

IN THE SENATE OF THE UNITED STATES.

JULY 17, 1888.—Ordered to be printed.

Mr. ALLISON, from the Committee on Appropriations, submitted the following

REPORT:

[To accompany bill H. R. 10540.]

The Committee on Appropriations, in reporting back to the Senate the bill "making appropriations for sundry civil expenses of the Government for the fiscal year ending June 30, 1889, and for other purposes," present the following statement showing the amounts estimated for these purposes in the Book of Estimates and the additional estimates submitted during the present session, the amounts provided by the bill as it passed the House of Representatives, and the amounts recommended by the committee, and append hereto report of statements made before the subcommittee respecting the bill and matters considered in connection therewith:

Sundry civil expenses, 1889.

Amount of estimates for 1889.....	\$23,742,695.26
Supplemental estimates submitted	5,124,000.00
Total estimates	33,866,695.26
Amount of House bill	23,332,406.30
Increase made to House bill by Senate committee (net).....	4,012,465.18
Amount as reported to the Senate	27,344,871.48
Amount of act for 1888	22,389,540.96
The bill as reported is less than estimates submitted.....	6,521,823.78
The bill as reported exceeds the act for current fiscal year.....	4,955,330.52

The items of increase made to the House bill by the committee are as follows:

Increase made to House bill by the committee.

For public buildings, as follows:

City City, Mich	\$100,000.00
Ridgeport, Conn	150,000.00
Chicago, Ill., post-office and court-house	8,000.00
Chicago, Ill., marine-hospital	5,000.00
Des Moines, Iowa	514.42
Denver, Colo.....	60,000.00
Greenville, S. C.....	50,000.00
Hoboken, N. J.....	30,000.00
Helena, Ark.....	37,500.00
Jacksonville, Fla.....	80,000.00
Lincoln, Nebr.....	10,000.00

For public buildings, as follows—Continued.

Portsmouth, Ohio	\$30,000.00
Portland, Oregon	1,271.82
Portland, Me.	2,000.00
Saint Louis, Mo.	4,056.00
Savannah, Ga.	75,000.00
Springfield, Mo.	50,000.00
Texarkana, Ark.	50,000.00
Utica, N. Y.	3,435.60
Vicksburg, Miss.	50,000.00
Wheeling, W. Va.	27,500.00
Treasury Building, repairs	16,065.00
Total public buildings	840,342.84

Light-houses, etc., as follows :

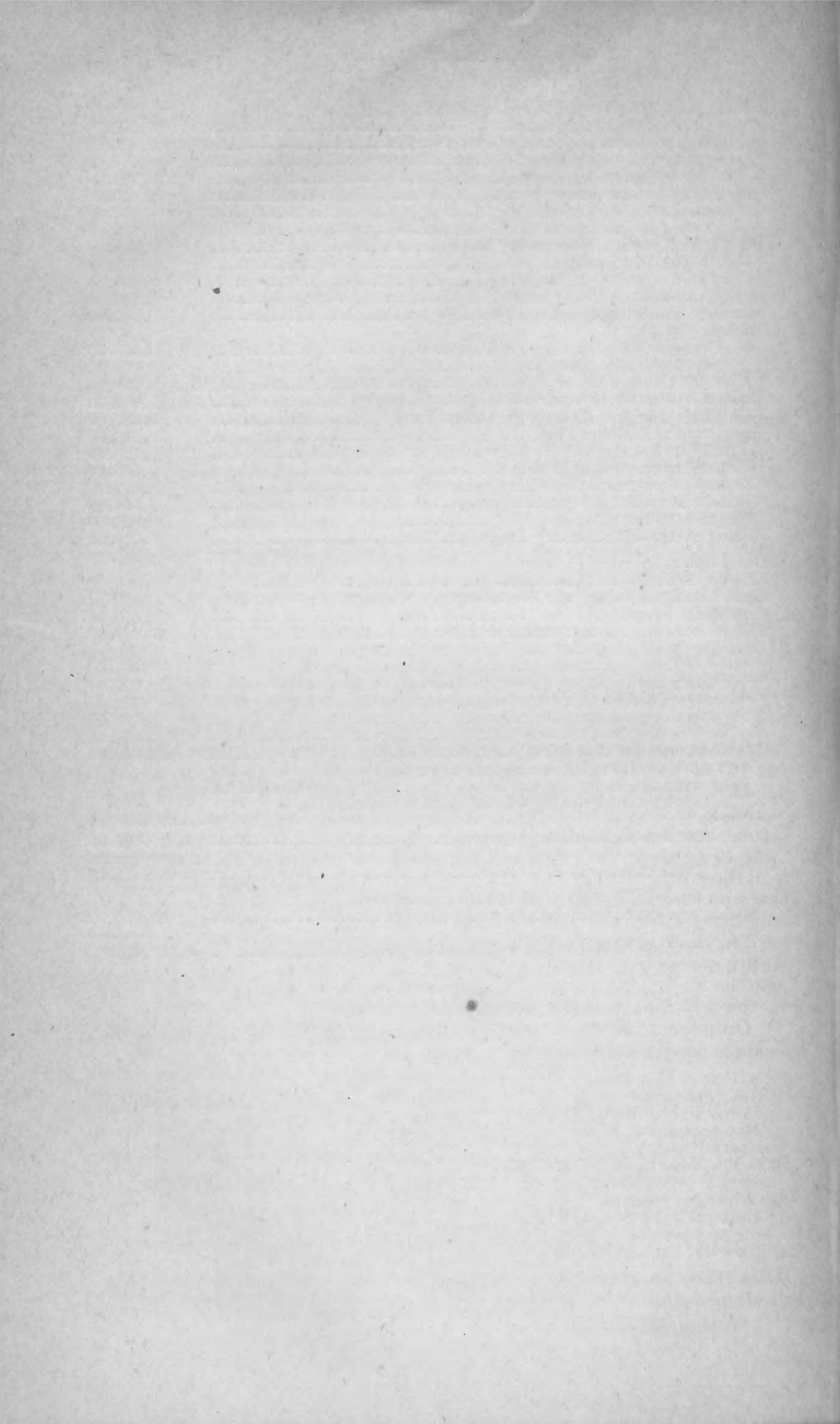
Crooked River, Florida	\$40,000.00
Saint Joseph's Point, Florida	25,000.00
Crabtree Ledge, Maine	13,000.00
Lubec Narrows, Maine	12,000.00
Deer Island, Boston Harbor, Massachusetts	6,000.00
Stonington Harbor, Connecticut	8,000.00
Statue of Liberty, Bedloe's Island, New York	50,000.00
Cob Point Bar, Maryland	15,000.00
Holland's Island Bar, Maryland	35,000.00
Bush's Bluff Shoal, Virginia, light-ship	40,000.00
Tangier Sound, Virginia	25,000.00
Newport News, Virginia	25,000.00
Oil-houses for light stations	20,000.00
Cedar River Point, Michigan	25,000.00
Point Loma, California	30,000.00
Ballast Point, California	25,000.00
Umpqua River, Oregon	80,000.00
Astoria, Oregon, purchase of wharf	15,000.00
Pier-lights at Duluth, etc	25,000.00
Steam-tender for the eleventh light-house district	85,000.00
Supply-steamer for Atlantic and Gulf coasts	32,500.00
Total, light-houses, etc	631,500.00

Miscellaneous purposes, as follows :

Revenue-Cutter Service	\$90,000.00
Engraving and printing	7,500.00
Repairs of light-houses	25,000.00
Keepers of light-houses	15,000.00
Inspecting lights	1,000.00
Lighting of rivers	15,000.00
Coast Survey	9,900.00
Punishing violations of internal-revenue laws	25,000.00
Importation of silver coin	25,000.00
Difference in value of old copper cents, etc	1,500.00
Distinctive paper for United States securities	10,000.00
Plans for public buildings	500.00
Compensation in lieu of moieties	10,000.00
Anchorage of vessels in port of New York	35,000.00
Rent for Fish Commission	1,000.00
Fish-culture station at Neosho, Mo	13,000.00
Inquiry respecting food-fishes	15,000.00
Payment to widow of late Professor Baird	50,000.00
United States and Mexican boundary survey	100,000.00
Purchase of lot near Senate stables	6,087.00
Building for Library of Congress	990,000.00
Pension Building repairs	1,500.00
Washington City post-office	500.00
Geological Survey, mineral resources report	2,000.00
Infirmity building, Government Hospital for the Insane	30,000.00
Howard University, industrial department	1,500.00
Education in Alaska	25,000.00
Freedmen's Hospital	1,000.00
To pay for improvements at Albuquerque Indian school	6,803.13

Miscellaneous purposes, as follows—Continued.

