	12.00
Apr. 30	...do.....	2,588.56	Feb. 28	By pensioners' pay-roll for February, 1890.	1,949.22
			Mar. 27	By pensioners' pay-roll for March, 1890.	12,711.52
May 31	...do.....	894.92	Apr. 26	By amount paid the estate of John O'Brien, deceased.	90.00
June 30	...do.....	15,831.16	Apr. 30	By pensioners' pay-roll for April, 1890.	5,489.57
			May 31	By pensioners' pay-roll for May, 1890.	1,840.20
July 31	...do.....	1,194.33	June 2	By amount paid the estate of Edward Wyles, deceased.	101.00
			June 20	By amount paid to John Franke, pensioner.	9.00
Aug. 31	...do.....	476.43	June 30	By pensioners' pay-roll for June, 1890.	15,175.26
			July 10	By amount paid the estate of James S. King, deceased.	16.00
Sept. 30	...do.....	16,718.77	July 31	By pensioners' pay-roll for July, 1890.	2,058.37
			Aug. 26	By amount paid S. L. Willson, account John Devlin.	51.00
			Aug. 30	By pensioners' pay-roll for August, 1890.	814.00
			Sept. 2	By amount paid the estate of Fred K. Bausmith, deceased.	32.00
			Sept. 9	By amount paid the estate of Henry Wielenburg, deceased.	50.00
			Sept. 29	By amount transferred to the Home fund under section 4, act of March 3, 1883.	621.30
			Sept. 30	By pensioners' pay-roll for September, 1890.	11,990.27
			Sept. 30	By balance on hand deposited in U. S. Treasury.	43,671.54
	Total.....	109,859.57		Total.....	109,859.57

I certify on honor that the above account is correct.

RICH. C. PARKER,
Brevet Major, U. S. Army, Secretary and Treasurer.

Annual report of the number of pensioners in the U. S. Soldiers' Home, rates of pension, etc., September 30, 1890.

	Number.		Number.
Pensioners drawing:		Pensioners drawing:	
\$2 per month.....	23	\$18 per month.....	13
\$3 per month.....	2	\$20 per month.....	4
\$4 per month.....	82	\$22 per month.....	4
\$5 per month.....	2	\$24 per month.....	45
\$6 per month.....	81	\$25 per month.....	2
\$6.25 per month.....	1	\$27 per month.....	2
\$8 per month.....	233	\$30 per month.....	15
\$10 per month.....	63	\$35 per month.....	1
\$12 per month.....	104	\$36 per month.....	1
\$13 per month.....	1	\$72 per month.....	2
\$14 per month.....	30		
\$16 per month.....	47	Total number of pensioners	804
\$17 per month.....	46		

Pensioners present in the Home:	
Pensioners whose money is drawn by the treasurer	440
Pensioners who have assigned their certificates	28
	468
Pensioners absent:	
On outdoor relief	263
On furlough	51
On suspension	14
In Government Hospital for the Insane.....	8
	336
Total number of pensions September 30, 1890	804
Total number of pensions September 30, 1889	820
Alterations since last report, September 30, 1889:	
New certificates received for inmates	115
Admitted and re-admitted	90
	205
Loss by discharge	179
Loss by deaths	42
	221
Net loss during the year	16
Description of certificates:	
Army invalid	691
Mexican war	112
Navy	1
	804

Annual report of members of the U. S. Soldiers' Home receiving outdoor relief September 30, 1890, rates of relief, pensions, etc.

	Number.		Number.
Number receiving—		Receiving—	
\$12 per month.....	1	\$6 per month.....	29
\$8 per month.....	409	\$8 per month.....	94
\$6 per month.....	16	\$10 per month.....	10
\$7 per month.....	1	\$12 per month.....	25
\$5 per month.....	1	\$13 per month.....	1
\$4 per month.....	42	\$14 per month.....	7
\$3 per month.....	2	\$16 per month.....	7
\$2 per month.....	20	\$17 per month.....	12
		\$18 per month.....	5
Total number receiving outdoor relief	492	\$20 per month.....	2
Number on outdoor relief September 30, 1889.	348	\$24 per month.....	10
		\$30 per month.....	2
		\$35 per month.....	1
Net gain during the year	144	Total non-pensioners	229
Of the whole number receiving outdoor relief there are non-pensioners ..	229	Pensioners	263
Receiving—			492
\$2 per month pension	16	Of this number there are Mexican war survivors	67
\$3 per month.....	1	Men who have served 25 years or more.	73
\$4 per month.....	39	Of this latter number there are non-pensioners	35
\$5 per month.....	2		

Farm account United States Soldiers' Home, D. C., October 1, 1889, to September 30, 1890, consolidated.

DR.		CR.—Continued.	
To labor, forage, fuel, fertilizers, imple- ments, seeds, and repairs.....	\$8, 470. 72	By 3½ bushels okra	7. 74
To balance to credit of farm.....	3, 224. 03	16½ bushels onions	21. 02
	11, 694. 75	10,550 bunches onions	147. 46
		1 bushel oyster plant	1. 25
CR.		1,140 bunches parsley	72. 22
By 690 bunches asparagus	\$58. 56	4½ bushels peas	5. 91
91½ bushels beets.....	91. 50	186 bushels parsnips	167. 98
417 bunches beets.....	0. 35	1,471½ bushels potatoes.....	1, 649. 57
654 bushels cow beets.....	570. 60	42½ bushels sweet potatoes.....	32. 91
13,051 heads cabbage.....	819. 48	30½ bushels radishes	40. 13
44 cantaloupes	4. 40	300 bunches radishes	6. 00
250 bushels carrots.....	250. 00	2,090 bunches rhubarb	51. 21
2,086 stalks celery.....	112. 07	25½ bushels salsify	35. 16
160½ bushels cucumbers.....	137. 60	20¾ bushels spinach	79. 34
10½ bushels Lima beans	8. 65	39½ bushels squash	20. 58
20½ bushels snap beans	15. 66	645 pounds winter squash	129. 00
463½ dozen ears green corn.....	79. 42	446½ bushels tomatoes.....	278. 33
358 egg-plants	13. 67	371½ bushels turnips	153. 07
1,623 pounds horse-radish	64. 92	19 bushels pepper	19. 00
288 bushels kale	77. 60	2 bunches pepper .....	. 10
6,628 heads lettuce	157. 39	350 tons hay	5, 600. 00
89 bushels martynyias.....	178. 00	Hauling and other than farm work during the year.....	527. 90
			11, 694. 75

Estimate of vegetables in the ground, Soldiers' Home farm, September 30, 1890.

800 bushels beets, at 30c.....	\$240. 00	10 bushels Lima beans, at 80c.....	\$8 60
400 bushels parsnips, at 75c.....	300. 00	40 bushels tomatoes, at 50c.....	20. 00
75 bushels carrots, at \$1	75. 00	1,500 stalks celery, at 5c.....	75. 00
50 bushels salsify, at \$1.50	75. 00	3,000 pounds horse-radish, at 4c.....	120. 00
400 bushels turnips, at 50c.....	200. 00	5 tons winter squash, at \$25.....	125. 00
25 bushels winter radishes, at \$2.....	50. 00	3,000 bunches parsley, at 5c.....	150. 00
100 bushels sweet potatoes, at 75c.....	75. 00	10,000 heads cabbage, at 4c.....	400. 00
300 bushels white potatoes, at \$1.10	330. 00		
15 bushels pepper, at \$1	15. 00	Total	2, 283. 00
100 bushels spinach, at 25c.....	25. 00		

Garden account United States Soldiers' Home, District of Columbia, October 1, 1889, to September 30, 1890, consolidated.

DR.		CR.	
To labor, fertilizers, seeds, tools, fuel, and implements.....	\$3, 527. 64	By 505 quarts strawberries	\$60. 60
		67 quarts raspberries.....	13. 40
		20 quarts currants.....	3. 00
		30 quarts gooseberries	2. 10
		279 quarts blackberries	36. 27
		20 cords wood, cut and stored	130. 00
		24,199 plants raised in greenhouse	2, 545. 75
		By balance to debit of the garden ex- pended in improvements of grounds	736 52
	3, 527. 64		3, 527. 64

NOTE.—This department has the care of the ornamentation of the grounds, lawns, flowers, shrubs, trees, and fruit.

Dairy account United States Soldiers' Home, District of Columbia, October 1, 1889, to September 30, 1890, consolidated.

Dr.		Cr.	
To labor, forage, tools, fuel, and repairs.	\$5,360.95	By 25,929 $\frac{1}{2}$ gallons milk.....	\$7,787.97
To balance to credit of the dairy.....	3,500.11	sale of three cows.....	49.30
		sale of 32 calves.....	187.79
		1,460 loads manure to the farm.....	511.00
		increase in value of 7 heifers.....	175.00
		increase in value of 8 calves.....	120.00
		services of bulls.....	30.00
	8,861.06		8,861.06

Daily average yield of milk per cow, 1.69 gallons.

Cost of production of milk per gallon, 16.53 cents.

The dairy herd on September 30, 1890, consisted of 44 milch cows, 13 heifers, 14 calves, 2 bulls.

List of names, etc., of men admitted to the benefits of the Soldiers' Home during the year ending September 30, 1890.

[Those who have served twenty or more years are entitled by length of service; all others by disability.]

No.	Name.	Last served in—		Service.		Age when admitted.	Date of admission.
		Com-pany.	Regiment.	Years.	Months.		
							1889.
1	Henry Deaner.....	E.....	Twenty-first Infantry.....	19	8	46	Oct. 3
2	Robert Williams.....	I.....	Fifth Infantry.....	4		32	Oct. 12
3	William A. Sartain.....	H.....	Seventh Cavalry.....	16	2	47	Oct. 14
4	David Wilson.....	E.....	Seventh Infantry.....	20	8	52	Oct. 16
5	John Green.....	C.....	Fourth Cavalry.....	1	8	24	Oct. 16
6	William H. Gray.....	K.....	Eighth Infantry.....	8	10	32	Oct. 28
7	John M. Fischer.....		Military Academy Band.....			24	Oct. 28
8	Jeremiah Quinn.....	M.....	Second Cavalry.....	27		56	Oct. 28
9	John Sullivan.....	D.....	First Infantry.....	23	2	50	Oct. 28
10	Addison Wright.....	K.....	First Artillery.....	2		22	Oct. 28
11	Jacob Klinger*.....	E.....	Eighth Infantry.....	3	6	64	Oct. 28
12	Michael Heens.....	D.....	Eighteenth Infantry.....	27		47	Oct. 28
13	Ishmael Baker.....	K.....	Twenty-fifth Infantry.....	23	9	49	Oct. 28
14	Daniel Albertson.....		General service.....		6	33	Oct. 28
15	Henry Heuer.....		Mounted service.....	21	4	46	Oct. 28
16	William Lafaire.....	I.....	First Infantry.....	14	7	44	Oct. 28
17	William Pratt.....	C.....	Seventh Infantry.....	23	7	63	Oct. 28
18	Cornelius H. Patton.....	F.....	Eighth Infantry.....	21	11	48	Oct. 28
19	James Spry.....	D.....	Second Artillery.....	20		49	Oct. 28
20	Christian Bauer.....	I.....	Seventh Infantry.....	27	7	56	Oct. 26
21	George Dieffenbach.....		Hospital Corps.....	24	10	47	Nov. 5
22	Simon Wendlinger.....		Ordnance detachment.....	3	7	68	Nov. 4
23	Frank H. Thomas.....	C.....	Seventeenth Infantry.....	22	7	51	Nov. 7
24	Rufus Sumerlin*.....	K.....	Fifteenth Infantry.....	1	4	64	Nov. 11
25	Carl Mogensen.....	K.....	Twentieth Infantry.....		8	25	Nov. 14
26	August Krueger.....	K.....	Twentieth Infantry.....	9	6	43	Nov. 14
27	Charles Hodge.....	K.....	Fifth Infantry.....	22	3	43	Nov. 14
28	Frank Walker.....	A.....	Fourth Artillery.....		5	22	Nov. 15
29	Frank Yandle.....		Fourteenth Infantry.....	10	8	43	Nov. 20
30	Charles A. Clarke.....	F.....	Eighteenth Infantry.....	20		56	Nov. 26
31	William Black.....	D.....	Second Infantry.....	6	4	35	Nov. 22
32	Adolph Durfback.....	L.....	First Cavalry.....	15		42	Nov. 23
33	David Elsner.....	F.....	Second Infantry.....	24		49	Nov. 22
34	Stephen Fritz.....	H.....	Eighth Infantry.....	2		25	Nov. 23
35	Daniel W. Hazen.....	A.....	Sixteenth Infantry.....		10	27	Nov. 22
36	Robert H. Newman.....	E.....	Tenth Infantry.....	21	11	48	Nov. 22
37	William E. Tomkins.....	A.....	Eleventh Infantry.....	1	6	28	Nov. 22
38	John Burnes.....	H.....	Third Artillery.....	11	6	36	Nov. 22
39	Ambrose Cooney.....	B.....	Fifth Artillery.....	22	4	50	Nov. 22
40	Timothy Fenton.....		Ordnance detachment.....	20	11	62	Nov. 22
41	John Hawkins.....	C.....	First Infantry.....	5		59	Nov. 22
42	Samuel T. McPherson*.....	E.....	Voltigeurs.....	1	6	60	Nov. 22
43	Charles G. Mathews.....		Mounted service.....	21	9	42	Nov. 22
44	John H. Steiner.....	D.....	Third Artillery.....	9	7	34	Nov. 22

*In war with Mexico.

List of names, etc., of men admitted to the benefits of the Soldiers' Home during the year ending September 30, 1890—Continued.

No.	Name.	Last served in—		Service.		Age when admitted.	Date of admission.
		Company.	Regiment.	Years.	Months.		
							1889.
45	John Weber	A	Fifth Cavalry	16		49	Nov. 22
46	John W. McEndree	D	Second Infantry	23	6	49	Nov. 23
47	Edward A. Buck		General service			43	Nov. 30
48	Andrew J. Stewart	D	Second Infantry	26	2	47	Dec. 3
49	Charles Senni	B	Fourteenth Infantry	21	5	47	Dec. 4
50	John Backer	E	Second Cavalry	24	9	58	Dec. 9
51	Charles Rahm		General service	11	10	53	Dec. 13
52	George Brown	B	Ninth Cavalry	20	7	42	Dec. 16
53	John Bennett	E	Twenty-first Infantry	10	4	44	Dec. 24
54	Stephen Bondra	E	Third Artillery	4	8	29	Dec. 24
55	Joseph Heller	G	Eleventh Infantry	14	3	56	Dec. 24
56	William Troy	H	Fourteenth Infantry	3	2	47	Dec. 24
57	Joseph Braddock	C	Eighth Cavalry	18	6	44	Dec. 24
58	Sebastian Rath	H	Fifth Infantry	14	10	72	Dec. 24
59	Joseph Winfield	G	Sixth Infantry	5		53	Dec. 24
							1890.
60	John Finarty		Ordnance detachment	26		52	Jan. 10
61	William H. Oram	B	Twenty-second Infantry	19	2	42	Jan. 22
62	Carl W. Sandell	F	Fourth Artillery	3	6	31	Jan. 25
63	Owen S. M. Cone		Signal Corps	8	11	47	Jan. 27
64	James Devereux †	E	Seventh Infantry	16	1	49	Jan. 27
65	John McCann	M	Fourth Artillery	20	4	45	Jan. 27
66	Francis Pollard	A	Tenth Infantry	17	7	54	Jan. 27
67	Moses B. Tyson	H	Fifth Artillery	8	5	39	Jan. 27
68	Joseph McGinniss	F	Eleventh Infantry		11	34	Jan. 27
69	Daniel Connerly	K	Fourth Infantry		9	33	Jan. 27
70	Thomas Beirne	G	Twentieth Infantry	5	3	29	Jan. 27
71	Patrick O'Neill		Mounted service	20		44	Jan. 27
72	George M. Crandall	L	First Artillery	23	9	52	Jan. 27
73	Pius Hadley	I	Sixth Infantry	20		47	Jan. 27
74	David A. Crutchfield	M	First Artillery	22	3	50	Jan. 27
75	Frank Spurrier	G	Twentieth Infantry	4	6	30	Jan. 28
76	Edward A. Burke	G	Fourteenth Infantry	1	1	45	Jan. 30
77	John McCarthy	E	Fourth Cavalry	1	7	34	Feb. 12
78	Frederick Geiger	A	Nineteenth Infantry	11	3	42	Feb. 18
79	Joseph J. Byrne	A	Third Artillery	5		32	Feb. 18
80	Michael Ryan	D	Eighth Cavalry	23	5	55	Feb. 18
81	James Lamb	H	First Artillery	3	2	57	Feb. 18
82	Henry C. Ulrich	F	First Cavalry	3	8	40	Feb. 18
83	John Saville	A	Thirty-sixth Infantry	7	6	48	Feb. 18
84	John J. Green	C	Fifth Artillery	15		47	Feb. 18
85	William H. Crisp	E	Fifth Cavalry	24		41	Feb. 18
86	George W. Brown	E	Tenth Cavalry	1	6	46	Feb. 18
87	George O. Crowe	G	Nineteenth Infantry	22	8	45	Feb. 18
88	William J. Hutchinson †	B	Fourteenth Infantry	3		49	Feb. 18
89	Herman Jensen		Mounted service	17	4	49	Feb. 18
90	Thomas O'Neill	E	Seventh Cavalry	24		45	Feb. 18
91	Thomas O'Sullivan	D	Fourteenth Infantry	18	7	49	Feb. 25
92	Patrick J. O'Brien	K	Fifth Artillery	13	9	33	Mar. 11
93	Joseph MacAnderson	G	Fourth Artillery	7	6	56	Mar. 12
94	Johnston B. Reed	D	Tenth Infantry	21	8	47	Mar. 17
95	Michael L. O'Rourke *	D	Fourth Artillery	4	2	63	Mar. 17
96	Morris Lewis	H	Fifth Infantry		10	24	Mar. 17
97	Charles Kloos	I	Fifth Artillery	13	6	39	Mar. 17
98	Bernard Henkelman	C	Fourth Infantry	3		55	Mar. 17
99	Richard Fowler	E	Seventeenth Infantry	7	6	41	Mar. 17
100	Herbert Emery	C	Fourth Artillery	2		28	Mar. 17
101	Thomas Dease	A	Third Artillery	10	5	33	Mar. 17
102	Robert Burgi	H	Fourth Cavalry	4	7	46	Mar. 17
103	Benjamin F. Howe	E	Thirteenth Infantry	24	11	47	Mar. 17
104	James Dolan	D	Fifteenth Infantry	20	11	44	Mar. 17
105	Henry Giasel	A	Second Artillery	4	5	33	Mar. 17
106	Florence Hansman	F	Nineteenth Infantry	20	11	53	Mar. 8
107	George Lough		General Service	23	5	43	Mar. 17
108	James Kennelly	F	Thirty-second Infantry	6	1	51	Mar. 17
109	Samuel L. Campbell	C	Fifteenth Infantry	3		50	Mar. 17
110	John Kelly	B	Fifth Cavalry	21	11	48	Mar. 19
111	Bernard Duffy	C	Twentieth Infantry	5		34	Mar. 19
112	John F. Schvoorn	F	Sixth Infantry	5		53	Mar. 19
113	Charles H. Davenport		Ordnance Detachment	18	8	44	Mar. 20
114	William S. Gayle	D	Sixth Infantry	22	9	46	Mar. 20
115	William Riley	C	Seventeenth Infantry	10	9	44	Mar. 21
116	Thomas Branigan	I	Fifth Cavalry	2	3	23	Mar. 29

* In war with Mexico.

† Died since admission.

List of names, etc., of men admitted to the benefits of the Soldiers' Home during the year ending September 30, 1890—Continued.

No.	Name.	Last served in—		Service.		Age when admitted.	Date of admission.
		Com-pany.	Regiment.	Years.	Months.		
117	George Stickney		Ordnance detachment.	20		64	1890. Mar. 29
118	Michael Daly	F	Second Cavalry	23	7	40	Apr. 3
119	Andrew Connor	G	Thirteenth Infantry	20	7	50	Apr. 19
120	William O. Blanton*	K	First Infantry	1		78	Apr. 21
121	William V. Kraver.	A	Fifth Artillery	5	9	29	Apr. 21
122	Joseph De Falco		Second Cavalry	6	9	28	Apr. 21
123	Jeremiah J. Murphy	I	Fifth Artillery	16		38	Apr. 21
124	Edward Lally *	D	Second Artillery	5		65	Apr. 21
125	Henry McGrath		First Dragoons	5		62	Apr. 21
126	William Pierce.	B	Fourteenth Infantry		7	55	Apr. 19
127	William R. Dempsey	K	Fifth Cavalry	5		54	Apr. 21
128	Benjamin Mitchell	I	Twenty-first Infantry	4	6	42	Apr. 21
129	Bartholomew Hammon	I	Second Artillery	25	6	60	Apr. 21
130	Daniel Ahern	H	Eighteenth Infantry	23	11	44	Apr. 21
131	Michael McDermott.	K	Second Infantry	5		61	Apr. 21
132	William Watson	G	Thirty-second Mass. Vols.	2	10		Apr. 21
133	Luke Sweeney	D	Eighth Cavalry	9		30	Apr. 21
134	Henry C. Mattison		Second Infantry	22	8	45	Apr. 21
135	Charles Loomis	C	Engineers.	3	9	26	Apr. 23
136	Charles Snyder f.		Eighth Cavalry	20	8	45	May 7
137	John M. Engleright	K	Third Infantry	25	10	53	May 19
138	William Griffith	L	Third Artillery	19	2	51	May 19
139	Charles Banks.		Detachment of cavalry	20	11	45	May 19
140	James Rafferty.	A	Fifth Artillery	13	8	35	May 19
141	Charles Brough*	B	Second Artillery	14	11	64	May 19
142	John B. Baker*	A	Sixteenth Infantry	1	4	61	May 19
143	William C. Tubman f.	K	Third Artillery	11	9	34	May 19
144	James Robinson	F	Twenty-fifth Infantry	12	1	41	May 19
145	Thomas Ledger †	F	Forty-fourth Infantry	15	3	66	May 19
146	Theodore J. Sammels	A	Second Artillery	8	4	62	May 19
147	Luke Burns	E	Twenty-first Infantry	19	3	53	May 19
148	Peter Creedon	D	Third Infantry	23		41	May 19
149	Frederick Diehr	A	Nineteenth Infantry	22	8	44	May 19
150	Albert Gruber*	G	Ninth Veteran Reserve Corps	13	3	69	May 19
151	William Hancock	L	Third Artillery	23	4	43	May 19
152	William H. McEnany	H	Fourth Infantry	7	8	35	May 19
153	William Y. McIntosh.	I	Fifth Cavalry	6	10	64	May 19
154	William Robinson	E	Twenty-first Infantry	20	5	51	May 21
155	James Dolan	F	Thirteenth Infantry	1	9	27	May 26
156	Gustav Niemer	B	Third Infantry	20	10	47	May 31
157	William Dugan	K	Third Artillery	16	1	41	May 28
158	Joseph S. Cook	H	Sixth Infantry	1	6	63	June 7
159	John Szakely	D	Nineteenth Infantry	22	9	53	June 9
160	Francis Miller	F	First Infantry	20	9	56	June 12
161	John Dunn	B	First Infantry	4	6	28	June 14
162	Denis Coffey	T	Seventeenth Infantry	5	4	44	June 14
163	Eugene Sigrist	B	Thirteenth Infantry	19	7	48	June 19
164	James S. Ahern.	K	Twenty-first Infantry	11	9	34	June 23
165	Peter Bunton		Hospital Steward	14	8	38	June 23
166	David Gemmel	F	Eleventh Infantry	18	9	47	June 23
167	Henry McMorrow	B	Second Infantry	9	11	39	June 23
168	Maurice O'Connell	B	Fifth Artillery	18		41	June 23
169	Samuel Sheets *	H	Fourth Infantry	1	4	70	June 23
170	William R. Smith	E	Tenth Infantry	13	1	36	June 23
171	Henry Steinback		Commissary Sergeant	20		42	June 23
172	Jacob Trautman		Mounted Service	14	10	42	June 23
173	Alexander Wilson	K	Sixteenth Infantry	7	5	47	June 23
174	Thomas Sout		Mounted Service		6	56	June 23
175	James J. Butler	B	Seventh Infantry	16	10	63	June 23
176	Sebastian Dimplin	G	Third Infantry	4	6	54	June 23
177	William Schaffer		Ordnance Detachment.	24	2	49	June 23
178	Thomas Smith	G	First Cavalry	23		43	June 23
179	John S. Tunnicliff.	F	Second Infantry	18	2	50	June 23
180	John Bell †	H	Third Artillery	21	3	43	June 23
181	Herman Wilkendorf.		Hospital Steward	19	10	54	June 23
182	William F. Leete	K	Sixth Cavalry	1	5	45	June 23
183	James Carr	C	First Infantry	14	9	57	June 28
184	William Stuart	B	First Artillery	13		50	July 5
185	William Griesamer *	H	First Dragoons	15	10	75	July 10
186	Nelson F. Nice	E	Fifth Cavalry	1	1	23	July 10
187	Edward Lowell †	L	Seventh Cavalry	14	6	43	July 12
188	George W. Sweeney	F	Second Cavalry	22	4	51	July 15

* In war with Mexico

† Died since admission.

List of names, etc., of men admitted to the benefits of the Soldiers' Home during the year ending September 30, 1890—Continued.

No.	Name.	Last served in—		Service.		Age when admitted.	Date of admission.
		Company.	Regiment.	Years.	Months.		
189	Augustus Smith.....	I.....	Twenty-fifth Infantry.....	25	9	47	July 16
190	Jacob Fath.....	K.....	Fourteenth Infantry.....	14	4	37	July 16
191	Joseph Cosleman.....	B.....	Eleventh Infantry.....	3		44	July 22
192	John Donohue.....	L.....	Sixth Cavalry.....	1		61	July 22
193	Martin Fagan.....	A.....	Third Artillery.....	11	11	45	July 22
194	John A. Gibbens.....	A.....	Fifth Artillery.....	10	9	40	July 22
195	James Hoey.....	B.....	Third Cavalry.....	22	1	44	July 22
196	Nicholas Jockum.....	E.....	Third Artillery.....	23	4	50	July 22
197	Andrew Russell*.....	K.....	First Artillery.....	15		65	July 22
198	William Stein**.....	I.....	Eighth Infantry.....	3	2	62	July 22
199	Eugene L. Sullivan.....	G.....	First Infantry.....	12	1	34	July 22
200	William Akerson.....	G.....	Twenty-first Infantry.....	14	4	38	July 22
201	George Arrington.....	C.....	Twenty-fourth Infantry.....	1	10	27	July 22
202	Heinrich A. Eichel.....	M.....	First Artillery.....	20	4	42	July 22
203	Jeremiah Enwright.....		General service.....	25	9	50	July 22
204	Walter Plunkett.....	F.....	First Infantry.....	23		46	July 22
205	August Schmidt.....		Third Artillery.....	8	6	32	July 22
206	John Quinn.....	E.....	Seventh Cavalry.....	20	1	52	July 23
207	Cornelius Donovan.....		Ordnance Detachment.....	23	6	51	July 31
208	Howard Watt.....		General Service.....	5	2	31	Aug. 2
209	Robert H. Clarke.....	F.....	Fifth Artillery.....	20		48	Aug. 19
210	Michael Hackett.....	F.....	Third Cavalry.....	8	7	30	Aug. 19
211	Patrick Hanratty.....	G.....	Eighth Cavalry.....	24		55	Aug. 19
212	Frank Hoefling.....	B.....	Fifth Infantry.....	14		38	Aug. 19
213	Alexander C. F. Knopp.....	G.....	Fifth Artillery.....	13	8	41	Aug. 19
214	Patrick Lynch.....	F.....	Third Cavalry.....	24	9	56	Aug. 19
215	John C. McCoy.....	K.....	Third Artillery.....	6	8	34	Aug. 19
216	Charles Morris.....	B.....	First Infantry.....	7	1	35	Aug. 19
217	John Myers*.....	C.....	Second Dragoons.....	11		75	Aug. 19
218	Louis Rufell.....	C.....	Second Infantry.....	12	10	48	Aug. 19
219	John E. Beck.....	E.....	Ninth Infantry.....	4	10	27	Aug. 19
220	John Hamilton*.....	D.....	Fourth Infantry.....	12	11	69	Aug. 19
221	James McGuire.....		General Service.....	20	2	46	Aug. 19
222	John W. McKenzie*.....		Quartermaster-Sergeant.....	5	7	67	Aug. 19
223	Michael Owens.....	F.....	Second Cavalry.....	11	6	38	Aug. 19
224	Lafayette Stevenson.....	H.....	Nineteenth Infantry.....	22	5	43	Aug. 19
225	Terah C. Daniel.....	H.....	Twenty-first Infantry.....		9	21	Aug. 19
226	Ernest Engel.....	B.....	Eleventh Infantry.....	15	6	44	Aug. 19
227	Charles J. Freitag.....	B.....	Nineteenth Infantry.....	1		44	Aug. 19
228	William Campbell.....	F.....	Ninth Infantry.....	16	5	43	Aug. 23
229	Thoma A. Kerr.....		General Service.....	22		56	Aug. 30
230	Jeremiah Lease.....	B.....	Third Infantry.....	26		48	Sept. 1
231	John McElwee.....	F.....	Second Artillery.....	21	10	53	Sept. 2
232	John Lanehart.....		Ordnance Detachment.....	22	6	52	Sept. 6
233	Matthias Moarn.....	G.....	Seventh Cavalry.....	2	8	33	Sept. 12
234	Thomas Flynn.....	G.....	Fourth Cavalry.....	3	8	29	Sept. 12
235	George F. Holmes.....		General Service.....	7	7	39	Sept. 13
236	Charles Long*.....	K.....	Fifth Infantry.....		5	65	Sept. 15
237	Daniel Smith.....	I.....	Thirteenth Infantry.....	25	8	50	Sept. 15
238	Peter Carroll.....	F.....	Tenth Infantry.....	1	10	25	Sept. 15
239	David Davis.....	B.....	Fourteenth Infantry.....		6	40	Sept. 22
240	Jesse Brown.....	A.....	Second Infantry.....	7	1	33	Sept. 22
241	James Hammond.....	D.....	Nineteenth Infantry.....	8		30	Sept. 22
242	Alfred Johnson.....	G.....	Third Infantry.....	9	4	37	Sept. 22
243	John Kenny.....		Commissary sergeant.....	21		53	Sept. 22
244	George Messeroy.....	I.....	Sixth Infantry.....	20		47	Sept. 22
245	Michael Odder.....	K.....	Second Cavalry.....	16	9	56	Sept. 22
246	Patrick Ryan.....	K.....	Third Artillery.....	19	11	46	Sept. 22
247	William Sullivan.....	H.....	Fourth Cavalry.....	2	11	26	Sept. 22
248	Thomas A. Williams.....	G.....	Fourth Infantry.....	2	10	53	Sept. 22
249	John E. Boyles.....	G.....	First Artillery.....	20		40	Sept. 22
250	A. M. C. Barnhart*.....	M.....	Second Artillery.....	10		70	Sept. 22
251	James Condon.....	F.....	Eighteenth Infantry.....	20		47	Sept. 22
252	Frank E. Darrow.....		Ordnance detachment.....	8	5	30	Sept. 22
253	Henry T. Dance.....	M.....	Fourth Artillery.....	11	3	37	Sept. 22
254	Charles E. Emerson.....	E.....	Fourth Cavalry.....		9	32	Sept. 22
255	Patrick Logan.....	H.....	Second Infantry.....	5		57	Sept. 22
256	John B. Laurens*.....	F.....	Mounted Rifles.....	2	2	64	Sept. 22
257	George F. Murphy.....		Ordnance detachment.....	3		24	Sept. 22
258	Daniel M. Myers.....	M.....	Second Cavalry.....	1	1	29	Sept. 22
259	Robert Merritt.....	F.....	Fifth Artillery.....	3	2	31	Sept. 22
260	Michael McGarry*.....	G.....	First Artillery.....	3	6	64	Sept. 22

* In war with Mexico.

† Died since admission.

List of names, etc., of men admitted to the benefits of the Soldiers' Home during the year ending September 30, 1890—Continued.

No.	Name.	Last served in—		Service.		Age when admitted.	Date of admission.
		Company.	Regiment.	Years.	Months.		
261	Herman Neinhaus		General service	20	4	44	1890. Sept. 22
262	William O'Hara	C	Fourth Infantry	27	4	48	Sept. 22
263	Michael O'Brien*	G	Third Infantry	5		66	Sept. 22
264	John Robertson	B	do	1	7	23	Sept. 22
265	Earnest Staeser	E	Second Infantry	21	10	45	Sept. 22
266	Edward R. Smith	A	Fourteenth Infantry	20		42	Sept. 22
267	John A. Tomamichel		Hospital steward	26		59	Sept. 22
268	John Wallace	K	Second Dragoons	7		65	Sept. 22
269	Jefferson Fuller	A	Tenth Cavalry	13	6	37	Sept. 26
270	Michael O'Malley		Hospital steward	18	6	62	Sept. 26
271	William H. Totten	L	Eighth Cavalry	20		43	Sept. 26
272	John Fay	G	Nineteenth Infantry	6	6	38	Sept. 26

*In war with Mexico.

REPORT OF AN INSPECTION OF THE SOLDIERS' HOME.

WAR DEPARTMENT, INSPECTOR GENERAL'S OFFICE,
Washington, D. C., December 8, 1890.

SIR: In conformity with section 2 of the act of March 3, 1833 (22 Stat., 564), I have the honor to submit the following report of an inspection of the Soldiers' Home, begun November 3, 1890:

Through the courtesy of the governor, Brig. Gen. O. B. Willcox, U. S. Army, useful information and reports have been secured and are here published, and the deputy governor, Capt. Robert Catlin, and the secretary and treasurer, Bvt. Maj. Richard C. Parker, have each furnished statements and data which are used in this report.

The condition of the Soldiers' Home is very much as reported a year ago. A great improvement in the police of the Barnes Hospital and several minor improvements were noted as salutary changes, and it is evident others will follow.

As is well known the revenue of the Home is derived from the pay of the enlisted men of the Army. The first or principal object of the Home is the maintenance in good health and comfort of its infirm and veteran inmates. The accommodations for them, in view of the wealth of the institution and the large expenditures, appear rather limited, but the ornamental grounds and handsome buildings indicate expensive outlays. During the critical examination of the place as a permanent home the lack of necessary or constantly accessible conveniences, the dingy paint, old-fashioned and defective plumbing, foul-smelling cess-pools, bugs in the dormitories, and the scarcity of sidewalks for the recreation of the old soldiers' attracted attention.

The water supply and the system of sewerage are apparently defective and possibly will remain so until connected with the district system. It is suggested that a test should be made to determine the comparative amount and quality of the water obtained from two sources when relaying the water-pipes supplying the pumps. The iron pipe brings water down from the cistern, but the upper terra pipes catch other water in the springy ground between the pump and this cistern. A tell-tale is needed at the pump. The tell-tale in use at Madison Barracks is reported inexpensive and reliable, but limited in effectiveness.

In the King and Scott buildings ragged coverlets were observed on some of the beds and there were signs of bedbugs. The Sheridan building is still the favorite abode of the men, but the Sherman building this year begins to rival it in neatness.

The army ration has been incidentally mentioned in reports of inspections of posts as costing 15 cents; the cost for the whole Army, including clerk-hire and rents of offices and store-rooms, is placed in the annual estimates at 20 cents per ration. At the Soldiers' Home it is averaged at over 24 cents for subsistence stores, not including hire or rents, but including special diet and stimulants for the sick. The difference between the estimate at the Home and for the Army is about

20 per centum, and the difference between the actual cost of the two is about 40 per centum. The question is whether the excellence and variety of the food at the Home as compared with what is given a well-fed company is great enough to warrant the difference of expense. The fare at the Home is of course as good as the officers can make it for the money.

The deputy governor informed me that he would follow up the disposal of the rations as far as possible this year, so that there will be some further record of their daily issue and use. The men do not receipt for their clothing. The food and clothing this year cost \$61,079.80, and doubtless a system of receipts can be established tracing all articles to their ultimate use, and thus locate any lack of economy should it appear.

The "slush fund" heretofore held by the governor has been turned in to the general fund of the Home. That accruing at the hospital has not. The governor of the Home informed me that as far as his duties extend arrangements will be made enabling the surgeon to "perform all the duties incident to his office, such as are usual at military posts," *vide* article 3 of the regulations of the Home.

Some of the methods suggested last year for keeping the accounts of the Secretary and Treasurer have been adopted and their verification was accomplished more readily and more satisfactorily, and it is believed that the nearer these accounts conform to the prescribed Army methods the better, and the more complete will be the accountability. Some may urge that these funds are not public funds, and that to environ them by the rigid rules and methods by which the public moneys are administered and guarded would so hamper their use as to defeat to a greater or less extent the purposes for which they were created, to wit, the care and comfort of these old and disabled soldiers. Whether public or private, the fund is a trust fund—the most sacred of funds—and is raised from the enlisted men of the Army, and the officers charged with the duty are laboring zealously under the methods found in vogue to execute that trust so that its beneficiaries may receive to the fullest extent all the advantages that can accrue from a careful and economic administration; and it is believed that by adopting fully and rigidly enforcing well established Army methods of administration, supervision, and accountability better results will follow and for equal expenditures a greater return will be received, and this would seem to be consonant with the requirement of the act of March 3, 1883, to wit, "all supplies that can be purchased upon contract shall be so purchased, after due notice by advertisement, of the lowest bidder."

Of the subsistence stores used only flour and meat are obtained under contract. All others are purchased in open market from several selected merchants in the city, giving to each in turn an order for about ten days' supply of the principal articles required. The varying prices paid for similar goods purchased during the same month indicate that the higher prices are unnecessary, and suggest that were bids invited and the order given to the lowest bidder on each article, even among the same dealers, the interest of the Home would be conserved without any prejudice to the quality of the goods. It would also seem that a daily issue of the supplies, based upon the ascertained number of rations required, would establish better supervision and admit of a more varied bill of fare without incurring any additional expense.