International exchanges	\$5,000.00
Census expenses of the State of Florida	9,326.21
Preservation of collections of National Museum	5,000.00
Rock Island Arsenal, Illinois, hospital	34,744.00
Rock Island water-power pool	25,000.00
Kennebec Arsenal, Augusta, Me	4,000.00
New York Arsenal	7,000.00
Watertown Arsenal, Watertown, Mass	11,900.00
Washington Monument	12,000.00
Army Medical Museum Building	3,475.00
Old Museum Building, repairs	2,250.00
Cavalry and artillery school, Fort Riley, Kans.....	100,000.00
Military post:	
Denver, Col	100,000.00
Fort Robinson, Nebr	50,000.00
Fort Niobrara, Nebr	50,000.00
Fort Meade military reservation, Dakota, land	5,000.00
Fort Thornburgh military reservation, Utah	3,437.00
Yellowstone National Park	10,000.00
Signal Service, stations of observation, etc	5,700.00
Soldiers' monument at Mound City, Kans	2,500.00
Repairs to roadways to national cemeteries	2,500.00
Garfield Memorial Hospital	5,000.00
Wagon-road in Colorado	10,000.00
Fort Leavenworth Military Prison.....	6,000.00
<i>National Home:</i>	
Pacific Branch.....	100,000.00
Additional barracks at Northwestern, Western, and Southern branches	101,000.00
District attorneys, compensation	27,000.00
Defense in suits against the United States and in French spolia- tion claims	2,000.00
Preparing and indexing Executive Journals of the Senate.....	10,000.00
Purchase of works of art by Joint Committee on the Library.....	10,000.00
Index to Congressional documents.....	3,000.00
Public printing and binding	154,000.00
Establishment of zoological park.....	200,000.00
To provide additional accommodations for the Post-Office and other Departments, including the Washington City post-office and for the Government Printing Office (indefinite amounts).	
Total miscellaneous purposes.....	<u>2,590,622.34</u>
Total increase	4,062,465.18
Reduction made in House bill by Senate committee:	
Military posts, construction of buildings, etc	50,000.00
Net increase made to House bill by Senate committee.....	<u>4,012,465.18</u>



STATEMENTS BEFORE SUBCOMMITTEE ON THE SUNDRY CIVIL BILL.

Hearings before the subcommittee of the Committee on Appropriations, United States Senate, consisting of Senators Allison (chairman), Hale, and Beck, on the bill (H. R. 10540) making appropriations for sundry civil expenses of the Government for the fiscal year ending June 30, 1889, and for other purposes.

THURSDAY, July 5, 1888.

LIGHT-HOUSE BOARD.

STATEMENT OF R. D. EVANS.

Naval secretary, Light-House Board.

R. D. EVANS appeared.

By Mr. BECK:

Q. The estimates for light-houses, beacons, and fog-signals begin at page 165 of the Book of Estimates, running through to the bottom of page 169. Here is the sundry civil appropriation bill as it came from the House of Representatives making appropriations for light-houses, beacons, and fog-signals, beginning on page 9, line 6, and running down to line 19 on page 10. Will you tell the committee why you estimated for all those other things that are not in the Book of Estimates? First, of those which you did estimate for, tell us which are most necessary, which are indispensable, and which can be dispensed with?—A. You will see stated in the House report those which we find indispensable and those that are necessary. They are given in the report.

Q. The statement made to the House is still your estimate?—A. Yes, sir; you will find it in the House report on this bill.

Q. On page 22 of the appendix of the report No. 2599 I find put down as indispensable the following:

Boston light-station, Mass.
Warwick light-station, R. I.
Bandy Hook light-ship, N. J.
Cape May boat-house, N. J.
Portsmouth Depot, Va.
Shark's Fin Shoal light-station, Md.
Greenbury Point light-station, Md.
North River Bar beacons, N. C.
Cape Hatteras light-station, N. C.
Washington buoy depot, N. C.
Dog River Bar light-station, Ala.

Spectacle Reef light-station, Mich.
Depot for the ninth light-house district.
Point Loma light-station, Cal.
Ballast Point light-station, Cal.
Depot for the fourteenth light-house district.
Depot for the sixteenth light-house district.
Oil-houses for light-stations.
Establishment and maintenance of lighted buoys.

I see those are marked "indispensable." Do you still regard them as indispensable?—A. Yes, sir.

Q. If we can not go beyond that number, would you leave out those that are marked in the report as "necessary" and those that are marked as "desirable," rather than to exclude any of those marked as "indispensable?"—A. Yes, sir.

Q. You make the same remark in regard to those that are "necessary" as standing higher than those marked "desirable?"—A. Yes, sir.

Q. The letter of Vice-Admiral Rowan, addressed to the Secretary of the Treasury, dated January 24, 1888, and submitted by the Secretary to Hon. Samuel J. Randall, chairman of the Committee on Appropriations of the House, is made part of House Report No. 2599, first session, Fiftieth Congress. I believe I have given the correct date.—A. It should be January 25, instead of January 24.

Q. January 24, is the date of Admiral Rowan's letter. It was referred on the 25th by Secretary Fairchild to Mr. Randall. The next is a communication from the Light-House Board, with which you are connected?—A. Yes, sir; I am the naval secretary of the Light-House Board.

Q. To what did the next communication of March 17, 1888, at the bottom of page 23 of the report, relate?—A. That was as to the matter of dividing up the appropriations. The chairman of the House committee wished certain accounts sent him for examination, which were sent in with that letter.

By the CHAIRMAN:

Q. And that letter gives all the information on the subject?—A. Yes, sir; it gives, with the inclosures, the accounts which were sent in for his examination.

By Mr. BECK:

Q. Running from the bottom of page 23 to near the close of page 28. Is that right?—A. That is right, sir.

Q. Have you made any estimate of the amount that would be required for those works that you call "indispensable," and how much you could use during the fiscal year?—A. Yes, sir; the estimate is made in each separate case. That was made by the engineer secretary.

By the CHAIRMAN:

Q. In the Book of Estimates?—A. Yes, sir; but we have the estimate for each one of those cases, if you wish to have it. The engineer secretary is absent, and I will answer the questions for him. Take Boston light-station, for instance.

Q. A thousand dollars is estimated there?—A. You will find it in the Book of Estimates, on page 165.

Boston Light Station, Massachusetts.—For a rain-shed to collect water for the fog signal at Boston light-station, Mass., \$1,000.

Q. That, you say, is indispensable?—A. Yes, sir.

By Mr. BECK:

Q. The next is Warwick light-station, Rhode Island?—A. Yes; the estimate is:

For building a new dwelling for the keeper at Warwick light-station, Rhode Island, \$8,000.

By the CHAIRMAN:

Q. As to the Boston light-station, I have a letter here dated May 7, addressed to me by the Acting Secretary of the Treasury, saying:

I have the honor to transmit herewith, for your information, a copy of a communication from the Light-House Board of the 12th ultimo, stating that the appropriation

estimated for on page 165 of the Book of Estimates for 1889, for rain-shed to collect water for the fog-signal at Boston light-station, Massachusetts, \$1,000, will not now be needed.

A. It was an estimate for repairs. The rain-shed is already built.

Q. He gives as a reason that the work was done out of the appropriations for the current year for fog-signals, and the Board therefore recommend that no appropriation be made; so that that is now no longer essential.—A. That is out.

By Mr. BECK:

Q. The Boston light-station is out, having been already provided for?—A. It is out. It was built out of the surplus appropriation for fog-signals.

By the CHAIRMAN:

Q. What about Warwick light-station?—A. The estimate is \$8,000.

By Mr. BECK:

Q. For Sandy Hook light-ship, New Jersey, the estimate is \$60,000?—A. That is the price of the last steel light-ships built. The one for Cape Charles, which was put on last fall, cost \$60,000. So we estimated for this new light-ship and everything \$60,000.

Q. The next is Cape May boat-house, New Jersey?—A. I think that is provided for in the bill. It is necessary to have a boat-house there for the light-ship boats.

By the CHAIRMAN:

Q. It is essential?—A. It is indispensable unless you are going to thump the boats all to pieces.

By Mr. BECK:

Q. That is provided for in the bill?—A. Yes, sir.

The CHAIRMAN. Portsmouth depot, Virginia, is the next.

Q. (By Mr. BECK.) Is that in the bill?

The WITNESS. No, sir; that is left out.

The CHAIRMAN. At page 166 of the Book of Estimates the following estimate is made:

For the purchase of additional land for a site of the Portsmouth light-house depot, Virginia, including about 96 feet of water front, \$10,000.

Mr. EVANS. The reason why we ask for that appropriation is because we have three or four tenders that lie at that buoy-depot. We have there all the buoys for the fifth, a very large district, and there is not room in the inclosure at present for the buoys. We have not wharf-room for our tenders. There is a piece of very desirable property lying next to it which was offered to us at \$10,000, if I remember correctly. The Board therefore propose to buy that in order to keep the buoys for the fifth district in proper condition.

By the CHAIRMAN:

Q. Suppose you do not buy it, what then?—A. We shall have to go on as we do now, in our present cramped condition, with the buoys exposed to the weather, and they are being destroyed, a good many of them, and unnecessarily so. We can not put them under cover. There is a good deal of coal stored there which is exposed to the weather.

Q. The next is Shark's Fin Shoal light-station, Maryland.—A. Shark's Fin Shoal is a point on the Eastern Shore of Maryland. We have a light now on Clay Island. The site of Clay Island light-house is about washed out. We shall have to put a sea-wall around it and

very expensive repairs will have to be made if you are going to retain that station. We thought a light would be more successful at Shark's Fin Shoal to maintain vessels going both ways, and therefore the Board desires to give up the station on Clay Island and to put a screw-pile light on Shark's Fin Shoal.

Q. What sort of a light will that be?—A. One of these skeletons; what we call a screw-pile light.

Q. You estimate \$25,000?—A. Twenty-five thousand dollars will be the cost. They are all put down at about the same price, where there is no difficulty in getting a foundation.