The inmates of the Home are paid every two months for the services they render the Home while the other employés are paid monthly. As

the system of monthly payments has been established wherever practicable in the Army, and it is partially recognized here, it would seem only proper that a uniform system of monthly payments should prevail and that no distinction should be made between the two classes. The pay accounts of the inmates are scattered over several pay-rolls, and instances were observed where the same individual was paid two rates of pay for the same period on separate rolls, or on the same roll in different places. A consolidated roll (showing in columns the different items and the entire amount paid to each individual, and requiring but one entry of the name and but one signature from each man paid) would be a more explicit showing and save much clerical labor.

The accounts of the treasurer with the pension fund were examined and the balance stated was verified. Under the act of March 3, 1883, section 4, the pensions due to the inmates of the Home are paid to the treasurer of the Home and by him deposited to his official credit in the United States Treasury.

The governor, under authority from the board of commissioners, directs the treasurer to pay quarterly to each pensioner such a sum as he may think proper to allow him, and upon his discharge from the Home the entire balance then to his credit. It seems no unusual occurrence for an inmate to ask for his discharge as a means of obtaining all his pension money and after a few months' absence to come back seeking admission to the shelter of the Home. Possibly some plan should be devised to protect such men from themselves, or perhaps the treasurer might be freed from some of the labor and annoyances of handling such money unnecessarily. An inspection of the accounts will show that almost the entire amount received on this account is very soon disbursed to the men, more particularly during the summer months, and the treasurer then seems only a new step between the pensioner and the agent.

The balances to the credit of the permanent fund of the Home, created by the act of March 3, 1883, for the last three years were as follows:

September 30, 1888.....	\$1,793,898.86
September 30, 1889.....	2,272,266.61
September 30, 1890.....	2,345,529.43

The increase in this fund during the past year was only \$76,262.82 while the increase during the previous one was \$478,467.75. This large difference was due not to an increased expenditure but to a decrease in the amount of receipts, and sounds a warning note of the near approach of the time when the expenses of the Home must be brought within the limit of its annual income.

Quite an important item in this income is the interest received on the quarterly balances held by the Treasury and it is evidently important that the capital of the Home, the permanent fund, be not encroached on.

The legitimate annual income of the Home consists of amounts which accrue from the following sources during any given year:

- (1) The monthly contributions of 12½ cents from enlisted men in service.
- (2) Fines and forfeitures from enlisted men by sentence of court-martial.
- (3) Amounts forfeited by deserters, and unclaimed amounts due to the estates of deceased soldiers.
- (4) Interest on the permanent fund.

The total amount paid to the treasurer and the amount credited to

the permanent fund during the year ending September 30, 1890, was \$323,199.87; included in this amount was about \$105,000, which accrued from forfeitures and unclaimed moneys on rolls of prior years, leaving as the legitimate income of the Home for the the above period about \$218,199.87.

From the statements submitted by the treasurer of the Home it seems that the expenses of the Home during the same period were \$263,322.80. (Exhibit A). Deducting from the total expenses the amounts paid for new buildings, \$72,247.02, and the amount deposited to credit of permanent fund, \$3,015, would leave as the legitimate annual expense \$187,090.78. This sum is \$31,108.09 less than the estimated annual income. An ample margin should be left to provide for an increase in the number of beneficiaries as well as any increase in prices for necessary supplies, as it is observed, in comparing the above exhibit with a corresponding one for the previous year, that there was a decrease of nearly \$5,000 in the cost of subsistence in favor of last year. This was due largely to the prices paid under contract for beef, to wit, 2 cents per pound for corned beef and 3 for fresh beef.

The note for \$3,000 of Ascension Church, the only indebtedness reported due the Home from investments, has been paid with the interest due thereon and the amount placed to the credit of the permanent fund.

Since last report it is observed that steps have been taken to obtain the legislation deemed necessary to authorize the Treasurer of the United States to be the custodian of the funds set apart for the current expenses of the Home as he now is of the permanent and pensioners' funds. It is hoped that a measure so eminently proper and prudent will commend itself and insure its speedy enactment.

The average number of inmates remains about the same as shown by last year's reports, viz, 686. The cost of maintaining the inmates has been reduced from \$0.645 to \$0.539 per man per day, and the average amount paid for out-door relief from \$0.241 to \$0.227, while the average number of men to whom outdoor relief has been granted has increased from 314 to 420. (Exhibits A and B.)

The amounts paid for services during the month of October, 1890, as shown by the statement of the treasurer (Exhibits C and D) were as follows:

Civil employés:		
9 non-residents	\$455.00	
38 residents	1,596.00	
		\$2,051.00
47		
To these latter (38) board and lodging were furnished.		
Inmate employés, extra duty:		
15 band	189.00	
22 non-commissioned officers	297.00	
18 home building	120.00	
3 governor's office	40.00	
6 kitchen	65.00	
23 dining-room	207.00	
5 home police	43.50	
1 library	15.00	
24 grounds and roads	204.00	
15 dairy and farm	140.00	
7 shops	100.00	
9 miscellaneous	87.00	
4 treasurer's office	80.00	
27 hospital	389.00	
		1,976.50
179		
Total per month	4,027.50	
Total per year	48,330.00	

This amount does not include the amount paid to the harvest hands.

The garden account (Exhibit E) for the ten months ending October 31, 1890, shows at the prices credited a small debit balance for the 903 quarts of berries raised, 20 cords of wood cut and stored, and 24,799 plants raised. As this account is charged with the ornamentation of the grounds, an item whose market value can not be ascertained from prices current but yet a necessary part of the expenses incident to the maintenance of grounds set apart for pleasure, a debit balance is properly charged to this item.

The farm and dairy accounts (Exhibits F and G) for the same time show, at the prices credited for their products, a balance in favor of the farm of 40 per cent. on the amount expended, and from the dairy 107 per cent. on the amount of its expenses. The dairy herd, October 31, 1890, consisted of 44 milch cows, 13 heifers, 13 calves, and 2 bulls. The amount of milk produced during the ten months ending October 31, 1890, was 22,021 gallons. The cost of maintaining the dairy during this period, after deducting receipts from sales, etc., was \$2,656.86, an average cost of 12.1 cents per gallon for the milk. The dairy account is credited at the rate of 30 cents per gallon, while hospital and home mess are charged 15.87 cents a gallon on the statement of cost of provisions. The old soldiers appear to derive direct benefit from the milk and vegetables, and with the present force and acreage it seems this benefit may be increased. All the old soldiers may be given milk to drink daily.

From the statements furnished by the treasurer the vegetables of the farm and the milk from the dairy were distributed as follows:

Value of vegetables per farm account	\$5,797.95	
Less 720 bushels cow beets	288.00	
		5,509.95
To Home mess	\$4,172.18	
To Barnes Hospital	396.14	
		4,568.32
To inmates	4,568.32	
To officers	309.82	
		4,878.14
Elsewhere not accounted for		631.81
Gallons of milk per dairy account, ten months		22,021
To Home mess	11,178	
To Barnes Hospital	5,748	
		16,926
To inmates	16,926	
To officers	3,505 $\frac{1}{2}$	
		20,431 $\frac{1}{2}$
Elsewhere not accounted for		1,589 $\frac{1}{2}$

The above distribution of 11,178 gallons of milk to the Home mess for the period stated would give an average of 294 pints per day (See Exhibit J).

In addition to the amount of vegetables produced at the Home farm during the past ten months, it seems from Exhibit I, that it was necessary to expend \$1,828.75 for potatoes, onions, and cabbages. If it is cheaper to produce these vegetables than to buy them, as shown by the farm account, would it not be well to increase the acreage of the farm to meet the requirements in this respect?

The amount expended for repairs and purchases on the different buildings occupied by officers from January 1 to October 31, 1890, was \$239.96, and for construction and repairs of permanent buildings, \$48,593.69;

total, \$48,833.65. For the details of this disbursement, showing the amount expended on each building, see Exhibit K.

The chaplain, one doctor, and the treasurer receive compensation from the Home. The commissioned officers are furnished with quarters and fuel, and the following allowances and issues were made to them from January 1 to October 31, 1890 :

	Governor.	Deputy Governor.	Treasurer.	Surgeon.	Total.
Vegetables	\$76.22	\$72.53	\$79.97	\$82.10	\$309.82
Milk	273.60	273.60	230.85	273.60	1,051.65
Ice	41.41	46.79	46.70	46.13	181.03
Gas, including governor's and treasurer's office.....					331.75
Total.....	391.23	392.92	357.52	408.83	1,874.25

There are sixteen horses and nine mules owned and employed at the Home ; how they are employed, and the number of horses not so owned for which forage is furnished, is shown on Exhibit M.

A statement showing the expenditures for supplies and services made for the support of the Home during the months of January and July, 1890, is appended and marked Exhibit L.

The following statement taken from the vouchers of the treasurer will show the prices paid to the various dealers for supplies during October, 1890 :

	N. Auth.	C. C. Carroll.	R. A. Golden.	W. M. Galt.	S. R. Waters.	C. J. Kellogg.	Browning & Middleton.	N. W. Burchell.	J. F. Oyster.	G. T. Wade.	Wm. Holmead.	J. J. Hogan.	Hume & Co.
Bacon..... pound.....					\$0.09 $\frac{1}{2}$	\$0.09 $\frac{1}{2}$	\$0.08 $\frac{1}{2}$						
Fish..... do.....			\$0.08										
Fresh beef..... do.....		*\$0.03											
C. beef..... do.....		*.02											
Mutton..... do.....		.05											
Flour..... barrel.....				*\$4.95	6.00								
Graham..... do.....				5.25									
Beans..... pound.....					.03 $\frac{1}{2}$	.04							
Rice..... do.....					.06 $\frac{1}{2}$	.07	.06 $\frac{1}{2}$						
Coffee, green..... do.....					.21 $\frac{1}{2}$								
roasted..... do.....					.24	.24	.24						
Sugar A..... do.....					.06 $\frac{1}{2}$	.06 $\frac{1}{2}$	.06 $\frac{1}{2}$						
brown..... do.....					.05 $\frac{1}{2}$		.06						
C..... do.....						.06							
granulated..... do.....								\$0.07					
Vinegar..... gallon.....					.16								
Candles..... pound.....					.10								
Soap..... do.....					.04 $\frac{1}{2}$	.05							
Salt..... do.....					.005 $\frac{1}{2}$								
Salt..... sack.....					1.40								
Mustard..... pound.....					.25	.20	.22						
Pepper..... do.....					.20								
Pork sausage..... cwt.....	\$7.90												
Butter..... pound.....								\$0.19					
Chickens..... do.....										\$0.15			
Cheese..... do.....					11 $\frac{1}{2}$	.12		.13					
Codfish..... do.....					.07	.07	.06 $\frac{1}{2}$	.07 $\frac{1}{2}$					\$0.07
Currauts..... do.....						.07		.08					.06 $\frac{1}{2}$
Crackers, oyster..... do.....					.07		.07						.07
Crackers, soda..... do.....								.08					
Corn meal..... barrel.....						4.25	4.25						
Corn meal..... pound.....								.02					
Eggs..... dozen.....										.25			
Flavoring extract, lemon, dozen bottles.....								2.25					1.50
Flavoring extract vanilla..... dozen bottles.....								2.28					1.75

* Contract prices.

	N. Auth.	C. C. Carroll.	R. A. Golden.	W. M. Galt.	S. R. Waters.	C. J. Kellogg.	Browning & Middleton.	N. W. Burchell.	J. E. Oyster.	G. T. Wade.	Wm. Holmead.	J. J. Hogan.	Hume & Co.
Corn starch.....pound.....						\$0.07	\$0.07						
Corn starch farina do.....						.07	.10	\$0.11					
Ham.....do.....					\$0.11½	.13	.12½	{.12½ .12½					\$0.12½
Oysters.....gallon.....												\$0.75	
Oatmeal.....pound.....								.04					
Onions.....bushel.....									\$1.25				
Prunes.....pound.....						.07½		{.08 .10					.07
Raisins.....box.....						.00		.15					2.50
Raisins.....pound.....						.34	.40						
Tea.....do.....					.35								
Molasses.....gallon.....													.40
Tomatoes 3 pound can.....					.90		.95	.95					
Evaporated apples, pounds.....								.17					
Beer.....dozen bottles.....								.75					
Barley.....pound.....								.08					
Chocolate.....do.....								.37					
Corn.....dozen cans.....								1.20					
Macaroni.....pound.....								.12					
Royal baking powder, pound.....								.45					
Gelatine.....ounce.....								.07½					
Lemons.....dozen.....								.25					
Shrimps.....cans.....								.23					
Sauce, Harvey's.....bottle.....								.37½					
String beans.....doz. cans.....								1.00					
Peas.....do.....								2.12					

A field return for November 3, 1890, is appended, showing the number present for duty, sick, on extra duty, invalidated, absent with leave, and suspended; also the distribution of the inmates among the several buildings, with the number of cubic feet of bedroom space in the principal buildings. (See Exhibit N.)

Very respectfully,

Hon. REDFIELD PROCTOR,
Secretary of War.

J. C. BRECKINRIDGE,
Inspector General.

LIST OF EXHIBITS.

- A.—Estimate of the average cost of maintaining an inmate at the Home.
- B.—Statement relative to members on out-door relief.
- C.—Amounts paid to civil employes October, 1890.
- D.—Amounts paid to inmates (extra duty) October, 1890.
- E.—Garden account from January 1 to October 31, 1890.
- F.—Farm account from January 1 to October 31, 1890.
- G.—Dairy account from January 1 to October 31, 1890.
- H.—Statement of milk and vegetables furnished to the home mess and to Barnes Hospital from January 1 to October 31, 1890.
- I.—Statement of the quantity and kind of vegetables with cost of same, purchased and consumed from January 1 to October 31, 1890, in addition to those received from home farm during the same period.
- J.—Bill of Fare, U. S. Soldiers' Home, October 25 to November 3, 1890.
- K.—Amount expended repairs, purchases, and construction of permanent buildings.
- L.—Disbursements of the Treasurer of the U. S. Soldiers' Home for the months of January and July, 1890.
- M.—Horses, mules and transportation owned and forage furnished.
- N.—Field return for November 3, 1890, and distribution of inmates.

EXHIBIT A.

Estimate of the average cost of maintaining an inmate of the Home for one year at the United States Soldiers' Home, District of Columbia, from October 1, 1889, to September 30, 1890.

Furniture for officers' quarters, etc	\$602. 75
Compensation of the treasurer and of the clerk of board of commissioners.	2, 1 0. 00
Fuel.....	8, 032. 76
Expenses of the hospital for medicines, medical stores, spectacles, false teeth, materials for coffins, etc.....	1, 983. 14
Expenses of the hospital for mess and kitchen utensils, all running expenses, and pay of clinical assistant.....	2, 003. 26
Clothing.....	16, 344. 20
Subsistence stores, including special diet and stimulants for the sick, and ice	44, 735. 60
Articles for Home bakery, except flour, salt, hops, and potatoes	82. 63
Bedding for inmates, bedsteads, blankets, upholstering materials, etc....	287. 74
Farm and garden utensils, seeds, guano, manure, etc., cultivation of garden, ornamentation of grounds, and pay of farm, garden, dairy, and other employes.....	26, 622. 40
Mess and kitchen utensils and other articles (except bedding) for the Home.....	742. 42
Material and labor for general repairs to buildings, repair of roads and fences, purchase and repair of harness, vehicles, etc., purchase of mechanical tools.....	4, 123 09
Forage and medicines for home animals, articles used in stables, straw as bedding for inmates.....	2, 135. 81
Expenses of the library, governor, and treasurer's offices, postage and post-office box rent, stationery, etc., for commissioners' office, freight, telegrams, amusements.....	1, 372. 54
Incidental expenses, rent of telephone, hack hire, advertising, traveling expenses, professional services, expenses of Home chapel.....	850. 07
Religious services	1, 740. 00
Laundry work	4, 720. 71
Extra duty pay and monthly allowance to inmates.....	23, 970. 63
Gas.....	2, 920. 64
Purchase of animals	180. 00
Total cost.....	<u>145, 556. 39</u>
Average cost per man per year	212. 18
Average cost per man per month	17. 68
Average number of men, 686.	

Expenses of the Home during same period, not included in the foregoing statement.

Transportation furnished inmates en route to the Home.....	660. 73
Refunded to claimants as heirs of deceased soldiers.....	1, 107. 67
Refunded to claimants as heirs of deceased inmates	1, 861. 19
Commutation to members of the Home residing outside.....	34, 310. 81
Board and medical treatment of members of the Home in Government Hospital for the Insane.....	2, 206. 43
Funeral expenses of members of the Home residing outside	300. 00
Payments on account of new buildings.....	72, 247. 02
Permanent improvements, bridges, paving, sewerage, etc.....	2, 057. 56
Deposited in United States Treasury to the credit of the permanent fund, proceeds of a note of Ascension Church, Washington, D. C., for \$3,000, with interest, taken in part payment for Y. M. C. A.....	3, 015. 00
	<u>117, 776. 41</u>
Amount as per foregoing statement.....	<u>145, 556. 39</u>
Total expenses	<u>263, 322. 80</u>

EXHIBIT B.

Statement relative to members of the United States Soldiers' Home, District of Columbia, on out-door relief.

Average number for one year, from October 1, 1889, to September 30, 1890	420
Average amount paid per man for one year	\$51.64
Average amount paid per man for one month	6.80½
Highest amount paid per man for one month	12.00
Lowest amount paid per man for one month	2.00

RICH. C. PARKER,
Brevet Major, U. S. Army, Secretary and Treasurer.

EXHIBIT C.

Report of civil employes of the Home, October 31, 1890.

1 gardener..... per month ..	\$50.00	1 plumber	per month ..	\$75.00
1 farm overseer..... do	50.00	1 fimsmith	do	75.00
6 farm hands, at \$33..... do	198.00	1 blacksmith	do	75.00
1 man in charge of dairy..... do	50.00	1 engineer of heating apparatus..... do	do	75.00
2 assistant dairymen, at \$21..... do	42.00	1 engineer assistant	do	60.00
1 driver-dairy wagon	19.00	3 firemen, at \$28	do	84.00
1 cook for dairymen	8.00	1 engineer, water works..... do	do	50.00
1 chief cook, Home mess	50.00	1 clinical assistant to attending surgeon.....	per month.	100.00
1 assistant cook, Home mess	25.00	6 laborers in garden, at \$1.25 per day.....	195.00	
1 chief baker	50.00	2 laborers on farm, at \$1.25 per day	65.00	
1 assistant baker	45.00			
1 driver ambulance..... do	20.00			
1 man in charge of horses, harness, etc., for the treasurer, per month.	25.00			
1 clerk to secretary and treasurer, per month.	100.00			
		Total		1,596.00

Other employes of the Home, not included above.

1 supervising architect .. per month..	\$50.00	Rev. J. A. Buck, Episcopal, per month	\$50.00
1 inspector of material and works, new building	100.00	Miss B. F. Snively, Episcopal choir, per month	15.00
1 clerk to board of commissioners, per month	100.00	Rev. Gustav Facinus, German Lutheran, per month	25.00
2 clerks, Second Auditor's Office, on Soldiers' Home accounts, each, per month	100.00		
The clergy of St. Dominick's Church, with choir (Catholic)..... per month..	65.00	Total	455.00
		Grand total per month.....	2,051.00
		Grand total per year.....	24,612.00

RICH. C. PARKER,
Brevet Major, U. S. Army, Secretary and Treasurer.

EXHIBIT D.

Inmates on extra duty in the United States Soldiers' Home, District of Columbia, October 31, 1890.

No.	Names.	Rate of pay per month.	On what work employed.
1	Evaus, Thomas	\$30.00	Sergeant-major and clerk.
2	Campbell, Alexander	18.00	Commissary-sergeant.
3	Tolson, Robert L	18.00	Quartermaster-sergeant.
4	Gillies, Charles F	15.00	First sergeant, Scott building.
5	Drost, A. P	15.00	First sergeant, Sheridan building.
6	O'Brien, James	15.00	First sergeant, King building.
7	Davin, Patrick	15.00	First sergeant, Sherman building.
8	Murray, Richard	15.00	First sergeant, Anderson building.
9	Dickenson, R. B	12.00	Floor sergeant, Scott building.
10	Kernahan, William	12.00	Floor sergeant, Sherman building.
11	Blau, John	12.00	Floor sergeant, Sheridan building.
12	Stauffer, Rudolph	12.00	Floor sergeant, King building.
13	Corcoran, John	12.00	Floor sergeant, Sheridan building.
14	Gaffney, William	12.00	Floor sergeant, Scott building.
15	Moran, James	12.00	Floor sergeant, Sherman building.
16	Kenny, John	12.00	Floor sergeant, Scott building.
17	Johnson, Robert.....	10.00	Corporal, charge of stables.

EXHIBIT D.—Inmates on extra duty in the United States Soldiers' Home, etc.—Continued.

No.	Names.	Rate of pay per month.	On what work employed.
18	Ellerhest, Henry	\$10.00	Corporal, laundryman.
19	Sugden, Reuben	10.00	Corporal, Scott building.
20	Thompson, Thomas	10.00	Corporal, charge of floor, Anderson building.
21	Eustace, Joseph	10.00	Corporal, charge of billiard tables, etc.
22	Finen, John	10.00	Corporal, charge of basement, Scott building.
		297.00	
<i>Home band.</i>			
1	Murray, Richard*	15.00	Leader.
2	Thompson, Thomas	12.00	First-class musician.
3	Clancey, James	20.00	Do.
4	Muehlhauser, Frederick	20.00	Do.
5	Sullivan, Eugene L.	20.00	Do.
6	Shereborne, Thomas	12.00	Do.
7	Graw, John	12.00	Do.
8	Fischer, John M.	12.00	Do.
9	Winkler, William	20.00	Do.
10	Aitken, George	8.00	Second-class musician.
11	Cline, Philipp	8.00	Do.
12	Urquhart, John	8.00	Do.
13	McGrath, Henry	8.00	Do.
14	O'Sullivan, Thomas	8.00	Do.
15	Watt, Howard	6.00	Third-class musician.
		189.00	
<i>Home buildings.</i>			
1	Barry, Dennis	5.00	Charge of bath and wash rooms.
2	Bullard, John E.	7.00	Assistant laundryman.
3	Cline, Philipp	7.00	Charge of property and floor police, Anderson building.
4	Conway, John	7.00	Charge of main water-closet.
5	Connolly, William	10.00	Night watchman.
6	Duckworth, John	5.00	Charge of bath and wash rooms.
7	Fortner, Valentine	7.00	Charge of amusement room, Sheridan building.
8	Horan, James	7.00	Floor police for invalids.
9	Lauthood, Ralph	7.00	Laborer in amusement and billiard room.
10	Murphy, Richard	10.00	Night watchman.
11	Norris, Thomas	5.00	Charge of bath and wash rooms.
12	O'Connor, Michael	7.00	Charge of main urinal, bath and wash rooms.
13	Stevens, R. W.	7.50	Charge of amusement room, King building.
14	Stauf, William J.	7.00	Reader to the blind.
15	Shifferling, Christian	5.00	Charge of bath and wash rooms.
16	Smith, W. R.	5.00	Do.
17	Taylor, Daniel	5.00	Do.
18	Young, John	7.00	Assistant laundryman.
		120.50	
<i>Governor's office.</i>			
19	Benson, Thomas	20.00	Clerk.
20	Sugden, Reuben†	10.00	Do.
21	Senni, Charles	10.00	Governor's orderly.
		40.00	
<i>Kitchen.</i>			
22	Baker, Ishmael	10.00	Assistant cook.
23	Boyne, Thomas	10.00	Do.
24	Berry, Francis S.	10.00	Do.
25	Meinart, Charles	10.00	Do.
26	Robinson, James	10.00	Do.
27	Walton, Frank	15.00	Assistant cook and butcher.
		65.00	
<i>Dining room.</i>			
28	Brockman, John	9.00	Dining room police.
29	Butterworth, William H.	9.00	Do.
30	Burke, James	9.00	Do.
31	Boon, John D.	9.00	Do.
32	Dillon, Richard	9.00	Do.

* Paid also as first sergeant, Anderson building. † Paid also as corporal Scott Building.

EXHIBIT D.—Inmates on extra duty in the United States Soldiers' Home, etc.—Cont'd.

No.	Names.	Rate of pay per month.	On what work employed.
<i>Dining room—continued.</i>			
33	Enright, Thomas	\$9.00	Dining room police.
34	Foley, John	9.00	Do.
35	Grable, William	9.00	Do.
36	Haack, Julius	9.00	Do.
37	Hutzler, Louis	9.00	Do.
38	Heens, Michael	9.00	Do.
39	Hall, Francis A.	9.00	Do.
40	Johnson, Alfred	9.00	Do.
41	Keefe, Patrick	9.00	Do.
42	Knoop, Alexander C. F.	9.00	Do.
43	Kruger, August	9.00	Do.
44	Lane, Patrick	9.00	Do.
45	Meyer, Robert	9.00	Do.
46	Malcomson, Alexander	9.00	Do.
47	Mantle, Thomas J.	9.00	Do.
48	O'Connell, John	9.00	Do.
49	Prevost, Henry	9.00	Do.
50	Perigo, Giovanni	9.00	Do.
		207.00	
<i>Home police.</i>			
51	Branch, Albert	9.00	Home and general police.
52	Kane, William	9.00	Do.
53	O'Connell, Maurice	9.00	Do.
54	Rafter, William	7.50	Do.
55	Williamson, John	9.00	Do.
		43.50	
<i>Library.</i>			
56	Kerschhoff, Adolph	15.00	Book-binder.
<i>Grounds and roads.</i>			
57	Burns, Edward	7.00	Gate keeper.
58	Broderson, Otto	9.00	Laborer on roads.
59	Boyd, John	9.00	Do.
60	Burke, Michael	9.00	Do.
61	Bunton, Peter	7.00	Charge of lamps on home grounds.
62	Cook, Thomas	7.00	Gate keeper.
63	Costello, James	9.00	Laborer on roads.
64	Cushing, Thomas	9.00	Do.
65	Cole, John H.	9.00	Do.
66	Carr, James	9.00	Do.
67	Dolan, John	7.00	Gate keeper.
68	Dillon, Michael	9.00	Laborer on roads.
69	Emmett, Samuel	9.00	Do.
70	Hastings, Mathias	9.00	Do.
71	Jensen, Wilhelm	9.00	Do.
72	Murriu, Patrick	9.00	Do.
73	McCann, Henry	9.00	Do.
74	Noonan, James	9.00	Do.
75	O'Hearn, Michael	9.00	Do.
76	O'Donnell, James	9.00	Do.
77	Riley, John	9.00	Do.
78	Slager, August	7.00	Gate keeper.
79	Wilson, W. W.	9.00	Laborer on roads.
80	Whelan, James	7.00	Gate keeper
		204.00	
<i>Dairy and farm.</i>			
81	Barry, William J.	8.00	Laborer on farm.
82	Durrhack, Adolph	10.00	Cattle herder.
83	Harding, William	9.00	Laborer on farm.
84	Hesserooy, George	9.00	Do.
85	McMahon, Michael	9.00	Do.
86	Parrum, John D.	9.00	Laborer on grounds and garden.
87	Quinn, John	10.00	Cattle herder.
88	Kann, Price	9.00	Laborer on farm.
89	Sexton, Philip	9.00	Laborer on grounds and garden.
90	Schmidt, Daniel	10.00	Cattle herder.
91	Steinback, Henry	10.00	Watchman on farm.

EXHIBIT D.—Inmates on extra duty in the United States Soldiers' Home, etc.—Continued.

No.	Names.	Rate of pay per month.	On what work employed.
<i>Dairy and farm—continued.</i>			
92	Stewart, Andrew J	9.00	Laborer on farm.
93	Smith, Edward	9.00	Do.
94	Williams, George	9.00	Do.
95	Murbeck, Valentine	10.00	Cattle herder.
		140.00	
<i>Shops and woodhouse.</i>			
96	Burke, DeWitt C	15.00	Painter.
97	Cooper, George A	15.00	Carpenter.
98	Fowler, Richard	15.00	Painter.
99	Kortman, Louis	15.00	Upholsterer.
100	Meehan, Patrick	10.00	Plumber's helper.
101	McEndroe, John W	15.00	Painter.
102	Wegner, Edward	15.00	Carpenter.
		100.00	
<i>Miscellaneous.</i>			
103	Bursch, John J	9.00	Laborer in stables.
104	Dean, Lawrence	15.00	Mail carrier.
105	Deikel, Anthony	9.00	Charge of ice and root houses.
106	Fay, John	10.00	Messenger to attending surgeon.
107	Mair, Charles	9.00	Cart driver (commissary).
108	Gorman, William	10.00	Laborer in engine house (pump).
109	Grosch, Andrew	9.00	Cart driver (laundry).
110	Starr, Louis	9.00	Cart driver (mail).
111	Turner, William	7.00	Laborer in church.
		87.00	
<i>Treasurer's office.</i>			
112	Comber, John B	20.00	Clerk and attending telephone.
113	Heyn, William	30.00	Clerk.
114	Murray, James	10.00	Orderly.
115	O'Connor, Jeremiah	20.00	Clerk.
		80.00	
<i>Hospital.</i>			
116	Buckley, William	9.00	Hospital attendant.
117	Brown, Elisha P	18.00	Nurse.
118	Conroy, John	10.00	Fireman.
119	Condon, John	20.00	Cook.
120	Collins, Henry	20.00	Wardmaster.
121	Exell, Christian	9.00	Hospital attendant.
122	Fortner, Charles E	10.00	Charge of dining room.
123	Fagan, Martin	20.00	Wardmaster.
124	Gray, William H	20.00	Do.
125	Green, John	18.00	Nurse.
126	Geiger, Frederick	9.00	Hospital attendant.
127	Harrison, R. H.	20.00	Wardmaster.
128	Hagans, James	20.00	Do.
129	Hackett, Michael	9.00	Hospital attendant.
130	Hodge, Charles	99.00	Do.
131	Lehane, Timothy B	15.00	Druggist.
132	McMurray, James B. G	18.00	Nurse.
133	Mason, William	10.00	Assistant cook.
134	Muller, William	9.00	Hospital attendant.
135	McMillan, Peter	18.00	Nurse.
136	Niemer, Gustave	9.00	Hospital attendant.
137	O'Brien, Dennis	9.00	Do.
138	Packard, Charles E	20.00	Wardmaster.
139	Ryan, Thomas W	9.00	Hospital attendant.
140	Regan, James	5.00	Librarian.
141	Whelan, M. J	18.00	Nurse.
142	Wright, Addison	18.00	do.
		389.00	

RICH. C. PARKER,
Bvt. Major U. S. Army, Secretary and Treasurer.

EXHIBIT E.

Garden account United States Soldiers' Home, District of Columbia, from January 1, 1890, to October 31, 1890, consolidated.

DR.		CR.	
To labor, fertilizers, seeds, tools, fuel, and implements.....	\$3, 226. 51	By 505 quarts strawberries.....	\$60. 60
		69 quarts raspberries.....	13. 40
		20 quarts currants.....	3. 00
		30 quarts gooseberries.....	2. 10
		279 quarts blackberries.....	36. 27
		20 cords wood cut and stored.....	130. 00
	•	24,790 plants raised during season.	2, 545. 75
		balance to debit of the garden expended in improvements of grounds.....	429. 39
	3, 220. 51		3, 220. 51

RICH. C. PARKER,
Bvt. Major U. S. Army, Secretary and Treasurer.

EXHIBIT F.

Farm account of the United States Soldiers' Home, District of Columbia, from January 1, 1890, to October 31, 1890, consolidated.

DR.		CR.	
To labor, forage, fuel, fertilizers, implements, seeds, repairs, etc.....	\$80, 097. 06	By 6,107 heads lettuce.....	\$141. 76
By balance to credit of farm.....	3, 300. 89	89 bushels martynias.....	178. 00
	11, 397. 95	3 $\frac{1}{2}$ bushels okra.....	6. 37
		16 $\frac{1}{2}$ bushels onions.....	21. 08
		10,550 bunches onions.....	147. 47
		913 bunches parsley.....	59. 02
		7 $\frac{1}{2}$ bushels peas.....	5. 91
		69 bushels parsnips.....	51. 28
		1,877 $\frac{1}{2}$ bushels potatoes.....	2, 155. 21
		80 $\frac{1}{2}$ bushels sweet potatoes.....	60. 63
		23 $\frac{1}{2}$ bushels radishes.....	38. 22
		268 bunches radishes.....	5. 36
		2, 090 bunches rhubarb.....	51. 21
		10 $\frac{1}{2}$ bushels salsify.....	12. 66
		153 $\frac{1}{2}$ bushels spinach.....	68. 10
		39 $\frac{1}{2}$ bushels summer squash.....	20. 58
		47,075 pounds winter squash.....	713. 28
		415 $\frac{1}{2}$ bushels tomatoes.....	261. 41
		227 bushels turnips.....	79. 21
		9 $\frac{1}{2}$ bushels green pepper.....	9. 06
		350 tons hay, \$16 per ton.....	5, 600. 00
			11, 397. 95
CR.			
By 690 bunches asparagus.....	58. 86		
179 $\frac{1}{2}$ bushels beets.....	155. 10		
417 bunches beets.....	9. 35		
720 bushels cow beets.....	288. 00		
14,810-heads cabbage.....	780. 79		
1 bushel carrots.....	1. 00		
783 stalks celery.....	46. 92		
160 $\frac{1}{2}$ bushels cucumbers.....	137. 59		
16 $\frac{1}{2}$ bushels lima beans.....	12. 84		
20 $\frac{1}{2}$ bushels snap beans.....	15. 66		
488 dozen ears green corn.....	83. 12		
532 egg plants.....	20. 63		
1,143 pounds horse radish.....	45. 72		
204 bushels kale.....	56. 60		

RICH. C. PARKER,
Bvt. Major U. S. Army, Secretary and Treasurer.

EXHIBIT G.

Dairy account United States Soldiers' Home, District of Columbia, from January 1, 1890, to October 31, 1890, consolidated.

DR.		CR.	
To labor, forage, rations, tools, fuel, and repairs	\$3,691.29	By 22.020½ gallons milk, at 30 cents per gallon	\$6,608.26
By balance to credit of the dairy	3,949.40	sale of 28 calves	181.32
		sale of 2 cows	35.55
		services of bulls	22.50
		increase in value of 7 heifers	175.00
		increase in value of 8 calves	120.00
		1,460 loads of manure to the farm	511.00
		error in milk account for month of February, 1890	9.06
	7,640.69		7,640.69

The dairy herd October 31, 1890, consisted of 44 milch cows, 13 heifers, 13 calves, and 2 bulls.

RICH. C. PARKER,
Bvt. Major U. S. Army, Secretary and Treasurer.

EXHIBIT H.

Statement of milk and vegetables furnished to the Home mess and to Barnes Hospital by the Home dairy and Home farm from January 1 to October 31, 1890.

	Value of vegetables.	Gallons of milk.
Home mess	\$4,172.18	11,178
Barnes hospital	396.14	5,748
Total	4,568.32	.....

Average number of gallons per month for Home mess

Average number of gallons per month for hospital

Average number of men in the Home and hospital during same period

The dairy is credited with the market price of milk, 30 cents per gallon, but the Home and hospital are charged only the cost of production per gallon, 15.87 cents.

RICH. C. PARKER,
Bvt. Major U. S. Army, Secretary and Treasurer.

EXHIBIT I.

Statement of the quantity and kind of vegetables, with cost of same, purchased and consumed from January 1, 1890, to October 31, 1890, at United States Soldiers' Home, District of Columbia, in addition to those received from the Home farm during the same period.

Date of purchase.	Potatoes.	Onions.	Cabbages.	Cost.
1890.	<i>Bushels.</i>	<i>Barrels.</i>	<i>Barrels.</i>	
January	350	7	3	\$273. 00
February	280	13	3	258. 25
March	315	5	3	258. 00
April	315	5	4	311. 00
May	280	4	4	280. 00
June	180	3	*47	313. 00
July	85	$\frac{1}{2}$		98. 00
August		1		5. 00
September		$1\frac{1}{2}$	2	13. 50
October		$3\frac{1}{2}$		19. 00
Total	1, 805 \$1, 458. 00	43 $\frac{1}{2}$ \$190. 75	*66 \$180. 00	1, 828. 75

* And 500 heads.

RICH. C. PARKER,
Bvt. Major U. S. Army, Secretary and Treasurer.

EXHIBIT J.

Bill of fare, United States Soldiers' Home.

Saturday, October 25:

Breakfast: Sliced bacon, bread, butter, and coffee.

Dinner: Corned beef and cabbage, potatoes, bread, and 352 pints of milk.

Supper: Bread, butter, and tea.

Sunday, October 26:

Breakfast: Corned-beef hash, bread, and coffee.

Dinner: Roast beef, mashed potatoes, cucumber pickles, farina pudding, bread, and 320 pints of milk.

Supper: Bread, butter, and tea.

Monday, October 27:

Breakfast: Sliced ham, bread, and coffee.

Dinner: Bacon, stewed turnips, potatoes, bread, and 360 pints of milk.

Supper: Bread, cheese, butter, and tea.

Tuesday, October 28:

Breakfast: Beef stew, bread, and coffee.

Dinner: Vegetable soup, roast beef, potatoes, bread, and 352 pints of milk.

Supper: Bread, butter, and tea.

Wednesday, October 29:

Breakfast: Corned-beef hash, bread, and coffee.

Dinner: Corned beef, stewed pumpkins, potatoes, bread, and 368 pints of milk.

Supper: Bologna sausage, bread, and tea.

Thursday, October 30:

Breakfast: Fresh pork sausage, bread, and coffee.

Dinner: Roast pork, mashed potatoes, cucumber pickles, bread, and 320 pints of milk.

Supper: Stewed prunes, bread, butter, and tea.

Friday, October 31:

Breakfast: Boiled codfish with cream sauce, potatoes, bread, butter, and coffee.

Dinner: Oyster soup, sliced cold beef, rice pudding, bread, and 352 pints of milk.

Supper: Stewed potatoes, bread, butter, and tea.

Saturday, November 1:

Breakfast: Sliced bacon, bread, butter, pickled beets, and coffee.

Dinner: Bean soup, fresh boiled beef, potatoes, bread, and 376 pints of milk.