Q. How far would this light be from the shore?—A. It would be about 4 miles from the nearest point to land.

Q. It will be on the shoal?—A. It will be on the sand shoal. Shark's Fin Shoal is a hard sand shoal that makes out from Clay Island.

Q. You would communicate with the shore with small boats?—A. Yes, sir; with small boats.

Q. What would it cost to repair the Clay Island light?—A. I should think \$15,000 or \$20,000 would do it.

Q. The intention is to substitute the Shark's Fin Shoal light-station for the Clay Island light and abandon the latter?—A. Yes, sir.

By Mr. BECK:

Q. The estimate for Shark's Fin Shoal light-station is \$25,000?—A. That is our estimate. I should think that \$15,000 or \$20,000 would build a sea-wall all around Clay Island. Clay Island is being rapidly cut away by the action of the waves. Besides it is not the right place for a light-house. That is the very important reason why we made this recommendation. It was built there years ago, before screw-pile lights were put up.

Q. The next is Greenbury Point light-station, Maryland.—A. The estimate for establishing a light on the shoal off Greenbury Point, Maryland, to replace the one on the point, is \$25,000. It is the north point at the entrance of Annapolis Harbor. The present site is washing away, and next year the light-house and the whole business will come down. The clay bluff is being undermined by the sea and we propose in place of it to put another screw-pile light out on the edge of the channel at Greenbury Point.

By the CHAIRMAN:

Q. How soon would that wash away?—A. The screw-pile light, never.

By Mr. BECK:

Q. The next is North River Bar beacons, North Carolina.—A. There is at present a light-house on North River Bar, and an appropriation for dredging a channel across the bar. When that channel is dredged we propose to abandon the present light and put up two gas beacons. We have a system of gas beacons which burn thirty days. The gas under a pressure burns night and day for thirty days, and that would certainly be much cheaper than the light-house, where you have to maintain a keeper.

By the CHAIRMAN:

Q. Is that essential there?—A. Yes, sir. As it is at present a light-house will answer, but when you cut a dredged channel through the bar you have got to have range lights in order to keep within the dredged channel, and we propose to put two gas beacons, the system in vogue in the other part of the sound in North Carolina, in that channel.

Q. What commerce goes through that channel?—A. An enormous amount of commerce from all points in North Carolina going up to Norfolk has to cross the North River Bar, which is a very ugly place. The course becomes very hard at times. There are a great many rocks on that bar.

By Mr. BECK:

Q. That connects the boats with Albemarle Sound?—A. Yes, sir; it comes up from Albemarle to Currituck Sound. The engineers have an appropriation for dredging a channel through that bar. There is now actually 8 feet of water over that bar, and in good water we sometimes get 9 feet; but they propose to dredge a 12-foot channel right through the bar, and we want these two gas beacons to be arranged for that channel when it is made.

Q. The North River Bar beacons, North Carolina, would cost how much?—A. Two thousand dollars.

Q. Two thousand dollars each or \$2,000 for both?—A. Two thousand dollars for both—\$1,000 apiece.

Mr. BECK. The next is Cape Hatteras light-station, North Carolina. The CHAIRMAN. That is estimated at \$5,000:

For a new dwelling and oil-house at Cape Hatteras light-station.

NOTE.—The Cape Hatteras beacon has been recently re-established, and as an additional keeper is required for it additional quarters are necessary. A detached oil-house is required for storing the oil that at present endangers the station.

You want \$5,000 for that?

Mr. EVANS. Yes, sir; that is for the oil-house.

By the CHAIRMAN:

Q. There is a light-house there?—A. Yes, sir; there are two light-houses at Cape Hatteras. There is the brick tower and then there is what is known as the beacon-light down farther on the point, used for running through the slough.

By Mr. BECK:

Q. Is that an electric light now?—A. No, sir; there is no electric light on the coast except at New York. When we used sperm oil, of course the danger was not so great from fire as it is with high-proof mineral oil. High-proof mineral oil is now stored in that tower. There is no other place to put it, and when lightning strikes the tower, as it frequently does, it is liable to take fire, and that is a tower that cost, I think, \$275,000. If that thousand or two thousand gallons of oil should ever catch on fire it would explode and ruin the whole thing. We ask for money to put those oil-houses up and use them to store the oil in.

Q. Would they be far enough removed from the main tower to prevent any danger?—A. Yes, sir; in case of fire it would prevent the tower from being injured.

Q. By explosion, or otherwise?—A. Yes, sir. It would not burn, but it could crack it all to pieces and blow it up.

By the CHAIRMAN:

Q. Have you ample light at Cape Hatteras?—A. Yes, sir; in the present position there is one of the first-order lights in the world on Cape Hatteras.

By Mr. BECK:

Q. The next is Washington Buoy Depot, North Carolina?—A. That is in the bill. Five thousand dollars was given by the House for buying additional property there.

By the CHAIRMAN :

Q. At the top of page 168 of the Book of Estimates is "Dog River Bar light station, Alabama," and on page 10, line 4, of the bill, there is an item for "Sand Island light station, Alabama.—For protecting the light station on Sand Island, Alabama, from the encroachment of the sea, \$12,000."—A. That estimate was made by some one else, not by me. I know all about Sand Island, because it is washing away now, and we have had to take the keepers out of it.

Q. In the Book of Estimates I read :

Dog River Bar light station, Alabama.—For establishing a permanent light in the Dog River Bar Channel, entrance to Mobile Bay, Alabama.

A. That is a mistake, I think. Fifty thousand dollars was estimated for the establishment of a light on Dog Island, Florida. It is a different place. I imagine, however, that that is what is known as Crooked River light station. I will have to give you further information when I look into that.

Q. The Board, I think, recommend for the protection of Sand Island (Alabama) light station from the encroachments of the sea, \$15,000. The House gave you \$12,000.—A. Yes, sir; they gave us \$12,000.

Q. Dog River Bar is not in the bill?—A. No, sir.

Q. You say that is in Florida?—A. Yes, sir.

By Mr. BECK :

Q. Sand River light station, Alabama, I do not find in the Book of Estimates?—A. The repairs to that station are not in the Book of Estimates. We have just taken the keepers out of that station now; it is about to tumble down, and the same thing would probably happen with the estimates we have put in. We estimated for money enough to put in a mattress protection, and the House cut it down to \$12,000. Of course we cannot do it with that amount. We would do the best we could, but the work would wash away again, just as it did before.

By the CHAIRMAN :

Q. That ought to be \$15,000?—A. Yes, sir; we made an estimate of what the work would cost there and they cut it down, without rhyme or reason, \$3,000, and we can not put the work down for that money. We will do the best we can, but it will wash away, just as it has done before.

The CHAIRMAN. Spectacle Reef light station, Michigan, is the next.

Mr. BECK. That is in the bill, and at the amount of the estimate. Depot for the ninth light-house district follows Spectacle Reef light station.

Mr. EVANS. There is no depot in that district. It is in our estimate. The following is the recommendation of the Board :

The creation of two new light-house districts, as provided for by the act approved 26th July, 1886, makes it necessary that the proper steps be taken for the establishment of a light-house depot in each district. It is therefore suggested that Congress be asked to appropriate \$50,000 to purchase a site, if necessary, at Little Traverse, Mich., to build the needed wharves and sheds, and remove the required material now stored elsewhere, and to establish the depot for the new ninth light-house district at that place.

Q. (By Mr. BECK.) You want how much for that?—A. Fifty thousand dollars. At present we have no depot in the ninth district. We pay storage on all our stuff up there, oil and everything else, and it is very difficult at times to get it done.

By the CHAIRMAN:

Q. How much does the storage cost you annually?—A. That I could not tell, but I will say a very considerable sum. I could not tell how much until I overhaul the accounts and find it.

Q. Will you overhaul them and let us know?—A. Yes, sir.

By Mr. BECK:

Q. What we are trying to get at, if we can not give you all you ask for, is what you must have, what to leave out and what to put in.—A. I understand. What is the next item in the list of "indispensable" works?

Q. The next is Point Loma light-station, California.—A. We estimated \$30,000. The station is so high up on the side of the mountain that it is frequently obstructed by fogs and can not be used by mariners.

Q. Where is Point Loma?—A. It is at the entrance to San Diego. To bring that station down to where it belongs and put it where it would be of use to mariners would require \$30,000.

By the CHAIRMAN:

Q. How much of a light is there now?—A. A first order coast light.

Q. You can not move it?—A. We will move it if you give us money, or build a new one. I suppose that light cost \$100,000.

Q. The estimate is "for establishing the light-station at Point Loma, in a situation lower down the cliff, \$30,000;" that sum would enable you to move it down?—A. It will enable us to bring it down to a proper level—below the fog-level. Ships can not see the light under the fog.

Q. Is that a good light now?—A. It is a first-rate light.

By Mr. BECK:

Q. But at important times it is useless?—A. At important times it is useless. It is like any light in the wrong position—like the light at the entrance to Rio. At times the fog hangs up there and you can not see the light at all.

Q. Ballast Point light-station, California, is the next?—A. There is no light at Ballast Point, California. That is the point where you turn to go into San Diego. After you turn around the point you come to Ballast Point. There has never been any light there and it is very important, in fact it is absolutely essential, to have a light going around in there at night.

Q. What is the estimate for that?—A. Twenty-five thousand dollars for one of the screw pile lights.

By the CHAIRMAN:

Q. Will those two lights sufficiently light the bay of San Diego?—A. No, sir; we have a stake light up at the head of the reservation to run the bar outside; but that we can manage under the appropriations for lighting rivers, I think.

By Mr. BECK:

Q. You need a low range light?—A. Yes, sir; a low range light.

Q. The next is depot for fourteenth light-house district. Is that one of the new items?—A. Yes, sir; the depot for the fourteenth district at Carrollton, Ky. We have been applying for that for a number of years, but do not seem to be able to get it.

Q. What is the estimate for it?—A. Five thousand dollars. We want to buy a piece of ground at Carrollton where we can lay our steamer up in winter clear of ice. As it is we have to hustle around to find a place where we can do so.

Q. You want to lay up in the still water of the Kentucky River?—
A. Yes, sir; we want to lay up there where the steamer will be out of the way of the ice when it breaks up.

Q. And the mouth of the Kentucky River will afford a sort of a harbor of refuge?—A. Yes, sir; and we want the best place we can find for the purpose.

By the CHAIRMAN:

Q. How about Dog River, or the Sand Island light?—A. That is a new light we propose to put on the island to the west of the mouth of Dog River.

Q. That is in Alabama?—A. Yes, sir; it is in Alabama in our estimate. The light was originally asked for at the mouth of Dog River, Alabama, and we looked over the matter and found it better to put it on the island to the west of the mouth of the river, making a range-light running in.

Q. Is Sand Island light station to be in lieu of that?—A. No, sir; Sand Island light station is another station altogether. There was a light asked for at a previous Congress at the mouth of Dog River. I investigated the matter and found the light ought not to be on Dog River, but on the island to the westward, and there recommended it should go.

By Mr. BECK:

Q. What do you estimate for it?—A. The original estimate was \$50,000, and it was cut down to \$20,000. We are going to build on high land. Like the Newport News business we can not get a good foundation.

Q. How about the depot for the sixteenth light-house district?—A. That is another one of those new districts that has not any depot. Twenty thousand dollars is estimated for that.

Q. Where is that?—A. It is in Astoria, Oregon, I think.

By the CHAIRMAN:

Q. There is more than one light-house district on the Pacific coast?—
A. There are two—the twelfth and fifteenth.

Q. Where is the sixteenth?

By Mr. BECK:

Q. That was formed when the river was divided, I suppose?—A. The sixteenth is the Saint Louis district. That is one of the new districts made when they divided the river. They made one below and one above—one from Saint Paul down to Cairo, and the other from Cairo to New Orleans.

By the CHAIRMAN:

Q. Let us know about the sixteenth, because that you have marked here as a depot being absolutely essential for it.—A. The sixteenth is the district below Cairo, running from Cairo to New Orleans. It joins onto the ninth at New Orleans. The ninth runs from Mobile down to Galveston. They wanted to get a piece of property, I remember, at Memphis. We looked all about to try to find as cheap a place as we could get and we found a convenient piece just below Memphis. You see the steamers carry oil to supply the rivers, and it becomes very necessary for us to guard against fire on those boats, so we want our depots away from the headquarters of other lines, where they would be in danger of fire. The least we could have it all done for was \$20,000, I think.

Q. What did you say about a depot for the fifteenth district?

Mr. BECK. That is not marked in the list as indispensable.

The WITNESS. Still it is needed, unless we are going to run the risk every winter of losing our steamer with the ice.

Q. (By the CHAIRMAN.) Where ought that to be located?—A. Carrollton, Ky., I think, is the best place for it. It is the best place we can find.

Q. On the Ohio River?—A. At the junction of the Ohio and the Kentucky. It gives us still water.

By Mr. BECK :

Q. It never rises except by backing up the Ohio?—A. That is it, sir. The next item is for oil-houses.

Q. That is provided for in the bill?—A. No, sir; the House gave us \$10,000, and we asked for \$50,000. You can see how many oil-houses we could put up with \$10,000. Here are first-order lights on this coast in the condition I have described Hatteras, with oil stored in the towers or in dwelling houses liable to catch on fire from lightning or anything else. We asked for \$50,000 and they have given us \$10,000, which would be practically of no use. We could build two or three oil-houses with the money, but that would be all.

By the CHAIRMAN :

Q. Describe these oil-houses.—A. They are simply detached houses far enough away from the tower to stow the oil which now comes in 5-gallon cans. We stow cans in there and we propose simply to put up houses of plain corrugated iron to protect the oil-cans from fire. They would take out 15 gallons every day and carry it up to the tower for the night's work, and it would be safer, being all the time away from the keeper's dwelling.

Q. You have no oil-houses?—A. We have not an oil-house. We have the oil stored in these towers and in dwelling houses, and the reports come in every day from inspectors of danger from fire. They ask for \$50,000, and the House has given us \$10,000. You might practically as well not give us anything.

Q. How would \$30,000 do?—A. There would be just that many more houses left out. I made a close estimate of how much it would cost.

By Mr. BECK :

Q. Suppose \$25,000 or \$30,000 is given this year for the most necessary ones, for example, at Hatteras, and afterwards when you have got the system established extend it as the money is given you?—A. Exactly, but you see we could put all those houses up in three months, if we had the money. We could arrange the whole lot, and could do it cheaper than to put up three or four and drop the work, and take it up again another year, and make additional drawings and go on again and put them up then.

Q. The last item in the list marked "indispensable" is "Establishment and maintenance of lighted buoys," for which \$25,000 is estimated. Is that provided for in the bill?—A. No, sir. You can strike that out. We do not ask for that now.

By the CHAIRMAN :

Q. Why not?—A. Because the lighted buoys are adopted now as a part of the buoyage of the country. Let them come in under the same head as any other buoys, and be simply treated as buoys.

Q. You have gone through with the indispensable lights. The first one of the necessary lights that I observe in the bill is on page 10 :

For the purchase of a site and erection of a buoy depot, at Absecon Inlet, New Jersey, \$1,500, or so much thereof as may be necessary.

That has been given to you. What is the estimate for that?—A. Fifteen hundred dollars is what we asked for.

Q. That was put in over the recommendation of the House committee?—A. Mr. Randall did not really object to that. He allowed it to go in the bill.

By Mr. BECK :

Q. The first item in the bill on page 9, under the head of "light-houses, beacons, and fog-signals," is :

Charlotte Harbor, Florida—For the establishment of a light or lights and other aids to navigation to guide into Charlotte Harbor, Florida, \$35,000.

A. That is in our estimates.

Q. It is marked "desirable."

A. Yes, sir; it is very desirable. Senator Call and Mr. Davidson had it put in. They had been at it for a good many years and finally got it. You see the railroads running down to Florida are increasing the amount of shipping at all those places. Steamers are beginning to run in, and they want some lights to get in by.

By the CHAIRMAN :

Q. That is marked "desirable."—A. It would be very desirable. Circumstances constantly change down there. The railroads are influenced more or less by the want of a proper light-house there to guide vessels in. That is below where the Florida Southern comes in.

Q. For Goose Rocks, Maine, light and fog signal, \$35,000 was appropriated by the House?—A. That is at the entrance to Fox Island Thoroughfare. If I had a chart I could show you in a second the absolute necessity for that light. That was brought in after our estimates were made. We make it a rule in the Light-House Board never to recommend anything to Congress of our own knowledge. We wait until either the pilots or the navigators bring it to our attention, and then we take it up, examine it, and we report it one way or the other.

By Mr. BECK :

Q. From the knowledge you have and the reports made to you, you say you regard the Goose Rock light as indispensable?—A. Yes, sir; it has been indispensable all the time. We never said so before because our attention was not called to it, and we do not care to recommend things to Congress until the interests of navigation require that we should do it after the matter has been brought to our attention positively.

The CHAIRMAN. An act was passed authorizing it this session.

Mr. BECK. I have marked Goose Rock as "indispensable" along with the others on the list.

Mr. EVANS. Goose Rock is not mentioned in our estimates. It was not brought to our attention until after the estimate was sent to Congress.

Mr. BECK. Not estimated for and reason given.

Mr. EVANS. It is a very difficult place to get through, and they have a great deal of fog in that country, too.

Mr. BECK. The next item in the bill is :

Newport News light, Virginia—For beginning the construction of a light-house at Newport News Middle Ground, Virginia, \$25,000.

The CHAIRMAN. That is estimated for at page 166.

Mr. EVANS. That is for beginning a light, I judge.

By the CHAIRMAN:

Q. The estimate reads:

For establishing a light-house and fog-signal at or near Newport News Middle Ground, Virginia.

NOTE.—The number of deep-draught vessels leaving Newport News docks is large and constantly increasing. They are obliged to pass to the southward of the Middle Ground, which offers a serious obstacle in dark and foggy nights.

You have estimated \$50,000 for that light, and the House has appropriated just half that sum?—A. We can not build it for \$25,000. It is utterly out of the question.

Q. Is it advisable for you to begin it until you have money to end it?—A. I would not begin a light-house under those conditions. It would cost more in the end. We would have to stop right in the middle of the work and wait for more money.

Q. Then you advise either doubling the appropriation made by the House or not beginning the construction?—A. Yes, sir: either \$50,000 or nothing. It is a very important point right on that little spot that makes out from where the *Minnesota* grounded in the fight with the *Merrimac*. There are a great many heavy-draught ships that come in there now. They can not get in there at night, but have to anchor over in the roads and lose a night. It is going to be a hard job to put a light there, because it will be in 17 feet of water and they will have to go down some distance to get a foundation. We made a careful estimate of the cost and put it at \$50,000.