Supper: Bread, butter, and tea.

Sunday, November 2:

Breakfast: Corned-beef hash, bread, and coffee.

Dinner: Roast beef, mashed potatoes, cucumber pickles, blanc mange, bread, and 356 pints of milk.

Supper: Bread, sweet cake, butter, and tea.

Monday, November 3:

Breakfast: Sliced ham, bread, and coffee.

Dinner: Bacon and cabbage, potatoes, bread, and 356 pints of milk.

Supper: Bread, cheese, butter, and tea.

EXHIBIT K.

Amounts expended for repairs and purchases on the different buildings occupied by officers during the period as follows: January to October, 1890, both inclusive.

House No. 1. Quarters of governor	\$145.07
House No. 2. Quarters of deputy governor	51.00
House No. 3. Quarters of treasurer	37.74
House No. 4. Quarters of surgeon	6.15
	239.96
On account of construction and repairs of permanent buildings:	
Sherman building, repairs	27.63
Center-wing building, repairs and construction	11,498.95
Scott building, repairs and improvements	27,701.83
Boiler house, repairs and cost of the inspection of boilers	538.61
Pump house, repairs new pump and improvement of water supply	816.18
Home bakery, construction of bake oven, etc	519.42
Dead house, construction	3,779.84
Chapel, repairs	36.30
Sheridan building, conduit	366.15
Ivy gate house	1.10
New cart shed and root house for stable and garden	107.68
Hospital stewards quarters, construction	3,200.00
	48,593.69

RICH. C. PARKER,
Brevet Major U. S. Army, Secretary and Treasurer.

EXHIBIT L.

Disbursements of the treasurer of the United States Soldiers' Home, Washington, District of Columbia, for the months of January and July, 1890.

PURCHASE OF PROVISIONS.

Articles purchased.	January, 1890.		July, 1890.	
	Quantities.	Value.	Quantities.	Value.
Bread, white	8,260	\$289.10		
Bacon	2,375	196.14	2,385	\$182.32
Fish, fresh	2,285	139.50		
Beef, fresh	11,899	637.19	9,070½	272.12
Beef, corned	3,582	94.08	3,600	72.00
Mutton	1,884	108.13	315	15.75
Flour	29	155.00	60	297.00
Beans	300	11.09	400	14.33
Rice	200	12.50	390	24.97
Coffee, roasted	1,060	240.20	900	208.50
Sugar	3,142	196.80	2,882	176.45
Vinegar	96	17.28	45	8.10
Candles	24	2.64		
Soap	720	36.00	540	27.00
Salt	800	6.20	450	2.50
Mustard	20	8.00	30	6.20
Pepper	10	3.00	30	5.80
Ice	16,440	69.05	51,490	151.90
Coffee, green	20	3.80	20	4.00
Beer	36	2.25	48	2.50
Butter	1,280	268.46	2,427	428.20
Chickens	54	7.56	46½	6.98
Cheese	346	40.81	666	74.18
Codfish	900	60.31	980	87.55
Currants	10	.60	40	2.70
Crackers, soda	26	2.08	55	4.13
Cabbage	1	2.50		
Cabbage	2	6.00		

EXHIBIT L.—Disbursements of the treasurer of the United States Soldiers' Home, etc.—
Continued.

PURCHASE OF PROVISIONS—Continued.

Articles purchased.	January, 1890.		July, 1890.	
	Quantities.	Value.	Quantities.	Value.
Corn meal.....pounds..	40	\$0.40	235	\$4.78
Apples, dried.....do.....	30	1.50	100	9.70
Eggs.....dozen.....	180	34.20	360	64.80
Flavoring extract, lemon.....bottles.....	12	1.75	12	1.50
Ham.....pounds.....	2,147½	258.03	2,415½	295.93
Gelatine.....boxes.....	4	.50		
Lard.....pounds.....	50	3.00	56	4.20
Oranges.....boxes.....	49	122.50		
Oat meal.....pounds.....	60	1.95	150	4.50
Onions.....barrels.....	7	19.50		
Potatoes.....bushels.....	350	245.00	35	35.00
Prunes.....pounds.....	345	20.25	50	3.50
Baking powder.....do.....	3	1.20	6	2.40
Raisins.....do.....	10	1.50	15	2.25
Molasses.....gallons.....	52	17.68		
Salsoda.....pounds.....	190	2.63		
Sherry.....gallons.....	4	14.00	2	7.00
Tea.....pounds.....	127	48.26	180	60.96
Pies, mince-meat.....number.....	375	56.25	25	3.75
Clams.....gallons.....	50	25.00	175	131.25
Lemons.....dozen.....	2	.40	11	2.70
Tomatoes.....cans.....	684	53.15	432	32.05
Green corn.....do.....	48	3.20	12	.85
Farina.....pounds.....	5	.45	40	2.80
Sugar, granulated.....do.....	40	3.30	10	.65
Sugar, powdered.....do.....	2	.15	2	.16
Cracked wheat.....do.....	200	7.75		
Sausage, Bologna.....do.....	695	55.60		
Sausage, fresh pork.....do.....	2,140	192.60		
Pork, fresh.....do.....	853	76.77	375	29.62
Cake.....loaves.....	680	54.40		
Pickles.....barrels.....	2	19.75	2	23.00
Pickles.....number.....	100	65	400	3.20
Barley.....pounds.....			10	.55
Crackers, oyster.....do.....			28	2.10
Chocolate.....do.....			8	2.84
Peaches, dried.....do.....			158	14.60
Flavoring extract, vanilla.....bottles.....			14	2.25
Mess pork.....barrels.....			14	205.50
Macaroni.....pounds.....			6	.60
Oysters.....gallons.....			50	37.50
Cinnamon.....pounds.....			4	1.60
Sauce, Harvey's.....bottles.....			1	.75
Cornstarch.....pounds.....			20	1.30
Shrimps.....cans.....			3	.75
String beans.....do.....			16	1.20
Mackerel.....number.....			8	1.60
Nutmegs.....ounces.....			4	.18
Pies, apple.....number.....			305	45.75
Pig's feet.....kegs.....			10	21.00
Tripe.....do.....			2	3.50
Onions.....bushels.....			2	3.00
Potatoes.....barrels.....			20	60.00
Gelatine.....pounds.....			213	1.06
Total.....		4,011.54		3,189.36

EXHIBIT L.—Disbursements of the treasurer of the United States Soldiers' Home, etc.—Continued.

SERVICES RENDERED.

	January, 1890.	July, 1890.
Secretary and Treasurer	\$75.00	\$75.00
Clinical assistant to attending surgeon	100.00	100.00
Religious services in chapel	150.00	180.00
Laundry work	447.18	413.93
Removing night soil	50.00	50.00
Hauling manure to the grounds	158.33	.....
Settlement of estates of deceased soldiers and inmates	15.00	566.01
Funeral expenses of deceased members of the Home on out-door relief	25.00	50.00
Repayment to Quartermaster's Department for transportation furnished discharged soldiers en route to the Home	85.99	138.92
Pay of clerk to Board of Commissioners	100.00	100.00
Pay of two clerks on Home accounts in Second Auditor's office	200.00	200.00
Pay of clerk to the secretary and treasurer	100.00	.....
Pay of two clerks to the secretary and treasurer .....	.....	183.33
Pay of gardener and florist	50.00	50.00
Pay of overseer of farm	50.00	50.00
Pay of overseer of dairy	50.00	50.00
Pay of laborers, garden and grounds	127.50	199.00
Pay of farm hands	198.00	386.75
Pay of two assistants at dairy	43.00	42.00
Pay of driver of dairy wagon	18.00	19.00
Pay of cook for dairymen	8.00	8.00
Pay of plumber	85.00	85.00
Pay of tinner	75.00	75.00
Pay of blacksmith	75.00	75.00
Pay of engineer at water works	50.00	50.00
Pay of engineer and assistant engineer at boiler house	135.00	135.00
Pay of firemen, boiler house	82.13	84.00
Pay of chief cook, assistant cooks, and butcher	100.00	76.00
Pay of chief baker and assistant baker	25.50	95.00
Pay of driver, hospital ambulance	18.00	20.00
Pay of laborer in care of harness and horses	25.00	25.00
Steamfitting, center wing, main buildings	42.25	.....
Labor, stowing coal	12.25	.....
Labor on miscellaneous work	8.44	17.94
Labor, paving gutters .....	.....	80.00
Labor, gravel pit .....	.....	55.62
Post-office box rent, freight, drayage, postage stamps, etc.	14.66	37.89
Making caps and aprons for inmate employes in kitchen and dining room .....	.....	9.15
Tuning piano in amusement room .....	.....	2.50
Extra-duty men :*		
Hospital .....	.....	6.00
Non-commissioned officer	9.60	.....
Band	118.60	155.20
Cornet player in chapel .....	.....	5.00
Roads and grounds	16.50	.....
Dining room	4.50	.....
Total	2,948.43	3,900.24

* The extra-duty men, except the band, are paid bi-monthly. Payments for service in January and July were made on the February and August rolls.

PURCHASE OF GENERAL SUPPLIES.

Medicines, hospital supplies, stationery, trimmings for coffins, refrigerator, spectacles, purchase and repair of surgical instruments, and miscellaneous articles for Barnes Hospital	253.11	309.61
Steam fittings, hardware, plumbing, and blacksmithing material	483.82	91.99
Bed cloth, balls, etc., for billiard tables	25.00	1.90
Manure and other fertilizers	50.00	25.00
Fuel	1,437.60	.....
Library, books, stationery, and subscription for newspapers, magazines, etc.	277.44	33.26
Paints and oils for general repairs, etc.	6.75	72.05
Boyd's Washington City Directory for 1890	5.00	.....
Gas	324.50	122.75
Forage, grain, bran, etc., for cattle, dairy	166.10	143.17
Stationery	89.10	.....
Home band, sheet music, and stripes for trousers .....	.....	14.97
Step ladders for use in garden, grounds, etc. ....	.....	6.75
Furniture for officers' quarters .....	.....	10.80
Furniture, mosquito netting, and corn brooms for use in Home buildings .....	.....	97.48
Articles used in Home bakery .....	.....	5.98
Repair of harness, wagons, carts, etc., and articles used in stable .....	.....	18.95
Rope for halliards of flagstaff .....	.....	2.80
Lumber for repairing bridges .....	.....	27.32
Total	3,118.42	984.66

EXHIBIT L.—Disbursements of the treasurer of the United States Soldiers' Home, etc.—
Continued.

COMMUTATIONS.

Per statement and cash book.	January, 1890.	July, 1890.
Commutation to non-resident inmates of United States Soldiers' Home ("out-door commuters").	369.60	887.00

PERMANENT IMPROVEMENTS.

Pay of supervising architect	50.00	\$50.00
Balance due for plans, specifications, etc., for center wing	1,084.23	.....
Part payment for construction of center wing	100.00	.....
Part pay for improvements of Scott Building .....	.....	14,400.00
Pay of inspection of work and material improvements Scott Building .....	.....	100.00
Conduit, Sheridan Building .....	.....	52.50
Improvement water supply .....	.....	83.00
Total	9,184.23	14,685.50

RECAPITULATION OF EXPENDITURES.

Purchase supplies, Abstract A	\$3,118.43	\$984.66
Purchase provisions, Abstract B	4,011.54	3,189.36
Services rendered, Abstract C	2,948.43	3,900.24
Pay of commuters, Abstract D	369.60	887.00
Permanent improvements, Abstract E	9,184.23	14,685.50
Total	19,632.22	23,646.76

RICH. C. PARKER,
Brevet Major, U. S. Army, Secretary and Treasurer.

EXHIBIT M.

Number of horses and mules owned and employed at United States Soldiers' Home, District of Columbia, October, 1890.

How employed.	No.
Horses:	
For use of the governor of the Home	3
For carts on roads, grounds, and police	4
For laundry wagon	2
For market wagon	2
For mail wagon	1
For hospital ambulance	2
For dairy wagon	1
Sick	1
Total	16
Mules:	
For carts on roads, grounds, and police	1
For use on farm	8
Total	9

Transportation.

	Governor.	Deputy governor.	Treasurer.
Number of horses, use of	3		
Carriage and harness:			
Single	1		
Double	1		
Buggy and single harness			1
Forage for horses		2	2

RICH. C. PARKER,
Brevet Major, U. S. Army, Secretary and Treasurer.

EXHIBIT N.

*Field return of the inmates of the United States Soldiers' Home, near Washington, D. C.,
November 3, 1890.*

Present:		Present—Continued.	
For duty:		Temporarily admitted	54
Governor	1	Invalided:	
Deputy governor	1	Privates	95
Secretary and treasurer	1	Total	681
Surgeon	1	Aggregate	685
Hospital steward	1	On outside commutation	492
Sergeants	20	Insane asylum	17
Corporals	8	Absent:	
Privates	301	With leave:	
Sick:		Privates	63
Privates	71	Suspended	17
Extra duty:		Present and absent:	
Non-commissioned officers	1	Total	1,270
Privates	180	Aggregate	1,274
On outdoor relief (beneficiaries)			492
In insane asylum (inmates)			17
On furlough (inmates)			63
On suspension (inmates)			17
			589
Present distributed among the buildings as follows:			
Scott building			*162
Sherman building			†124
Sheridan building			‡134
King building			§95
Anderson building			¶34
North Gate House			4
Eagle Gate House			2
West Gate House			1
Southeast Gate House			1
Married men, old farm house			6
Hospital			100
Married men, who sleep outside			17
Whitney Avenue Gate House			1
Total inmates present			681
Total inmates present and absent			1,270
Permanent inmates present and absent			713
Temporary inmates present and absent			65
Beneficiaries on out-door relief			492
Total			1,270

The first man admitted as an inmate of the home (military asylum) was William Daily, Company A, Third Infantry, May 18, 1851. Total received to date, 6,574, the last being John H. Johnson, late musician, Battery B, First Artillery.

* With bedroom space of 221,950 cubic feet = 1,363.20 cubic feet per man.

† With bedroom space of 214,664 cubic feet = 1,731.16 cubic feet per man.

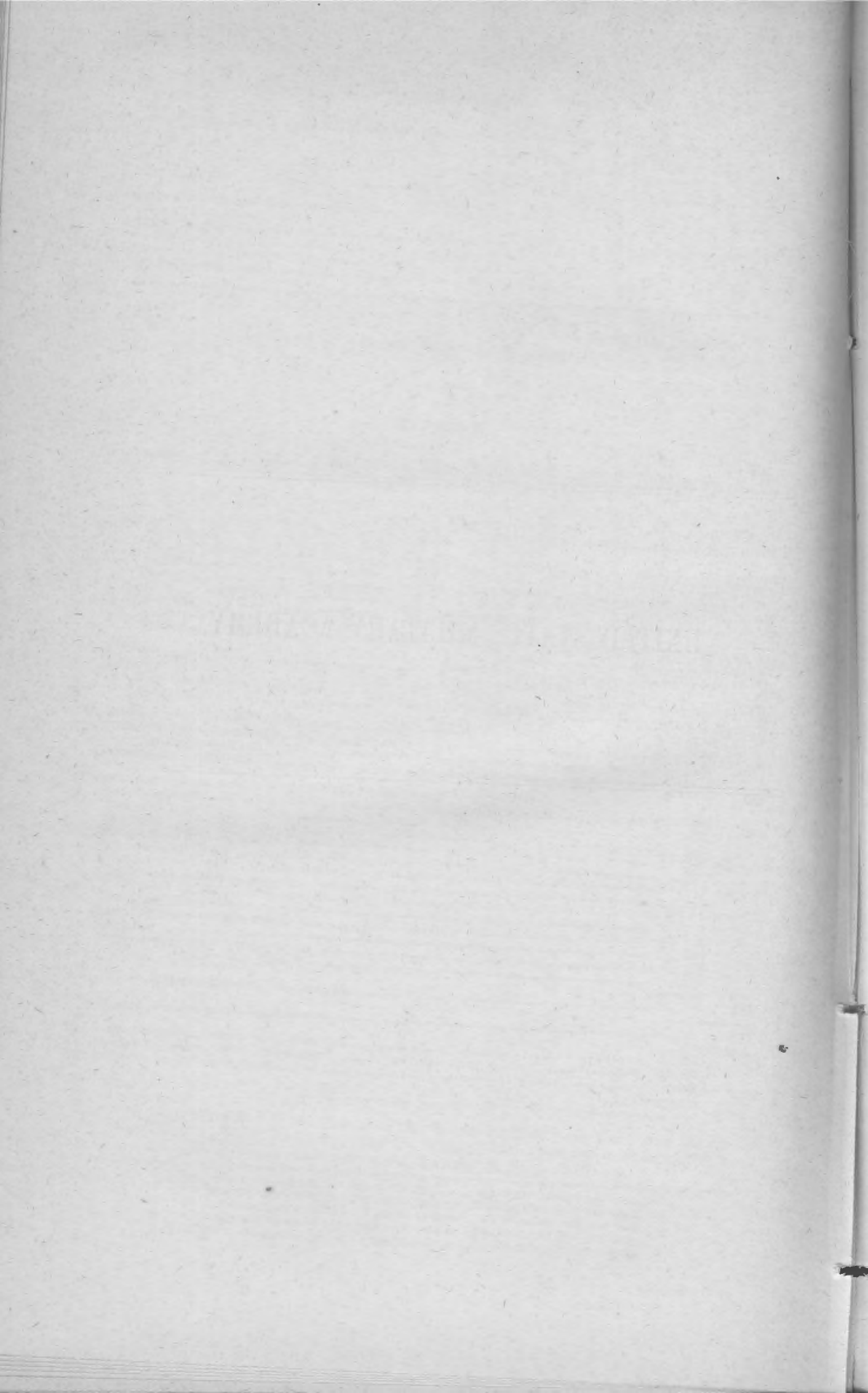
‡ With bedroom space of 152,058 cubic feet = 1,134.76 cubic feet per man.

§ With bedroom space of 106,594 cubic feet = 1,122.04 cubic feet per man.

¶ With bedroom space of 55,874 cubic feet = 1,643.25 cubic feet per man.

UNITED STATES MILITARY ACADEMY.

1065



BOARD OF VISITORS.

JUNE, 1890.

APPOINTED BY THE PRESIDENT OF THE UNITED STATES.

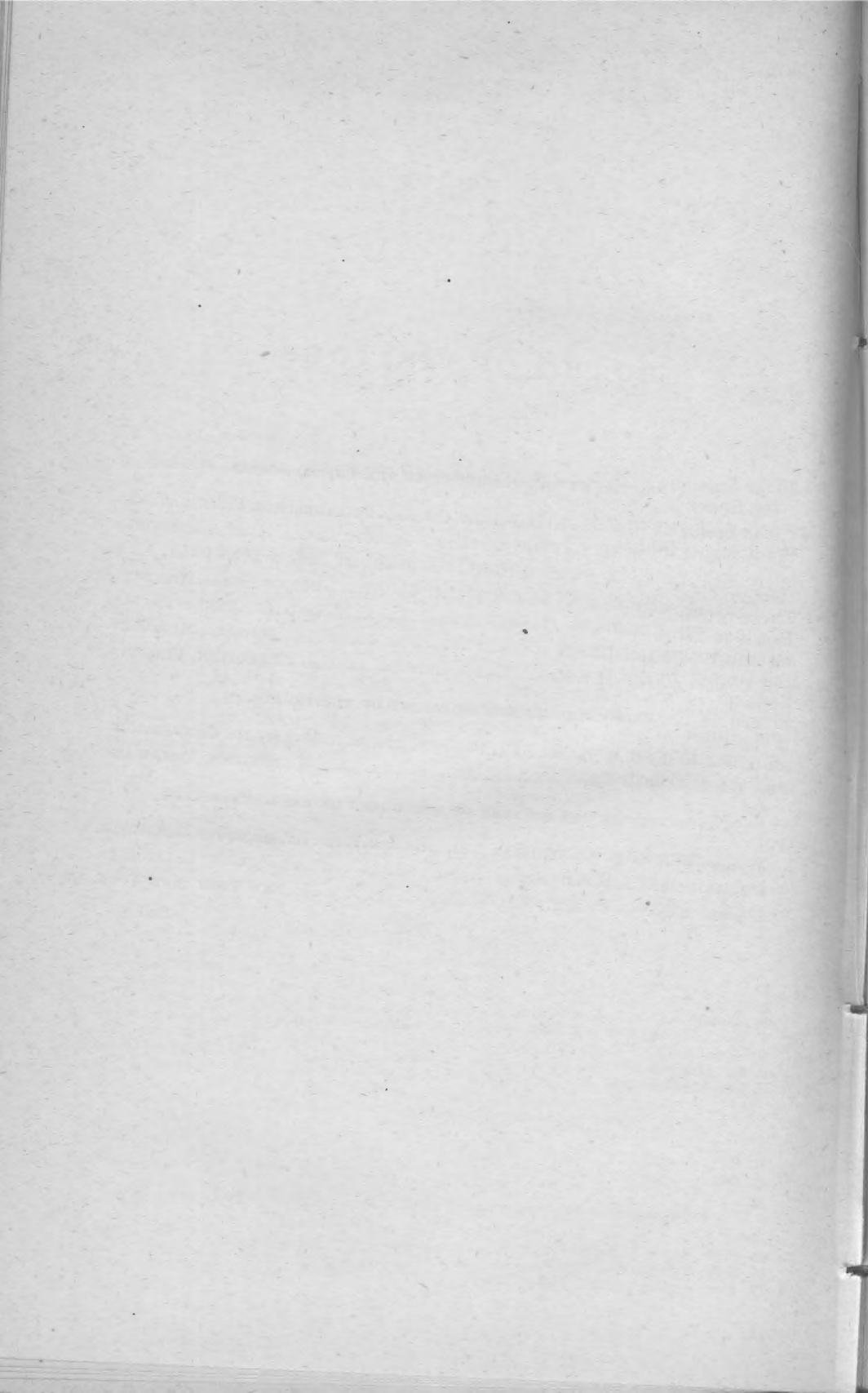
1. Colonel FRANCIS J. CRILLY.....PHILADELPHIA, PENNSYLVANIA.
2. Colonel LEWIS M. DAYTON.....CINCINNATI, OHIO.
3. General EDWARD BURD GRUBB (*Vice-President*)..EDGEWATER PARK, N. J.
4. Reverend EDWARD EVERETT HALE, D. D.....BOSTON, MASSACHUSETTS.
5. Hon. CORNELIUS C. JADWIN.....HONESDALE, PENNSYLVANIA.
6. Mr. HUGH McMILLAN.....DETROIT, MICHIGAN.
7. Colonel SCOTT SHIPP.....LEXINGTON, VIRGINIA.

APPOINTED BY THE PRESIDENT OF THE SENATE.

8. Hon. JOSEPH R. HAWLEY (*President*).....HARTFORD, CONNECTICUT.
9. Hon. GEORGE GRAY.....WILMINGTON, DELAWARE.

APPOINTED BY THE SPEAKER OF THE HOUSE OF REPRESENTATIVES.

10. Hon. BYRON M. CUTCHEONMANISTEE, MICHIGAN.
11. Hon. JOSEPH McKENNASUISUN, CALIFORNIA.
12. Hon. AMOS J. CUMMINGS (*Secretary*).....NEW YORK, NEW YORK.



REPORT

OF THE

BOARD OF VISITORS TO THE UNITED STATES MILITARY ACADEMY.

To the Secretary of War, the President of the Senate, and the Speaker of the House of Representatives :

The Board of Visitors to the United States Military Academy at West Point respectfully submit the following report:

The Board was appointed in accordance with the provisions of the Revised Statutes of the United States, sections 1327, 1328, and 1329. These provide that every year seven persons shall be appointed by the President, and two Senators and three members of the House of Representatives shall be designated as visitors by the Vice-President of the United States or the President *pro tempore* of the Senate and the Speaker of the House respectively, at the session of Congress next preceding the annual examinations. The statutes farther provide that it shall be the duty of this Board of Visitors to inquire into the actual state of the discipline, instruction, police administration, fiscal affairs, and other concerns of the Academy.

NAMES OF THE BOARD OF VISITORS.

In accordance with the provisions of the law, the following gentlemen were appointed and requested to convene at the Military Academy on June 2, 1890:

APPOINTED BY THE PRESIDENT OF THE UNITED STATES.

1. Col. Francis J. Crilly.....Philadelphia, Pa.
2. Col. Lewis M. Dayton.....Cincinnati, Ohio.
3. General Edward Burd Grubb.....Edgewater Park, N. J.
4. Rev. Edward Everett Hale, D. D.....Boston, Mass.
5. Hon. Cornelius C. Jadwin.....Honesdale, Pa.
6. Mr. Hugh McMillan.....Detroit, Mich.
7. Col. Scott Shipp.....Lexington, Va.

APPOINTED BY THE PRESIDENT OF THE SENATE.

8. Hon. Joseph R. Hawley.....Hartford, Conn.
9. Hon. George Gray.....Wilmington, Del.

APPOINTED BY THE SPEAKER OF THE HOUSE OF REPRESENTATIVES.

10. Hon. Byron M. Cutcheon.....Manistee, Mich.
11. Hon. Joseph McKenna.....Suisun, Cal.
12. Hon. Amos J. Cummings.....New York, N. Y.

ORGANIZATION OF THE BOARD.

The Board organized on June 2 by unanimously electing the Hon. Joseph R. Hawley president, General Edward Burd Grubb vice-president, and the Hon. Amos J. Cummings secretary.

ORDER OF EXAMINATIONS AND EXERCISES.

The Board were informed that the following order of examinations and military exercises had been arranged by the officers of the Academy:

Orders No. 80.]

HEADQUARTERS U. S. MILITARY ACADEMY,
West Point, N. Y., May 15, 1890.

I. The annual examination will begin on Monday, the 2d proximo, and continue daily, Sundays excepted, from 9 o'clock a. m. till 1 o'clock p. m., and from 2.30 o'clock p. m. till 4.30 o'clock p. m., until finished.

II. The Academic Board will be divided into two committees.

The first committee will be composed of—

- The Professor of Natural and Experimental Philosophy,
- The Professor of Mathematics,
- The Professor of Law,
- The Professor of Civil and Military Engineering, and
- The Instructor of Practical Military Engineering.

The second committee will be composed of—

- The Professor of Modern Languages,
- The Professor of Drawing,
- The Professor of Chemistry, Mineralogy, and Geology,
- The Professor of History, Geography, and Ethics,
- The Commandant of Cadets, and
- The Instructor of Ordnance and Gunnery.

The first committee will sit in the library and examine orally—

- (1) The first class in engineering.
- (2) The third class in mathematics.
- (3) The second class in natural and experimental philosophy.
- (4) The first class in law.

And by written examination—

The fourth class in mathematics at 8 a. m., June 3.

The second committee will sit in Room No. 1, Academic building, and examine orally—

- (1) The second class in chemistry, mineralogy, and geology.
- (2) The fourth class in French.
- (3) The first class in ordnance and gunnery.
- (4) The first class in Spanish.
- (5) The third class in French.

And by written examination—

The fourth class in French at 8 a. m., June 2.

The first class in Spanish at 8 a. m., June 4.

The fourth class in English at 8 a. m., June 5.

The third class in French at 8 a. m., June 6.

And by inspection of marks and drawings—

The second and third classes in drawing.

In all the classes the oral examinations will begin with the lowest sections, and the examinations will be so conducted as not to interfere with the usual hours for meals of cadets.

All written examinations will be conducted in Room 23, Academic building.

The superintendent will preside in either committee in which he may be present.

III. As each committee shall complete its labors of examination, its presiding officer will report the fact to these headquarters.

Either committee may, in its discretion, extend its labors not to exceed one hour each day, provided this does not interfere with any of the military exercises directed in Paragraph VI of this order.

IV. First Lieut. Samuel D. Freeman, Tenth Cavalry, and Second Lieut. Benjamin Alvord, Twentieth Infantry, are appointed the secretaries of the first and second committees respectively. The record of each committee will be so kept as to show clearly the length of time occupied in examination by each department of instruction.

At the close of each day's proceedings, the secretaries will report to the adjutant of the Academy the progress of the examination, and they will transmit to the secretary of the Academic Board the records of the proceedings of the committees as soon as they are completed.

V. The instructors will report daily to the heads of their respective departments, and keep themselves informed as to the times when their services will be required.

VI. The following military exercises will take place during the examination:

Exercise.	Subject.	Date.
Infantry	Review	June 2
	School of the battalion	June 4
	Battalion skirmish drill	June 9
Artillery	Mortar battery drill	June 9
	Light battery drill	June 10
Cavalry	Sea-coast battery drill	June 5
	School of the company and battalion	June 3
Practical military engineering	School of the soldier mounted	June 6
	Spar bridge building	June 10
	Pontoon bridge building	June 7
Small-arms	Military signaling	June 11
	Use of the sword and bayonet, and military gymnastics.	June 11

This order of exercises may be changed on account of the weather, or for other causes.

VII. The members of the First Class will be graduated June 12, 1890.

By order of Colonel Wilson,

W. C. BROWN,
First Lieutenant First Cavalry, Adjutant.

EVERY FACILITY EXTENDED TO THE BOARD.

The secretary was instructed to invite Col. John M. Wilson, Superintendent of the Military Academy, to make any suggestions that he desired respecting the interests in his charge. This was done. At the second session of the Board the following letter from Colonel Wilson was received:

HEADQUARTERS U. S. MILITARY ACADEMY,
West Point, N. Y., June 2, 1890.

SIR: I have the honor to acknowledge the receipt of your communication of this date notifying me of the organization of the Board of Visitors.

I shall be happy to afford the Board every facility for a thorough inspection of the workings of all the departments of the Academy, administrative as well as those of instruction, and in general to do everything possible to assist the Board in its labors.

A programme of the examination has already been furnished each member. Notice will be given from day to day of such military exercises as are ordered for the Board of Visitors.

First Lieut. Frank L. Dodds, Ninth Infantry, Second Lieut. Daniel L. Tate, First Cavalry, Henry C. Hodges, jr., Twenty-second Infantry, and Samuel D. Sturgis, First Artillery, have been detailed to attend upon the Board of Visitors during their stay at the Academy.

I also take occasion to say that I hope the Board will communicate with me freely, both personally and officially, upon any subject connected with the Military Academy which may be of interest to its members in connection with their official visit to West Point.

In conclusion, permit me to say that I desire to call officially upon the Board of Visitors at the hotel at 4.20 o'clock p. m. to-day, with the members of the Academic Board and my military staff, for the purpose of paying our respects to the Board of Visitors, and to conduct them to a review of the Corps of Cadets given in their honor.

At the close of the review it will give me pleasure to receive the members of the Board, their families and friends, at my quarters to meet the officers and ladies of the post.

Very respectfully, your obedient servant,

JOHN M. WILSON,
Colonel of Engineers, Superintendent.

Hon. AMOS J. CUMMINGS,
Secretary Board of Visitors, West Point, N. Y.

WORKING COMMITTEES APPOINTED.

At the third session, on June 3, the Board appointed the following committees:

1. *On buildings, grounds, and police administration.*—Hon. Byron M. Cutcheon, chairman; Hon. George Gray, Hon. Amos J. Cummings, Mr. Hugh McMillan, and Hon. Joseph McKenna.

2. *On discipline and instruction.*—General Edward Burd Grubb, chairman; Col. Lewis M. Dayton, Rev. Edward Everett Hale, D. D., and Col. Scott Ship.

3. *On ordnance, armament, and equipment.*—Col. Scott Ship, chairman; Hon. Joseph R. Hawley, Col. Lewis M. Dayton, and General Edward Burd Grubb.

4. *On cadet supply department and expenditures.*—Col. Francis J. Crilly, chairman; Mr. Hugh McMillan, and Hon. Amos J. Cummings.

5. *On fiscal affairs of the Academy.*—Hon. George Gray, chairman; Hon. Cornelius C. Jadwyn, Hon. Joseph R. Hawley, and Col. Francis J. Crilly.

6. *On appointments, examinations, and miscellaneous business.*—Rev. Edward Everett Hale, D. D., chairman; Hon. Cornelius C. Jadwyn, Hon. Joseph McKenna, and Hon. Byron M. Cutcheon.

By order of the Board an official list of the committees was sent to the Superintendent of the Academy. The Rev. Edward Everett Hale, D. D., was selected to deliver the address to the graduating class of cadets on June 12.

THE COMMITTEES AT WORK.

The committees began their work immediately. Every facility was extended by the Superintendent and officers of the Academy. Many of the Board heard the examinations of the classes, while others attended to the various duties assigned to the committees.

At the fourth session of the Board the following letter from the Superintendent of the Academy was received:

HEADQUARTERS U. S. MILITARY ACADEMY,
West Point, N. Y., June 3, 1890.

SIR: I have the honor to acknowledge the receipt of your letter of to-day's date announcing the subcommittees of the Board of Visitors.

The heads of the various departments of administration and instruction of the Academy have been directed to hold themselves prepared to furnish the Board any information that may be required, and if the Board will make its requests through these headquarters they will receive prompt attention.

I shall be pleased to confer personally with you upon this matter with a view of facilitating, as far as possible, the object of your visit to the Academy.

Very respectfully, your obedient servant,

JOHN M. WILSON,
Colonel of Engineers, Superintendent.

Hon. AMOS J. CUMMINGS,
Secretary Board of Visitors, West Point, N. Y.

SUGGESTIONS FROM THE SUPERINTENDENT.

At the seventh session of the Board, on June 7, the Hon. Byron M. Cutcheon, of the committee on buildings, grounds, and police administration, reported that he had received the following letter from Col. John M. Wilson, the Superintendent:

HEADQUARTERS U. S. MILITARY ACADEMY,
West Point, N. Y., June 6, 1890.

DEAR SIR: Replying to your letter of the 5th instant I have the honor to submit the following list of improvements required at this post, estimates for which will be submitted with my annual report for the present fiscal year.

I consider all of the improvements as very necessary, but in preparing the list I have placed them in their order of importance:

No. 1. New tile floor, cadet mess hall.....	\$3,024
No. 2. Repairs and enlargement of quarters for cadet mess-hall cooks, waiters, etc.....	2,193
No. 3. Repairs of present quarters of married enlisted men.....	10,000
No. 4. Two sets of officers' quarters.....	20,000
No. 5. Repairs of Kinsley mansion.....	9,000
No. 6. Twenty sets new quarters for enlisted men.....	24,000
No. 7. Enlargement cadet quartermaster's store-house, and repairing present building.....	11,300
No. 8. Electric light and power plant complete.....	60,000
Current yearly expense of same.....	11,000
No. 9. Increase of size and repairs of building for office of commandant of cadets and his assistants; reception room for persons visiting cadets, and cadet guard-house.....	5,000
No. 10. Entire renovation of cadet sinks and bath-rooms, placing all in one building upon or near present location of sinks.....	28,000
No. 11. Building for storing oil and lime.....	2,500
No. 12. Heating riding-hall and stables, including building for apparatus..	15,000

I have given these items in the order in which I deem them most necessary.

It is probable that other minor items will appear in my annual estimates when I prepare them in August, but the foregoing are all that it appears necessary to place before the Board of Visitors at this time.

I think I have personally explained the necessity in each case to the committee except No. 11, which was presented to me this morning by the quartermaster and the need of which is obvious.

It will give me pleasure to direct the post quartermaster to appear before your committee at any time and to further explain the necessity for the improvements suggested.

Very respectfully, your obedient servant,

JOHN M. WILSON,
Colonel of Engineers, Superintendent.

Hon. B. M. CUTCHEON,
*Chairman Committee on Buildings and Grounds,
Board of Visitors, West Point, N. Y.*

CONSULTATIONS.

The letter was referred back to the committee for examination and report.

The secretary was instructed to invite Col. John M. Wilson, Superintendent of the Academy; Prof. Peter S. Michie, professor of natural and experimental philosophy, and Col. George L. Andrews, professor of the department of modern languages, to meet the Board for consultation as to matters relating to the Academy. These gentlemen accordingly appeared before the Board and gave the information desired.

BUILDINGS AND GROUNDS.

The committees attended to their duties promptly, and their reports were amended and adopted by the Board. The recommendations of the Board are made up from the reports of these committees.

The Board report that the most of the buildings are in very good condition. When the appropriations already made or that are certain to be made at the present session of Congress have been properly expended the post will have all necessary buildings.

WHAT CONGRESS HAS ALREADY APPROPRIATED.

The Fiftieth Congress appropriated \$490,000 for a new academic building and \$100,000 for a gymnasium. The plans for the gymnasium have been made and accepted, and work upon it will begin as soon as the contracts can be made. This Congress has already made the following appropriations for the improvement of buildings and grounds at the post:

Repairs and improvements.....	\$17,500	Stone for roads.....	\$2,000
Gas-pipe, fixtures, etc.....	900	Quarters for watchman.....	1,500
Repairing roads and paths, etc.	500	For post cemetery.....	1,200
Continuing breast-high wall...	500	For quarters superintendent ca-	
Water-works, etc.....	520	det laundry.....	400
Plumbing in cadet hospital....	2,500	Repairs to cadet barracks.....	3,000
Two sets officers' quarters.....	20,000	For south wharf.....	2,000
Cavalry barracks.....	21,000	Changes in headquarters build-	
Quartermaster's store-house....	18,000	ing.....	1,350
Practice-room for band.....	3,030	Repairing Kinsley House.....	1,500
Ten sets quarters for enlisted			
men.....	12,000	Total.....	139,400
Hospital for enlisted men.....	30,000		

APPROPRIATIONS RECOMMENDED.

The aggregate amount of unexpended appropriations for buildings and grounds is nearly \$730,000. The Superintendent of the Academy, Col. John M. Wilson, submitted to the Board a statement and estimate of further improvements deemed by him desirable. It aggregates \$201,017. These improvements are undoubtedly necessary for the perfect equipment of the post and Academy. In view of the very large appropriations now unexpended, however, the Board do not urge upon Congress the appropriation of the entire amount suggested for the coming fiscal year. They call attention to the recommendations that they may receive full consideration. They are informed that the Superintendent will give his reasons for his recommendations in his full report to the Secretary of War. The Board simply emphasize and recommend the appropriation of the following sums:

Repairs, and enlargement of quarters for cadet mess-hall cooks, waiters, etc.	\$2,193
Repairs of present quarters of married enlisted men (estimated)	10,000
Twenty sets quarters for enlisted men	24,000
Two sets officers' quarters	20,000
Enlargement of cadet quartermaster's store (estimated)	11,300

OFFICERS' QUARTERS.

Two sets of officers' quarters have been authorized, but not yet constructed. Last year's estimates only called for three sets in all. The enlargement of cadet quartermaster's store was recommended last year, but no appropriation was made for it.

NEW FLOOR IN MESS-HALL.

The Board recommend that provisions be made for a new floor in the cadet mess-hall. The present floor was laid down about seven years ago. While a tile flooring would be a great improvement, it is not an immediate necessity. As the money will not become available until 1891-'92 provision for the new floor ought to be made as soon as possible.

ELECTRIC LIGHTING.

A year ago the Superintendent of the Academy recommended a plant for lighting the cadet barracks with electricity. It was estimated that it would cost \$9,540. The Superintendent now recommends that provision be made for lighting the entire buildings and grounds with electricity, at an estimated cost of \$60,000, and an annual expense of \$11,000. The Board does not urge the appropriation at this time. It would be better to make it after the erection of the new academic hall and the building for a gymnasium.

NEW SINKS AND BATH-ROOMS.

The Board urge that the sinks used by the cadets be reconstructed. They are insufficient and unsuitable. The bath-rooms are in a separate building. They should be placed in the same building with the sinks. The estimate for the change is \$28,000. The Board recommend an immediate reconstruction of the sinks with a view to the removal of the bath rooms at a subsequent period.

ENLARGEMENT OF COMMANDANT'S OFFICE.

The Board also think that the office of the Commandant of Cadets should be enlarged. More commodious reception-rooms for persons visiting cadets should be provided. If the new academic building is erected upon a site that will permit the preservation of the present building, ample provisions could be made in the old building for such increased accommodations. Unless this is done, an appropriation for the enlargement of the office of the Commandant of Cadets should be made as soon as practicable.

HEATING THE RIDING-HALL AND STABLES.

The last Board of Visitors recommended the establishment of a heating apparatus for the riding-hall and stables at a cost of \$15,000. Congress made no appropriation for this purpose. The recommendation is renewed by the Superintendent of the Academy. The Board of Visitors find that the riding-hall and stables are in very good order. Captain Dorst, the instructor of cavalry tactics, as well as the Superintendent, urges the necessity for this heating apparatus. The Board, therefore, submit their recommendation to the favorable consideration of Congress.

BUILDING FOR STORAGE OF OIL AND LIME.

A small appropriation for a building for storing oil and lime is sought. When the new hospital for enlisted men and the new barracks for cavalry are constructed, the old building will be free for other uses. Temporary buildings for storing lime are undoubtedly required. The Board, however, suggest that the need and location of a permanent building for this purpose can be determined better at a later date.

THE OLD ACADEMIC BUILDING.

The present academic building was carefully examined with a view to its preservation. The structure is about fifty years old. All the exterior walls remain nearly or quite perfect. They are of excellent

material. The cut-stone work is without a flaw. The building is plain, solid, enduring, and commodious. Its architecture is not unsightly, and it possesses a historic interest. Generals of world-wide reputation received their military education here. The Board recommend that this historic building be preserved, if some other suitable site for the new structure can be found. The question is left by law to others to decide. The Board simply direct attention to it at this time. There is no doubt that the old building could be used to great advantage.

THE KINSLEY PURCHASE.

The Superintendent recommends the appropriation of \$9,000 for the repair of the Kinsley House. The Board, however, think that a careful examination ought to be made to determine whether the condition of the house will warrant so large an outlay for its repair. Meantime the \$1,500 already appropriated ought to be sufficient to repair it to such an extent that it will resist further decay.

REMODELING THE LIBRARY.

The Board recommend the remodeling of the library. It ought to be made fire-proof. The Board suggest that a competent architect be employed to examine the building and report a plan for remodeling it.

QUARTERS FOR ENLISTED MEN.

In the reconstruction of quarters for enlisted men or employés of the post, the Board recommend that the present low and unsanitary location be abandoned. They suggest that the new quarters be placed upon a higher and more healthful location. There is plenty of room upon the reservation and consequently no necessity for retaining the quarters in a situation where they lack the free circulation of air and light. This recommendation of the Board is in full accord with the views of the present Superintendent.

HOSPITAL FOR ENLISTED MEN.

The Board find the condition of the hospital for enlisted men excellent. The building is commodious, nearly new, and kept in admirable order. The location, however, is objectionable. If it were not, the expenditure of \$30,000 for a new hospital would be unnecessary.

THE POST CEMETERY.

The small cemetery of the post is in admirable order, and a credit to the officer in charge. It needs enlargement. Congress has already appropriated \$1,200 for this purpose.

THE WATER SUPPLY.

The water supply of the post is excellent and abundant. It comes from the mountains back of West Point. It is adequate for the needs of the fire department, as well as for all other purposes. There are two steam fire-engines, one near the cadet barracks, and the other near the quartermaster's store and cavalry barracks. The Board, however, suggest that portable fire-extinguishers be placed in the more important buildings, such as the library, the academic building, and the cadet barracks.

THE HOTEL.

It has been urged that the hotel on the reservation be enlarged. During a brief period in the summer it is much crowded. Accommodations, however, for the rest of the year are ample. The hotel was built from the proceeds of a post fund. It rents for \$3,500 a year, the lessee covenanting to expend an additional \$500 a year in repairs. This rental is a special contingent fund in the hands of the Superintendent. The Board suggest that a part of this fund might properly be expended in the repair and enlargement of the hotel itself.

THE POLICE ADMINISTRATION.

The police administration of the post is commended. The Board urge the removal of some of the cabins now occupied by enlisted men and of some of the wooden structures under the bluff at the north end of the post as soon as practicable. They are unsightly and unhealthy.

DISCIPLINE.

A careful examination of the system of discipline in the Academy and the methods by which it is administered was made. The Board find them adapted to the best interests of the cadets, and temperately, but firmly, applied.

INSTRUCTION.

The system of instruction was fully shown in the examinations. They indicated careful and thorough work on the part of the professors and diligent and faithful application on the part of the cadets. Many of the recitations in the upper sections of the first and second classes were brilliant. They clearly showed practical education of a very high order.

ROOM FOR MORE CADETS.

With its present accommodations, equipment, and academic staff, the Academy can receive, educate, and graduate nearly one hundred more cadets yearly than are now there. The total annual cost to the country would, of course, be increased, but the per capita cost would be reduced. The Board recommend that some action be taken to keep up the full quota of cadets in the Academy.

ARMAMENT AND EQUIPMENT.

As to the military exercises and parade, the Board report that in every particular the high standard of the Academy was fully sustained.

The Board find that the armament of the Academy has been improved by the addition of a field battery of six 32-inch, breech-loading, rifled steel guns, mounted upon carriages of the new model. In other respects the armament remains unchanged. The siege-guns, however, are not only obsolete in form, but are not in a serviceable condition. Their defects are recognized by all. They will undoubtedly be remedied by the Ordinance Department as soon as new forms are adopted.

The equipments of the infantry are complete and in good condition.

BETTER CAVALRY HORSES NEEDED.

The instructors in cavalry tactics are placed at a great disadvantage because the cadets are forced to use horses employed for draughting purposes in the artillery service. They suggest that this can be remedied by stationing a fully equipped field battery at the post to be used for the instruction of cadets. This would relieve the cavalry horses from artillery service. Such service unfits them for cavalry drill. The Board recommend the suggestion to favorable consideration, provided a field battery can be detailed for duty at the post without entailing additional expenditures for barracks and stables.

A HOTCHKISS GUN.

They also recommend that funds be provided for the purchase of a 3-pounder Hotchkiss rapid-fire gun, estimated to cost \$2,500. The artillery equipment of the Academy can hardly be regarded as complete without one gun to represent a type so important in modern warfare.

The Board recommend that the senior assistant instructor in ordnance be put upon the same footing with regard to pay as the senior assistants in other departments of instruction.

The exhibits as to ordnance, armament, and equipment, published in the report of the Board of Visitors for 1889, are full, minute, and detailed. The conditions all remain unchanged, with the exceptions already noted.

SUPPLIES FOR CADETS.

The Board find the supplies furnished to the cadets in the mess-hall of the best quality, properly cooked, and the diet sufficiently varied by daily changes. The mess department appears to be so satisfactory that no improvement is suggested.

The cadet quartermaster's department has charge of the purchase and issue of all supplies furnished the cadets. Samples of all the articles they furnish were examined. All were found to be of uniformly good quality and the prices reasonable. The report of the Board of Visitors last year gave detailed lists of the articles with prices, and as there is no material change in the cost it is not necessary to repeat it.

THE CADET LAUNDRY.

The Board report that the cadet laundry is carefully and economically managed. The prices charged to the cadets are very moderate, yet sufficient to cover the actual expenses of the laundry.

THE BAND.

The Board recommend an increase of the band at the post to fifty pieces. At the present rate of pay for enlisted musicians it is almost impossible to secure expert instrumentalists. Some arrangement should be made by which the pay of musicians would be increased according to their ability. The rate of pay should be based upon the length of service and skill of the musician.

FISCAL AFFAIRS OF THE ACADEMY.

The fiscal affairs of the Academy were found to be satisfactory after a careful examination. The books of Capt. W. F. Spurgin, treasurer of the Academy, who receives and disburses the pay of the cadets, are well kept and show fullness of detail and clearness of statement. They are audited by a committee of the Academic Board every two months, and are also examined by an official and expert inspector at like intervals.

A condensed statement for the past year, made elsewhere (see Appendix A), illustrates the methods and detail of this important office.

Capt. Charles R. Williams, quartermaster of the post, submitted an explanatory statement of the important matters committed to his charge. The manner in which the large sums for which he is responsible are received and disbursed, and the management of the practical details of his office, reflect great credit on the intelligence and capacity of this officer. Abstracts of receipts and expenditures furnished by him will be found elsewhere. (See Appendix B.)

For the efficient performance of the multifarious duties of treasurer and post commissary, Captain Spurgin deserves especial commendation. The Board, however, are of opinion that the officer charged with these duties should be a paymaster with the rank of major, and that an additional officer should be appointed in that corps for the purpose of this detail. Such an officer so assigned could also perform the duties of the paymaster of the post. This would be economical as compared with the present method of sending a paymaster from New York. And as a bond is required by law from every paymaster, the change proposed would do away with the present anomalous condition of having an unbonded officer charged with such great financial responsibility. The wisdom of this recommendation is confirmed by Captain Spurgin himself, founded upon his long experience in this office.

EXAMINATIONS AND APPOINTMENTS.

The statute regulating the number of cadets was passed on March 1, 1843. The section relating to this subject is in the following words:

The corps of cadets shall consist of one from each Congressional district, one from each Territory, one from the District of Columbia, and ten from the United States at large. They shall be appointed by the President, and shall, with the exception of the ten cadets appointed at large, be actual residents of the Congressional or Territorial districts, or of the District of Columbia, respectively, from which they purport to be appointed.

Another section provides that—

Cadets shall be appointed one year in advance of the time of their admission to the Academy, except in cases where by reason of death or other cause, a vacancy occurs which can not be provided for by such appointment in advance.

Another section provides that the age of appointment shall be from seventeen to twenty-two years.

A joint resolution passed by Congress in 1866 provided that—

In all appointments of cadets to the Military Academy after those who enter the present year, the person authorized to nominate shall nominate not less than five cadets for each vacancy, all of whom shall be actual residents of the Congressional district, Territory, or District of Columbia entitled to the appointment, and the selection of one shall be made from the candidates according to their respective merits and qualifications under such rules and regulations as the Secretary of War shall from time to time prescribe.

And in like manner the President of the United States shall be authorized hereafter to nominate fifty at large each year, instead of ten as now provided by law, who shall be examined under like regulations, and of whom the ten who may be reported as most meritorious and best qualified shall be appointed; provided, however, that not more than two of these shall be appointed in any year from one State.

This joint resolution was approved on June 16, 1866, and was repealed in the following year. It seems to have contained the only reference to the established right of members of the House of Representatives to nominate cadets to be appointed. The custom of such nomination, however, existed long before the act of 1843. The number of recommendations recognized by law would give three hundred and forty-five cadets if every place was full. In practice the Secretary of War appoints the persons nominated by members of Congress, and waits for their nomination before he makes such appointment. In fact, however, partly from delays in the appointment, and more often from failures to fill vacancies, the number of cadets present in the Academy is at all times much less than the number directed under the present law. A quarter of the working force is thus lost. The two principal causes for this loss are:

First. That some vacancies are left open by the delay of Representatives in making the nominations to which by long courtesy they have become entitled.

Second. Through vacancies, by far the larger part of which result from the failure of boys nominated and appointed to pass the first examination, or to fill the places to which they have been appointed. In many instances these last failures seem to result from the fact that the preliminary course has not prepared them for the work of the first year.

To meet the first of these difficulties the Board suggest that members of the House be urged to make nominations at or before the time prescribed, which is one year before the nomination, and in all cases to nominate alternates who may be examined on the failure of the first person named.

The Board also report that it would materially add to the ease and regularity of attendance for examination if examinations were held under the direction of the Academic Board at several other places beside West Point. These examinations should be made from the same sets of question papers, on the same day, and might be held at Washington, Pittsburgh, Atlanta, New Orleans, Chicago, St. Paul, Leavenworth, and San Francisco, at the military posts at or near those cities. They could and should be conducted under arrangements made and with regulations and conditions prescribed by them. The admission or rejection of each candidate should be determined by the Academic Board on consideration of his examination papers, just as it is now.

As the candidate receives an appointment from Government, and is instructed to report for examination at a fixed time and place, there seems to be no reason why all candidates, successful or unsuccessful, should not be paid fair traveling expenses to the place of examination.

The September examination brings young men into the lowest class three months after its work has begun. The results are very unfavorable. The Board recommends that it be abolished and that the candidates who are now referred to it be referred to the next annual examination.

With reference to the gap between the requisites for entrance and the first year, the Board recommends that to the examination as now conducted be added an examination in algebra as far as quadratic equations.

The experience of past years warns us that unless more nominations

are made than are now permitted by law the Academy will not be up to the full number of cadets which could be accommodated here to advantage. The Board, therefore, recommend that the President of the United States nominate five persons at large every year, and keep this number filled when any vacancy is created. We also recommend that each Senator be requested to nominate one person under the same conditions as those under which members of the House now make nominations, and that the President appoint the persons thus nominated for examination and admission to the Academy like other candidates.

DRILLS AND EXERCISES.

The Board attended the infantry, artillery, and cavalry drills of the cadets, and witnessed the exercises in practical military engineering and small arms. They found thorough efficiency in each branch. They had much to commend and nothing to condemn.

A MILITARY POST.

West Point should be a post for a representative body of troops. As the many small frontier posts are abandoned, a sufficient number might be brought to West Point to make it a model military post. Its healthfulness, facility for access or transfer of troops, and the cheapness of supplies, make it an excellent spot for maintaining a considerable force. It would be of great advantage, in a military point of view, to have a picked corps of trained soldiers close at hand and under the eyes of the cadets who, sooner or later, are to command them. A full regiment of infantry, a battalion of cavalry, and a horse battery might be stationed there. As the post would be a desirable one, it might be made a prize to be won, from time to time, by troops attaining the highest standard of soldierly bearing.

DISTRIBUTION OF DIPLOMAS.

The graduates of 1889 received their diplomas on June 13, at the hands of the Secretary of War. The Rev. Edward Everett Hale delivered the address to the graduated class. (See Appendix C.) Gen. William T. Sherman also addressed the class.

CONCLUSION.

The Board, in conclusion, find that the Academy under its present superintendent, Col. John M. Wilson, and its military and academic staff, fully maintains and has increased its reputation as a national military school. The education is both practical and theoretical. The cadets not only receive the most thorough military education, but they are imbued with patriotic fervor, and are instilled with honor. The institution reflects credit not only upon its faculty and upon its pupils, but upon the nation.

APPENDIX A.

OFFICE TREASURER OF THE MILITARY ACADEMY,
QUARTERMASTER AND COMMISSARY OF CADETS,
West Point, N. Y., June 9, 1890.

SIR: In compliance with your verbal request, I have the honor to submit the following exhibit of the funds and accounts in my charge May 16, 1889, followed by a consolidated statement of receipts and disbursements appertaining to all accounts in this office, made since then to include May 19, 1890, the date of the last bimonthly settlement of the books of this office:

Statement of the treasurer United States Military Academy, May 16, 1889.

ASSETS.		LIABILITIES.	
Assistant treasurer U. S., New York.	\$31,428.15	Cadet laundry	\$4,580.86
Policing barracks.....	73.39	Cadet quartermaster.....	5,618.75
Trust funds.....	20,000.00	Cadet subsistence department.....	416.62
Cash on hand.....	1,603.95	Cadet hospital.....	15.93
		Corps of cadets.....	14,436.67
		Deposits.....	213.00
		Dialectic Society.....	1.92
		Equipment fund.....	27,652.00
		Gas account.....	165.90
		Miscellaneous fund.....	5.84
	53,105.49		53,105.49

Statement of receipts and disbursements made by the treasurer United States Military Academy from May 16, 1889, to May 19, 1890.

Assistant treasurer:		Deposits:	
Checks drawn.....	\$153,887.33	Receipts.....	\$15,980.75
Deposited.....	151,995.30	Disbursements.....	16,193.75
Balances paid:		Dialectic Society:	
Receipts.....	13,867.54	Receipts.....	258.21
Disbursements.....	13,867.54	Disbursements.....	234.65
Barber:		Equipment fund:	
Receipts.....	529.10	Receipts.....	12,426.00
Disbursements.....	529.10	Disbursements.....	10,472.00
Cadet laundry:		Expressage:	
Receipts.....	9,193.40	Receipts.....	15.10
Disbursements.....	9,049.74	Disbursements.....	15.10
Cadet quartermaster's department:		Gas fund:	
Receipts.....	73,693.55	Receipts.....	844.05
Disbursements.....	71,578.32	Disbursements.....	1,009.95
Cadet subsistence department:		Hops and german:	
Receipts.....	57,528.85	Receipts.....	1,762.53
Disbursements.....	57,413.98	Disbursements.....	1,762.53
Cadet hospital:		Miscellaneous fund:	
Receipts.....	2,621.99	Receipts.....	23.10
Disbursements.....	2,637.92	Disbursements.....	19.24
Cadet cash:		Miscellaneous items:	
Receipts.....	14,398.40	Receipts.....	447.10
Disbursements.....	14,468.40	Disbursements.....	447.10
Confectioner:		Oaths:	
Receipts.....	310.15	Receipts.....	24.05
Disbursements.....	310.15	Disbursements.....	24.05
Corps of Cadets:		Paymaster:	
Receipts.....	174,700.33	Receipts.....	151,996.75
Disbursements.....	181,925.79	Disbursements.....	151,996.75
Damages, ordnance:		Periodicals:	
Receipts.....	10.25	Receipts.....	81.97
Disbursements.....	10.25	Disbursements.....	81.97
Dancing:		Photographs:	
Receipts.....	615.00	Receipts.....	147.75
Disbursements.....	615.00	Disbursements.....	147.75
Dentist:		Policing barracks:	
Receipts.....	821.00	Receipts.....	5,421.17
Disbursements.....	821.00	Disbursements.....	5,347.78

Statement of the treasurer United States Military Academy, May 19, 1890.

ASSETS.		LIABILITIES.	
Assistant treasurer	\$29,539.12	Cadet laundry	\$4,724.52
Cadet cash	70.00	Cadet quartermaster	7,731.98
Trust funds	20,000.00	Cadet Subs. Dept	531.49
Cash on hand	231.26	Corps of Cadets	7,211.21
		Dialectic Society	25.48
		Equipment fund	29,606.00
		Miscellaneous fund	9.70
	49,840.38		49,840.38

I have the honor to invite attention to published communications from this office having reference to fiscal affairs of the Academy, relating solely to cadets and to matters appertaining to the cadet supply departments, viz:

1. Exhibit E A.—Report of the Board of Visitors, 1887, page 91. "Statements showing how the pay of cadets is drawn from the Treasury, and how disbursed."
2. Exhibit F A.—Report of the Board of Visitors, 1887, page 106. "Statements showing cost of subsisting cadets per capita, and expenses of laundry."
3. Exhibit J.—Report of the Board of Visitors, 1887, page 123. "Statement showing origin of the equipment and other cadet funds, how raised, for what purposes used, etc."
4. Exhibit F.—Report of the Board of Visitors, 1889, pages 75 to 79, inclusive, relative to fiscal affairs, etc.
- 5.—Communications of June 7 and October 17, 1889; report of the Board of Visitors for that year, pages 64 to 69, inclusive, reply to "request for information," etc.
- 6.—Communication of June 8, 1889; report of the Board of Visitors for that year, pages 29 and 30, relative to the cadet quartermaster's department store-house and its enlargement.

All vouchers appertaining to the treasurer's office made on account of purchases of supplies for the different cadet supply departments are inspected every two months by the board of audit as provided for by paragraph 332 Academic Regulations, and in addition thereto the accounts of the treasurer of the Academy are inspected every settlement by an officer of the Army specially detailed for the purpose, who makes his report to the Superintendent of the Academy.

The foregoing enumerated exhibits and communications contain the fullest information relative to cadet financial affairs and the cadet supply departments.

I have the honor to be, very respectfully, your obedient servant,

W. F. SPURGIN,

Captain, Twenty-first Infantry, Treasurer United States Military Academy, Quartermaster and Commissary of Cadets.

Hon. GEORGE GRAY,

Chairman Committee on Fiscal Affairs of the Academy Board of Visitors.

[Through the Adjutant U. S. Military Academy, West Point, N. Y.]

APPENDIX B.

Abstract of appropriations made for the support of the Military Academy for the fiscal year ending June 30, 1890, disbursed by Capt. Charles W. Williams, assistant quartermaster U. S. Army, disbursing officer U. S. Military Academy.

	Amount received.	Expended to include June 5, 1890.	Unexpended balance on hand.
Current and ordinary expenses	\$54,529.65	\$42,160.36	\$12,369.29
Miscellaneous items and incidental expenses	18,220.00	15,136.53	3,083.47
Buildings and grounds	9,361.96	3,618.36	743.60
New Academy building	500.00	.....	500.00
New gymnasium building	500.00	.....	500.00
Total	83,111.61	65,915.25	17,196.36

I certify that the above abstract is correct, and that the expenditures reported have all been made by the undersigned on vouchers approved by the Superintendent of the Military Academy.

CHAS. W. WILLIAMS,

*Captain and Assistant Quartermaster, U. S. Army,
Disbursing Officer, U. S. Military Academy.*

WEST POINT, N. Y., June 7, 1890.

Abstract of receipts and expenditures pertaining to the special contingent fund, U. S. Military Academy, between July 1, 1889, and June 5, 1890.

On hand July 1, 1889..... \$1,416.88

RECEIPTS.

By rent of West Point Hotel	\$3,500.00
By rent of post-office cottage.....	112.50
By rent of public stables.....	100.00
By rent of brick market	112.50
By sale of hoop poles	26.72
	<hr/>
	3,851.72
 Total.....	 5,268.60
Expended to include June 5, 1890	4,586.17
	<hr/>
Unexpended balance on hand	682.43

I certify that the above abstract is correct, and that the expenditures reported have all been made by the undersigned on vouchers approved by the Superintendent of the U. S. Military Academy.

CHAS. W. WILLIAMS,
Captain and Assistant Quartermaster, U. S. Army,
Treasurer Special Contingent Fund.

WEST POINT, N. Y., June 5, 1890.

Abstract of receipts and expenditures pertaining to the U. S. Military Academy gas fund between the 1st day of July, 1889, and June 5, 1890.

RECEIPTS.

From sale of coke.....	\$351.25
From sale of tar.....	386.57
From sale of gas to officers.....	1,531.53
From sale of gas to civilians	541.42
From sale of gas to buildings	102.42
From sale of gas to cadets	1,009.95
	<hr/>
	3,923.14
On hand July 1, 1889	3,105.26
	<hr/>
Total.....	7,028.40
Expended to include June 5, 1890	6,540.35
	<hr/>
Unexpended balance on hand	488.05

I certify that the above abstract is correct, and that the expenditures reported have all been made by the undersigned on vouchers approved by the Superintendent of the U. S. Military Academy.

CHAS. W. WILLIAMS,
Captain and Assistant Quartermaster, U. S. Army,
Director of Gas-Works.

WEST POINT, N. Y., June 5, 1890.

APPENDIX C.

ADDRESS OF THE REV. DR. EDWARD EVERETT HALE TO THE GRADUATING CLASS OF THE U. S. MILITARY ACADEMY, WEST POINT, N. Y., JUNE 12, 1890.

GENTLEMEN OF THE GRADUATING CLASS: I count this a peculiar good fortune which gives me the privilege of addressing you. Any one might be glad to be remembered in all parts of the country by such young men for many years in connection with a day which ought to be one of the happiest and proudest of your lives. And I am glad to be intrusted by the gentlemen around me with their congratulations. The timid plebe of 1886 is the accomplished officer of 1890. You are grateful to the Academy which has wrought this miracle. And the Academy to-day admits you to the honorable fraternity of her graduates—bids you share their honors, maintain her fame, defend your country, and serve your God.

On the commencement day of all colleges there is a story told, which is very likely a chestnut here. It is of the graduate of the day found musing apart from his fellows, who is asked what he is thinking of. He answers: "I am trying to see how a man feels when he has received the best education which his country can afford." Possibly you have been working on that problem, though I did not see that the question fell to any one in the examinations. It happens that I am instructed by the Board of Visitors to give you some help in making out the answer. Let us look forward a little while we shake hands in our good-bys. What are the duties and the responsibilities which you carry with you on these well-earned holidays, and after they are over, in your new career?

You will hardly find them stated in the European books. The place and the duty of an American soldier are, thank God, far wider and nobler than those of any servant of a feudal State. You serve the People of America; yes, and you belong to and are part of the People whom you serve. The People, which commands President, Congress, Army and Navy, needed this institution and needed you. It has created this institution and educated you. And you are still of this People, bone of its bone, blood of its blood. You are to quicken its life and make its voice to be the voice of God. This duty, this privilege, you share with all other Americans. You stand, therefore, somewhat as a young prince of the blood of Napoleon might have stood the day he left the military school of Saint-Cyr; or as this young Emperor of Germany might have stood the day he received his first real commission. That is, you not only receive orders from your sovereign; you are looking forward, as well, with a high determination that the orders of that sovereign shall always show the dignity of their source, shall be for the nation's honor, and shall be worthy of the kingdom of the living God.

Few men have an opportunity as large as you have, in this duty, present to the mind of every loyal American, of keeping high, strong, and pure, the spirit of this People. For wherever you go, the nation is visibly behind you. What you say, you say in some sort as her representative. What you do, you do in some sort in her name. If the boys in the street watch and follow your example, why, it is because the nation gives you her commission. If a community in doubt turns to you for counsel, it is because the nation has given to you her instructions. You have been in good hands here. The country knew what she wanted. And she got it, as she always does. What follows is that she expects from you what she has given to you. She has other children, and she expects you to carry forward to them what you have received here at her hands.

I do not mean, of course, that in some frontier post you are to stop a half-breed boy in the street and teach him how he is to make a rational expression out of some highly differentiated equation. But I do mean that when you and men like you have established such a post, there may be and ought to be a simpler confidence in law, a more certain punctuality in action, a more evident justice between man and man; in a word, a higher civilization and social order, because you and yours are representing the nation called the United States of America, in the midst of them. It is not instruction in mathematics or tactics of which we speak; no—it is education in manhood, which it is your power and is to be your duty to extend.

I listened with very great interest to the careful definitions which one of your own number gave, on Saturday, to the great words "conduct worthy an officer and a gentleman." I was glad to see that he was quite ready to enter upon the noble sentiment involved. He was willing to pass behind even the statement of words which could be made in the best of text-books. It was clear enough that somebody, in the spirit of the text-books, or in the instruction of the class-room—very likely in the friendly and familiar chat of the mess-room—had gone back to the magnificent language of the New Testament in its definition of the gentleman. You have the authority of an apostle that the officer who is a gentleman is "first pure." He keeps his body in subjection, as did those men who gained the name of Puritan because

they did so. These men—the men who laid the corner-stones of the institutions of the country—were first pure; and because they kept their bodies in subjection they rode down the impure and profligate cavaliers at Naseby and Marston Moor. The gentleman is first pure. Then he is peaceable. He does not seek a quarrel. There is no chip on his shoulder. This man is the gentleman of the Scriptures and of the Articles of War. And he is a man easy to be entreated, while inflexible in his duty. A man who, as an old writer says, is willing to abate something from his right. A man, as the apostle says, without partisanship. He is no slave to sect or prejudice. What he says is the thing which is. His word is his bond.

Gentlemen of that standard, you are going hence now to a frontier post—now to the capital cities of the nation—to make definite and real to those you meet this visible type of manhood. For this duty and privilege you have an opportunity which any of us, set aside to the special business of lifting higher the moral standard of the community, might envy you; perhaps because we are “set aside” for this, men of affairs are quick to pass us by. You are not set aside; you are in the thick of life. The country bids you stand for her in posts of especial difficulty; she girds you, therefore, with special honors. And the words you speak, or the silence you maintain, or the deeds you do in keeping higher the nation’s standard of duty and of honor, have special and peculiar value.

You may never have a pupil to instruct. But you can not help yourselves—you will be the educators of the men around you, with whom, for whatever purpose, you have to do. I might be satisfied to take this simple illustration of the physical training of America. You have been taught all that they say the Roman education involved—to swim, to march, to ride. It will be a proud day for America when, of the fifty million of her sons, she can say that same thing, and a prouder thing when she can say it of her fifty million daughters. To show that the student of language or science is not of necessity a puny stripling, this is one of the lessons which West Point has taught in the past and which you are to beat into the heads of the educators of your time: that athletic training is not to be left to contests as absurd as those of the Blues and Greens of the Byzantine Empire. The country wants men who are men and women who are women, strong to act, healthy to resolve, and quick to do. She ought to be able to look confidently to you for help in that matter of bodily education.

And she wants men and women who can clearly observe, can wisely balance testimony, and can rightly determine. The country means that her children’s minds, as well as their bodies, shall be trained and in working order.

And I would speak at length of that matter, of the intellectual education of the country, but that I may refer you so easily to the baccalaureate addresses which are delivered in every college of the country at this time. Read them all; young gentlemen—you will find them in the New York papers of this month—and consider them as addressed to yourselves.

The country, in its passion for education, has undoubtedly attempted too much in the way of mental education—I mean too much in a fair perspective and proportion of the claims of the mind, which is but one tool of the infinite soul, to the claims of the body, which is another tool, and the greater claims of the soul herself, which is to be the mistress of both mind and body. You are to regard yourselves as charged to correct this error where it exists, and to see that the education of this country is made simpler and that this matter of the education of the intellect holds its own proper place in the arrangements which are made for the education of the whole man.

And as for religion, gentlemen—as for the education which brings man closer to his God, that he may know his God, and how to approach to Him, and that he may rightly address God—do not think that any men have an advantage over you. All history is full of the services which soldiers have rendered to the religion of the world. Why should it not be so, when the soldier is known everywhere as the man who understands what life is for, and that death is not the greatest of all evils? He knows that

’T is not the whole of life to live,
Nor all of death to die.

And, before the world, the soldier is the living illustration of this truth, which the pulpit can only proclaim in language.

Do not forget that I may give a simple instance in those blessings to the world which were wrought out by the four soldiers of the New Testament. The four soldiers of the New Testament need not be ashamed if they were named in the same breath with the four evangelists. It was a captain in the Roman army who, when he had to take charge of a ship because her crew were cowardly, just as you may have to take charge of some transport in the same condition, saved the life of Paul, so that Paul might preach to Nero.

It is another captain in the Roman army who sent his own orderly a day’s journey that he might call the Apostle Peter to open to him the treasures of the Word. To that soldier’s decision and determination, under the Providence of God, the world

owed it that the Gentiles were received into the church, which was not left to be a church of Pharisees. Again it was a soldier who stood at the Cross and gave the testimony, which the men of letters of the time were ashamed to give, or afraid to give, in the words which every man remembers: "Truly this was a righteous man." With such examples one does not wonder when he reads that the Saviour of mankind Himself said of another Roman centurion, "I have not found so great faith, no, not in Israel."

Here are four examples of four deeds of duty well done by four soldiers who took the responsibility in the proper moment. And I would not ask for better examples of what men like you may do in the daily course of common life, in the advancement and promotion of the supreme end of living.

In these illustrations I have spoken to you as I might speak to any well-educated young man just starting upon active life. But there is one great department of the education of the American people where you have opportunities which none of the rest of us have. This country does not know herself. The American People does not know what the American People is or what it can be or can do. The men of the East do not know the power of the West. The new generation of the Pacific does not know the men of the Atlantic. The men of the South do not know the social order of the North. The people of the North do not know the traditions or necessities of the South. We are not as badly off as were those colonists who stood together under Washington. But still we do not know our resources, our possibilities, our difficulties, and our greatness. Gentlemen, it is for trained men like you—here to-day and by the Muir Glacier to-morrow, scanning the horizon from Eastport to-day and next week looking out on the Gulf of California—it is for you to reveal the nation to herself. It is for you to conciliate where you find prejudice. It is for you to teach where you find ignorance. It is for you to give the hint, when Vermont can supply what Idaho requires, or when at Fort Wrangel you see a need which could be answered from Florida. This is what is meant when we say that here at last we have one nation organized from many germs, one country made up from many races, and one People swaying all, directing all, and determined that each and all shall go forward to success.

The country is rich, so rich that she does not know her wealth—her wealth is awful in any estimate which approaches the reality. It is for educated men like you, men who see with your own eyes what is East and what is West, who look upon those upon the Arctic and the Caribbean Seas, upon the Pacific and the Atlantic, it is for you to tell her how her treasures shall be used, not for the good of this nabob, nor of that section, but for the improvement and blessing of all.

I was very much impressed by an anecdote told me of President Grant by one of his companions in his journey around the world. At any place where he was received with such honors as princes dare not claim, he was asking questions, he was using his eyes and his ears, and informing himself as to what there was, or what there was not, which might be useful to America—to the commerce or the manufactures or the social order of the people which he loved and the people which loved him. I was reminded of another story of him which Dr. Sears told me. Dr. Sears was the secretary of the Peabody Board of Education. He knew intimately the details of its wide administration. There came a matter which he thought the President should know, the nominal head of the board, which he thought would not have fallen under his notice in the wide range of the executive duties. So he waited on him at the White House and told his story. The President listened, and took from a file of letters the statement of the same affair made to him by the personal correspondent on whose information in that quarter he relied.

Believe me, gentlemen, there is no danger that you will know too much as to your country, her needs, or her possibilities. They asked Daniel Webster once when he would argue a critical case regarding the national jurisdiction, on which vast interests depended. It was the Ogden Gibbons case. "I will try it now," said he. "But do you not need some time for preparation?" "I made my preparation when I had no briefs to study, and was waiting for my first clients at the cross-roads in Franklin, in New Hampshire."

Give yourselves to your country, gentlemen, in every least detail of present service, or in the great crises which history tries to represent, on which hang the destinies of freedom. Give yourselves to her. You may serve her as Grant served or as Sherman still serves her. You may serve her in some new invention or discovery as Ericsson served her or Eli Whitney. You may serve her in the conciliation and sympathy by which you make friends of those who have been separated, as General Crook served her when he made an Apache baby play with the white man's doll.

Be the detail as it may, from this moment you serve her, you serve her in your obedience to any officer she commands. Always this loving mother is there—it may be behind the curtain—but it is her voice which you obey. The message of her will may come to you in a cramped hand-writing, on a mean bit of yellow paper; it may be given by only a very dirty telegraph boy, and he may be surly as he gives it, but it is your mother's message to you all the same, and your part is to do her will with all a loyal son's devotion.

Your country is to work out the world's problem. In a large measure she will work by your hands. There are duties which require great delicacy of touch and handling. She has made no mistake, we are sure, in intrusting them to you. They will require personal sacrifice; they will require that you shall meet abuse; shall meet danger; maybe shall meet death. But that is what a soldier is for. His life-long prayer, as his life-long duty is, that his country may be happy and true and strong. He dies, perhaps, but she lives.

Let me repeat to you the words which it is said a young naval officer heard from an army lieutenant of the first generation. They were in a boat pulling away from a captured slaver, over which the American flag was flying. "For your country, boy"—and the words rattled in his throat—"and for that flag, never dream a dream but of serving her as she bid you, though the service lead you through a thousand hells. No matter what happens to you, no matter who flatters or abuses you, never look at another flag, never let a night pass but you pray God to bless that flag. Remember, boy, that, behind all these men you have to deal with, behind officers and government and people even, there is the country herself—your country—and that you belong to her as you belong to your own mother. Stand by her, boy, as you would stand by your own mother if those devils yonder had got hold of her to-day."

INDEX.

Abraham Lincoln, Fort, N. Dak. :

- Drainage, sewerage, etc., 843, 931.
- Location, etc., of reservation, how occupied, 843.
- Means of communication, 85.
- Ordnance depot transferred from, 191.
- Water supply, 843, 937.

Accounts:

- Clothing. See *Clothing Accounts*.
- Money. See *Money Accounts*.
- Property. See *Property Returns*.

Accounts and Returns Division, C. G. O. :

- Work done during year, 863.

Acting Judge-Advocate-General:

- Annual report, 507.

Remarks:

- Citizen witnesses, 510.
- Courts-martial, 509.
- Depositions as evidence, 510.
- Desertion, 510.
- Graduated code of punishment, 509.
- Judge-Advocate-General's Dept., 511, 512.
- Law libraries for judge-advocates, 512.
- Limitation of punishment, 509.
- Military convicts, 511.

Adams, Fort, B. I. :

- Drainage, sewerage, etc., 843, 931, 935.
- Location, etc., of reservation, how occupied, 843.
- Means of communication, 85.
- Water supply, 843.

Adjutant-General:

- Annual reports, 57, 247.