Q. You think that an essential light if you have money enough to build it?—A. It is a desirable light. I have explained why it is desirable and you gentlemen are as capable to see how desirable it is as I am.

By Mr. BECK:

Q. Spectacle Reef, Michigan, you put in as indispensable?—A. Yes, sir. That is for renewing the cribbing, which is giving way.

Q. The House gave you \$15,000, what you asked for?—A. Yes, sir; that is what we asked for.

Q. On page 10 of the bill, beginning at line 7, is the following item:

Two Harbors light-station, Minnesota.—That the appropriation of \$10,000 made by the sundry-civil appropriation act, approved August 4, 1886, for the establishment and completion of a light-house at Two Harbors, Minnesota, is hereby authorized to be used for the establishment and completion of a light-station at the point named.

House Executive Document No. 137, is referred to.

A. The bill proposes to appropriate \$5,500 for establishing a fog-signal at this place. Lake Superior is almost constantly in fog, and signals are much needed at the frequented harbors. This part of the lake is rapidly coming into prominence by reason of the shipment of iron ore.

Q. Where is Two Harbors?—A. On the north shore of Lake Michigan, where you come out from the Vermillion Iron Works. The Board has been unable to purchase a site on the head-lands where the light and signals can properly be placed, and it is now awaiting a sufficient advancement of the pier-work to afford a foundation for the light. It may not be practicable to put a steam fog-signal on the pier, but if it should be found so, it can be done for the amount named in the bill, \$5,500; otherwise an additional amount will be necessary for the purchase of a site for the signals. The appropriation was made for a light-

house, and the auditing officers of the Treasury would not allow us to build a dwelling-house or keepers' house under that law. We could not build anything but the light-house itself.

By the CHAIRMAN :

Q. The provision is just as you want it?—A. Yes, sir. Here I wish to make a short statement in reference to all the lights on the Pacific coast. Only a few, Ballast Point, Point Loma, and one or two others were brought to the attention of the Light-House Board before the estimate was made. After that estimate was made, we took up the general subject of lighting the Pacific coast from Oregon down, and we found that the Pacific coast had been shamefully neglected in years past. It is only necessary for you to take a chart and look at it to see for yourself. The coast of Maine is painted red with light-houses. On the Pacific coast there are so few you do not know whether there are any there or not; you never see them. The entire Atlantic coast is daubed with red paint, from Maine to Florida, while on the Pacific coast you will occasionally see a little spot of red indicating a light-house. Taking that into consideration and then taking into consideration the enormous increase in commerce on the Pacific Ocean, particularly at the ports in Oregon, we felt called upon to recommend to Congress that these appropriations should be made. That is the whole story about the lights on the Pacific coast. If you will take them up in detail you will find that such is the case.

Q. Take them up in detail and show us which are the most important of those embraced in the bill, from the information you now have.—A. The one at the mouth of the Umpqua River is one of the most important in the whole country. We must either have a wharf at Astoria, Oregon, or we must go on paying wharfage on all our stores and all our light-house vessels.

By the CHAIRMAN :

Q. A wharf there is essential?—A. It is absolutely essential at Astoria. A vessel comes in there loaded with buoys and oil and we must have some place to lay her or else pay \$5 a day wharfage. You can figure out for yourself how long it would take to eat up the appropriation we ask for.

By Mr. BECK :

Q. For how much do you ask?—A. \$15,000. The mouth of the Umpqua River is the most important light in my opinion on that coast, that river being a magnificent sheet of water.

Q. Those two things for the Oregon coast, at Astoria and the mouth of the Umpqua River, are the two things that you think are very much needed?—A. Yes, sir.

By the CHAIRMAN :

Q. I do not see that light for the mouth of the Umpqua River mentioned in your estimate to Congress?—A. It was not brought to our attention. We could not go to work and look up and down the coast, and say ourselves where the lights are desired. I think the Board ought to do it, but they have not heretofore considered it their business. They wait until a petition is sent in. I suppose we have ten tons of petitions up in the Light-House Board for all these places.

By Mr. BECK :

Q. Where is the Umpqua?—A. It is just south of Cape Foulweather, between Cape Foulweather and Cape Arago.

Q. Have you finished Tillamook Rock light?—A. No, sir; it will be finished probably this year.

Q. Have you money enough to finish that?—A. Yes, sir; Congress appropriated the sum required to finish it.

By the CHAIRMAN :

Q. Is there a harbor at the Umpqua River?—A. A beautiful harbor; it is a beautiful river, too. Look at that chart [indicating] and see the number of lights on the Pacific coast, and turn to one of the Eastern districts, and you can hardly put the point of a pin without touching a light.

Q. Why will the light at Umpqua cost so much?—A. It is to be built on a bluff, and built of stone. It requires a good deal of work to get stone up there. It will be a first-order light; a coast light.

Q. There is no fog there?—A. Yes, sir; at times there is fog.

Q. The Light-House Board favor the wharf at Astoria and the Umpqua light?—A. Oh, undoubtedly. The letters are here on file—the recommendations of the Light-House Board in each case—if you would like to see them.

The CHAIRMAN. We have them here in print, have we not?

Mr. BECK. I suppose we have them in print.

Mr. EVANS. The whole truth of the matter is there is a number of lights on the Pacific coast that have been brought to our attention and we can not help saying that these lights are indispensable, because when you come to look at the condition of the coast, the amount of shipping, and the way it is increasing out there, there is no other conclusion to come to. Whether you choose to appropriate money for them or not is quite another question, one, of course, that we have not anything to do with, but when we are asked professionally to say whether light-houses on the Pacific coast are necessary, and they bring up the fact that there is no light within 120 miles of coast, and on the Atlantic coast the lights are thick from one end of the coast to the other, so that you are never outside of one light until you strike another, and when we come to apply that rule to the Pacific coast, it makes it indispensable that you should have a great number of lights there.

The CHAIRMAN. Suppose we go over the amendments of the Committee on Commerce in detail.

Mr. BECK. The first is an appropriation of \$15,000 for a light-house at the mouth of the Wicomico River, Maryland.

Mr. EVANS. That light is in the State of Maryland, on Cob Point Bar, at the mouth of Wicomico River. Going down the Potomac River, just above Blackistone Island, a large river makes up there, the Wicomico, and it is a great shelter for oystermen. A long narrow bar, with only 3 feet of water, runs down and nearly laps over the whole length of the river. Mr. Compton has been seeking to have this appropriation made for two or three years. It is an essential light, and ought to be put there. The Potomac River is the worst lighted river in the country that I know of. You can not get to Washington at night if it is foggy; you have got to stop.

By Mr. BECK :

Q. What is the next?—A. The next is Astoria, Oregon. That we have talked about, the Astoria wharf, Oregon. The sum of \$40,000 is proposed to be appropriated for the erection of a light-house on the highland (main-land), to the westward of the Crooked River in Franklin County, Fla. That is the one you were talking about awhile ago, Dog Island.

Q. If that is Dog River bar light-station—A. No, sir; that is an-

other place. If I had a chart of the Florida coast I could show you the whole thing in a minute. It is St. Andrew's Bay, a beautiful bay, a good refuge in a southerly gale. The fishermen get out there. They have a fleet of 60 or 70 fishing smacks, schooners. They get caught in a southerly gale there and they have no other place to go to. They want one light at St. Andrew's Bay and another one at Saint Joseph's Island, and that will give them an excellent harbor of refuge. This Crooked River business is one of them, and St. Joseph's is another. That light is a very necessary light, but it is not an indispensable light.

By the CHAIRMAN :

Q. It is not as important as the Umpqua River light?—A. No, sir; but people have been getting drowned there for the last fifty years and schooners have been wrecked there, and all that sort of thing.

Q. It is important but not indispensable?—A. It is indispensable to the safe navigation of St. Andrew's Bay if they are going in there.

Q. Is there much commerce in there?—A. No, sir; nothing except this large fishing interest that has to seek a harbor somewhere. When they get into a southern gale they would go to pieces on the beach.

Q. That is near the mouth of the Crooked River?—A. Yes, sir; right by the mouth. Two or three trains of cars run off from Pensacola every day loaded with fish packed in ice and nothing else.

By Mr. BECK :

Q. What is the next item?—A. The next item is \$500,000 for the erection of a light-house at or near Diamond Shoals, off Cape Hatteras, North Carolina; that you object to.

Q. Pass that and get to the easy ones.—A. I will tell you all I know about that in a very few words. The plans of that light-house are in the Committee on Commerce of the House, all prepared. Hatteras Shoal makes off $9\frac{1}{2}$ miles from the main-land. Nine and a half miles out from Hatteras light there is 8 feet of water. In foggy weather there is nothing to guide any vessel around that point. There is a strong current setting up one way in the Gulf Stream and a counter current running inside, making it the most dangerous point in the world to get around. We propose to put a light-house on that shoal 9 miles off Hatteras out to sea. We have obtained the estimates of the best engineering firms in the-country, and the estimates are \$500,000. The estimates are in the Committee on Commerce of the House, with all the detailed plans, drawings, and specifications.