Remarks:

- Colleges, 247.
- Courts-martial, 60.
- Desertion, 58.
- Discharge of enlisted men, special causes, 60.
- Fuel allowance, 250.
- Graduated code of punishment, 60.
- Limitation of punishment, 60.
- Military Prison, Leavenworth, 251.
- Pay of non-commissioned officers, line, 250.
- Post canteens, 64.
- Post schools, 61.
- Practice marches, field maneuvers, etc., 62.
- Recruiting service, 68.
- Reward for apprehension of deserters, 250.

Adjutant-General's Department:

- Abstract of inspection of money accounts, 476.
- Annual report, 57.
- Appropriation for contingencies, 22.
- Army exhibits and statistics:
 - Actual strength June 30, 1860, facing p. 68.

Adjutant-General's Department—Continued.

Army exhibits and statistics:

- Casualties, 91.
- Desertions, 58, 59.
- Discharges of enlisted men, 60.
- Increased pay, enlisted men, 57, 58.
- Position and distribution of troops, 70-83.
- Recruiting service, 66-68, 92.
- List of, and means of communication:
 - Armories, arsenals, and depots, 89, 90.
 - Departments and divisions, 84, 85.
 - Posts, 85-89.
 - Regimental headquarters, 90.
- Synopsis of reports received:
 - Post canteens, 64-66.
 - Post schools, 61, 62.
 - Practice marches, field maneuvers, etc., C2-04.

Adjutant-General's Office:

- Annual report, 247.
- Clerical force, 252, 253.
- Exhibits and tables:
 - Average attendance at colleges, 248, 249.
 - Government Insane Hospital, 252.
 - Work done during year, 253.
- Salaries, contingencies, etc., 22.

Ainsworth, Capt. F. C. :

- Annual report of operations, R. and P. Div., 1005.

Alabama Agricultural and Mechanical College:

- Inspection of military department, 363.

Alabama State Troops:

- Reports of inspection, 293, 295.

Alaska:

- Exploration of, 18.

Alcatraz Island, Cal.:

- Deficiency in food supply, 115, 942.
- Drainage, sewerage, etc., 843.
- Location, etc., of reservation, how occupied, 843.
- Means of communication, 85.
- Military convicts, 115.
- Reports of inspectors-general, 115.
- Sanitary condition of quarters, 115, 924, 926.
- Water supply, 843.

Alcove Barracks:

- System of, suggested, 183.

Alden, Lieut. Col. Charles H. :

- Report of operations, hospital corps, 918.

Alexandria (La.) National Cemetery:

- Construction of roadway, 725.

Alexandria (Va.) National Cemetery:

- Erection of rostrum, 720.

Allegheny College, Pennsylvania:

- Inspection of military department, 117, 431.

Allowances:

- Clothing. See *Clothing Allowances*.
- Fuel. See *Fuel*.
- Quarters. See *Quarters*.
- Transportation of baggage. See *Baggage*.
- Travel. See *Travel Allowances*.

Almy, Lieut. William E.:

- Report, Q. M. Dept., Military Prison, 202.

Alton (Ill.) Cemetery:

- Care of soldiers' lot, 724.

Anadarko, Ind. T.:

- Medicine dance, 197.

Andersonville (Ga.) National Cemetery:

- Care and maintenance, 720.
- Erection of rostrum, 720.

Angel Island, Cal.:

- Location, etc., of reservation, how occupied, 843.
- Means of communication, 85.
- Water supply, 843.

Antietam (Md.) National Cemetery:

- Construction of roadway, 37, 535, 725, 726.

Apache, Fort, Ariz.:

- Appropriation for military quarters, 25, 533.
- Bathing facilities, 943.
- Drainage, sewerage, etc., 843, 931, 933.
- Location, etc., of reservation, how occupied, 843.
- Means of communication, 85.
- Sanitary condition of quarters, 924, 925.
- Telegraph line to, from Holbrook, 164.
- Water supply, 843, 937, 941.

Apache Indians:

- Engagement with, March 7, 1889, 167.
- Removal of certain, to Fort Union, N. Mex., 107.

Appel, Capt. Aaron H.:

- Report, water supply, Fort Sheridan, 940.

Appel, Capt. Daniel M.:

- Report, drainage, etc., Fort D. A. Russell, 932.

Apprentice Battalions:**Remarks:**

- Frank, Lieut. Col. Royal T., 128.
- Greenleaf, Maj. Charles R., 134.
- Howard, Maj. Gen. O. O., 155.
- Inspector-General, 95.
- Sanger, Maj. J. P., 128.
- Schofield, Maj. Gen. John M., 48.
- Tidball, Lieut. Col. John G., 127.
- Weaver, Lieut. E. M., 146.
- Whistler, Lieut. G. N., 139.
- Woodhull, Maj. Alfred A., 135, 138.
- Wotherspoon, Lieut. W. W., 140.

Appropriations:

- Statement of War Department, 22-40.

Arizona, Department of:

- Affair at Mescal Springs, Ariz., Oct. 8, 1889, 164.
- Alleged Indian depredations, 172, 175, 176.
- Annual report of operations, 162.
- Apprehended difficulties with Hualpais, 162.
- Changes of troops, 171.
- Correspondence of commanding general, 43.
- Courts-martial records, 508.
- Desertions, 519.

Arizona, Department of—Continued.

- Domestic animals kept, 100.
- Engagement with Apaches, Mar. 7, 1890, 167.
- Execution of Na-diz-az, December 27, 1889, 165.
- Extract from report of judge-advocate, 519.
- Geographical limits, 84.
- Health of Army, 889, 950, 955, 963, 968.
- Indian affairs, 157, 162-171, 175-177.
- Inspection duty in, assignments, 287.
- McCook, General, assigned to command, 43.
- Military operations, 163-169, 171, 175, 176, 178.
- Military posts, 166, 168, 172-174.
- Murders:
 - Hardie, Robert, May 24, 1890, 170, 171.
 - Herbert, *freighter*, March 2, 1890, 167.
 - Reynolds, *sheriff*, and guard, 165.
 - Tez-chilla, December 26, 1889, 166.
- Operations on Mexican frontier, 175-178.
- Position and distribution of troops, 82.
- Post gardens, 100.
- Post commanders' inspection reports, 504.
- Practice marches, etc., 163, 168, 920, 921.
- Railroad through Grand Cañon, Colo., 170.
- Telegraph line, Holbrook to Fort Apache, 164.
- Trespassers, Moqui Indian reservation, 168.
- Zuñi Indians and ranchmen, 164.

Arlington (Va.) National Cemetery:

- Care and maintenance, 720.

Armories:

- List of, and means of communication, 89.

Army and Navy Hospital, Hot Springs, Ark.:

- Analysis of water, 876.
- Appropriations, 23, 533.
- Buildings and grounds, 877.
- Diseases treated, with results, 876.
- Patients, statements, 875.

Army Cooks:

- Enlistment of, 862.

Army Medical Museum:

- Appropriation, etc., 23, 871.
- Specimens received, 872, 873.

Army of the United States:

- Adjutant-General's Department, 22, 57-92.
- Allowances, 10, 2-104, 250, 773, 987.
- Annual report of operations, etc., 43.
- Appropriations, 22, 23.
- Army cooks, 862.
- Artillery School, 208-215.
- Bands, 772.
- Commissionary sergeants, 863.
- Commissioned officers, 12, 13, 154-158, 250, 252.
- Desertion, 9, 58, 59, 92, 97, 114, 115, 152, 158, 161, 194, 199, 250, 290, 509, 510, 514, 517-519.
- Employment of, since close of civil war, 1865, 49.
- Enlisted men, 10, 11, 57, 58, 60, 94, 103, 110-114, 153, 154, 156, 157, 250, 252, 288-291, 507, 771, 773, 944, 985, 989.
- Enlisted strength, increase, 113, 159.
- Indian scouts, 172, 195, 773.
- Infantry and Cavalry School, 38, 201-207.
- Inspector-General's Department, 93-150.
- Medical Dept., 154, 184, 186, 198, 214, 404, 869-981.
- Military commands, 43, 94, 151-201.

Army of the United States—Continued.

- Military posts and reservations,** 15, 52, 85, 116;
166, 168, 172-174, 183, 185, 186, 194, 199-201,
256, 287, 288, 392, 523, 526, 672, 680, 685, 715,
839-854, 879, 890, 923-944, 956-958, 961-963,
975-980.
- Pay Dept.,** 103, 104, 153, 154, 157, 250, 494, 985-997.
- Post bakers and bakeries,** 99, 750, 862.
- Post canteens,** 64, 94, 105, 162, 194.
- Post gardens,** 99, 100, 291, 750.
- Post schools,** 61, 109, 110, 151, 214, 291, 750.
- Practice marches, field maneuvers, etc.,** 51, 62-65,
107, 163, 168, 189-191, 200, 736, 910-922.
- Quartermaster's Department,** 100-103, 154, 183,
186, 198, 200, 214, 215, 292, 476, 523-854, 878.
- Recruiting service,** 68-68, 89, 92, 114, 291, 909, 981.
- Reorganization,** 12, 46, 93, 153.
- Small-arms practice,** 51, 107, 108, 151, 156, 181, 186,
194, 198, 200, 214, 531, 532, 581-585, 603, 623-
625, 637, 681, 736, 838, 841.
- Subsistence Dept.,** 99, 149, 154, 186, 484, 857-865.
- Army Reorganization:**
Remarks:
Howard, Maj. Gen. O. O., 153.
Inspector-General, 93.
Secretary of War, 12.
Schofield, Maj. Gen. John M., 46.
- Army Service Men, Q. M. Dept.:**
Enlistment and uniform, 225, 775.
- Arsenals:**
Appropriations, 23.
List of, and means of communication, 89.
- Articles of War:**
Courts-martial convened under eighty-first, 508.
- Artificial Limbs and Appliances:**
Appropriations, etc., 38, 871.
Commutation in money in lieu, 872.
Furnished during year, 872.
- Artillery Instruction:**
Artillery School, 208, 212.
- Artillery School:**
Annual report of operations, 208.
Appropriation for support, 38.
Board of examiners, 213.
Course of instruction:
Commissioned officers:
Artillery, 208.
Ballistics, interior, 208.
Chemistry and explosives, 269.
Electricity, 208.
Military science, 211.
Enlisted men:
Artillery practical exercises, 212.
Miscellaneous objects, 211.
Signaling and telegraphy, 212.
Library, 213.
Printing office, 213.
Results of examinations, 211, 213.
Scope and nature of instruction, 208-213.
Visit of class to Washington navy-yard, 208.
- Artillery Target Practice:**
Monroe, Fort, Va., 212.
Remarks of General Schofield, 51.
Reports of inspectors-general, 109.

Assiniboine, Fort, Mont.:

- Bathing facilities, 943.
Drainage, sewerage, etc., 843, 931, 932.
Epidemic of typhoid fever, 895.
Location, etc., of reservation, how occupied, 813.
Means of communication, 85.
Sanitary condition of quarters, 925.
Water supply, 843, 937, 941.
- Atlantic, Division of the:**
Annual report of operations, 151.
Clothing and equipage, 154.
Construction and repair of buildings, 154.
Courts-martial records, 503.
Domestic animals kept, 100.
Health of Army, 154, 834, 950, 951, 961, 904.
Inspection duty in, assignments, 285.
Military departments comprising, 84.
Payment of troops, 154.
Position and distribution of troops, 70.
Post commanders' inspection reports, 504.
Post gardens, 100.
Post schools, 61, 151.
Practice marches, etc., 151.
Small-arms practice, 151.
Subsistence supplies, 154.
Transportation of Army, 154.
- Bache, Maj. Dallas:**
Report of operations, hospital corps, 913.
- Bacon, Maj. John M.:**
Detailed as Actg. I. G., Dept. of the Platte, 122.
- Baggage:**
Appropriation, transportation of officers, 530.
Transportation allowance, 102, 103.
- Balley, Capt. H. K.:**
Remarks:
Civilian clerks for judge-advocates, 519.
Courts-martial, 519.
Desertion, 519.
Graduated code of punishment, 519.
- Bakers:**
See *Post Bakers*.
- Ball, Lieut. R. R.:**
Report, food supply, operations, Ind. T., 942.
- Ballistics:**
Instruction in, Artillery School, 208.
- Bands:**
Military Academy, 222, 1078.
Purchase of instruments, 772, 812, 813.
- Bannister, Capt. W. B.:**
Report of bathing facilities, Fort Grant, 943.
- Barnes Hospital, Soldiers' Home, D. C.:**
Cooks, nurses, and attendants, 1029.
Dead house, 1029, 1030.
Discipline, 1029.
Expenses:
Annual, 1887-1890, 1026.
Monthly, Oct., 1889-Sept., 1890, 1026-1023.
Records, 1029.
Sanitary condition, 1028, 1029, 1045.
Supplies of milk and vegetables, 1058.
- Barracks and Quarters:**
Alcove system of, suggested, 183.

Barracks and Quarters—Continued.

- Appropriation:**
 Allotments for construction, 526, 672.
 Amounts available, 23, 667.
 Debits and credits, 530-532.
 Expenditures in detail, fiscal years ending—
 June 30, 1889 (in part), 618-622, 637.
 June 30, 1890, 572-576, 603.
 Indefinite or special, 533-535.
 Authorized expenditures, 667-671.
 Building operations at military posts, 154, 183,
 186, 198, 200, 214, 215, 526, 672-679.
 Expenditures, compiled from reports, 685-715.
 Furniture for officers, 101.
 Losses, 684, 685.
 Manufacture of furniture, 263, 264, 748.
 Married soldiers and children, 101.
 Post-traders' buildings, 684.
 Property rented, 715-718.
 Remarks of Quartermaster-General, 524.
 Reports of inspectors-general, 100, 101.
 Sale of cottages at San Antonio, Tex., 685.
 Sanitary condition, 923, 930.
 Use of casemates, 100, 924.
- Barracks and Quarters Branch, Q. M. G. O.:**
 Annual report of operations, 666.
 Financial statements, 667-718.
 Scope and character of work, 666.
- Barrancas, Fort, Fla.:**
 Drainage, sewerage, etc., 843.
 Location, etc., of reservation, how occupied, 843.
 Means of communication, 85.
 Water supply, 843, 936.
- Barrancas (Fla.) National Cemetery:**
 Care and maintenance, 720.
- Batchelder, Brig. Gen. Richard N.:**
 Commissioner, Soldiers' Home, D. C., 1021.
 Reports. See *Quartermaster-General*.
- Baton Rouge (La.) National Cemetery:**
 Roadway, 37, 535.
- Bathing Facilities:**
 Remarks:
 Medical officers, 943, 944.
 Surgeon-General, 943.
- Baxter, Brig. Gen. Jedediah H.:**
 Commissioner, Soldiers' Home, D. C., 1021.
- Bayard, Fort, N. Mex.:**
 Abandonment recommended, 172, 173.
 Drainage, sewerage, etc., 843.
 Location, etc., of reservation, how occupied, 843.
 Means of communication, 85.
 Water supply, 843.
- Beaufort (S. C.) National Cemetery:**
 Care and maintenance, 720.
 Construction of roadway, 37, 535, 726.
 Erection of rostrum, 720.
- Beaumont, Maj. Eugene B.:**
 Inspection of Texas Mech. and Agr. College, 450.
 Remarks:
 Cavalry equipments and blanket-bags, 104.
 Beds, 101.
 Furniture for barracks and quarters, 101.
 Instruction of enlisted men, 741.
 Medical department, 104.

Beaumont, Maj. Eugene B.—Continued.

- Remarks:
 Post schools, 110.
 Practice marches, field maneuvers, etc., 107.
 Subsistence supplies, 90.
 Station and work performed, 121, 122.
- Beckwith, —:**
 Murder of, near Polvo, Tex., 185.
- Beds:**
 Reports of inspectors-general, 101.
- Bref:**
 Average contract price, 860.
- Bellevue Rifle Range, Nebr.:**
 Rifle and cavalry competition, 200.
- Benham, Maj. D. W.:**
 Remarks on desertion, 115.
- Benicia Barracks, Cal.:**
 Drainage, sewerage, etc., 843.
 Location, etc., of reservation, how occupied, 843.
 Means of communication, 85.
 Water supply, 843, 936, 938.
- Bennett, Fort, S. Dak.:**
 Drainage, sewerage, etc., 844.
 Location, etc., of reservation, how occupied, 843.
 Means of communication, 85.
 Water supply, 844, 936, 937.
- Berry, Lieut. L. G.:**
 Inspection, Alabama State troops, 203.
- Bertillon System:**
 Identification of deserters, 114.
- Beverly (N. J.) National Cemetery:**
 Care and maintenance, 720.
 Construction of roadway, etc., 37, 535, 725.
- Bidwell, Fort, Cal.:**
 Drainage, sewerage, etc., 844.
 Location, etc., reservation, how occupied, 844.
 Means of communication, 85.
 Transfer of, to Interior Department, 52.
 Water supply, 844.
- Bingham School, North Carolina:**
 Inspection of military department, 116, 417.
- Birchimer, Capt. William E.:**
 Remarks:
 Civilian clerks for judge-advocates, 516.
 Courts-martial, 515.
 Desertion, 518.
 Judge-Advocate-General's Department, 515.
 Law libraries for judge-advocates, 517.
- Births:**
 At military posts, 923.
- Black, Capt. C. S.:**
 Report, drainage, etc., Fort Sidney, Nebr., 933.
- Blacksmiths:**
 Additional extra-duty pay, 114.
- Black Tanks Camp:**
 Restoration of, to Yavia Suppai Indians, 169.
- Blanket-bags:**
 Merriam pack recommended, 104.
- Bliss, Fort, Tex. (new):**
 Purchase of site, etc., 25, 534, 078, 841.

- Bliss, Fort, Tex. (old) :**
 Affairs, military reservation, 678, 839.
 Drainage, sewerage, etc., 844, 931.
 Location, etc., of reservation, how occupied, 844.
 Means of communication, 85.
 Sale of reservation, 678, 841.
 Sanitary condition of quarters, 925.
 Water supply, 844, 936, 938.
- Blunt, Capt. Stanhope E. :**
 Inspection, North Carolina National Guard, 357.
- Board of Commissioners, Soldiers' Home, D. C. :**
 Annual report of condition, etc., of Home, 1019.
 Changes in personnel, 1021.
- Board of Ordnance and Fortification :**
 Allotments of appropriations, 54-56.
 Appropriations placed at its disposal, 54.
 Sites examined for ordnance proving ground, 54.
 Work done during year, 53.
- Board of Publication, War Records :**
 Annual report of operations, 1001.
 Appointment and composition, 1001.
- Board of Visitors, U. S. Military Academy :**
 Annual report, 1069.
 Appointment and composition, 1067, 1069,
 Organization, 1070.
 Remarks:
 Appointment and examination of cadets, 1069.
 Band, U. S. Military Academy, 1078.
 Buildings, grounds, etc., 1073-1077.
 Discipline and instruction, 1077.
 Fiscal affairs, 1079.
 Supply department and expenditures, 1078.
 Suggestions from superintendent, 1071-1073.
 Working committees appointed, 1072.
- Boise Barracks, Idaho :**
 Drainage, sewerage, etc., 844.
 Location, etc., of reservation, how occupied, 844.
 Means of communication, 85.
 Water supply, 844, 936, 938, 939.
- Boots :**
 Manufactures, 262, 769, 770.
- Boston, Mass. :**
 Defense of, construction of batteries, 55.
- Bowle, Fort, Ariz. :**
 Drainage, sewerage, etc., 844.
 Location, etc., of reservation, how occupied, 844.
 Means of communication, 85.
 Water supply, 844.
- Brady, Fort, Mich. :**
 Location, etc., of reservation, how occupied, 844.
 Means of communication, 85.
 Purchase of site, etc., 25, 526, 533, 678, 838.
 Water supply, 844.
- Brechemin, Capt. Louis :**
 Instruction, etc., Illinois National Guard, 921.
- Breckinridge, Brig. Gen. Joseph C. :**
 See *Inspector-General*.
- Brevet-Bank Act, February 27, 1890 :**
 Remarks of General Schofield, 52.
- Bridger, Fort, Wyo. :**
 Drainage, sewerage, etc., 844.
 Location, etc., of reservation, how occupied, 844.
- Bridger, Fort, Wyo.—Continued.**
 Transfer of, to Interior Department, 52, 841.
 Water supply, 844.
- Bridges :**
 Amounts expended, 525.
 Appropriation for, over Mill Creek, Va., 25.
 Authorized expenditures at military posts, 680.
 Forts Riley, Wingate, and Sheridan, 683.
- British Army :**
 Preliminary training of recruits, 112.
- Brooke, Brig. Gen. John R. :**
 Annual report, Department of the Platte, 109.
 Remarks:
 Law libraries, judge-advocates, 200.
 Practice marches, field maneuvers, etc., 200.
 Small-arms practice, 200.
- Brook's Ranch, Tex. :**
 Murder of Simpson and Nations, 185.
- Brooms :**
 Manufactures, 263, 769-771.
- Brown, Fort, Tex. :**
 Bathing facilities, 9, 43.
 Condition of affairs, 840.
 Drainage, sewerage, etc., 844.
 Location, etc., of reservation, how occupied, 844.
 Means of communication, 85.
 Purchase of reservation, 25, 534, 840.
 Sanitary condition of quarters, 924, 925.
 Water supply, 844.
- Brown, Lieut. George Le Roy :**
 Inspection, Delaware National Guard, 298.
- Brownsville (Tex.) National Cemetery :**
 Care and maintenance, 720.
- Buffington, Act'g Asst. Surg. A. L. :**
 Report of drainage, etc., Fort Hancock, 933.
- Burford, Fort, N. Dak. :**
 Bathing facilities, 943.
 Deficiency in food supply, 942.
 Drainage, sewerage, etc., 844.
 Location, etc., of reservation, how occupied, 844.
 Means of communication, 85.
 Water supply, 844.
- Bulkheads :**
 Construction of, at Fort Mason, Cal., 684.
- Burial of Indigent Soldiers :**
 Appropriation and expenditures, 37, 533, 725.
- Burton, Lieut. Col. G. H. :**
 Inspection of:
 California University, 118, 364.
 Nevada State University, 118, 411.
 Remarks:
 Conduct of enlisted men, 113.
 Instruction of enlisted men, 110.
 Pay and allowance of quarters, 104.
 Post schools, 109.
 Purchase of public animals, 101.
 Subsistence supplies, 99.
 Station and work performed, 120, 122.
- Business Methods :**
 Results of, in Record and Pension Div., 1013.
- Byrne, Lieut. Col. Charles C.,**
 Relieved from duty, Soldiers' Home, D. C., 1021.

- Cadets:**
 Appointment and examination, 210, 1079.
 Drills and exercises, 1081.
 Instruction, 1077.
 Supplies, 1078.
 Tried by general courts-martial, 507.
- California, Department of:**
 Courts-martial records, 508.
 Domestic animals kept, 100.
 Extract from report of judge-advocate, 513.
 Geographical limits, 84.
 Health of Army, 888, 950, 954, 963, 967.
 Position and distribution of troops, 76.
 Post commanders' inspection reports, 504.
 Post gardens, 100.
 Post schools, 61.
- California National Guard:**
 Report of inspection, 352.
- California University:**
 Inspection of military department, 118, 364.
- Camp Butler (Ill.) National Cemetery:**
 Care and maintenance, 720.
- Camp-stools,**
 Manufactures, 263, 748.
- Camps of Instruction:**
 See *Practice Marches, Field Maneuvers, etc.*
- Canby, Fort, Wash.:**
 Drainage, sewerage, etc., 844.
 Location, etc., of reservation, how occupied, 844.
 Means of communication, 85.
 Water supply, 844.
- Canteens:**
 See *Post Canteens.*
- Carbaugh, Capt. H. C.:**
 Remarks:
 Courts-martial, 520.
 Previous trials and convictions, 520.
- Card System:**
 Adoption of, in Record and Pension Div., 1006.
 Applied to record of volunteers, 1012.
 Method of working in R. and P. Div., 1008.
- Carr, Col. E. A.:**
 Annual report, District of New Mexico, 179.
 Remarks:
 Heliograph system, 181.
 Indian affairs, 180.
 Practice marches, etc., 180.
 Small-arms practice, 181.
- Carroll, Fort, Md.:**
 Location, etc., of reservation, how occupied, 844.
 Means of communication, 85.
- Carson City (Nev.) National Cemetery:**
 Appropriation, 37, 533.
- Carter, Capt. E. C.:**
 Sanitary condition Willets Point, 926.
- Carter, Capt. W. Fitzhugh:**
 Report, water supply at Fort Ringgold, 939.
- Casualties, U. S. Army:**
 Table, 91.
- Caswell, Fort (N. C.):**
 Location, etc., of reservation, how occupied, 844.
 Means of communication, 85.
- Cavalry Bridle-bit:**
 Unsatisfactory, 199.
- Cavalry Instruction:**
 Infantry and Cavalry School, 206.
- Cave Hill (Ky.) National Cemetery:**
 Care and maintenance, 720.
- Cemeteries:**
 National. See respective national cemeteries.
 Soldiers' lots, 724.
- Certificates of Merit:**
 Enlisted men, U. S. A., who have, 283-290.
- Chaffee, Maj. Adna R.:**
 Assigned to duty, Department of Arizona, 123.
- Chairs:**
 Improved seats for barracks, 776.
 Manufactures, 263, 769, 770.
- Chalmette (La.) National Cemetery:**
 Care and maintenance, 720.
 Construction of roadway, 37, 535, 720.
- Chaplains:**
 Undress uniform, 775.
- Chattanooga (Tenn.) National Cemetery:**
 Care and maintenance, 721.
 Roadway, 37, 534.
- Chemistry:**
 Instruction in, Artillery School, 209.
- Cherokee Strip:**
 President's Proclamation, 196, 197.
- Cheyenne, Fort, Wyo.:**
 Quartermaster's and ordnance depots, 200.
- Cheyenne River Agency:**
 Military support of agent, 187, 191, 192.
- Chicago, Ill.:**
 New military post. See *Fort Sheridan, Ill.*
- Chickamauga, Ga.:**
 Appropriation for battle-field maps, 39.
- Chicken-pox:**
 Prevalence in Army, 893.
- Cholera Morbus:**
 Military Academy, 220, 221.
- Citizen Witnesses:**
 Power of courts-martial to punish, 510.
- City of Mexico, National Cemetery:**
 Care and maintenance, 723.
- Civilian Attachés:**
 Health, 922.
- Civilian Employés:**
 Military Prison, Leavenworth, 262, 263.
 Quartermaster's Department, 648-661.
 Soldiers' Home, D. C., 1046, 1048, 1053.
- Civil Surveys:**
 Appropriation, 38.
- Claims:**
 Act of July 4, 1864, 752, 753, 863.
 Commutation of rations, prisoners of war, 863.
 Horses and other property lost in service, 536.
 Miscellaneous, 750, 751, 864.
 Pay, bounty, etc., to volunteers, 985, 986, 989.
 Quartermaster's and commissary supplies, 536.
 Transportation of Army, 741.

- Claims Branch (Act July 4, 1864), Q. M. G. O. :**
 Annual report of operations, 752.
 Clerical force, 753.
 Number of claims acted upon, etc., 753.
 Scope and character of work, 752.
- Claims Division, C. G. O. :**
 Work done during year, 863, 864.
- Clark, Fort, Tex. :**
 Affairs, military reservation, 186, 839, 840.
 Drainage, sewerage, etc., 844, 931, 933.
 Location, etc., of reservation, how occupied, 844.
 Means of communication, 85.
 Sanitary condition of quarters, etc., 924, 927.
 Water supply, 844, 937, 940.
- Clark's Point, Mass. :**
 Location, etc., of reservation, how occupied, 845.
 Means of communication, 85.
- Clary, Maj. P. J. A. :**
 Report, clothing, Fort Wingate, N. Mex., 942.
- Clendenin, Lieut. Paul :**
 Report, water supply, Fort McIntosh, 939.
- Clinch, Fort, Fla. :**
 Location, etc., of reservation, how occupied, 845.
 Means of communication, 85.
- Clothing Accounts :**
 Change in settlement of soldiers', 773.
- Clothing Allowances :**
 Indian scouts, 773.
- Clothing and Equipage :**
 Allowance of certain articles, insufficient, 103.
 Appropriation :
 Amounts received and remitted, 828.
 Debits and credits, 530-532.
 Expenditures in detail, fiscal years ending—
 June 30, 1889 (in part), 623-625, 637.
 June 30, 1890, 581-585, 603.
 Increase recommended, 525, 777.
 Receipts and expenditures, 23, 766.
 Books of specifications, 777.
 Detailed statement of, at issuing depots, 779-795.
 Issues :
 Army of the United States, 768, 779-795.
 Indian prisoners, 769, 836.
 Military Prison, Leavenworth, 770, 837.
 Militia, 768, 769, 779-795, 828-834.
 Manufactures, 262-264, 766, 767, 769-771, 836, 837.
 Payments and collections, enlisted men, 771.
 Purchases, 766, 767, 796-827.
 Remarks :
 Medical officers, 942.
 Quartermaster-General, 525.
 Surgeon-General, 942.
 Reports of inspectors-general, 103.
 Returns, number received and examined, 666.
 Sales of condemned clothing, etc., 771, 772.
- Clothing and Equipage Returns Branch, Q. M. G. O. :**
 Annual report of operations, 666.
 Scope and character of work, 666.
 Work done during year, 666.
- Clothing and Equipage Supply Branch, Q. M. G. O. :**
 Annual report of operations, 766.
 Clerical force, 778.
 Financial statements, 767-772, 777, 796, 834, 837.
 Scope and character of work, 766.
- Coast Defense.**
 See *National Defense*.
- Colleges :**
 Average attendance of students, 248.
 Inspection of military departments, 363-474.
 Remarks :
 Adjutant-General, 247.
 Heyl, Col. E. M., 279, 280.
 Hughes, Col. R. P., 280.
 Inspector-General, 116, 278.
 Secretary of War, 17
 St. Joseph's Commercial College, Mo., 39, 535.
 Synopsis of inspection reports, facing p. 148.
- Colorado River :**
 Proposed railroad through Grand Cañon, 170.
- Colorado State Agricultural College :**
 Inspection of military department, 365.
- Columbia, Department of the :**
 Annual report of operations, 160.
 Changes of troops, 160.
 Courts-martial records, 508.
 Desertions, number, percentages 114, 517, 518.
 Domestic animals kept, 100.
 Extract from report of judge-advocate, 515.
 Geographical limits, 84.
 Health of Army, 889, 950, 954, 963, 968.
 Indian affairs, 160.
 Inspection duty in, assignments, 286.
 Position and distribution of troops, 76.
 Post canteens, 105, 162.
 Post commanders' inspection reports, 504.
 Post gardens, 100.
 Post schools, 61.
 Trials by courts-martial, with percentages, 517.
- Columbus, Fort, N. Y. :**
 Bathing facilities, etc., 115.
 Drainage, sewerage, etc., 845.
 Location, etc., of reservation, how occupied, 845.
 Means of communication, 85.
 Synopsis of reports of inspection, 115.
 Water supply, 845.
- Columbus Barracks, Ohio :**
 Construction of buildings, etc., 25, 534, 677.
 Drainage, sewerage, etc., 845.
 Location, etc., of reservation, how occupied, 845.
 Means of communication, 85, 89.
 Water supply, 845.
- Columbus, Ohio :**
 Confederate cemetery, 37, 533.
- Colville Indian Reservation :**
 Removal of Kum-num-so-wich-it-tsa, 160.
- Commissaries of Subsistence :**
 Duties and stations, 865.
- Commissary-General of Subsistence :**
 Annual report, 857.
- Commissary-General's Office :**
 Accounts and Returns Division, 863.
 Claims Division, 863, 864.
 Salaries, contingencies, etc., 22.
- Commissary-Sergeants :**
 Appointments and casualties, 833.

Commissioned Officers :

- Allowance of fuel in kind, 250.
- Committed to Insane Hospital, 252.
- Forage-caps, 773.
- Promotion, 3, 155, 156.
- Transfer of, to unlimited retired list, 12, 13, 154.
- Tried by general courts-martial, 507.

Common Carriers :

- Rates, transportation of Army, 736.

Company Field-desks :

- Manufactured at Leavenworth Prison, 263, 748.

Concho, Fort, Tex. :

- Transfer of, to Interior Department, 52.

Constitution, Fort, N. H. :

- Location, etc., of reservation, how occupied, 845.
- Means of communication, 85.

Contractors :

- Rates, transportation of Army, 736.

Contracts :

- Quartermaster's stores, 745.
- Transportation, wagon and water, 736, 759-765.

Cooks :

- See *Army Cooks*.

Corbin, Lieut. Col. Henry C. :

- Inspection, Pennsylvania National Guard, 328.

Corinth (Miss.) National Cemetery :

- Care and maintenance, 721.
- Construction of roadway, 726.
- Erection of rostrum, 720.

Cornell College, Iowa :

- Inspection of military department, 118, 385.

Cornell University, N. Y. :

- Inspection of military department, 415.

Courts-Martial :

- Composition of, general, 161.
- Convened under eighty-first Article of War, 508.
- Decrease in cases tried, 508.
- Depositions to be used in evidence, 510.
- Establishment of military court of appeal, 161.
- Jurisdiction over military convicts, 511.
- Number of cases tried, 507, 508.
- Pay of soldiers retained by sentence, 989.
- Power to punish citizen witnesses, 510.
- Previous convictions, 513, 520.
- Records of, received, 508.
- Remarks :
 - Acting Judge-Advocate-General, 509.
 - Adjutant-General, 60.
 - Bailey, Capt. H. K., 519.
 - Birkhimer, Capt. William E., 515.
 - Carbaugh, Capt. H. C., 520.
 - Gibbon, Brig. Gen. John, 161.
 - Groesbeck, Capt. S. W., 513.
 - Howard, Maj. Gen. O. O., 153.
 - Hunter, Maj. Edward, 513.
 - Secretary of War, 4.
- Trials by, number for past eleven years, 507.

Cowdrey, Capt. Stevens G. :

- Reports :
 - Bliss, Fort, Tex., water supply, 938.
 - Marcy, Fort, Tex., drainage, etc., 933, 934.

Cox, John :

- Murder by, of Tez-chilla, Dec. 26, 1889, 166.

Crawford, Fort, Colo. :

- Drainage, sewerage, etc., 845.
- Location, etc., of reservation, how occupied, 845.
- Transfer of, to Interior Department, 52, 196, 841.
- Water supply, 845.

Crook, Maj. Gen. George :

- Death, 43.

Crow Creek and Lower Brulé Agency :

- Military support of agent, 187, 191, 192.

Culpeper (Va.) National Cemetery :

- Care and maintenance, 721.

Cummings, Fort, N. Mex. :

- Location, etc., of reservation, how occupied, 845.

Custer, Fort, Mont. :

- Drainage, sewerage, etc., 845.
- Indian prisoners, 193.
- Location, etc., of reservation, how occupied, 845.
- Means of communication, 85.
- Sanitary condition of quarters, etc., 924, 927.
- Water supply, 845, 937, 940.

Custer, General :

- Monument, 526.

Custer Battle-field (Mont.) National Cemetery :

- Care and maintenance, 721.
- Remarks of Quartermaster-General, 525.

Cypress Hill (N. Y.) National Cemetery :

- Care and maintenance, 721.

Dakota, Department of :

- Annual report of operations, 187.
- Changes of troops, 191-193.
- Courts-martial records, 508.
- Departmental rifle and cavalry competition, 200.
- Desertions, number, percentage, etc., 114, 194, 514.
- Domestic animals kept, 100.
- Extract from report of judge-advocate, 513.
- Geographical limits, 84.
- Health of Army, 885, 950, 952, 961, 965.
- Indian affairs, 188, 189, 191-193.
- Inspection duty in, assignments, 286.
- Inspections, 194.
- Instruction and discipline of troops, 194.
- Military support of agents, 187-193.
- Ordnance depot removed to Fort Snelling, 191.
- Position and distribution of troops, 72.
- Post canteens, 194.
- Post commanders' inspection reports, 504.
- Post gardens, 100.
- Post schools, 61.
- Practice marches, etc., 189-191, 918-920.
- Small-arms practice, 194.
- Strength of garrisons of military posts, 194.
- Trials by courts-martial, with percentages, 513.

Danville (Va.) National Cemetery :

- Care and maintenance, 721.
- Construction of roadway, 37, 533, 535, 725, 726.

D. A. Russell, Fort, Wyo. :

- Drainage, sewerage, etc., 200, 845, 931, 932.
- Location, etc., of reservation, how occupied, 845.
- Means of communication, 85.
- Sanitary condition of quarters, 925.
- Water supply, 38, 200, 535, 845.

David's Island, N. Y.:

- Drainage, sewerage, etc., 845.
- Location, etc., of reservation, how occupied, 845.
- Means of communication, 85, 90.
- Water supply, 845, 936.

Davis, Fort, Tex.:

- Condition of affairs, 839.
- Drainage, sewerage, etc., 845, 931, 933.
- Location, etc., of reservation, how occupied, 845.
- Means of communication, 85.
- Sanitary condition of quarters, 924, 929.
- Water supply, 845, 937, 939.

Davis, Maj. George B.:

- Board of Publication War Records, 1001.

Davis, Brig. Gen. Nelson H.:

- Death of, announced, 118.

Deceased Soldiers:

- Removal of remains to national cemeteries, 719.

Delaware, Fort, Del.:

- Location, etc., of reservation, how occupied, 845.
- Means of communication, 85.

Delaware College:

- Inspection report of military department, 368.

Delaware National Guard:

- Report of inspection, 298.

Del Rio, Camp, Tex.:

- Condition of affairs, 839.
- Erection of quarters for a one-company post, 185.
- Location, etc., of reservation, how occupied, 845.

De Pauw University, Ind.:

- Inspection of military department, 380.

Depositions:

- Evidence before courts-martial, 510.

Deposits of Enlisted Men:

- Amount received, 985.
- Post commanders' inspection reports, 291.
- Reports of inspectors-general, 103.

Derby, Capt. George McC.:

- Report, water supply, West Point, 238.

Desertion:

- Arizona, Department of, 519.
- Assigned reasons, by offenders, 599.
- Columbia, Department of the, 114, 517, 518.
- Dakota, Department of, 114, 194, 514.
- Enlisted men gained from, table, 92.
- Limitation in prosecutions, 4, 510.
- Missouri, Department of the, 114.
- Percentage of, to actual strength, 58, 59.
- Platte, Department of the, 115.
- Post commanders' inspection reports, 290.
- Remarks:

- Acting Judge-Advocate-General, 510.
- Adjutant-General, 58.
- Bailey, Capt. H. K., 519.
- Birkhimer, Capt. William E., 518.
- Gibbon, Brig. Gen. John, 161.
- Groesbeck, Capt. S. W., 514.
- Howard, Maj. Gen. O. O., 152.
- Inspector-General, 97.
- Merritt, Brig. Gen. Wesley, 199.
- Miles, Maj. Gen. Nelson A., 56.
- Sanger, Maj. J. P., 114.

Desertion—Continued.

- Remarks:
- Secretary of War, 9.
- Reward for arresting deserters, 152, 250.

Destitute Patients:

- See *Providence Hospital*.

Diarrheal Diseases:

- Prevalence of, in Army, 903, 977, 979.

Dietz, Capt. W. D.:

- Sanitary report, Alcatraz Island, 926.

Diphtheria:

- Prevalence of, in Army, 221, 893.

Disbursing Officers:

- Remarks of Inspector-General, 283.

Diseases:

- Civilians attached to or with Army, 922.
- Influence of season on prevalence of disease, 909.
- Medical reports, special, 907.
- Monthly prevalence, 964-968.
- Prevalence of special, 893-904, 975-980.
- Prevalent at:

- Military Prison, Leavenworth, 257-259.
- Soldiers' Home, D. C., 1024.
- West Point, N. Y., 220-222, 231-236.

- Results of, and injuries, 881, 882, 956-968.

- Special reports, 908.

- Surgical operations, character and number, 906.

- Treated in Hospital, Hot Springs, 876.

District of Columbia National Guard:

- Clothing and equipage, 769, 834.
- Medical and hospital supplies, 870.
- Quartermaster's stores, 769, 835.

Domestic Animals:

- Departments and divisions, 100.
- Soldiers' Home, D. C., 1049, 1058.

Donations:

- Money and clothing to post prisoners, 256.

Douglas, Fort, Utah:

- Drainage, sewerage, etc., 200, 845.
- Enlargement of reservation, 841.
- Location, etc., of reservation, how occupied, 845.
- Means of communication, 85.
- Water supply, 200, 845, 937, 940.

Drainage, Sewerage, etc.:

- Military reservations, 200, 214, 843-854, 930-935.

Remarks:

- Medical officers, 931-935.
- Surgeon-General, 930.
- Sewer system, Fort Monroe, 25.
- Soldiers' Home, D. C., 1028, 1045.

Drawers:

- Improvement in, 775.

Drowning:

- Number of cases, 905.

Drum, Lieut. Col. W. F.:**Inspection reports:**

- Minnesota University, 405.
- North Dakota University, 421.
- Shattuck School, Minnesota, 473.
- South Dakota Agricultural College, 441.

- Relieved from duty, Department of Dakota, 123.

Remarks:

- Cavalry equipments and blanket-bags, 104.

Drum, Lieut. Col. W. F.—Continued.**Remarks:**

- Conduct of enlisted men, 113.
- Desertion, 114.
- Illuminating supplies, 101.
- Post gardens, 99.
- Post schools, 110.
- Subsistence supplies, 99.

Station and work performed, 121, 122.

Du Barry, Brig. Gen. Beekman:

- Commissioner, Soldiers' Home, D. C., 1021.
- Reports. See *Commissary-General*.

Du Chesne, Fort:

- Bathing facilities, 843.
- Drainage, sewerage, etc., 845.
- Location, etc., of reservation, how occupied, 845.
- Means of communication, 86.
- Sanitary condition of quarters, etc., 925.
- Water supply, 845.

Duluth and Manitoba Railroad Company:

- Right of way, Fort Pembina Reservation, 839.

Duncan, Fort, Tex.:

- Purchase of old post, 185, 840.

Dutch Island, R. I.:

- Location, etc., of reservation, how occupied, 845.
- Means of communication, 86.

Eagle Pass, Camp, Tex.:

- Clothing supplied for use, 942.
- Location, etc., of reservation, how occupied, 846.

East, Department of the:

- Geographical limits, 84.
- Position and distribution of troops, 70.
- See also, *Division of the Atlantic*.

Egan, Capt. P. R.:

- Report, clothing, Camp Eagle Pass, Tex., 942.

Electricity:

- Instruction in, Artillery School, 208.

Electric Lights:

- Soldiers' Home, D. C., 1022.
- West Point, N. Y., 229, 240-243, 1075.

Elliott, Fort, Tex.:

- Abandonment ordered, 196, 839.
- Appropriation for, and purchase of site, 25, 526, 534, 839.
- Bathing facilities, 943.
- Condition of affairs, 840.
- Location, etc., of reservation, how occupied, 845.
- Transfer of, to Interior Department, 52.

Engineer Department:

- Abstract of inspection of money accounts, 496.
- Annual report of operations. See Vol. II.
- Salaries, etc., Engineer Bureau, 22.

Engineer Depot, Willets Point, N. Y.:

- Appropriation, 23.
- Means of communication, 90.

Engineering Instruction:

- Infantry and Cavalry School, 204.

Enlisted Men:

- Certificates of merit and medals, 288.
- Changes in settlements of clothing accounts, 773.
- Committed to Insane Hospital, 252.
- Deposits, 103, 291, 985.
- Discharge of, for special cause, 60.

Enlisted Men—Continued.

- Habits, etc., 944.
- Increased pay, 57.
- Instruction and conduct, 110-113.
- Non-commissioned officers, 94, 113, 114, 153, 157, 250, 291.
- Number whose terms expire June 30, 1892, 58.
- Payments and collections, clothing, etc., 771.
- Pay retained, sentence of courts-martial, 989.
- Post commanders' inspection reports, 288.
- Promotion, 10, 11, 156.
- Recruits in British and German armies, 111, 112.
- Retirement, reduction of period of service, 154.
- Tried by general courts-martial, 507.

Estimates:

- Consolidated statement of, for 1892, 19.
- Funds, officers Q. M. Dept., 537, 538, 541.

Evans, Lieut. R. K.:

- Report, provost guard, Military Prison, 261.

Everts, Capt. Edward:

- Reports of affairs at, Fort Apache:
 - Drainage, sewerage, etc., 933.
 - Water supply, 941.

Expenditures:

- Analysis of, Q. M. Dept., 546-637.
- Army supplies at general depots, 750.
- Clothing, equipage, and material, 766.
- Consolidated statement, 19.
- Disbursing officers, Q. M. Dept., 662.
- National cemeteries, 729-733.
- Medical and hospital department, 869-871.
- Military posts and reservations, 685, 842, 843.
- Mississippi River sufferers, 837, 862.
- Pay of the Army, 985, 996.
- Practice marches, field maneuvers, etc., 736.
- Subsistence supplies and property, 859.
- Transportation of Army, 638-647.

Explosives:

- Instruction in, Artillery School, 209.

Express Companies:

- Payments to, Army transportation, 638, 640.

Fayette, Fort, Pa.:

- Sale of grounds originally known as, 839.

Fayetteville (Ark.) National Cemetery:

- Care and maintenance, 722.

Ferguson, ———:

- Murder of, 188.

Fessenden, Capt. Joshua A.:

- Station and work performed, 122.

Finance Branch, Quartermaster-General's Office:

- Annual report of operations, 529.
- Financial statements, 530-543.
- Scope and character of work, 529.

Finn's Point, N. J.:

- Location, etc., of reservation, how occupied, 846.
- Means of communication, 86.

Fires:

- Losses. See *Losses of Stores and Property*.

Flathead Agency:

- Military support of agent, 188, 189, 191, 193.

Florence (S. C.) National Cemetery:

- Construction of roadway, 37, 535, 725.

- Food Supply:**
 Military Prison, Leavenworth, 258, 265.
 Remarks:
 Medical officers, 842.
 Surgeon-General, 942.
 Soldiers' Home, D. C., 1029.
- Forage:**
 Average cost, 749.
 Post commanders' inspection reports, 292.
- Forage cap:**
 Officers', proposed change of pattern, 773.
- Foot, Fort, Md.:**
 Location, etc., of reservation, how occupied, 846.
 Means of communication, 86.
- Foot, Lieut. S. M.:**
 Inspection, Vermont National Guard, 341.
- Fort Gratiot, Mich.:**
 Cemetery, 37, 532.
- Fortifications:**
 Appropriations, 23, 24.
- Forwood, Maj. William:**
 Annual report, 1023.
 Relieves Lieut. Col. C. C. Byrne, 1021.
- Frank, Lieut. Col. Royal T.:**
 Annual report of Artillery School and post of
 Fort Monroe, Va., 208.
 Remarks, apprentice battalions, 128.
- French Army:**
 Efforts for suppression of typhoid fever, 902.
- Frick, Actg. Asst. Surg. A. P.:**
 Report, water supply, Fort Selden, 939.
- Fuel:**
 Allowances in kind for officers, 250.
 Average cost, 749.
 Post commanders' inspection reports, 292.
 Reports of inspectors-general, 101.
 Wood, Military Prison, Leavenworth, 258.
- Furniture:**
 Barracks and quarters, 263, 264, 748.
 Officers' quarters, 101.
 State, War, and Navy Department building, 22.
 Stove and range, 263, 746, 747.
- Gaines, Fort, Ala.:**
 Location, etc., of reservation, how occupied, 846.
 Means of communication, 86.
- Garfield Hospital:**
 Appropriation for maintenance, 38.
- Garfield, James A.:**
 Statute, 40.
- Gaston, Fort, Cal.:**
 Drainage, sewerage, etc., 846, 931, 935.
 Location, etc., of reservation, how occupied, 846.
 Means of communication, 86.
 Water supply, 846.
- Geological Survey:**
 Sale of tents, etc., to Director, 772.
- Georgia Militia:**
 Report of inspection, 301.
- German Army:**
 Preliminary training of recruits, 111.
- Gettysburgh, Pa.:**
 Appropriation for monuments or tablets, 40, 534.
- Gibbon, Brig. Gen. John:**
 Annual report, Dept. of the Columbia, 160.
 Assigned to Division of the Pacific, 43.
 Remarks:
 Courts-martial, 161.
 Desertion, 161.
 Indian affairs, 160.
 Post canteens, 162.
- Gibson, Fort, Ind. T.:**
 Bathing facilities, 943.
 Drainage, sewerage, etc., 846, 931, 932.
 Location, etc., of reservation, how occupied, 846.
 Sanitary condition of quarters, 924.
 Transfer of, to Interior Department, 52, 196.
 Water supply, 846, 936.
- Gillis, Maj. James:**
 Annual report of operations, Q. M. G. O.:
 Claims branch (act July 4, 1864), 752.
 Record, files, and claims branch, 750.
 Regular supplies branch, 741.
 Transportation branch, 734.
- Gilman, Lieut. B. H.:**
 Annual report Military Prison, 260.
- Girard, Maj. A. C.:**
 Report of water supply, Boise Barracks, 939.
- Goose Island, Wash.:**
 Location of reservation, 846.
- Gordon Boys' Home:**
 West End, Cobham, England, 96.
- Gorges, Fort, Me.:**
 Location, etc., of reservation, how occupied, 846.
 Means of communication, 86.
- Government Insane Hospital:**
 Commitments, officers and enlisted men, 252.
- Grand Cañon, Colo.:**
 Proposed railroad through, 170.
- Grant County, Ind.:**
 Branch Home for disabled soldiers, 38.
- Grant, Fort, Ariz.:**
 Abandonment recommended, 172.
 Bathing facilities, 943.
 Drainage, sewerage, etc., 846.
 Location, etc., of reservation, how occupied, 846.
 Means of communication, 86.
 Sanitary condition of quarters, 924.
 Water supply, 846.
- Graves:**
 Purchase of headstones, 533, 719.
- Greenleaf, Maj. Charles R.:**
 Remarks, apprentice battalions, 134.
- Grierson, Brig. Gen. B. H.:**
 Annual report, Department of Arizona, 162.
 Remarks:
 Alleged Indian depredations, 172, 175, 176.
 Heliograph system, 166.
 Indian affairs, 162, 164, 168-171, 175-177.
 Indian scouts, 172.
 Irrigation, 177.
 Military posts, 166, 168, 172-174.
 Practice marches, etc., 163, 168.
 Railroad through Grand Cañon, Colo., 170.

Grissold, Fort, Conn.:

Location, etc., of reservation, how occupied, 846.
Means of communication, 86.

Groesbeck, Capt. S. W.:

Remarks:
Courts-martial, 513.
Desertion, 514.

Guard-houses:

Post commanders' inspection reports, 292.
Sanitary condition, 925.

Guidons:

Service bunting adopted, 776.

Guthrie, Camp, Okla.:

Means of communication, 86.

Hale, Rev. Dr. Edward Everett:

Address to graduates, Military Academy, 1085.

Hall, Lieut. Col. Robert H.:

Relieved from duty, Department of Arizona, 123.
Remarks:

Clothing and equipage, 103.
Post bakers, 99.
Station and work performed, 121, 122.

Hall, Capt. W. R.:

Report of affairs at Fort Custer, Mont. :
Sanitary condition of quarters, 927.
Water supply, 940.

Hamilton, Fort, N. Y.:

Construction of buildings, etc., 672, 674.
Drainage, sewerage, etc., 846, 931.
Location, etc., of reservation, how occupied, 846.
Means of communication, 86.
Sanitary condition of quarters, 924.
Water supply, 846.

Hampton (Va.) National Cemetery:

Care and maintenance, 722.
Construction of roadway, 37, 535, 725.

Hancock, Fort, Tex.:

Condition of affairs, 839.
Drainage, sewerage, etc., 846, 931, 933.
Location, etc., of reservation, how occupied, 846.
Means of communication, 86.
Water supply, 846.

Hancock, Gen. W. S.:

Pedestal for statue, 18, 40.

Hardie, Robert:

Murder of, May 24, 1890, 170, 171.

Harness and Harness Supplies:

Manufactures, 263, 748.
Purchases, 743.

Hartsuff, Maj. A.:

Report, drainage, etc., Fort Omaha, 931.

Havard, Capt. V.:

Report, bathing facilities, Fort Buford, 843.

Hays, Fort, Kans.:

Transfer of, to Interior Department, 52, 196, 840.

Headstones:

Purchases, 37, 533, 719.

Health, Military Prison, Leavenworth:

Mean strength and percentage of sick, 258.
Prevalent diseases, 257-259.

Health of Army:

Comparison with former years, 879, 880, 949.

Health of Army—Continued.

Comparison with foreign armies, 880, 969-975.
Injuries, nature and number, 904.
Military departments, 154, 184, 186, 198, 884-890,
950-955, 961-968.
Military posts, 214, 890, 956-958, 961-963, 975-980.
Monthly prevalence of diseases, 964-968.
Prevalence of special diseases, 893-904, 975-980.
Relative sick, white and colored, 881, 950.
Remarks of Surgeon-General, 879.
Results of disease and injury, 881, 882, 956-958.
Special reports, medical and surgical, 907, 908.
Surgical operations, 906.
Statistical tables, 949-981.

Health of Inmates, Soldiers' Home, D. C.:

Ages of patients, 1023.
Deaths, 1019, 1025.
Hospital reports of admissions, etc., 1023.
Prevalent diseases, 1024.

Heliograph System:

Remarks:
Carr, Col. E. A., 181.
Grierson, Brig. Gen. B. H., 166.

Herbert, Freighter:

Murder of, near Fort Thomas, Mar. 2, 1890, 167.

Heyl, Col. E. M.:

Inspection reports:
Alabama Agr. and Mech. College, 363.
De Pauw University, Indiana, 380.
Illinois University, 118, 379.
Kentucky Agr. and Mech. College, 390.
Knox College, Illinois, 378.
Louisiana State University, 391.
Mississippi Agr. and Mech. College, 117, 406.
Ohio Normal University, 425.
Ohio State University, 422.
Purdue University, 382.
Wisconsin University, 471.
Wooster (Ohio) University, 424.

Remarks:

Colleges, 279, 280.
Desertion, 114.
Military Prison, Leavenworth, 115.
Pay and allowances for quarters, 103.
Per diem allowance, officers traveling, 103.
Station and work performed, 120, 122.

Hoff, Capt. J. Van R.:

Reports:
Habits, etc., of enlisted men, 944.
Operations, hospital corps, 910.
Water supply, Fort Reno, Ind. T., 941.

Horses:

See *Public Animals*.

Horses and Mules:

Soldiers' Home, D. C., 1050, 1063.

Horseshoe-nails:

Purchases, 743.

Horseshoes:

Purchases, 743.

Horton, Maj. S. M.:

Report, drainage, etc., at Fort Adams, R. I., 935.

Hoskins, Lieut. J. D. C.

Artillery matters, West Point, N. Y., 223, 237.

Hospital Corps :

- Gain and loss, 874.
- Operations during practice marches, etc., 910-922.
- Organization and efficiency, 874.
- Record of examinations, 875.

Hospitals :

- Appropriations:
 - Debits and credits, 530-532.
 - Expenditures in detail, fiscal years ending—
 - June 30, 1889 (in part), 620-625, 637.
 - June 30, 1890, 577-580, 603.
- Construction and repairs, 23, 682, 878.

Hospital Stewards :

- Appropriations for quarters:
 - Allotments to several posts, 683.
 - Debits and credits, 531, 532.
 - Expenditures in detail, fiscal years ending—
 - June 30, 1889 (in part), 623-625, 637.
 - June 30, 1890, 581-585, 603.
- Construction of quarters, 23, 154, 683, 879.
- Soldiers' Home, D. C., 1029, 1030.

Hot Springs, Ark.:

- Army and Navy Hospital, 533, 875-877.
- Location, etc., of reservation, 846.

Howard, Maj. Gen. O. O.:

- Annual report, Division of the Atlantic, 151.

Remarks:

- Apprentice battalions, 155.
- Army reorganization, 153.
- Courts-martial, 153.
- Desertion, 152.
- Indian prisoners, 152.
- National defense, 151.
- Pay of non-commissioned officers, line, 153.
- Post schools, 151.
- Practice marches, field maneuvers, etc., 151.
- Retirement, 153, 154.
- Small-arms practice, 151.

Howe, Lieut. Edgar W.:

- Inspection of, Maine Volunteer Militia, 309.

Huachuca, Fort, Ariz.:

- Drainage, sewerage, etc., 846, 931, 932.
- Location, etc., of reservation, how occupied, 846.
- Means of communication, 86.
- Water supply, 846.

Hualpais Indians :

- Apprehended difficulties with, 162.

Hughes, Col. R. P.:

- Inspection reports:
 - Allegheny College, Pennsylvania, 117, 431.
 - Cornell University, New York, 415.
 - Maine State College, 392.
 - Massachusetts Agricultural College, 402.
 - Michigan Agricultural College, 404.
 - Michigan Military Academy, 117, 403.
 - Norwich University, Vermont, 459.
 - Peekskill, N. Y., Military Academy, 474.
 - Pennsylvania State College, 432.
 - Rutgers College, New Jersey, 412.
 - St. John's College, New York, 117, 413.
 - St. Paul Cathedral School, New York, 117, 414.
 - Sheffield Scientific School, 366.
 - Vermont Univ. and State Agr. College, 458.

Hughes, Col. R. P.—Continued.**Remarks:**

- Artillery target practice, 109.
- Barracks and quarters, 100, 101.
- Colleges, 280.
- Enlisted strength of Army, 113.
- Fuel for officers' quarters, 101.
- Instruction of enlisted men, 112.
- Medical Department, 104.
- Monthly payments, 103.
- Ordnance and ordnance stores, 104, 105.
- Pay and allowance of quarters, 104.
- Post schools, 110.
- Small-arms practice, 107.
- Subsistence supplies, 99.
- Station and work performed, 110, 122.

Hunter, Maj. Edward :**Remarks:**

- Civilian clerks for judge-advocates, 513.
- Courts-martial, 513.
- Graduated code of punishment, 513.
- Previous trials and convictions, 513.

Illinois National Guard :

- Instruction, etc., 921.

Illinois University :

- Inspection of military department, 118, 370.

Illuminating Supplies :

- Lamps, 101.
- Purchases and sales, 744.

Incidental Expenses :

- Appropriation:
 - Debits and credits, 22, 530-532.
 - Expenditures in detail, fiscal years ending—
 - June 30, 1889 (in part), 611-617, 637.
 - June 30, 1890, 556-571, 603.

Indefinite Appropriations :

- Quartermaster's Department, 533-535.

Independence, Fort, Mass. :

- Location, etc., of reservation, how occupied, 846.
- Means of communication, 86.

Indian Affairs :

- Arizona, Department of, 157, 162-171, 175-177.
- Columbia, Department of the, 160.
- Dakota, Department of the, 188, 189, 191-193.
- Missouri, Department of the, 196, 197.
- Missouri, Division of the, 182.
- New Mexico, District of, 180.
- Platte, Department of the, 190.

Indiana Militia :

- Report of inspection, 307.

Indian Prisoners :

- Atlantic Division of the, 152.
- Clothing and equipage, 769, 836.
- Conveyed to Fort Custer, Mont., 193.
- Extracts from reports of inspectors-general, 115.
- Fort Union, N. Mex. 180.
- Subsistence supplies, 861.

Indians :

- Enlistment of, as soldiers, 172.
- Issues of subsistence supplies, 861.
- Sale of intoxicants, 189.

Indian Scouts :

- Clothing allowance, 773.

Indian Scouts—Continued.

- Consolidation of Companies A and C, 195.
- Enlistment and pay, 172.

Indian Territory:

- Apprehended election riots, 196.
- Food supply during field operations, 942.
- Threatened violence at Oklahoma City, 196.

Indigent Soldiers:

- Burial, 37, 533, 725.

Infantry and Cavalry School:

- Age limit, of officers detailed, 203.
- Annual report of operations, 201.
- Appropriation for support, 38.
- Change in control of, recommended, 207.
- Changes in personnel of staff, 207.
- Class formed September 1, 1880, 201.
- Course of instruction:
 - Cavalry department, 206.
 - Engineering department, 204.
 - Infantry department, 203.
 - Military art department, 203.
- Efficiency, progress, and discipline, 207.
- Equitation course recommended, 206.
- Officers relieved from duty, 202.
- Results of examinations, 202.
- Sanitary condition of officers' quarters, 203.

Infantry Instruction:

- Infantry and Cavalry School, 203.

Injuries:

- Nature of, and number, 904.
- Special reports, 908.
- Surgical operations, 906.

Inmates, Soldiers' Home, D. C.:

- Admissions and discharges, 1019, 1040-1044.
- Average cost of maintaining, 1048, 1052.
- Average daily present, 1886-1890, 1025.
- Average during year, 1048, 1052.
- Distribution among buildings, 1064.
- Extra duty, 1046-1048, 1053-1056.
- Health, 1019, 1023-1025.
- Outdoor relief, temporary shelter, etc., 1019, 1021, 1022, 1038, 1048, 1053, 1063.
- Pensioners, 1019, 1038.
- Sale of intoxicants to, by outsiders, 1022.

Insane Asylum:

- See *Government Insane Hospital.*

Inspection Branch, Q. M. G. O.:

- Annual report of operations, 528.
- Scope and character of work, 528.
- Work done during year, 529.

Inspection Duty:

- Remarks, Inspector-General, 284.

Inspections:

- Form of report, for money accounts, 282.
- Dakota, Department of, 194.
- Military convicts, 115, 116.
- Military departments of colleges, 363-474.
- Missouri, Department of, 199.
- Money accounts, 474-503.
- National Guard, 293-362.
- Personnel of Army, 106-116.
- Post canteens, 105.
- Post commanders' reports, 287-292, 504.

Inspections—Continued.

- Prisoners, 115, 116.
- Property, etc., 105.
- Sunday morning inspections, 93.
- Supply departments, 98-105.

Inspector-General:

- Annual reports:
 - Inspection of Soldiers' Home, D. C., 1045.
 - Operations, Inspector-General's Dept., 93, 271.
- List of supplies designated for sale, 93, 149, 150.

Remarks:

- Alcatraz Island, Cal., 115.
- Apprentice battalions, 95.
- Army reorganization, 93.
- Clothing and equipage, 103.
- Colleges, 116, 278.
- Columbus, Fort, N. Y., 115.
- Deposits of enlisted men, 103.
- Desertions, 97.
- Disbursing officers, 283.
- Inspection duty, 284.
- Inspector-General's Department, 118.
- Medical Department, 104.
- Military Prison, Leavenworth, 115.
- Money accounts, 281-284.
- National Guard, 271.
- Non-commissioned officers, line, 94.
- Officers' baggage, 102.
- Pay Department, 103.
- Post canteens, 94.
- Post schools, 94.
- Quartermaster's supplies, 100.
- Recruiting service, 96.
- Soldier's Home, 284.
- Subsistence supplies, 99.
- Sunday morning inspections, 93.
- Supplies generally, 98.
- System of purchases, 98.
- Unorganized soldiers, 97.
- Station and work performed, 119.

Inspector-General's Department:

- Annual reports of operations, 93, 271.
- Appropriation for contingencies, 22.
- Inspections, 98-116, 194, 199, 282, 287, 504.
- Inspectors-general, 119-125, 284, 285.
- Remarks of Inspector General, 118.
- Salaries, etc., Inspector-Generals' Office, 22.
- Synopsis of reports received:
 - Inspections, 98-116, facing p. 148.
 - Military science at colleges, 116-118.
 - Post commanders, 287-292, p. 504.

Inspectors-General:

- Assignments for inspection, 284, 285.
- Changes of stations and details of acting, 122.
- Clerks, 125.
- Stations and duties, 119-122.
- Summary of changes since 1884, 124.
- Transient officers for duty, 123.

Interior Department:

- Military posts, 52, 166, 168, 199, 840, 841.

Interments:

- Indigent soldiers, 37, 533, 725.
- Number in national cemeteries, 727.

Iowa Reservation, Kans. and Nebr.:

- Ejection of Dougherty family, 196.

Iowa State University:

Inspection of military department, 383.

Irrigation:

Remarks of General Grierson, 177.

Issues:

Clothing and equipage, 768-770, 823-834, 836, 837.
Quartermaster's property, 745, 769, 772, 835.
Subsistence supplies, 861, 862.

Jacarillas Indians:

Special agency, etc., recommended, 177.

Jackson, Fort, La.:

Location, etc., reservation, how occupied, 846.
Means of communication, 86.

Jackson, Lieut. Col. B. H.:

Inspection, New York National Guard, 323.

Jackson Barracks, La.:

Bathing facilities, 943.
Drainage, sewerage, etc., 846.
Location, etc., reservation, how occupied, 846.
Means of communication, 86.
Water supply, 846.

Janeway, Maj. John H.:

Report, water supply at Benicia Barracks, 938.

Jarvis, Lieut. N. S.:

Report, water supply at Fort Lewis, 941.

Jefferson, Fort, Fla.:

Location, etc., of reservation, how occupied, 847.
Means of communication, 86.

Jefferson Barracks, Mo.:

Deficiency in food supply, 942.
Drainage, sewerage, etc., 847.
Location, etc., reservation, how occupied, 846.
Means of communication, 86, 90.
New post recommended, 197, 198.
Sanitary condition of quarters, etc., 924, 925.
Target range, recommended, 198.
Water supply, 847, 936.

Jefferson Barracks (Mo.) National Cemetery:

Care and maintenance, 722.

Jefferson City (Mo.) National Cemetery:

Care and maintenance, 722.

Jeffersonville, Ind.:

Care and maintenance of soldiers' lot, 724.

Johnson, Fort, N. C.:

Location, etc., reservation, how occupied, 847.
Means of communication, 86.

Judge-Advocate-General's Department:

Annual report, 507.
Judge-Advocate-General's Office, 22, 507, 508, 512.
Judge-advocates, 200, 511-520.

Judge-Advocate-General's Office:

Clerical force, increase recommended, 512.
Salaries, contingencies, etc., 22.
Work done during the year, 507, 508.

Judge-Advocates:

Civilian clerks, 513, 516, 519.
Detail of, acting, 512.
Extracts from reports, 513-520.
Law libraries, 200, 512, 517.
Qualifications, etc., 511, 512, 516.

Kansas Agricultural College:

Inspection of military department, 383.

Kean, Capt. J. R.:

Report, bathing facilities, Fort Robinson, 943.

Kent, Maj. J. Ford:

Detailed as A. Insp. Gen., Dept. of Dakota, 122.

Kentucky Agricultural and Mechanical College:

Inspection of military department, 390.

Keogh, Fort, Mont.:

Drainage, sewerage, etc., 847.
Location, etc., of reservation, how occupied, 847.
Means of communication, 86.
Water supply, 847, 937.

Key West Barracks, Fla.:

Location, etc., of reservation, how occupied, 847.
Means of communication, 86.

Kimball, Maj. James P.:

Report, bathing facilities, Fort Elliott, 943.

Kirkley, Joseph W.:

Board of Publication War Records, 1001.

Kitchen Utensils:

Purchases, 772.

Klamath, Fort, Oreg.:

Condition of affairs, 841.
Transfer of, to Interior Department, 52.

Kneedler, Capt. W. L.:

Reports of sanitary condition of quarters, etc.,
West Point, N. Y., 925, 926.

Knox, Fort, Me.:

Location, etc., of reservation, how occupied, 847.
Means of communication, 86.

Knox College, Ill.:

Inspection of military department, 378.

Knoxville (Tenn.) National Cemetery:

Care and maintenance, 722.
Construction of roadway, 37, 535, 726.

Lacings for Leggings:

Purchase of porpoise, for trial, 775.

Lafayette, Fort, N. Y.:

Location, etc., of reservation, how occupied, 847.
Means of communication, 86.

Lafayette, General:

Statute to memory, 18, 40.

La Garde, Capt. Louis A.:

Report of affairs at Fort Assiniboine, Mont.:
Drainage, sewerage, etc., 932.
Epidemic of typhoid fever, 895.
Water supply, 941.

La Grippe:

Prevalence of at West Point, N. Y., 221.

Lakeside Cemetery, Mich.:

Care and maintenance of soldiers' lot, 724.

Lamps:

Now in use satisfactory, 101.

Langdon, Col. Loomis L.:

Inspection, New Hampshire National Guard, 319.

Laramie, Fort, Wyo.:

Transfer of, to Interior Department, 52, 199, 841.

Las Islas Hatch, Tex.:

Capture of General Sandoval and party, 184.

- Lauderdale, Maj. J. V.:**
 Report of affairs at Fort Davis, Tex.:
 Drainage, sewerage, etc., 933.
 Sanitary condition of quarters, etc., 929.
 Water supply, 939.
- Lawton, Col. H. W.:**
 Remarks:
 Alcatraz Island, Cal., 115.
 Public animals, 102.
 Station and work performed, 130, 122.
- Leavenworth, Fort, Kans.:**
 Construction of buildings, etc., 672, 674.
 Headquarters Dept. of the Mo. removed, 195.
 Location, etc., of reservation, how occupied, 847.
 Means of communication, 86.
 Sanitary condition of quarters, etc., 925, 929, 930.
 Water supply, 847.
- Leavenworth, Fort (Kans.), National Cemetery:**
 Care and maintenance, 722.
- Lewis, Fort, Colo.:**
 Abandonment recommended, 198.
 Bathing facilities, 943.
 Drainage, sewerage, etc., 847.
 Location, etc., of reservation, how occupied, 847.
 Means of communication, 86.
 Water supply, 847, 937, 941.
- Libraries:**
 Artillery School, 213.
 Law, for judge-advocates, 200, 512, 517.
 Military Prison, Leavenworth, 259, 260.
 Surgeon-General's Office, 870, 871, 873, 874.
- Lieber, Col. G. Norman:**
 See *Acting Judge-Advocate-General*.
- Limitation:**
 Prosecutions for desertion, 4, 510.
- Little Rock Barracks, Ark.:**
 Drainage, sewerage, etc., 847.
 Location, etc., of reservation, how occupied, 847.
 Transfer of, to Interior Department, 52, 196, 841.
 Water supply, 847.
- Livingston, Fort, La.:**
 Location, etc., of reservation, how occupied, 847.
 Means of communication, 86.
- Lockers:**
 Manufactures, 263, 748.
- Logan, Fort, Colo.:**
 Construction of buildings, etc., 183, 198, 672, 673.
 Drainage, sewerage, etc., 847.
 Location, etc., of reservation, how occupied, 847.
 Means of communication, 86.
 Sanitary condition of quarters, 924, 928.
 Water supply, 847, 937, 940.
- Logan, Gen. John A.:**
 Pedestal for statue, 18, 40.
- Losses of Stores and Property:**
 Quartermaster's Department, 684, 685.
 Subsistence Department, 861.
- Louisiana State University:**
 Inspection of military department, 391.
- Lowell, Fort, Ariz.:**
 Abandonment recommended, 172.
 Drainage, sewerage, etc., 847.
 Location, etc., of reservation, how occupied, 847.
 Means of communication, 86.
 Water supply, 847.
- Ludington, Lieut. Col. M. I.:**
 Annual reports of operations, Q. M. G. O.:
 Barracks and quarters branch, 666.
 Clothing and equipage returns branch, 666.
 Finance branch, 529.
 Inspection branch, 528.
 Money and property branch, 514.
 National cemeteries, 719.
- Lyon, Fort, Colo.:**
 Transfer of, to Interior Department, 52, 196, 840.
- McClary, Fort, Me.:**
 Location, etc., of reservation, how occupied, 848.
 Means of communication, 86.
- McCleery, Chaplain J. B.:**
 Report, Military Prison, Leavenworth, 259.
- McCook, Brig. Gen. Alexander McD.:**
 Annual report, Infantry and Cavalry School, 201.
 Assigned to the Department of Arizona, 43.
- McDermitt, Fort, Nev.:**
 Transfer of, to Interior Department, 52, 840.
- McDowell, Fort, Ariz.:**
 Location, etc., of reservation, how occupied, 848.
 Transfer of, to Interior Department, 52, 166, 841.
- McElderry, Maj. Henry:**
 Report, medical department, West Point, 231.
- McHenry, Fort, Md.:**
 Drainage, sewerage, etc., 848.
 Location, etc., of reservation, how occupied, 848.
 Means of communication, 86.
 Water supply, 848.
- McIntosh, Fort, Tex.:**
 Bathing facilities, 943.
 Condition of affairs, improvements, etc., 186, 839.
 Drainage, sewerage, etc., 848.
 Location, etc., of reservation, how occupied, 848.
 Means of communication, 86.
 Water supply, 848, 937, 939.
- McKeever, Col. Chauncey:**
 See *Adjutant-General*.
- Mackinac, Mich.:**
 Drainage, sewerage, etc., 847, 921, 932.
 Location, etc., of reservation, how occupied, 847.
 Means of communication, 86.
 National Park, 25, 533.
 Water supply, 847, 937.
- McKinney, Fort, Wyo.:**
 Appropriation, 25, 533.
 Drainage, sewerage, etc., 848.
 Location, etc., of reservation, how occupied, 848.
 Means of communication, 86.
 Water supply, 848.
- Macomb, Fort, La.:**
 Location, etc., of reservation, how occupied, 847.
 Means of communication, 86.
- Macon, Fort, N. C.:**
 Location, etc., of reservation, how occupied, 847.
 Means of communication, 86.
- McPherson, Fort, Ga.:**
 Construction of buildings, etc., 526, 672.
 Drainage, sewerage, etc., 847.
 Location, etc., of reservation, how occupied, 847.
 Means of communication, 86.
 Purchase of land for target range, 841.
 Water supply, 847.

- Madison Barracks, N. Y.:**
 Drainage, sewerage, etc., 848.
 Location, etc., of reservation, how occupied, 847.
 Means of communication, 86.
 Post canteens, 66.
 Rifle range, etc., 25, 534, 838.
 Water supply, 848.
- Maginnis, Fort, Mont.:**
 Drainage, sewerage, etc., 848.
 Location, etc., of reservation, how occupied, 848.
 Transfer of, to Interior Department, 52, 193, 841.
 Water supply, 848.
- Mail Boxes and Cards:**
 Advantages of system, 1011.
- Maine State College:**
 Inspection of military department, 392.
- Maine Volunteer Militia:**
 Report of inspection, 309.
- Malarial Diseases:**
 Prevalence of, in Army, 902, 977, 978.
- Manufactures:**
 Barrack furniture, 263, 264, 748.
 Clothing and equipage, 262-264, 766, 767, 769-771, 836, 837.
 Harness, 262, 748.
 Prisoners' clothing, 263, 837.
 Stove and range furniture, 263, 746, 747.
- Maps:**
 Appropriations, 38, 39.
- Marcy, Fort, N. Mex.:**
 Clothing supply, 942.
 Drainage, sewerage, etc., 848, 931, 933.
 Location, etc., of reservation, how occupied, 848.
 Means of communication, 86.
 Sanitary condition of quarters, 924, 925.
 Water supply, 848, 936.
- Marleta (Ga.) National Cemetery:**
 Care and maintenance, 722.
 Roadway, 37, 535.
- Marine Corps, U. S.:**
 Sales of clothing and equipage, 771.
- Marion, Fort, Fla.:**
 Location, etc., of reservation, how occupied, 848.
 Means of communication, 86.
- Marksman:**
 Post commanders' inspection reports, 290.
- Marriages:**
 At military posts, 923.
- Maryland Agricultural College:**
 Inspection of military department, 117, 393.
- Mason, Lieut. Charles F.:**
 Report of affairs at Fort Washakie, Wyo.:
 Clothing supply, 942.
 Drainage, sewerage, etc., 935.
- Mason, Lieut. Charles W.:**
 Report, Military Prison, Leavenworth, 265.
- Mason, Col. Edwin C.:**
 Inspection, Wisconsin National Guard, 345.
- Mason, Fort, Cal.:**
 Construction of bulkhead and wharf, 684.
 Drainage, sewerage, etc., 848.
 Location, etc., of reservation, how occupied, 848.
- Mason, Fort, Cal.—Continued.**
 Means of communication, 86.
 Water supply, 848.
- Massachusetts Agricultural College:**
 Inspection of military department, 402.
- Mat-making:**
 Remarks of Capt. J. W. Pope, 255.
- Mattresses:**
 Practice of folding, 101.
- Meade, Fort, S. Dak.:**
 Drainage, sewerage, etc., 848.
 Enlargement of reservation, 840.
 Location, etc., of reservation, how occupied, 848.
 Means of communication, 87.
 Post canteen, 65.
 Purchase of land, 25, 526, 533, 838.
 Sanitary condition of quarters, 925.
 Water supply, 848.
- Measles:**
 Prevalence of, in Army, 804.
- Medals of Honor:**
 Enlisted men of Army, 288-290.
- Medical and Hospital Supplies:**
 Appropriation, 23, 869, 870, 871.
 District of Columbia National Guard, 870.
 Money value of, actually issued, 870.
- Medical and Surgical History:**
 Appropriation, 38, 871.
- Medical Department:**
 Abstract of inspection of money accounts, 494.
 Annual report of operations, 869.
 Army and Navy Hospital, 875-877.
 Army Medical Museum, 871-873.
 Financial statements, 869-871.
 Health of Army, 154, 184, 186, 198, 214, 870-909, 949-980.
 Hospital corps, 874, 875, 910-922.
 Hospitals, 878.
 Hospital stewards' quarters, 879.
 Medical and hospital supplies, 869-870.
 Medical officers, 877-879, 910-922, 925-935, 938-945.
 Reports of inspectors-general, 104.
 Statistical tables, 947-981.
 Surgeon-General's Office, 22, 870, 871, 873-875.
- Medical Officers:**
 Change in the personnel, 877.
 Inspections by medical directors, 879.
 Non-effective, 878.
 Reports:
 Operations of hospital corps, 910-922.
 Sanitary condition of Army, 925-935, 938-945.
- Medical Reports:**
 List of special, received, 907.
- Memphis (Tenn.) National Cemetery:**
 Care and maintenance, 723.
- Merriam Pack:**
 Substitution of, for blanket-bags, 104.
- Merritt, Brig. Gen. Wesley:**
 Annual report, Department of the Missouri, 195.
 Remarks:
 Desertion, 199.
 Indian affairs, 196.
 New military posts, 197, 198.