Q. Why was it not put in the Book of Estimates?—A. It was brought to our attention after the estimates were sent in.

Q. Do you say that as important a point as that, known as the most stormy part of the coast, ever since it was known as a coast, your attention was never called to it until this year?—A. Our attention was called many a time to it. It was a sort of hobby of mine, and I suppose I am entitled to all the wrath for its having been brought before Congress. It has been a hobby of mine for years, that there should be a light-house on Cape Hatteras, and when I came in as naval secretary of the Board I said, "We will call the attention of this to Congress." I immediately brought out the petitions of the chambers of commerce of every city on the coast, all petitioning that something should be done for lighting Cape Hatteras.

Q. What do you mean by bringing out the petitions?—A. They were stored away in the Light-House Board—pigeon-holed—any quantity of them there. I took them out and submitted the proposition to Sooy Smith & Co., of New York, the greatest engineering firm in this country

for that sort of work, and asked them to submit to us a bid, detailed plans, and drawings of a light-house to go on Cape Hatteras, after giving them an idea of what I wanted, and, as I said, those plans and specifications are now in the Committee on Commerce of the House. Sooy Smith said if the Government would assume the responsibility of towing the caisson out and anchoring it in position, he would do the work for a certain sum of money. If he should have to assume the entire responsibility of success or failure of the scheme and be compelled to give bond, he could not do it for less than \$500,000, and he stands prepared to give bond in \$1,000,000, if required, twice the amount of the contract that he will build that light-house.

Q. When did you become secretary of the Board?—A. Last September.

Q. What had you been doing before that time?—A. I had been steel inspector at Pittsburgh; inspecting steel for the new cruisers.

Q. The Board had never, as far as you are advised, recommended the light-house off Hatteras before?—A. Yes, sir; they had taken action in the Board.

Q. What action had they taken?—A. The Board had taken action looking to submitting to Congress this same scheme—that is to say, plans and specifications—but they had never completed it.

Q. When did they begin taking that action?—A. My impression is they had been at work at it for four or five years at different times, but never had taken any final action.

Q. When was the Book of Estimates dated?—A. Most of these estimates were prepared before I came into the Board, but they were submitted in September.

Q. Up to that time the Board had taken no action about it?—A. Yes, sir; they had taken action, but they had not gone to the point of bringing it to the attention of Congress. Understand me, they had taken action in the Board; they had discussed this thing, but they had not gone to the point of submitting the question to Congress.

Q. And did not when they made out their estimates and sent them here?—A. No, sir; they did not.

Q. How did it come to be estimated for afterwards?—A. Senator Ransom introduced a bill in the Senate for the construction of the light-house which was referred.

Q. When?—A. During this session of Congress.

Q. Had he ever done that before, at any previous session of Congress?—A. I do not know; he had not done so to my knowledge. He introduced a bill which was submitted to the Committee on Commerce, and they called me before them, and I submitted a chart showing the number of wrecks, the number of lives lost, the loss of property, taken from the record of the Life-Saving Service in ten years past, by giving authentic information, and I submitted an argument, and the Committee on Commerce, I believe, unanimously reported the bill favorably. I know that it passed the Senate without any dissenting voice.

Q. Is your argument now in writing before the Committee on Commerce?—A. No, sir; I think not. I do not think it was taken down in evidence. They did not have a stenographer there.

Q. What paper is there showing that the Board recommended it?—A. I will read it to you, sir :

OFFICE OF THE LIGHT-HOUSE BOARD,
Washington, January 21, 1888.

The SECRETARY OF THE TREASURY :

SIR: The Light-House Board has the honor to state that at its session held on 10th January, 1888, it had under consideration the matter of the necessity for the establishment of a light at or near the outer shoal off Cape Hatteras, North Carolina,

when it was ordered that a report be made in favor of the establishment of a light and fog-signal at or near the locality in question.

With reference to the necessity for the establishment of a light and fog-signal at or near the outer shoal off Cape Hatteras, the Board begs leave to report that the need of a powerful light and fog-signal at this locality has long been felt, and the establishment thereof has been urged by underwriters and others whose interests have been jeopardized for want of the needed aids to navigation at this point.

On 27th December, 1882, the commissioner of pilots of New York asked that a light-ship be stationed at Cape Hatteras shoals, stating that the value of such a mark to vessels navigating coastwise would be very great.

On 4th January, 1883, the Committee on Commerce of the Senate transmitted to the Board for its views thereon petitions from citizens of New York and from others, asking that a light ship be stationed on the outer shoal off Cape Hatteras, these petitions being signed by parties of the highest intelligence and business position, amongst whom were the presidents of the Atlantic Mutual Insurance Company, the Commercial Mutual Insurance Company, the New-York Mutual Insurance Company, Messrs. Miller & Houghton, H. H. Lond & Co., R. P. Buck & Co., of New York City, and by upwards of three hundred and fifty other citizens, being underwriters, merchants, and masters of vessels engaged in the coasting trade of the United States.

The matter of the establishment of a light-ship, as requested by the petitioners, was referred to the inspector of the fifth light-house district for report, and on January 9, 1883, that officer reported that to establish a light-ship as asked would simply cause a continued loss of life; that all gales from the southward and eastward, which are extremely severe there, would have a tendency to cause the light-ship to break adrift, and that no earthly power could prevent every soul on board being lost on the shoals to leeward, as the sea is heavy at all times.

This matter was considered by the Board at its session held on January 18, 1883, when the conclusion was reached, in view of the bad holding-ground off Cape Hatteras, that it would be more advisable to erect a light-house than to place a light-ship there; and by its letter of January 19, 1883, the Board informed the Department of the conclusion which it had reached.

At its session held on the 28th of September, 1883, the Board had under consideration the matter of the establishment of a light-house on the outer shoal off Cape Hatteras, when the conclusion was reached that a light-house should be erected thereat, providing the engineering difficulties were not found to be insurmountable.

After careful and personal examination of the locality made by the engineer of the fifth light-house district he reported that the placing of a light-house on the outer shoal itself is practicable, and that, although its construction would be expensive and attended with danger, its importance to commerce is so great that the work should be done.

The following remarks regarding the necessity for a light-house on the outer shoal are taken from the report of the Commissioner of Navigation for the fiscal year ending June 30, 1886:

"It is not generally known that one of the most dangerous reefs on the Atlantic coast is still unmarked by a properly constructed beacon or light-house. I refer to the Outer Diamond Shoal, lying about $7\frac{1}{2}$ miles off Cape Hatteras. Undoubtedly there are many difficulties in the way of building a safe and firm structure upon a shifting sand-bank so far seaward from the salient point of the coast; but during the last session of Congress the shipping interests of the whole Atlantic coast and Gulf of Mexico memorialized Congress to authorize the Light-House Board to erect a proper light with powerful fog-signal there.

"The importance of the project can hardly be overestimated, and difficult as may be the undertaking, it is thought that the appeal, where so much of life and property is at stake, should be regarded."

In his annual report for the fiscal year ending June 30, 1887, the Commissioner of Navigation says:

"It is also thought proper to again refer to the Cape Hatteras Shoals, constituting one of the most dangerous places on the Atlantic coast, and which is not yet marked by a properly constructed beacon or light-house.

"The outer Diamond Shoal, $7\frac{1}{2}$ miles off Cape Hatteras, ought to be so marked, if practicable.

"Memorials have been presented to Congress from shipping interests of the Atlantic and Gulf coasts requesting that the Light-house Board be authorized to erect a proper light with a powerful signal thereon.

"Favorable action would undoubtedly be for the interest of shipping."

A copy of the Coast Survey chart, No. 145, Cape Hatteras to Ocracoke Inlet, North Carolina, is inclosed, upon which are shown the localities of wrecks that have occurred, but which might have been prevented had there been a light and fog-signal near the outer shoal off Cape Hatteras, the locality of which is also shown on this chart.

The Board is satisfied that it is entirely practicable to erect the necessary structures at or near the outer shoal, and in view of the dangerous character of the shoals off Cape Hatteras, of the great loss of life and property which occurs there annually, and of the urgent demands of commerce, the Light-House Board is of the opinion that provision should be at once made for the establishment of a light and fog-signal at or near the outer shoal off Cape Hatteras, North Carolina, and suggestion is therefore made that the Department recommend to Congress that an adequate appropriation be made therefor.

Respectfully, yours,

S. C. ROWAN,
Vice-Admiral, U. S. Navy, Chairman.

Q. When was that?—A. This is the report I submitted on the 21st of January.

Q. You made that report to them?—A. Yes, sir.

Q. And you had only been on the Board about four months?—A. I had been on it since September. In my life I had spent many an uncomfortable night off Hatteras.

Q. You wrote that report yourself?—A. Yes, sir.

Q. Where do you say you found all this memoranda?—A. In the records of the Light-House Board.

Q. Did you call a meeting of the Board, or did they request you to do it?—A. I called a meeting of the Board, having collated all this information for them, and I submitted this report, which they approved, and it was signed by Vice-Admiral Rowan.

Q. Did you write any communication requesting him to give the work to your friends, whatever their names are, there, or to anybody else?—A. No, sir.

Q. Why was this letter written, recommending that the work should be given out without making any contract with anybody else?—A. I will tell you.

Q. (Presenting a letter.) Who wrote that letter? Tell me that first.—A. (Examining.) I did, sir; my name is signed to it.

Q. I see it is. Did Admiral Rowan approve that letter?—A. I doubt if he saw that letter at all. The Admiral, as a rule, approves the action of the naval secretary of the Board.