Merritt, Brig. Gen. Wesley—Continued.**Remarks:**

- Oklahoma Territory, 197.
- Practice marches, field maneuvers, et c., 197.

Mescal Springs, Ariz.:

- Affair at, October 8, 1889, 164.

Messenger Service:

- Description of, Record and Pension Div., 1010.

Mess Tables and Benches:

- Manufactures, 263, 748.

Mexico:

- Arrest of revolutionists from, 184.
- Coöperation of military forces, 45.

Michigan Agricultural College:

- Inspection of military department, 404

Michigan Military Academy:

- Inspection of military department, 117, 403.

Michigan National Guard:

- Report of inspection, 313.

Mifflin, Fort, Pa.:

- Location, etc., of reservation, how occupied, 848.
- Means of communication, 87.

Mileage:

- See *Travel Allowances*.

Miles, Maj. Gen. Nelson A.:

- Annual report, Division of the Pacific, 155.
- Assigned to Division of the Missouri, 43.

Remarks:

- Desertion, 156.
- Enlistments, reenlistments, etc., 157.
- Indian affairs, 157.
- National defense, 158.
- Pay of non-commissioned officers, line, 157.
- Practice marches, field maneuvers, etc., 156
- Promotion, 155.

Military Academy:

- Academic and military staff, 219.
- Address of Rev. Dr. Hale, 1085-1088.
- Annual reports:
 - Board of Visitors, 1069.
 - McElderry, Henry, 231.
 - Wilson, Col. John M., 219.

Appropriations:

- Buildings and grounds, 25.
- Pay and expenses, 23.

Band, 222, 1078.**Cadet corps, 219, 507, 1077-1081.****Distribution of diplomas, 1081.****Financial statements:**

- Appropriations for support, etc., 1083.
- Exhibit, accounts of Treasurer, 1082.
- Gas fund, 1084.
- Receipts and disbursements, 1082.
- Special contingent fund, 1084.

Fiscal affairs, summary, 1079.**Foreign cadets, 219.****Remarks, Board of Visitors, 1073-1081.****Sword-master, 222.**

- See, also, *West Point, N. Y.*

Military Commands:

- Annual reports of commanding generals, 151-201.
- Commanding generals, 84.
- Correspondence, 43.
- Geographical limits, 84.
- Organization of divisions and departments, 43.

Military Convicts:

- Alcatraz Island, Cal., 115.
- Appropriation for expenses, 38.
- Columbus, Fort, N. Y., 115.
- Donations to post prisoners, 256.
- Liability to trial by courts-martial, 511.
- Military Prison, 251, 252, 257-260, 265-267.
- Penitentiaries, 116.
- Reduction of sentences, and discharges, 252, 258.
- Trial by general courts-martial, 507.
- Uniform for, serving sentences at posts, 258.

Military Instruction:

- Artillery School, 208-215.
- Infantry and Cavalry School, 201-207.

Military Offenses:

- Graduated code of punishment, 60, 153, 161, 509, 513, 519.
- Limitation of punishment, 4, 5, 60, 509.

Military Posts and Reservations:

- Accommodations for troops, etc., 843-854.
- Affairs, reservations in Texas, 839, 840.
- Appropriations, 25, 533.
- Arizona, Department of, 168, 172-174.
- Authorized expenditures at several, 680.
- Construction of buildings, etc., 526, 533, 672.
- Dakota, Department of, 194.
- Donations to prisoners at discharge, 256.
- Enlisted men at, service, etc., 288.
- Expenditures:
 - Construction and repairs of buildings, 685.
 - Lighting, heating, etc., 843.
 - Water, sewerage, plumbing, etc., 842.
- Garrisoned, strength, etc., 287, 292.
- Health of Army, 890, 956-958, 961-963, 975-980.
- Inspections by medical officers, 879.
- List of, and means of communication, 85-90.
- Location, etc., of reservations, 843-854.
- Missouri, Division of the, 183.
- Newspapers and periodicals, post libraries, 751.
- Orders, Adjutant-General, affecting, 840, 841.
- Platte, Department of the, 199-201.
- Prisoners at posts, 116.

Remarks:

- Quartermaster-General, 526.
- Secretary of War, 15.
- Sanitary condition, 923-944.
- Supplies designated for sale, 99, 149, 150.
- Texas, Department of, 185, 186.
- Transfer to Interior Dept., 52, 166, 168, 190, 840-841.

Military Prison, Leavenworth:

- Annual reports, 254, 258, 259, 261, 262, 265, 266.
- Appropriation for support, 38.
- Civilian employes, 262, 263.
- Clothing, equipage, and material, 770, 837.
- Construction of buildings, etc., 251, 254.
- Discipline, 257, 258, 261, 265.
- Farm and garden products, 257.
- Financial statements:
 - Account with Q. M. Department, 257.
 - Disbursements of Q. M. Department, 264.
 - Donations to post prisoners, 256.
 - Prison-fund account, 256.
 - Prison-mess fund, 256.
 - Receipts and expenditures, 256.
 - Receipts from sales to officers, etc., 264.

Military Prison, Leavenworth—Continued.

- Financial statements:
 - Sales of condemned property, 256.
 - Value of prison labor, 264.
- Fiscal affairs, summary, 251, 252, 256, 257.
- Fuel, 257.
- Food supply; condition, 258, 265.
- Health of guards and prisoners, 252, 257-159.
- Inspections, 261, 265.
- Manufactures, 262-264, 746-748, 769-771, 836, 837.
- Means of communication, 86.
- Military convicts:
 - Behavior of prisoners, 258.
 - Clothing and equipage received for issue, 257.
 - Escaped from confinement, 258.
 - Moral and educational interests, 252, 258-260.
 - Rations issued, 265.
 - Recaptures of escaped convicts, 258.
 - Received and discharged, 251, 259, 260, 266, 267.
 - Statistics, 259, 260, 266, 267.
- Prison labor, 251, 255, 262-264, 268.
- Provost guard, 257, 258, 261.
- Reports of inspectors-general, 115.
- Quartermaster's stores issued to, 745.
- Remarks of Adjutant-General, 251.
- Subsistence supplies, 265.

Military Prisoners at Posts:

- Extracts from reports of inspectors-general, 116.

Military Science and Art:

- Instruction in, 203, 211.

Militia:

- Appropriation for arming and equipping, 38.
- Issues of supplies, 768, 769, 828-835.
- Montana, 38.
- Organization of heavy artillery batteries, 51.
- Organized, See *National Guard*.
- Relation of, to Regular Army, 271.

Mills, Lieut. John:

- Electric light, West Point, N. Y., 240.

Minnesota University:

- Inspection report of military department, 405.

Miscellaneous Money Accounts:

- Abstract of inspection, 500.

Mississippi Agricultural and Mechanical College:

- Inspection of military department, 117, 406.

Mississippi River Sufferers:

- Appropriations for relief, 17, 18, 39, 535, 862.
- Purchase, etc., of tents, 772, 837.
- Subsistence supplies, 17, 862.

Missoula, Fort, Mont.:

- Drainage, sewerage, etc., 848, 931.
- Location, etc., of reservation, how occupied, 848.
- Means of communication, 87.
- Water supply, 848, 937.

Missouri, Department of the:

- Annual report of operations, 195.
- Apprehended election riots, Indian Ter., 196.
- Changes of troops, 195, 196.
- Correspondence of commanding general, 43.
- Courts-martial records, 508.
- Desertions, 114.
- Domestic animals kept, 100.
- Geographical limits, 84.
- Headquarters, 195.

Missouri, Department of the—Continued.

- Health of Army, 198, 886, 950, 953, 962, 966.
- Indian affairs, 196, 197.
- Indian scouts, 195.
- Inspection duty in, assignments, 286.
- Inspections, 199.
- Military posts, 196-198.
- Position and distribution of troops, 80.
- Post commanders' inspection reports, 504.
- Post gardens, 100.
- Post schools, 61.
- Practice marches, etc., 197, 910-913.
- President's proclamation, Cherokee Strip, 196, 197.
- Sanitary condition of posts, 198.
- Target range, 198.
- Threatened violence at Oklahoma City, 100.

Missouri, Division of the:

- Annual report of operations, 182.
- Construction of new posts, 183.
- Courts-martial records, 508.
- Departments comprising, 84, 182.
- Indian affairs, 182.
- Inspection duty in, assignments, 285.
- Miles, Maj. Gen. Nelson A., assigned, 43.
- Mule transportation, 183.
- Nativity of non-commissioned officers, 113.
- Position and distribution of troops, 72.
- Territorial limits modified, 43, 182.

Missouri National Guard:

- Regular troops at encampment, 196, 317.
- Report of inspection, 316.

Missouri State University:

- Inspection of military department, 407.

Mojave, Fort, Ariz.:

- Clothing supply, 942.
- Drainage, sewerage, etc., 848.
- Location, etc., of reservation, 848.
- Transfer of, to Interior Department, 52, 166.
- Water supply, 848.

Mojave Indians:

- Removal from San Carlos Agency, 169.

Money Accounts:

- Abstracts of inspection:
 - Adjutant-General's Department, 476.
 - Engineer Department, 496.
 - Medical Department, 494.
 - Miscellaneous, 500.
 - Ordnance Department, 498.
 - Pay Department, 494.
 - Quartermaster's Department, 476.
 - Subsistence Department, 484.

Inspections:

- Form of report, 282.
- Outstanding checks, 282.
- Remarks of Inspector-General, 281-284.
- Number received and disposed of:
 - Pay Department, 989.
 - Quartermaster's Department, 545.
 - Subsistence Department, 863.

Money and Property Branch, Q. M. G. O.:

- Annual report of operations, 544.
- Financial statements, 545-647, 662-665.
- Money accounts and property returns, 545.
- Scope and character of work, 544.
- Statement, civilian employees Q. M. Dep., 648-661.

- Monroe, Fort, Va.:**
 Annual reports of operations of post, 208.
 Artillery School, 208-213.
 Artillery target practice, 212.
 Bridge over Mill Creek, 25.
 Construction of buildings, etc., 214, 215, 675.
 Discipline, 214.
 Drainage, sewerage, etc., 25, 848.
 Health, 214.
 Location, etc., of reservation, how occupied, 818.
 Means of communication, 87.
 Ordnance used in practice, 212, 213.
 Post school, 214.
 Sanitary condition, 214, 215.
 Small-arms practice, 214.
 Subsistence Department, 215.
 Water supply, 848.
 Wharf, 25.
- Montgomery, Fort, N. Y.:**
 Location, etc., of reservation, how occupied, 849.
 Means of communication, 87.
- Monuments:**
 Appropriations, 40.
 Battle, West Point, N. Y., 227.
 Custer, General, 526.
 Sheridan, Hancock, Logan, and Lafayette, 18.
 Soldiers, Mound City, Kans., 40, 535.
- Moore, Brig. Gen. John:**
 See *Surgeon-General*.
- Moqui Indian Reservation:**
 Removal of trespassers, 168, 180.
- Morgan, Fort, Ala.:**
 Location, etc., of reservation, how occupied, 849.
 Means of communication, 87.
- Moultrie, Fort, S. C.:**
 Location, etc., of reservation, how occupied, 849.
 Means of communication, 87.
- Mound City, Kans.:**
 Appropriation for soldiers' monument, 40, 535.
- Mount Vernon Barracks, Ala.:**
 Drainage, sewerage, etc., 849.
 Location, etc., of reservation, how occupied, 849.
 Means of communication, 87.
 Water supply, 849, 936, 938.
- Mules:**
 Missouri, Division of the, 183.
 Purchases, 741, 742.
 Sales, 742.
 Texas, Department of, 186.
- Mule-shoes:**
 Purchases, 743.
- Mumps:**
 Prevalence of, in Army, 241, 894.
- Myer, Fort, Va.:**
 Drainage, sewerage, etc., 849.
 Location, etc., of reservation, how occupied, 849.
 Means of communication, 87.
 Water supply, 849.
- Na-diz-az:**
 Execution of, December 27, 1849, 165.
- Nashville (Tenn.) National Cemetery:**
 Care and maintenance, 711.
- Natchez (Miss.) National Cemetery:**
 Construction of roadway, 37, 535, 725.
- National Cemeteries:**
 Annual report of care and maintenance, 719.
 Appropriations, 37, 531, 532, 534, 535.
 Construction of roadways, 725, 726.
 Erection of rostrums, 720.
 Financial statements, 724-726, 720-733.
 Interments, 727.
 Names and classification, 727.
 Remarks of Quartermaster-General, 525.
 Removal of remains of deceased soldiers, 719.
 Superintendents, 37, 531, 532, 719, 727.
- National Defense:**
 Remarks:
 Howard, Maj. Gen. O. O., 151.
 Miles, Maj. Gen. Nelson A., 158.
 Schofield, Maj. Gen. John M., 8, 44.
 Secretary of War, 5, 8.
- National Guard:**
 History of improvement, 276.
 Inspections of, reports, 293-362.
 Interstate rifle competition, Camp Douglas, 361.
 List of encampments inspected, 272.
 Remarks:
 Berry, Lieut. L. G., 293.
 Blunt, Capt. Stanhope E., 357.
 Brechemin, Capt. Louis, 921.
 Brown, Lieut. George Le Roy, 293.
 Corbin, Lieut. Col. H. C., 328.
 Foote, Lieut. S. M., 341.
 Howe, Lieut. Edgar W., 309.
 Inspector-General, 271.
 Jackson, Lieut. Col. R. H., 323.
 Langdon, Col. Loomis L., 319.
 Mason, Col. Edwin C., 345.
 O'Connell, Capt. John J., 352.
 Penney, Capt. Charles G., 307.
 Ramsay, Capt. J. Gales, 330.
 Sears, Capt. Clinton B., 333.
 Secretary of War, 16.
 Smith, Col. C. H., 313.
 Stanley, Brig. Gen. D. S., 186.
 Steever, Capt. E. Z., 349.
 Stretch, Capt. J. F., 316.
 Taylor, Lieut. S. W., 295.
 Terrett, Lieut. Colville P., 301.
 Woodruff, Maj. E. C., 337.
 Return of troops, inspected, 273.
- National Home, Disabled Soldiers, etc.:**
 Appropriation for support, 38.
- Nations —:**
 Murder of, at Brook's Ranch, Tex., 185.
- Navajo Indians:**
 Condition of, and relations with settlers, 176, 180.
 Murder of Tez-chilla, December 26, 1859, 166.
- Navy Department:**
 Sales to, of clothing and equipage, 771.
- Nebraska University:**
 Inspection of military department, 410.
- Nevada State University:**
 Inspection of military department, 118, 411.

- New Berne (N. C.) National Cemetery :**
Construction of roadway, 37, 535, 725.
Erection of rostrum, 720.
- Newburgh, N. Y. :**
Monument at Washington's headquarters, 43.
- New Hampshire National Guard :**
Report of inspection, 319.
- New Mexico, District of :**
Annual report of operations, 179.
Indian affairs, 180.
Practice marches, 180.
- Newport, Ky. :**
New post near. See *Fort Thomas, Ky.*
- Newport Barracks, Ky. :**
Drainage, sewerage, etc., 849.
Location, etc., of reservation, how occupied, 849.
Means of communication, 87.
Water supply, 849.
- Newspapers and Periodicals :**
Purchases for post libraries, 751.
- New York City :**
Appropriation, harbor obstructions, 38.
Defense of, 55.
- New York National Guard :**
Report of inspection, 323.
- Niagara, Fort, N. Y. :**
Drainage, sewerage, etc., 849.
Location, etc., of reservation, how occupied, 849.
Means of communication, 87.
Water supply, 849.
- Niobrara, Fort, Nebr. :**
Construction of buildings, 200, 677.
Drainage, sewerage, etc., 849, 931.
Location, etc., of reservation, how occupied, 849.
Means of communication, 87.
Water supply, 849.
- Non-commissioned Officers :**
Increase of pay of line, 153, 157, 250.
Nativity of, in Division of the Missouri, 113;
Per diem compensation, recruiting, 114.
Post commanders' inspection reports, 291.
Remarks of Inspector-General, 94.
- North Carolina National Guard :**
Report of inspection, 357.
- North Dakota University :**
Inspection of military department, 421.
- Northern Cheyenne Reservation :**
Murder of Mr. Ferguson near, 188.
Unsettled condition of Indians, 188.
- Northern Frontier Defense :**
See *National Defense.*
- North Georgia Agricultural College :**
Inspection of military department, 373.
- North Island or Peninsula :**
Recommended for militia & post San Diego, 173.
- Norwich University, Vt. :**
Inspection of military department, 459.
- O'Connell, Capt. John J. :**
Inspection, California National Guard, 352.
- Oglethorpe, Fort, Ga. :**
Means of communication, 87.
- Ohio Normal University :**
Inspection of military department, 425.
- Ohio State University :**
Inspection of military department, 422.
- Oklahoma City, Ind. T. :**
Threatened violence, 196.
- Oklahoma Station, Ind. T. :**
Location, etc., of reservation, how occupied, 849.
Means of communication, 87.
- Oklahoma Territory :**
Relief of sufferers, 18, 862.
Remarks of Brig. Gen. Wesley Merritt, 197.
- Omaha Depot, Nebr. :**
Location and size of reservation, 849.
- Omaha, Fort, Nebr. :**
Bathing facilities, 943.
Construction of buildings, 25, 200, 533, 677.
Drainage, sewerage, etc., 849, 930-932.
Location, etc., of reservation, how occupied, 849.
Means of communication, 87.
Purchase of new site, 526, 533, 839.
Quartermaster and ordnance depot, 200.
Sale of old site, 839.
Sanitary condition of quarters, 924.
Water supply, 849.
- Ontario, Fort, N. Y. :**
Drainage, sewerage, etc., 849.
Location, etc., of reservation, how occupied, 849.
Means of communication, 87.
Water supply, 849.
- Ordnance Department :**
Annual report of operation. See Vol. III.
Abstract of inspection of money accounts, 498.
Reports of inspectors-general, 104, 105.
Salaries, etc., Ordnance Bureau, 22.
- Ordnance Depots :**
Dakota, Department of, 191.
List of, and means of communication, 89.
Platte, Department of the, 200.
- Ordnance, Ordnance Stores, etc. :**
Appropriation for arms, etc., 23.
Blanket-bags and cavalry equipments, 104.
Cavalry bridle-bits, 199.
Manufacture, etc., 7.
Modern guns for heavy artillery, 104.
Rapid-firing guns of field and siege calibers, 105.
Reports of inspectors-general, 104, 105.
- Outstanding Checks :**
Remarks of Inspector-General, 282.
- Overcoats :**
Infantry, with light capes, 776.
Light shades, 775.
Water-proof, 774.
- Owen, Capt. W. O., Jr. :**
Report of drainage, etc., Fort Gibson, 932.
- Pacific, Division of the :**
Annual report of operations, 155.
Changes of troops, 155.
Departments comprising, 43, 84.
Gibbon, Brig. Gen., assigned to command, 43.
Indian affairs, 157.
Inspection duty in, assignments, 285.

- Pacific, Division of the—Continued.**
 Position and distribution of troops, 76.
 Practice marches, etc., 62, 65, 156.
 Small-arms practice, 156, 181.
- Parker, Bvt. Maj. Richard C.:**
 Annual report, Soldiers' Home, D. C, 1030.
 Relieves Captain Rittenhouse, 1021.
- Patten, Capt. W. S.:**
 Report, reservation branch, Q. M. G. O., 838.
- Patzki, Maj. J. H.:**
 Report of drainage, etc., Fort Huachuca, 932.
- Pay Corps:**
 Changes in personnel, 986.
 Non-effective officers, 986.
 Paymasters' clerks, 986.
 Statement of pay trips made, 996, 997.
- Pay Department:**
 Abstract of inspection of money accounts, 494.
 Annual report of operations, 985.
 Expenditures 1890, compared with 1889, 985.
 Financial statements, 985, 992, 994.
 Pay Corps, 986, 996, 997.
 Paymaster-General's Office, 22, 989, 990.
 Paymasters' accounts, 989, 991.
 Pay of Army, 103, 153, 157, 250, 966, 987, 989.
- Paymaster-General:**
 Annual report, 985.
 Remarks:
 Clerical force of Pay Department, 990.
 Paymasters' clerks, 985.
 Travel allowances, 987.
- Paymaster-General's Office:**
 Clerical force, increase needed, 990.
 Exhibit of work, 989.
 Salaries, contingencies, etc., 22.
- Paymasters' Clerks:**
 See *Pay Corps*.
- Pay of the Army:**
 Appropriation, 22.
 Deficiency in appropriation, 987.
 Increase in expenditures, 986.
 Monthly payments, 103, 154, 986.
 Non-commissioned officers, 153, 157, 250.
 Reports of inspectors-general, 103, 104.
 Retained by sentence of courts-martial, 989.
 Stoppage against officers, 989.
- Peekskill (N. Y.) Military Academy:**
 Inspection of military department, 474.
- Pembina, Fort, N. Dak.:**
 Clothing supply, 942.
 Drainage, sewerage, etc., 849.
 Location, etc., of reservation, how occupied, 849.
 Means of communication, 87.
 Right of way, Duluth and Manitoba R. R., 839.
 Water supply, 849, 937.
- Pena Colorado, Camp, Tex.:**
 Establishment of small post, 185.
 Location, etc., of reservation, how occupied, 849.
 Means of communication, 87.
 Sanitary condition of quarters, 924.
- Pentitularies:**
 Condition of military convicts, 116.
- Penney, Capt. Charles G.:**
 Inspection, Indiana militia, 307.
- Pennsylvania Military Academy:**
 Inspection of military department, 117, 427.
- Pennsylvania National Guard:**
 Reports of inspection, 328, 330, 333.
- Pennsylvania State College:**
 Inspection of military department, 432.
- Pensioners:**
 Inmates of Soldiers' Home, D. C., 1019, 1038.
- Perry, Leslie J.:**
 Board of Publication, War Records, 1001.
- Personnel of the Army:**
 Reports of inspectors-general, 106-116.
- Philadelphia, Pa.:**
 Appropriation for Q. M. depot, 39, 534.
- Philadelphia (Pa.) National Cemetery:**
 Care and maintenance, 723.
- Phenix, Fort, Mass.:**
 Location, etc., of reservation, how occupied, 849.
 Means of communication, 87.
- Pickens, Fort, Fla.:**
 Location, etc., of reservation, how occupied, 849.
 Means of communication, 87.
- Pike, Fort, La.:**
 Location, etc., of reservation, how occupied, 850.
 Means of communication, 87.
- Pilot Butte, Camp, Wyo.:**
 Location and garrison, 850.
 Means of communication, 87.
- Pine Ridge Agency:**
 Military support of agent, 188, 192.
- Pittsburgh, Pa.:**
 Location, etc., of reservation, 850.
 Sale of reservation authorized, 839.
- Platte, Department of the:**
 Annual report of operations, 199.
 Changes of troops, 199, 200.
 Courts-martial, 200, 508.
 Desertions, 115.
 Domestic animals kept, 100.
 Departmental rifle and cavalry competition, 200.
 Geographical limits, 84.
 Health of Army, 886, 950, 952, 962, 966.
 Indian affairs, 199.
 Inspection duty in, assignments, 286.
 Inspection of military posts, 201.
 Military posts, 199-201.
 Position and distribution of troops, 72.
 Post commanders' inspection report, 504.
 Post gardens, 100.
 Post schools, 61.
 Practice marches, etc., 200, 913-918.
 Quartermaster's and ordnance depots, 200.
 Signaling instruction, 200.
 Small-arms practice, 200.
- Plattsburgh Barracks, N. Y.:**
 Construction of roadway, 37, 535, 678.
 Drainage, sewerage, etc., 850.
 Location, etc., of reservation, how occupied, 850.
 Means of communication, 87.
 Water supply, 850.

- Pleurisy:**
Prevalence of, in Army, 904.
- Pneumonia:**
Prevalence of, in Army, 904, 980.
- Polvo, Tex.:**
Murder of — Beckwith near, 185.
- Pope, Maj. B. F.:**
Report of affairs at Fort Clark, Tex.:
Drainage, sewerage, etc., 933.
Sanitary condition of quarters, 927.
Water supply, 940.
- Pope, Capt. J. W.:**
Annual reports, Military Prison, Leavenworth:
Ages, nativities, etc., of prisoners, 268.
Alterations in prisoners, 267.
Condition and management, 254.
Prison labor performed, 268.
- Popham, Fort, Me.:**
Location, etc., of reservation, how occupied, 850.
Means of communication, 87.
- Poplar River Camp, Mont.:**
Location and garrison, 850.
Means of communication, 87.
Water supply, 937.
- Porter, Fort, N. Y.:**
Drainage, sewerage, etc., 850.
Location, etc., of reservation, how occupied, 850.
Means of communication, 87.
Water supply, 850.
- Port Hudson (La.) Cemetery:**
Construction of roadway, 37, 535, 726.
- Postage:**
Appropriation, 22.
- Post Bakeries:**
Purchases, 750.
- Post Bakers:**
Employment of civilian, recommended, 99.
Enlistment of, recommended, 862.
Reports of inspectors-general, 99.
- Post Canteens:**
Columbia, Department of the, 105, 162.
Dakota, Department of the, 194.
Madison Barracks, N. Y., 66.
Meade, Fort, S. Dak., 65.
Remarks:
Adjutant-General, 64.
Gibbon, Brig. Gen. John, 162.
Inspector-General, 94.
Reports of inspectors-general, 105.
Sidney, Fort, Nebr., 66.
Snelling, Fort, Minn., 65.
Synopsis of reports on benefits, etc., 64-68.
- Post Commanders' Inspection Reports:**
Synopsis, 287-292.
Tabular statement, 504.
- Post Funds:**
Post commanders' inspection reports, 291.
- Post Gardens:**
Area under cultivation, 100.
Cost and value of products, 100.
Post commanders' inspection reports, 291.
Purchases, 750.
- Post Gardens—Continued.**
Reports of inspectors-general, 99.
System established not satisfactory, 99.
- Post Schools:**
Monroe, Fort, Va., 214.
Post commanders' inspection reports, 291.
Purchases, 750.
Remarks:
Adjutant-General, 61.
Howard, Maj. Gen. O. O., 151.
Inspector-General, 94.
Reports of inspectors-general, 109, 110.
Synopsis of reports on education in Army, 61.
- Post Traders:**
Appointment, etc., 16.
Purchases of buildings, 684.
- Practice Marches, Field Maneuvers, etc.**
Arizona, Department of, 163, 168, 920, 921.
Atlantic, Division of the, 151.
Dakota, Department of, 189-191, 918-920.
Expenditures, 736.
Missouri, Department of the, 197, 910-913.
Operations of hospital corps, 910-922.
Pacific, Division of the, 62-65, 156.
Platte, Department of the, 200, 913-918.
Remarks:
Adjutant-General, 62.
Brechenfin, Capt. Louis, 921.
Schofield, Maj. Gen. John M., 51.
Reports of inspectors-general, 107.
Synopsis of reports on benefits, etc., 62.
- Preble, Fort, Me.:**
Drainage, sewerage, etc., 850.
Location, etc., of reservation, how occupied, 850.
Means of communication, 87.
Water supply, 850.
- Presidio del Norte:**
Establishment of small post, 186.
Permanent camp to be established, 185.
- Presidio of San Francisco, Cal.:**
Construction of roadways, etc., 37, 535, 678.
Drainage, sewerage, etc., 850.
Location, etc., of reservation, how occupied, 850.
Means of communication, 87.
Water supply, 850.
- Previous Convictions:**
Consideration of, by courts-martial, 513, 520.
- Printing and Binding:**
Quartermaster's Department, 752.
- Prisoners' Clothing:**
Manufactures, 263, 837.
- Prisoners of War:**
Claims, commutation of rations, 863.
- Prison School, Military Prison, Leavenworth:**
Remarks:
Adjutant-General, 252.
McCleery, Chaplain J. B., 259.
- Proctor, Hon. Redfield:**
See *Secretary of War*.
- Promotion:**
Officers and enlisted men, 3, 10, 155, 156.
- Property:**
Injured or destroyed, 684, 685, 801.

Prosecutions:

Limitation of, for desertion, 4, 510.

Providence Hospital:

Appropriation, and relief afforded, 38, 871, 875.
Contract with, support of destitute patients, 875.

Provost Guard, Military Prison, Leavenworth:

Arms, etc., 257, 258, 261.
Canteen, 258, 261.
Discipline, 257, 261.
Health, 258.
Method of recruiting, 261.

Public Animals:

Appropriation, cavalry and artillery horses:
Debits and credits, 23, 531, 532.
Expenditures in detail, fiscal years ending—
June 30, 1889 (in part), 620-622, 637.
June 30, 1890, 577-580, 603.
Claims for horses lost in military service, 536.
Post commanders' inspection reports, 292.
Purchases, 101, 102, 741, 742.
Reports of inspectors-general, 101, 102.
Sales, 742.

Public Buildings and Grounds:

Appropriations, 22, 24, 25.

Public Works:

Appropriations, 23-36.

Pulaski, Fort, Ga.:

Location, etc., of reservation, how occupied, 850.
Means of communication, 87.

Pulmonary Consumption:

Prevalence of, in Army, 904.

Punishment:

Graduated code of, 60, 153, 161, 509, 513, 519.
Limitation of, 4, 5, 60, 509.

Purchases:

Average cost fuel, forage, and straw, 749.
Band instruments, 772.
Clothing, equipage, and material, 766, 796-827.
Harness and harness supplies, 743.
Horse and mule shoes, and horseshoe nails, 743.
Illuminating supplies, 744.
Lands for reservations, rifle-ranges, etc., 838-841.
Post bakeries, gardens, and schools, 750.
Post traders' buildings, 684.
Public animals, 101, 102, 741, 742.
Remarks of Inspector-General, 98.
Shoeing tools, 743.
Stoves and ranges, 746.
Tableware and kitchen utensils, 772.
Tents for Mississippi River sufferers, 837.
Veterinary supplies, 744.
Wagons, etc., 744.

Purdue University, Ind:

Inspection of military department, 382.

Quartermaster-General:

Annual report, 523.
List of papers accompanying annual report, 526.
Remarks:
Barracks and quarters, 524.
Clothing and equipage, 525.
Custer Battle-field Cemetery, 525.
Military posts and reservations, 526.
National cemeteries, 525.

Quartermaster-General—Continued.**Remarks:**

Roads and bridges, 525.
Transportation of Army, 524.
Vessels of Q. M. Department, 525.
Water, sewerage, etc., 525.
Wharves, 525.

Quartermaster-General's Office:

Appropriation, salaries, etc., 23.
Barracks and quarters branch, 666-718.
Claims branch, act July 4, 1864, 752, 753.
Clothing and equipage returns branch, 666.
Clothing and equipage supply branch, 766-837.
Finance branch, 529-543.
Inspection branch, 528, 529.
Money and property branch, 544-665.
National cemeteries, 719-733.
Record, files, and claims branch, 750-752.
Regular supplies branch, 741-750.
Reservation branch, 838-854.
Transportation branch, 734-741, 754-758.

Quartermaster's Department:

Abstract of inspection of money accounts, 476.
Agents, salaries and expenses, 23.
Annual report of operations, 523.
Army service men, 225, 775.
Barracks and quarters, 100, 101, 154, 183, 186, 198,
200, 214, 215, 524, 526, 530-535, 572-576, 603,
618-622, 637, 667-679, 684, 715.
Civilian employes, 648-661.
Clothing, equipage, and material, 103, 525, 530-
532, 581-585, 603, 623-625, 637, 766-771, 777,
779-834, 836, 837.
Construction and repairs, hospitals, 530-532,
577-580, 603, 620-625, 637, 682, 878.
Financial statements:
Amounts received from sales to officers, 545.
Analysis of expenditures, 546-637.
Appropriation, debits and credits, 530-536.
Burial of indigent soldiers, 725.
Care of soldiers' lots, 724.
Clothing, equipage, and material:
Appropriations diverted, 777.
Collections and payments, Pay Dept., 771.
Issues, 768, 769, 834-836.
Manufactures, etc., 769, 770, 836, 837.
Mississippi River sufferers, 772, 837.
Payments to operatives, 767.
Purchases, 796-827.
Receipts and expenditures, 766, 828.
Sales, 771, 772.
Estimates of funds, 537, 538, 541-543.
Expenditures of disbursing officers, 662-665.
Military posts and reservations:
Barracks and quarters, 667-715.
Bridges, 680, 681, 683.
Hospitals, 682, 683.
Hospital stewards' quarters, 683.
Lighting, heating, etc., 843.
Newspapers and periodicals, 751.
Post traders' buildings, 684.
Property rented, 715-718.
Shooting galleries and ranges, 681.
Water, sewerage, etc., 842.
Wharves, 680, 681, 683.

Quartermaster's Department—Continued.**Financial statements :****National cemeteries :**

Expenditures in detail, 729-733.

Roadways, 725, 726.

Printing and binding, 752.

Regular supplies :

Fuel, forage, and straw, 749.

Harness and harness supplies, 743.

Horse and mule shoes, etc., 743.

Illuminating supplies, 744.

Manufactures, etc., Military Prison, 745-748.

Payments, general depots, 750.

Post bakeries, schools, and gardens, 750.

Public animals, 741, 742.

Stoves and ranges, 746.

Tableware and kitchen utensils, 745.

Veterinary supplies, 744.

Wagons, carts, etc., 744.

Remittances of funds, 539-543.

Transportation of Army :

Approximate cost, 735.

Earnings of bond-aided Pacific railroads, 737.

Payments, 638-647.

Practice marches, field maneuvers, etc., 736.

Small-arms practice, rifle competition, 736.

Vessels hired and owned, 737, 738, 756-758.

Fiscal affairs, summary, 523-526.

Incidental expenses, 530-532, 556-571, 603, 611-617, 637.

National cemeteries, 525, 531, 532, 534, 535, 719, 720, 724-726, 729-733.

Papers accompanying annual report, 526-528.

Public animals, 101, 102, 292, 531, 532, 536, 577-580, 603, 620-622, 637, 741, 742.

Quartermaster-General's Office, 528-854.

Quarters for hospital stewards, 154, 531, 532, 581-585, 603, 623-625, 637, 683, 878.

Regular supplies, 530-532, 546-561, 603-610, 637, 741-750.

Reports of inspectors-general, 100-103.

Shooting galleries and ranges, 531, 532, 581-585, 603, 623-625, 637, 681, 838, 841.

Transportation of the Army, 524, 525, 530-532, 536, 581-603, 626-647, 735-738, 754-765.

Quartermaster's Stores :

Appropriation for payment of claims, 39, 536.

Contracts, 745.

Issues, 745, 762, 769, 835.

Quarters, Allowance :

Post commanders' inspection reports, 292.

Reports of inspectors-general, 103, 104.

Quincy (Ill.) National Cemetery :

Care and maintenance, 723.

Railroad Transportation :

Appropriation for Pacific railroads, 23, 536.

Bond-aided Pacific, 736, 737.

Increased expenditures, 738.

Payments, 638-642.

Raleigh (N. C.) National Cemetery :

Care and maintenance, 723.

Ramsay, Capt. J. Gales :

Inspection, Pennsylvania National Guard, 330.

Randall, Fort, S. Dak. :

Drainage, sewerage, etc., 850.

Randall, Fort, S. Dak.—Continued.

Location, etc., of reservation, how occupied, 850.

Means of communication, 87.

Water supply, 850.

Rates :

Transportation of Army, 736.

Reade, Capt. Philip :

Report of rifle competition, Camp Douglas, 361.

Rebellion Records :See *War of the Rebellion*.**Record and Pension Division :**

Annual report of operations, 1005.

Books for record keeping discarded, 1006.

Card system, 1006, 1008.

Condition of work on organization, 14, 1006, 1008.

Mail boxes and cards, 1011.

Medical and military index record cards, 1012.

Messenger service, 1010.

Organization, 1005.

Remarks of Secretary of War, 13.

Results of business methods adopted, 14, 1013.

Salaries, etc., 22.

Scope and character of work, 13, 1005.

Records, Files, and Claims Branch, Q. M. G. O. :

Annual report of operations, 750.

Financial statements, 751, 752.

Miscellaneous claims and accounts, 750, 751.

Scope and character of work, 750.