Q. And the naval secretary of the Board is a young man, who came in last September, and is now recommending \$500,000 without even a contract being made. Is that the fact?—A. No, sir.

Q. Then read that letter and see if you do not recommend it. You say you do not recommend it?—A. No, sir; I do not.

Q. To the lowest bidder?—A. Not the lowest bidder. I want to give it to the best bidder and not the lowest.

Q. And the best bidder is the man you picked yourself?—A. The Light-House Board. I do not know anything about it.

Q. The Light-House Board did not know anything about that letter until you wrote it yourself?—A. We knew all about the money asked for.

Q. I want to see whether you are the Light-House Board. That is what I want to get at.—A. I can tell you that I am not, without going any further.

Q. That is the letter [exhibiting]? Who wrote that letter?—A. I prepared it and the Light-House Board indorsed it, and Admiral Rowan signed it.

Q. You wrote the letter for them?—A. I did.

Q. Did you recommend that the contract should be made without inviting any competing bids?—A. I just recommended that it should be given to the best light-house builder.

Q. Without competition?—A. Not without competition.

Q. What do you mean by "the best"?—A. The best by means of plant, etc., to do the work.

Q. Then, though there were other bidders who offered to do the work for a good deal less money, you would give it to somebody who proposed to charge more?—A. Yes, sir.

Q. You were consulted by the firms to whom you have referred?—A. Yes, by Roberts and some one; and Sooy Smith.

Q. And they agreed to do it for \$500,000?—A. Yes, sir.

Q. And you put in that bill for \$500,000 yourself and made the suggestion for \$500,000?—A. I did not make the suggestion for \$500,000.

Q. Where did the \$500,000 appear that these gentlemen had agreed to do it for; how did you get at the sum of \$500,000?—A. That is what they proposed to do it for.

Q. Then the \$500,000 was inserted in the bill in accordance with that suggestion?—A. Yes, sir.

Q. Was not that \$500,000 suggested to you because it had been suggested by these men, who wanted to do the job?—A. I do not understand. What do you mean by "job"?

Q. Doing the work.—A. Doing the work.

Q. A job is a work. It is a job to build a house, as I would call it, or to do the work. This is the letter; I want it made part of the record.

The letter is as follows:

TREASURY DEPARTMENT,
OFFICE OF THE LIGHT-HOUSE BOARD,
Washington, January 31, 1888.

The SECRETARY OF THE TREASURY:

SIR: The board has the honor to acknowledge the receipt of a letter from the Committee on Commerce of the Senate inclosing bill S. 1283, making an appropriation for the erection of a light-house on or near Diamond Shoal, off Cape Hatteras, N. C., which was referred by the Department to this office, asking the views of the Board touching the proviso in said bill that the contractors for doing this work may be selected by the Light-House Board, as may, in the judgment of the Board, be best fitted, by reason of skill, experience, possession of plant, and control of means, to do the work.

With reference to the necessity for retaining this provision in the bill, the Board begs leave to report that section 4667 of the U. S. Revised Statutes provides that "no contract for the erection of any light-house shall be made except * * * with the lowest bidder therefor, upon security deemed sufficient in the judgment of the Secretary of the Treasury."

While the application of this provision of law to obtaining proposals and making contracts for the erection of light-houses has, in the main, worked advantageously for the Government in works of a special character requiring the experience and skill of experts and adequate plant and capital, it has worked injuriously to both the Government and the contractor.

This was notably the result in the case of the construction of the metal work for the Fowey Rocks, Fla., light-house, where the contractors, an enterprising firm of young men, were ruined, the work greatly delayed, and the Government subjected to much loss.

It was also the result in the case of the construction of the tower for the Hallet's Point, N. Y., electric light, and had it not been for the special skill and experience of the contractors for building the foundation of the Fourteen-Foot Bank (Delaware Bay) light, a similar result would have followed. The success of this work turned on a pivotal point; a little less skill, a trifle less power, a slight deficiency in experience, and the work would have been a disastrous failure instead of being a gratifying success.

The experience of the Board in making contracts with the lowest bidders on security certified to be sufficient shows that some business firms, for want of an adequate conception of the character of the work to be done, in order to obtain contracts, embarrass themselves by bidding below a fair price, hoping in case of failure to get relief from Congress. This was the case in regard to tenders built for use in the fifth light-house district; and in the case of the contract for the construction of a jetty for the protection of the Cape Charles, Va., light-house, the contractor has appealed to Congress for relief. In this case, which was one of great urgency, a carpenter underbid an experienced worker in stone, and the result was loss to him without any

advantage to the Government, and with great delay in completing the work, the time of completion having been twice extended.

There have been cases within the experience of the Board where, under the law, it was given contracts to lowest rather than best bidders, with disastrous results.

In cases of building certain steamers, the lowest bidder was known to be an inferior workman, but the Board was forced to give the contract to him, and though his work was supervised with more than usual care, the steamers were just good enough so that the Board could not refuse to accept them, and yet so poor that they have been quite frequently under repair.

In repeated cases where the lowest rather than the best bidders got the contract, the Board has had to supply the skill from its own offices which the contractors needed in their work-shops, to save the work from being a failure.

In repeated cases the work has been delayed far beyond the time specified in the contract, because the Board's inspector condemned bad material and other had to be manufactured to take its place.

In repeated cases contractors have taken jobs at prices less than the Board has estimated that they could be done for, and while they have been held to their contracts by constant and skilled supervision, the Board has been fully satisfied that every effort was made by the contractors to slight the work that their loss might be lighter, and this, of course, has been detrimental to the character of the work.

In repeated cases the Board has been forced by the operation of this statute to give contracts to men of doubtful reputation for skill or honesty, and the work done under such contracts, while it was done sufficiently well to pass examination, soon showed need of strengthening or repair.

The proposed work off Cape Hatteras is one of great magnitude, and is the most difficult and dangerous of the kind ever attempted by the Government. To carry it to a successful issue requires the highest skill, supported by the best appliances and by ample means.

There are a number of firms within the knowledge of the Board who have the expert skill, the plant, and the capital needed to accomplish this great work satisfactorily, and to make a bid with an intelligent perception of the cost of the work, of its difficulties, its risks, and its dangers, and in making a bid to leave a fair margin of profit after the work has been completed. They have the control of experienced engineering talent and of superintendents of construction and skilled laborers who are brave men, accustomed to dangerous work, and without whom such a work could not be successfully accomplished. They also have a reputation to risk, and are not likely to undertake a work that they have not a reasonable expectation of successfully accomplishing.

Should Congress make the necessary appropriation for the work, the Board expects to have it completed in twelve months after the initiation of the work, unless prevented by some untoward accident.

It is to be expected that when proposals are invited, parties deficient in one or more or all of these requirements will bid for the work, and that some of them will be able to give satisfactory security for the performance of their contract. Under this provision of Section 4667 of the Revised Statutes, no option can be had; the contract must be given to the lowest bidder. This was the decision of the Department in the case of the bids for the metal work for the Fowey Rocks light-house, when all the facts as to the insufficiency of the plant of the lowest bidders were submitted to the Secretary.

The Board has informed itself of the approximate cost of building this proposed light-house, and therefore can judge correctly as to whether bids are too low or too high, and it is of the opinion that to secure the completion of the work, competition should be restricted to parties known to have the experience, the plant, the expert ability, and the capital necessary to do the work in a proper manner, and to carry it to successful completion within a proper time.

While the Board would not suggest a general change in the law, it begs to submit that, in this case, the competition should be so restricted that the contract shall be given to no one who has not experience, skill, plant, capital, and reputation.

For the reason stated it is urgently recommended that the provision referred to be retained in the bill providing for the erection of a light-house on the shoals off Cape Hatteras.

The letter of the Committee on Commerce and bill S. 1283, are herewith returned.

Respectfully, yours,

S. C. ROWAN,
Vice-Admiral, U. S. N., Chairman.

By the CHAIRMAN:

Q. I want to ask you about the lights. Have you ever considered the feasibility or propriety of a light-ship there in lieu of this light-house?—A. Yes, sir.

Q. That is in the letter?—A. Yes, sir.

Q. Let me call your attention to the item of "Twenty-five thousand dollars * * * for the construction of pier-lights at Duluth, Lake Superior, Minnesota; Kewaukee, Lake Michigan, Wisconsin; Charlotte Harbor, Lake Ontario, New York," and "Port Washington, Lake Michigan, Wisconsin." Explain what that means.—A. Various river and harbor bills have from time to time authorized piers to be constructed at points on these lakes.

Q. And these items are for lights on the piers?—A. Yes, sir; they are required to be done under separate and distinct appropriations.

By Mr. BECK:

Q. Are these lights all erected on the piers?—A. Yes, sir.

By the CHAIRMAN:

Q. "For the construction of pier-lights" is the language. Is the pier put under the control of the Light-House Board also?—A. Yes, sir; the Army engineers build out the piers, and we put the lights on them afterwards.

Q. This is a lump sum to be used in putting up all these lights?—A. Yes, sir.

Q. What do they usually cost?—A. Five thousand dollars apiece; they are of frame-work.

Q. A signal-light at the end of the pier?—A. Yes, sir.

Q. The next item proposed in the amendment before me is "that the Secretary of the Treasury is hereby authorized and directed to cause a light-house to be constructed at Holland's Island Bar, near the entrance to Kedge's Straits, in the Chesapeake Bay, Maryland," and \$35,000 is appropriated.—A. Kedge's Straits are near the mouth of the Potomac River. After crossing the bay, running in towards the entrance to Kedge's Straits, there is a fine harbor to the north of Kedge's Straits, and they want a light-house put on Holland's Island Bar which makes off to the south of Holland's Island, so as to secure safety in going into that place.