Recruiting Service :

Appropriation for expenses, 22.

Depots and recruiting rendezvous, 66, 89.

Enlistments and reenlistments, 67, 92.

Per diem compensation to sergeants, 114.

Recruits, 68, 291, 909, 981.

Remarks :

Adjutant-General, 66.

Inspector-General, 96.

Rural districts, 67.

Recruits :

Colored, 68.

Medical examinations, 909, 981.

Nativity of, accepted, 68.

Post commanders' inspection reports, 291.

White, 68.

Red Bank, N. J. :

Location and size of reservation, 851.

Reed, Capt. Walter :

Report, water supply, Mt. Vernon Barracks, 938.

Refugees, Freedmen, and Abandoned Lands :

Appropriation for support of Bureau, 38.

Regiments :

Headquarters and stations, 90.

Regular Supplies Branch, Q. M. G. O. :

Annual report of operations, 741.

Estimates for annual supplies, 744.

Financial statements, 741-750.

Miscellaneous requisitions, 744.

Scope and character of work, 741.

Regular Supplies, Q. M. Dept. :**Appropriation :**

Debits and credits, 22, 530-532.

Expenditures during fiscal years ending—

June 30, 1889 (in part), 604-610, 637.

June 30, 1890, 546-561, 603.

- Regular Supplies, Q. M. Dept.—Continued.**
Average price of fuel, forage, and straw, 749.
Manufactures, Military Prison, 745-748.
Purchases, 741-744, 750.
- Relief Acts:**
Appropriations, 39.
- Remittances of Funds:**
Disbursing officers, Q. M. Dept., 539, 541.
- Reno, Fort, Ind. T.:**
Additional accommodations needed, 198.
Drainage, sewerage, etc., 850.
Location, etc., of reservation, how occupied, 850.
Means of communication, 87.
Water supply, 850, 937, 941.
- Rents:**
Appropriations, 22.
Payments by Q. M. Dept., 715-718.
- Reservation Branch, Q. M. G. O.:**
Annual report of operations, 838.
Financial statements, 842, 843.
Scope and character of work, 838.
- Reservations:**
See *Military Posts and Reservations*.
- Retirement:**
Remarks:
Howard, Maj. Gen. O. O., 153, 154.
Secretary of War, 12.
- Rewards:**
Apprehension of deserters, 152, 250.
- Reynolds, Sheriff:**
Murder of, near Riverside, Ariz., 165.
- Rheumatism:**
Prevalence of, in Army, 903, 977, 979.
- Richard, Capt. Charles:**
Report of affairs at Fort Logan, Colo.:
Sanitary condition of quarters, 928.
Water supply, 940.
- Richmond (Va.) National Cemetery:**
Care and maintenance, 723.
Construction of roadway, 726.
- Riley, Fort, Kans.:**
Bridge and buildings, 25, 183, 533, 675, 683.
Drainage, sewerage, etc., 850.
Location, etc., of reservation, how occupied, 850.
Means of communication, 87.
Water supply, 850.
- Ringgold, Fort, Tex.:**
Bathing facilities, 943.
Condition of affairs, 839.
Construction of buildings, etc., 186.
Deficiency in food supply, 942.
Drainage, sewerage, etc., 850, 931.
Location, etc., of reservation, how occupied, 850.
Means of communication, 87.
Water supply, 850, 937, 939.
- Riots:**
Eloction, apprehended in Indian Territory, 198.
Shafter, Tex., August 1, 1890, 185.
- Rittenhouse, Capt. Benjamin F.:**
Relieved from duty, Soldiers' Home, D. C., 1021
- Rivers and Harbors:**
Appropriations, 25-36.
- Riverside, Ariz.:**
Murder of Sheriff Reynolds and guard, 165.
- Roadways:**
Amounts expended, 525.
Authorized expenditures at military posts, 680.
National cemeteries, 37, 534, 535, 725, 726.
Plattsburgh Barracks, N. Y., 37, 535, 678.
- Robinson, Fort, Nebr.:**
Bathing facilities, 943.
Construction, etc., 200.
Drainage, sewerage, etc., 850.
Location, etc., of reservation, how occupied, 850.
Means of communication, 87.
Sanitary condition of quarters, 925.
Water supply, 850.
- Rodgers, Capt. John F.:**
Report clothing supply branch, Q. M. G. O., 766.
- Rosters of Officers:**
Inspector-General's Department, 119-123.
Medical offices, West Point, N. Y., 231.
Subsistence Department, 865.
- Rostrums:**
Erected at national cemeteries, 720.
- Rothein:**
Prevalence of, in Army, 894.
- Ruger, Brig. Gen. Thomas H.:**
Annual report, Department of Dakota, 187.
Remarks:
Desertion, 194.
Indian affairs, 187.
Post canteens, 744.
- Rutgers College, New Jersey:**
Inspection of military department, 412.
- Sac and Fox Reservation, Mo.:**
Ejection of Murphy family, 196.
- St. Francis Barracks, Fla.:**
Drainage, sewerage, etc., 852.
Location, etc., of reservation, how occupied, 852.
Means of communication, 88.
Water supply, 852.
- St. John's College, Annapolis, Md.:**
Inspection of military department, 398.
- St. John's College, Fordham, N. Y.:**
Inspection of military department, 117, 413.
- St. Joseph's Commercial College, Missouri:**
Appropriation for relief, 39, 535.
- St. Louis, Mo.:**
Headquarters Dept. of the Mo., removed to, 195.
- St. Louis Arsenal, Mo.:**
Location and size of reservation, 851.
Water supply, 851.
- St. Paul, Minn.:**
Army depot building, 25, 533.
- St. Paul Cathedral School, Garden City, N. Y.:**
Inspection of military department, 117, 414.
- St. Phillip, Fort, La.:**
Location, etc., of reservation, how occupied, 852.
Means of communication, 88.
- Salaries, Contingencies, etc.:**
Appropriations, 22.

Sales :

- Clothing and equipage, 771.
- Condemned subsistence supplies, 862.
- Cottages at San Antonio, Tex., 685.
- Illuminating supplies, 744.
- Military reservations, 839, 841.
- Proceeds, 545.
- Public animals, 742.

Salt River, Ariz. :

- Engagement with Apaches, Mar. 7, 1860, 167.

San Houston, Fort, Tex. :

- Means of communication, 87.

San Antonio, Tex. :

- Condition of affairs, 839.
- Construction of buildings, 186, 672, 674.
- Drainage, sewerage, etc., 851.
- Location, etc., of reservation, how occupied, 851.
- Purchase of drill grounds, 25, 534.
- Sale of cottages authorized, 685.
- Water supply, 851.

San Antonio (Tex.) National Cemetery :

- Care and maintenance, 723.
- Erection of rostrum, 720.

San Carlos, Ariz. :

- Drainage, sewerage, etc., 851.
- Location, etc., of reservation, how occupied, 851.
- Means of communication, 87.
- Sanitary condition of quarters, 925.
- Water supply, 851, 937.

San Carlos Agency, Ariz. :

- Affairs at, 176.
- Removal of Mojave and Yuma Indians, 169.

San Diego Barracks, Cal. :

- Drainage, sewerage, etc., 851, 931.
- Location, etc., of reservation, how occupied, 851.
- Means of communication, 87.
- Sale of reservation, 173.
- Water supply, 851, 936.

Sandoval, Gen. Francisco Bulz :

- Capture of Mexican revolutionists under, 184.

Sandy Hook, N. J. :

- Location, etc., of reservation, how occupied, 851.
- Means of communication, 87.

San Francisco, Cal. :

- Defense of, 55.

San Francisco (Cal.) National Cemetery :

- Care and maintenance, 723.

Sanger, Maj. J. P. :**Inspection reports :**

- Colorado State Agricultural College, 365.
- Cornell College, Iowa, 118, 385.
- Iowa State University, 383.
- Kansas Agricultural College, 388.
- Missouri State University, 407.

Remarks :

- Apprentice battalions, 128.
- Conduct of enlisted men, 113.
- Desertion, 114.
- Instruction of enlisted men, 110.
- Furniture for barracks and quarters, 101.
- Post gardens, 99.
- Post schools, 109.
- Practice marches, field maneuvers, etc., 107.
- Subsistence supplies, 92.

Sanger, Maj. J. P.—Continued.

- Station and work performed, 121, 122.
- Transferred to Inspector-General's Office, 122.

Sanitary Condition of the Army :

- Barracks and quarters, 923.
- Bathing facilities, 943.
- Clothing, 942.
- Drainage, sewerage, etc., 930.
- Food supply, 942.
- Habits, etc., of enlisted men, 944.
- Water supply, 936.

Sanitary Condition, Soldiers' Home, D. C. :

- Buildings and grounds, 1028, 1029, 1045.
- Drainage, sewerage, etc., 1028, 1045.
- Food supply, 1029.
- Water supply, 1022, 1023, 1029, 1030, 1045.

San Juan Island, Wash. :

- Location and size of reservation, 851.

San Pedro, Cal. :

- Enlargement of military reservation, 173.
- Location, etc., of reservation, 851.

Scammel, Fort, Me. :

- Location, etc., of reservation, how occupied, 851.
- Means of communication, 88.

Scarlet Fever :

- Prevalence of, in Army, 221, 894.

Schofield, Maj. Gen. John M. :

- Annual report, 43.

Remarks :

- Apprentice battalions, 48.
- Army reorganization, 46.
- Artillery target practice, 51.
- Brevet-rank act, February 27, 1890, 52.
- Indian affairs, 43.
- Militia, heavy artillery batteries, 51.
- National defense, 844.
- Practice marches, field maneuvers, etc., 51.
- Skeleton or three-battalion formation, 46.
- Small-arms practice, 51.

Schuyler, Fort, N. Y. :

- Drainage, sewerage, etc., 851.
- Extension of wharf, 683.
- Location, etc., of reservation, how occupied, 851.
- Means of communication, 88.
- Water supply, 851.

Scott, Fort (Kans.), National Cemetery :

- Appropriation for roadway, 37, 534.

Sears, Capt. Clinton B. :

- Inspection, Pennsylvania National Guard, 333.

Secretary of War :

- Annual report, 3.

Remarks :

- Alaska, 18.
- Artillery organization, 12.
- Colleges, 17.
- Courts-martial, 4.
- Desertion, 9.
- Military posts, 15.
- Mississippi River sufferers, 17.
- Monuments, 18.
- National defense, 5, 8.
- National Guard, 16.
- Ordnance, 7.

Secretary of War—Continued.

- Remarks:**
 Post traders, 16.
 Promotion, 3, 10.
 Record and Pension Division, 13.
 Retirement, 12.
 Signal Corps, 15.
 Three-battalion formation, 11.
 War of the Rebellion, Records, 15.
- Selden, Fort, N. Mex.:**
 Deficiency in food supply, 942.
 Transfer of, to Interior Department, 52, 168, 840.
 Water supply, 936, 937, 939.
- Seminole:**
 Conveyed to Fort Custer, Mont., 193.
- Sevall, Fort, Mass.:**
 Location, etc., of reservation, how occupied, 851.
 Means of communication, 88.
- Shafter, Tex.:**
 Riot at, August 1, 1890, 185.
- Shafter, Col. William R.:**
 Remarks, practice marches, etc., 63.
- Sharpshooters and Marksmen:**
 Post commanders' inspection reports, 290.
- Shattuck School, Minnesota:**
 Inspection of military department, 473.
- Shaw, Fort, Mont.:**
 Drainage, sewerage, etc., 851.
 Location, etc., of reservation, how occupied, 851.
 Means of communication, 88.
 Water supply, 851.
- Sheffield Scientific School, Yale University:**
 Inspection of military department, 366.
- Sheridan, Camp, Wyo.:**
 Location, etc., of reservation, how occupied, 851.
 Means of communication, 88.
- Sheridan, Fort, Ill.:**
 Bridge and buildings, 25, 183, 533, 675, 683.
 Drainage, sewerage, etc., 851, 931.
 Location, etc., of reservation, how occupied, 851.
 Means of communication, 88.
 Water supply, 851, 937, 940.
- Sheridan, Gen. Philip H.:**
 Pedestal for statue, 18, 40.
- Sherman, Fort, Idaho:**
 Drainage, sewerage, etc., 851.
 Location, etc., of reservation, how occupied, 851.
 Means of communication, 88.]
 Water supply, 851.
- Shiloh (Tenn.) National Cemetery:**
 Care and maintenance, 724.
- Ship Island, Miss.:**
 Location and description of reservation, 851.
 Means of communication, 88.
- Shirts:**
 Muslin, purchase for trial, 774.
- Shoeing Tools:**
 Purchases, 743.
- Shoes:**
 Manufactures, 262, 769, 770.
- Shooting Galleries, Ranges, etc.:**
 See *Small-arms Practice*.

Sidney, Fort, Nebr.:

- Buildings, 677.
 Drainage, sewerage, etc., 851, 931, 933.
 Location, etc., of reservation, how occupied, 851.
 Means of communication, 88.
 Post canteens, 66.
 Water supply, 851.
 Withdrawal of troops, 841.
- Signal Corps:**
 Annual report of operations. See Vol. IV.
 Appropriations, 22, 36.
 Decrease in pay, etc., for 1890, 986.
 Remarks of Secretary of War, 15.
- Signaling Instruction:**
 Artillery School, 212.
 Department of the Platte, 200.
- Sill, Fort, Ind. T.:**
 Bathing facilities, 943.
 Dyscrasia, condition of, developed, 942.
 Drainage, sewerage, etc., 851.
 Location, etc., of reservation, how occupied, 851.
 Means of communication, 88.
 Reduction of garrison recommended, 198.
 Sanitary condition of quarters, 925.
 Water supply, 851.
- Simpson——:**
 Murder of, at Brook's Ranch, Tex., 185.
- Sisseton, Fort, Dak.:**
 Transfer of, to Interior Department, 52.
- Small-arms Practice:**
 Appropriation, shooting galleries and ranges:
 Apportionment, 681.
 Debits and credits, 23, 531, 532.
 Expenditures in detail, fiscal years ending—
 June 30, 1889 (in part), 623-625, 637.
 June 30, 1890, 581-585, 603.
 Atlantic Division of the, 151.
 Dakota, Department of, 194.
 Estimate of expenses incurred and paid, 736.
 Monroe, Fort, Va., 214.
 Pacific Division of the, 156, 181.
 Platte, Department of the, 200.
 Purchases of land for ranges, 838, 841.
 Ranges for, in Department of the Missouri, 108.
 Remarks of General Schofield, 51.
 Reports of inspectors-general, 107, 108.
 Texas, Department of, 186.
- Small-pox:**
 Prevalence of, in Army, 893.
- Smith, Col. C. H.:**
 Inspection, Michigan National Guard, 313.
- Smith, Fort (Ark.), National Cemetery:**
 Erection of rostrum, 720.
- Smith, Lieut. Col. Joseph R.:**
 Report of operations, hospital corps, 920.
- Smith, Brig. Gen. William:**
 See *Paymaster-General*.
- Snelling, Fort, Minn.:**
 Construction of buildings, 672, 674.
 Drainage, sewerage, etc., 852.
 Location, etc., of reservation, how occupied, 851.
 Means of communication, 88.
 Ordnance depot, 191.

- Snelling, Fort, Minn.—Continued.**
 Post canteens, 65.
 Water supply, 852.
- Soldiers' Home, D. C.:**
 Annual reports, 1019, 1022, 1023, 1030, 1045.
 Appropriation for support, 38.
 Barnes Hospital, 1026-1030, 1045, 1058.
 Bill of fare, 1059.
 Building operations, 1020, 1022, 1030, 1044, 1060, 1063.
 Civilian employes, 1046, 1048, 1053.
 Dairy and farm, 1021, 1039, 1040, 1049, 1056.
 Disbursements, January and July, 1890, 1060.
 Domestic animals, 1049, 1058.
 Electric lights, 1022.
 Expenses during the year, 1048, 1052.
 Field return, November 3, 1890, 1064.
 Financial statements:
 Dairy account, 1040, 1058.
 Farm account, 1039, 1057.
 Garden account, 1030, 1057.
 Interest account, 1036.
 Pensioners' account, 1037.
 Permanent fund account, 1035.
 Receipts and expenditures, 1031, 1035.
 Fiscal affairs, summary, 1020, 1021.
 Forwood, Major, attending surgeon, 1021.
 Horses and mules, 1050, 1063.
 Inmates, 1019, 1021-1025, 1038, 1040-1044, 1040-1048, 1052-1056, 1063, 1064.
 Laundry, 1023.
 Means of transportation, 1064.
 Parker, Captain, secretary and treasurer, 1021.
 Remarks of Inspector-General, 284.
 Sanitary condition, 1022, 1028, 1029, 1045.
 Supplies, 1039, 1045, 1046, 1050, 1059-1062.
 System of accounts, 1046.
- Soldiers' Home (D. C.) National Cemetery:**
 Care and maintenance, 724.
- Soldiers' Lots:**
 Care and maintenance, 724.
- South Carolina Military Academy:**
 Inspection of military department, 433.
- South Dakota Agricultural College:**
 Inspection of military department, 441.
- Special Appropriations:**
 Quartermaster's Department, 533, 535.
- Special Diseases:**
 Prevalence of, in Army, 893-904, 975-980.
- Specific Febrile and Infectious Diseases:**
 Prevalence of, in Army, 893-902, 975, 976.
- Spokane, Fort, Wash.:**
 Drainage, sewerage, etc., 852.
 Location, etc., of reservation, how occupied, 852.
 Means of communication, 88.
 Water supply, 852.
- Springfield (Mo.) National Cemetery:**
 Construction of roadway, 37, 534, 726.
- Spurgin, Capt. W. F.:**
 Finances, Military Academy, 1082, 1083.
- Stable Brooms:**
 Manufactures, 263, 743.
- Stage Companies:**
 Payments to, Army transportation, 640, 647.
- Stanley, Brig. Gen. D. S.:**
 Annual report, Dept. of Texas, 184.
 Remarks, National Guard, 186.
- Stanton, Fort, N. Mex.:**
 Bathing facilities, 943.
 Drainage, sewerage, etc., 852.
 Location, etc., of reservation, how occupied, 852.
 Means of communication, 88.
 Water supply, 852.
- State and Territorial Homes:**
 Appropriation for support, 38.
- State War Claims:**
 See *War Claims*.
- Stanton (Va.) National Cemetery:**
 Construction of roadway, 37, 535, 726.
- Stationery:**
 Appropriation, 22.
- Steever, Capt. E. Z.:**
 Inspection, Texas Volunteer Guard, 349.
- Stevens, Fort, Oreg.:**
 Location, etc., of reservation, how occupied, 852.
 Means of communication, 88.
- Stockings:**
 Seamless woolen not satisfactory, 776.
- Storms and Floods:**
 Losses. See *Losses of Stores and Property*.
- Stoves and Ranges:**
 Manufacture of furniture, 263, 746, 747.
 Purchases, 746.
- Straw:**
 Average cost, 749.
- Strength of Army:**
 June 30, 1890, facing p. 68.
- Stretch, Capt. J. F.:**
 Inspection, Missouri National Guard, 316.
- Subsistence Department:**
 Abstract of inspection of money accounts, 484.
 Annual report of operations, 857.
 Commissary-General's Office, 22, 863, 864.
 Duties and stations of officers, 865.
 Financial statements, 857-862.
 Subsistence supplies and property, 39, 99, 149, 150, 154, 186, 530, 860-862.
- Subsistence Property:**
 Losses by fire, etc., 861.
- Subsistence Supplies:**
 Appropriations, 22, 39, 536.
 Articles designated for sale, 99, 149, 150.
 Atlantic, Division of the, 154.
 Average contract price of fresh beef, 860.
 Issues of, to, with cost:
 Indians, 861.
 Miscellaneous, 861.
 Mississippi River sufferers, 862.
 Losses by fire, etc., 861.
 Remarks of Inspector-General, 99.
 Reports of inspectors-general, 99.
 Sales of condemned supplies, 862.
 Texas, Department of, 186.

- Suicides :**
 Number, and means employed, 905.
- Sully, Fort, S. Dak. :**
 Drainage, sewerage, etc., 852.
 Location, etc., of reservation, how occupied, 852.
 Means of communication, 88.
 Water supply, 852.
- Sumner, Maj. S. S. :**
 Remarks :
 Desertion, 114.
 Post canteens, 105.
 Post schools, 110.
 Small-arms practice, 108.
 Station and work performed, 121, 122.
- Sumter, Fort, S. C. :**
 Location, etc., of reservation, how occupied, 852.
 Means of communication, 88.
- Sunday Morning Inspections :**
 Remarks of Inspector-General, 93.
- Superintendents, National Cemeteries :**
 Changes, etc., 719.
 Names and stations, 727.
 Pay, etc., 37, 531, 532.
- Supplies :**
 Remarks of Inspector-General, 98.
- Supplies, Soldiers' Home, D. C. :**
 Cost of rations, 1045, 1046.
 Estimate of vegetables in ground, 1030.
 Prices paid during October, 1890, 1050.
 Purchases, 1059-1062.
 System of purchases, 1046.
- Supply, Fort, Ind. T. :**
 Drainage, sewerage, etc., 852.
 Location, etc., of reservation, how occupied, 852.
 Means of communication, 88.
 Water supply, 852.
- Surgeon-General :**
 Annual report, 869.
 Contract with Providence Hospital, 875.
 List of papers appended to annual report, 945.
 Remarks :
 Bathing facilities, 943.
 Clothing supplies, 942.
 Drainage, sewerage, etc., 930.
 Food supply, 942.
 Habits, etc., of enlisted men, 944.
 Health of Army, 879.
 Hospitals and hospital stewards' quarters, 878.
 Operations, hospital corps, 910.
 Sanitary condition of quarters, 923.
 Water supply, 936.
- Surgeon-General's Office :**
 Library, 22, 870, 871, 873, 874.
 Providence Hospital, 875.
 Salaries contingencies, etc., 22.
- Surgical Appliances :**
 See *Artificial Limbs and Appliances*.
- Surgical Operations :**
 Number, character, and results, 906.
- Surgical Reports :**
 List of special, received, 908.
- Sword-master, Military Academy :**
 Rank, pay, and emoluments, 222.
- Tableware :**
 Purchases, 772.
- Target Practice :**
 Artillery. See *Artillery Target Practice*.
 Small-arms. See *Small-arms Practice*.
- Taylor, Capt. B. D. :**
 Report, bathing facilities at Fort Sill, 943.
- Taylor, Fort, Fla. :**
 Location, etc., of reservation, how occupied, 852.
 Means of communication, 88.
- Taylor, Capt. Marcus E. :**
 Report, bathing facilities at Fort Stanton, 943.
- Taylor, Lieut. S. W. :**
 Inspection, Alabama State Troops, 205.
- Telegraphing :**
 Rates and service, 739, 740.
- Telegraphy :**
 Instruction in Artillery School, 212.
- Tennessee University :**
 Inspection of military department, 442.
- Tents :**
 Mississippi River sufferers, 39, 535, 772, 837.
 Sale of, to Director Geological Survey, 772.
- Térrét, Lieut. Colville P. :**
 Inspection, Georgia Militia, 301.
- Texas, Department of :**
 Annual report of operations, 184.
 Armed revolutionists from Mexico, 184.
 Changes of troops, 184.
 Condition of reservations, 839, 840.
 Correspondence of commanding general, 43.
 Courts-martial records, 508.
 Domestic animals kept, 100.
 Extract from report of judge-advocate, 520.
 Geographical limits, 84.
 Health of Army, 184, 186, 887, 950, 953, 962, 967.
 Inspection duty in, assignments, 286.
 Military operations, 184, 185.
 Military posts, 185, 186.
 Mule transportation, 186.
 Murders and outrages, 185.
 Permanent camp near Presidio del Norte, 185.
 Position and distribution of troops, 78.
 Post commanders' inspection reports, 504.
 Post gardens, 100.
 Post schools, 62.
 Quartermaster's supplies, 186.
 Riot at Shafter, Tex., August 1, 1890, 185.
 Small-arms practice, 186.
 Subsistence supplies, 186.
- Texas Mechanical and Agricultural College :**
 Inspection of military department, 456.
- Texas Peninsula :**
 Murders and outrages, 185.
- Texas Volunteer Guard :**
 Regular troops at encampment, 186, 351.
 Reports of inspection, 337, 349.
- Tez-chilla :**
 Murder of, December 26, 1889, 166.
- Thomas, Fort, Ariz. :**
 Location, etc., of reservation, how occupied, 852.
 Means of communication, 88.

Thomas, Fort, Ariz.—Continued.

Murder of Freighter Herbert, March 2, 1890, 167.
Transfer of, to Interior Department, 52, 166, 841.

Thomas, Fort, Ky. :

Appropriation for buildings, etc., 25, 533.
Construction of buildings, 676.
Means of communication, 88.
Purchase of land for rifle range, 838.

Three-Battalion Formation :**Remarks :**

Schofield, Maj. Gen. John M., 46.
Secretary of War, 11.

Tidball, Col. John C. :

Remarks, apprentice battalions, 127.

Tongue River Agency :

Military support of agent, 188, 192, 193.

Totten, Fort, N. Dak. :

Drainage, sewerage, etc., 852.
Location, etc., of reservation, how occupied, 852.
Means of communication, 88.
Transfer of, to Interior Department, 52.
Water supply, 852.

Townsend, Fort, Wash. :

Drainage, sewerage, etc., 852.
Location, etc., of reservation, how occupied, 852.
Means of communication, 88.
Water supply, 852.

Transportation :

Means of, Soldiers' Home, D. C., 1064.

Transportation Branch, Q. M. G. O. :

Accounts and claims acted upon, 741.
Annual report of operations, 734.
Clerical force, 735.
Financial statements, 735-738, 756-758.
Scope and character of work, 734.

Transportation of the Army :

Abstracts of payments on account, 638-647.

Appropriation :

Debits and credits, 23, 530-532.
Expenditures in detail, fiscal years ending—
June 30, 1889 (in part), 626-637.
June 30, 1890, 581-603.

Contracts, wagon and water, 736, 759-765.

Deficiency in appropriation, 524, 738, 739.

Expenses of vessels, 525, 737, 738, 756-758.

Pacific railroads accounts, 736, 737.

Rates, 736.

Remarks of Quartermaster-General, 524.

Troops and property transported, 735, 754, 755.

Travel Allowances :

Analysis of mileage disbursements, 987.

Per diem for officers, 103.

Remarks of Paymaster-General, 987.

Troops and Property :

Transported by Q. M. Dept., 735, 754.

Trousers :

Issues of light shades, 775.

Trumbull, Fort, Conn. :

Drainage, sewerage, etc., 852.
Location, etc., of reservation, how occupied, 852.
Means of communication, 88.
Water supply, 852.

Trumpets :

Expériments to secure uniform tone, 774.

Trusses :

See *Artificial Limbs and Appliances*.

Turtle Mountain Agency :

Military support of agent, 191, 192.

Typhoid Fever :

Efforts for suppression in French army, 902.
Epidemic at Fort Assiniboine, Mont., 805.
Prevalence of, in Army, 894.

Undershirts :

Purchase of knit, for trial, 774.

Union, Fort, N. Mex. :

Drainage, sewerage, etc., 853.
Inspection of Indian prisoners, 180.
Location, etc., of reservation, how occupied, 852.
Means of communication, 88.
Removal to, of certain Apache Indians, 167.
Sanitary condition of quarters, 180.
Water supply, 853.

University of the South :

Inspection of military department, 450.

Vaccinations :

Primary and revaccinations, 909.

Vancouver Barracks, Wash. :

Drainage, sewerage, etc., 853.
Location, etc., of reservation, how occupied, 853.
Means of communication, 88.
Water supply, 853.

Varioloid :

Cases at West Point, N. Y., 221.

Veneral Diseases :

Prevalence of, in Army, 903, 978, 979.

Verde, Fort, Ariz. :

Location, etc., of reservation, how occupied, 853.
Means of communication, 88.
Transfer of, to Interior Dept., 52, 166, 841.

Vermont National Guard :

Report of inspection of, 341.

Vermont University and State Agricultural College :

Inspection of military department, 458.

Vessels :

Chartered, impressed, or employed, 738, 757-765.

Owned by Q. M. Dept., 525, 737, 738, 756.

Veterinary Supplies :

Purchases, 744.

Vicksburgh (Miss.) National Cemetery :

Care and maintenance, 724.

Construction of roadway, 37, 535, 726.

Virginia Agricultural and Mechanical College :

Inspection of military department, 116, 459.

Volunteer Records :

Card system applied, 1012.

Consolidation of medical and military, 13, 1005.

Necessity of reproducing rolls, 14, 1012, 1013.

Volunteers :

Claims of, for pay, bounty, etc., 989.

Expenditures of pay, bounty, etc., 986.

Vroom, Maj. Peter D. :

Inspection reports :
Delaware College 368.

- Vroom, Maj. Peter D.—Continued.**
 Inspection reports:
 Maryland Agricultural College, 117, 393.
 Nebraska University, 410.
 Pennsylvania Military Academy, 117, 427.
 St. John's College, Annapolis, Md., 398.
 Station and work performed, 121, 122.
 Transferred to Department of the Missouri, 122.
- Wade, Camp, Oklahoma:**
 Means of communication, 88.
- Wadsworth, Fort, N. Y.:**
 Construction of buildings, etc., 672, 674.
 Drainage, sewerage, etc., 853.
 Location, etc., of reservation, how occupied, 853.
 Means of communication, 88.
 Water supply, 853.
- Wagons:**
 Purchases, 744.
- Wagon Transportation:**
 Payments on account, 644-646.
- Walker, Lieut. F. V.:**
 Report, bathing facilities, Jackson Barracks, 943.
- Walla Walla, Fort, Wash.:**
 Drainage, sewerage, etc., 853.
 Location, etc., of reservation, how occupied, 853.
 Means of communication, 88.
 Water supply, 853.
- War Claims, State and Volunteer:**
 Appropriations for payment, 39.
- War Maps:**
 Appropriation for reprinting, 38, 39.
- War Department:**
 Adjutant-General's Office, 247-249, 252, 253.
 Annual report of condition and needs, 3.
 Army of the United States, 9-13, 15, 22, 23, 43-
 215, 250, 252, 287-292, 494, 509, 510, 514, 517-
 519, 523-854, 857-865, 869-981, 985-997.
 Financial statements:
 Appropriations, 1890, 22-40.
 Expenditures, 1890, appropriations, 1891, esti-
 mates, 1892, 19.
 Inspector-General's Department, 271-534.
 Judge Advocate-General's Department, 507-520.
 Military Academy, 219-243, 1067-1088.
 Military Prison, Leavenworth, 115, 251, 252, 254-
 268, 745, 746, 748, 769, 770, 836, 837.
 Record and Pension Division, 13-15, 1005-1015.
 Soldiers' Home, D. C., 1019-1064.
 War of the Rebellion, Records, 15, 1001, 1002.
- War of the Rebellion:**
 Annual report of publication of Records, 1001.
 Appropriations:
 Printing, binding, etc., 38.
 Salaries, etc., 22.
 Remarks of Secretary of War, 15.
- Warren, Fort, Mass.:**
 Drainage, sewerage, etc., 853.
 Location, etc., of reservation, how occupied, 853.
 Means of communication, 88.
 Water supply, 853.
- Washakie, Fort, Wyo.:**
 Clothing supply, 942.
 Drainage, sewerage, etc., 853, 931, 935.
 Location, etc., of reservation, how occupied, 853.
- Washakie, Fort, Wyo.—Continued.**
 Means of communication, 88.
 Water supply, 853.
- Washington, D. C.:**
 Appropriation for buildings and grounds, 24.
- Washington, Fort, Md.:**
 Location, etc., of reservation, how occupied, 853.
 Means of communication, 88.
- Washington Barracks, D. C.:**
 Drainage, sewerage, etc., 853.
 Location, etc., of reservation, how occupied, 853.
 Means of communication, 88.
 Water supply, 853.
- Water Supply:**
 Military reservations, 215, 525, 843-854, 936-942.
 Remarks:
 Medical Officers, 938-942.
 Surgeon-General, 936.
 Soldiers' Home, D. C., 1022, 1028, 1029, 1030, 1045.
 West Point, N. Y., 228, 238-240, 853, 1076.
- Water Transportation:**
 Payments on account, 642-644.
- Wayne, Fort, Mich.:**
 Drainage, sewerage, etc., 853.
 Location, etc., of reservation, how occupied, 853.
 Means of communication, 88.
 Water supply, 853, 936.
- Weaver, Lieut. E. M.:**
 Remarks, apprentice battalions, 146.
- West Point, N. Y.:**
 Army service men, Q. M. Dept., 225, 775.
 Battle monument, 227.
 Buildings and grounds, 225, 533, 1073-1076.
 Cavalry detachment and horses, 224.
 Cemetery, 227, 1076.
 Civilian clerks, 230.
 Discipline, instruction, etc., 1077.
 Drainage, sewerage, etc., 221, 853, 931.
 Electric lights, 229, 240-243, 1075.
 Engineer battalion, 224.
 Health of post:
 Average strength and cases treated, 231.
 Cadet corps, 234.
 Civilians, 235.
 Enlisted men, 236.
 Officers stationed at Military Academy, 233.
 Prevalence of special diseases, 220-222.
 Kinsley tract, 25, 227, 526, 534, 839.
 Location, etc., of reservation, how occupied, 853.
 Means of communication, 88.
 Medical officers, 231.
 Military Academy, 219-243, 1067-1088.
 Ordnance, etc., 223, 224, 237, 238, 1077, 1078.
 Sanitary condition of quarters, 924-926.
 Survey of reservation, 227.
 Water supply, 228, 238-240, 853, 1076.
- West Virginia University:**
 Inspection of military department, 118, 465.
- Wharves:**
 Authorized expenditures, 680.
 Construction of, at Fort Monroe, Va., 25.
 Enlargement, etc., at Fort Mason, Cal., 684.
 Expenditures, construction and repairs, 525.
 Extension of, at Fort Schuyler, N. Y., 683.

- Whipple Barracks, Ariz. :**
 Drainage, sewerage, etc., 853.
 Location, etc., of reservation, how occupied, 853.
 Means of communication, 89, 90.
 Water supply, 853.
- Whistler, Lieut. G. N. :**
 Remarks, apprentice battalions, 139.
- White Buffalo :**
 Conveyed to Fort Custer, Mont., 193.
- White Mountain Apache Indians :**
 Separate agency, 177.
- White Mountain Reservation :**
 Condition of Indians, 176.
- Whooping Cough :**
 Prevalence of, in Army, 893.
- Willcox, Brig. Gen. O. B. :**
 Annual report, Soldiers' Home, D. C., 1022.
- Willetts Point, N. Y. :**
 Drainage, sewerage, etc., 853.
 Engineer depot, 23, 90.
 Location, etc., of reservation, how occupied, 853.
 Means of communication, 89, 90.
 Sanitary condition of quarters, 924, 926.
 Water supply, 853.
- Williams, Capt. Charles W. :**
 Finances, Military Academy, 1083, 1084.
- Williams, Col. Robert :**
 Annual report, Division of the Missouri, 182.
 Remarks :
 Barracks and quarters, 183.
 Transportation of Army, 183.
- Wilson, Col. John M. :**
 Annual report, 219.
 Suggestions, 1071-1073.
- Winfield Scott, Fort, Cal. :**
 Location, etc., of reservation, how occupied, 853.
 Means of communication, 89.
- Wingate, Fort, N. Mex. :**
 Clothing supply, 942.
 Construction of a bridge over Rio Puerco, 683.
 Drainage, sewerage, etc., 853.
 Location, etc., of reservation, how occupied, 853.
 Means of communication, 89.
 Sanitary condition of quarters, 924.
 Water supply, 853.
- Winthrop, Fort, Mass. :**
 Location, etc., of reservation, how occupied, 853.
 Means of communication, 89.
- Wisconsin National Guard :**
 Regular troops at encampment, 193.
 Report of inspection, 345.
- Wisconsin Rifle Range :**
 Rifle competition at Camp Douglas, Wis., 361.
- Wisconsin University :**
 Inspection of military department, 471.
- Witnesses :**
 Power of courts-martial to punish citizen, 510.
- Wolverton, Maj. W. D. :**
 Report, water supply, Fort Douglas, 940.
- Wood, Fort, N. Y. :**
 Drainage, sewerage, etc., 854.
 Location, etc., of reservation, how occupied, 854.
 Means of communication, 89.
 Water supply, 854.
- Wood, Lieut. Col. H. Clay :**
 Inspection reports :
 Bingham School, North Carolina, 116, 417.
 North Georgia Agricultural College, 373.
 South Carolina Military Academy, 433.
 Tennessee University, 442.
 University of the South, 450.
 Virginia Agr. and Mech. College, 116, 459.
 West Virginia University, 118, 465.
 Station and work performed, 121, 122.
- Woodhull, Maj. Alfred A. :**
 Remarks, apprentice battalions, 135, 138.
 Sanitary report, Fort Leavenworth, 929.
- Woodruff, Lieut. Charles E. :**
 Reports of drainage, sewerage, etc. :
 Gaston, Fort, Cal., 935.
 Mackinac, Fort, Mich., 932.
- Woodruff, Maj. E. C. :**
 Inspection, Texas Volunteer Guard, 337.
- Wooster (Ohio) University :**
 Inspection of military department, 424.
- Wotherspoon, Lieut. W. W. :**
 Remarks, apprentice battalions, 140.
- Wounds :**
 Number of gunshot, and results, 905.
- Wright, Lieut. Col. J. P. :**
 Annual report Military Prison, Leavenworth, 258.
- Yale University ;**
 Inspection of Sheffield Scientific School, 366.
- Yates, Fort, N. Dak. :**
 Drainage, sewerage, etc., 854, 931.
 Location, etc., of reservation, how occupied, 854.
 Means of communication, 89.
 Water supply, 854, 937.
- Yaval Suppal Indians :**
 Condition of, and relations with settlers, 169.
- Yellowstone Park, Wyo. :**
 Assignment of troops for duty, 192, 193.
 Improvement, 25.
- Yorktown, Va. :**
 Erection of Monumental column, 40.
- Yuma Indians :**
 Removal from San Carlos Agency, 169.
- Zuni Indians :**
 Dispute with ranchmen, 164.
 Trespassers on reservation, 180.