Q. Is that essential?—A. No; but it is desirable.

Q. Is it as important as the light at Tangier?—A. Nothing like as important as that at Tangier.

Q. Is the Tangier light an important light?—A. A very important light.

Q. Is Tangier light estimated for?—A. I do not think you will find it in our estimates; in fact, I know it is not. The recommendation came in after the book was made up.

Q. "Tangier Sound light-station, Virginia," is in the estimates. "For the establishment of a light-house and fog-signal to mark the lower entrance to Tangier Sound, Chesapeake Bay, \$25,000," is on top of page 167 of the Book of Estimates.

And there is added:

NOTE.—There is a great increase in the commerce of this section, and the outlying shoal is dangerous to navigation, there being no high land near which can be used as a mark.

A. That is a very desirable light. The Holland's Island Bar light I do not regard as so essential as that.

Q. So if we can not give both in that neighborhood we should have to give the Tangier light.—A. The Tangier light is much more important than the Holland's Island Bar light.

Q. Here is another light proposed in the same amendment, "at or near Saint Joseph's Point, in Florida." Is that light opposite the

Crooked River light ?—A. Yes, sir; on the west end of Saint Joseph's Island.

Q. That would make two lights, then, at the same point ?—A. Saint Joseph's Island to the east, and Crooked Island light to the west of the entrance of Saint Andrew's Bay. Saint Joseph's light is at the entrance to Saint Joseph's Bay behind Saint Joseph's Island.

Q. Here is another item :

That there be appropriated, out of any money in the Treasury not otherwise appropriated, the sum of forty thousand dollars, for establishing a first-class light-ship, with steam fog-signal in duplicate, on or near Bush's Bluff Shoal, entrance to Elizabeth River, Virginia, and that so much of the amount of twenty thousand dollars already appropriated and not used for establishing a light-house at that point be added to and used for the establishment of the light-ship; providing that the entire cost of constructing and establishing this light-ship shall not exceed sixty thousand dollars.

Did that have the approval of the Light-house Board ?—A. Yes, sir. That matter stood in this way: Congress passed an appropriation, I think, of \$37,000 to put a light on Bush's Bluff; they left out the word "shoal," and it was held that you could not have a bluff under water. It had to be out of water; otherwise it could not be a bluff. They could not understand what a "bluff shoal" meant. So we could not expend the money efficiently. We went to sounding to find out where we could get a foundation, and drove piles 90 feet and could not get a foundation short of 90 feet. In our estimates we recommended that this money be applied to dredging off the point; but the Chief of Engineers came to the conclusion he could not dredge it for less than \$250,000. Then it was suggested, as it was a very important point and it ought to be guarded in some way, that we build a light-ship which could be moored off that point.

Q. That is, you recommended for it in the regular Book of Estimates ?—A. You will find a note there:

A careful examination of the site selected for this light-house has developed the fact that a solid foundation can not be obtained unless the work is carried down 82 feet through soft mud.

That is on page 166 of the Book of Estimates.

Q. You estimated \$125,000. Afterwards you revised your view respecting this and recommended a light-ship ?—A. For the reason I have just stated, because the light-ship could be used somewhere else, but a light-house could only be used there.

Q. How many light-ships have you now ?—A. I can not tell without going over the list.

Q. The light-ships are not expensive to maintain, I suppose ?—A. No, sir; comparatively speaking. There are a master, an engineer, a mate, and six men on each.

Q. You are clear that no light-ship would serve at Diamond Shoals; that they could not keep it in place ?—A. If carried away by a gale she has 8 miles of shoals to drive over, and it would not do at all.

Q. Then an appropriation is asked for a light-ship off False Cape ?—A. That is at the mouth of Chesapeake Bay. We have established a light-ship off Cape Charles, and False Cape is about 7 miles from there.

By Mr. BECK :

Q. Where is Cape Henry there ?—A. Cape Henry is the immediate entrance of Chesapeake Bay.

Q. How far is False Cape from it ?—A. Nineteen miles.

Q. Inside or outside ?—A. Outside.

Q. And south?—A. Yes, sir; a little east of south. Those shoals have been increasing until now we have a bell-buoy about 7 miles off shore in 11 feet of water, and in the last three years there have been six or seven ocean steam-ships aground on those shoals. A light-ship there would make the entrance to Chesapeake Bay perfectly right, in my opinion.

By the CHAIRMAN:

Q. Is this an essential thing?—A. Yes, sir.

Q. It is not estimated for, however. We have several other amendments here and documents of various kinds proposing light-houses at various points.—A. Those recommended by the Board were appropriated for, but the appropriations were not sufficient.

Q. In the act approved August 4, 1886; and you say it is necessary to have these additional appropriations in order to complete these light-houses?—A. Yes, sir. There were two estimates made on those light-houses, and an increase was made at one time in the estimate by the engineer secretary of the Light-House Board.

Q. Are these light-houses being built now?—A. No, sir.

Q. You have not touched them?—A. No, sir; it is useless to do so until an additional appropriation is provided.

Q. These you regard as important lights—all of them?—A. Yes, sir.

By Mr. BECK:

Q. How much will it take to make them good?

The CHAIRMAN. Twelve thousand dollars, \$6,000, and \$13,000 are the estimates for these three light-houses that the Government appropriated for, but which have not been commenced.

Mr. EVANS. You understand that these estimates are made by the engineer secretary of the Board and not by me.

Q. (By the CHAIRMAN.) He has charge of what you call construction, and makes the estimates?—A. Yes, sir.

By Mr. BECK:

Q. Who is the engineer secretary of the Board?—A. James M. Gregory.

Q. Does he make all the estimates of the cost of construction?—A. Yes, sir.

Q. Did he make the estimates of the Diamond Shoals construction?—A. No, sir.

Q. Is not that part of his work?—A. He would make the estimates before the contract was signed.

Q. I thought you said all the estimates were made by him?—A. They are.

Q. Why did he not make that one?—A. There has been no appropriation of money by Congress for it. In each of the other cases money was appropriated by Congress, and after an appropriation was made he took them up and made the estimates and found what was the deficiency.

By the CHAIRMAN:

Q. I think we had better go now to "the Light-House Establishment." Here is the light and fog-signal in Stonington Harbor on page 15 of the sundry civil bill. Here is an estimate "for a light and fog signal at Stonington Harbor, \$8,000," recommended by the Light-House Board.—A. Yes, sir; the breakwater at Stonington Harbor has been completed. The old light-house on the shore is of no use. Of course if we abandon that we must have a fog-signal on the end of the breakwater.

Q. Is that an essential thing now?—A. Yes, sir; the breakwater is there and the steamers must have a light there.

Q. There is an estimate for a steam tender. I am reading now from miscellaneous documents before us respecting Light-House Establishment. Here is, under date of April 7, an estimate for an appropriation of \$85,000 for construction of new steam tender for the first light-house district. What is that?—A. It will not be necessary if we repair the one we have.

Q. Then we can mark that "not necessary." Then there is an estimate for "supply steamer for Atlantic and Gulf coast light-house service."—A. Thirty-two thousand five hundred dollars is the amount. You passed a bill in the last Congress appropriating \$147,000 for a supply steamer. As far as I can make out there has been about four years' delay in the appropriation. When we looked into the amount of oil, freight, and various articles it would carry, we found we could not build a proper vessel for the sum appropriated. It requires \$175,000 to build it, and the Board asked for an additional sum in order to construct the vessel. The \$147,000 has been lying in the Treasury ever since. The question is whether we should build one not large enough for the service, or ask Congress to appropriate more to build a proper ship, and the Board decided to ask for a sufficient amount to build a proper ship.

Q. Here is an estimate, April 5, of \$85,000 to construct "a new steam tender of the eleventh light-house district." How is that?—A. That is in place of the *Warrington*, upon the lakes. The *Warrington* was purchased eight or ten years ago, and it is not safe to run her any longer. There will either have to be a new tender or additional lights put there.

Q. The *Warrington*, you say, is unfit for use now?—A. Yes, sir.

Q. Could you not repair her?—A. She has been repaired until there is no longer any use of trying to repair her. She is rotten. I have reports the last few years that it is not safe to keep her in motion.

Q. Would you build an iron ship if you built a new one?—A. No; a steel ship.

Q. That you regard as a necessary thing?—A. Necessary. If you are going to keep the lights going on the lakes you must have some way of getting supplies to them.

Q. Here is "Range light, Pascagoula River, Mississippi, \$5,000," what is there about that?—A. The engineers have just dredged a channel through there and that light should be put on it.

Q. Does anybody ever go in there?—A. There seems to be some commerce there. Congress thought it important enough to dredge the channel out.

Q. "Statue of Liberty, Bedloe's Island." Do you know anything about that?—A. That is for completing the pedestal.

Q. Here is a copy of a communication of the Light-House Board, estimating "an appropriation of \$50,000 for completing the statue of Liberty and approaches, Bedloe's Island."—A. The pedestal is uncompleted. The American committee, who have had charge of it to this time, have spent all the money they could get. This action was taken in my absence.

Q. That, of course, is a question for the discretion of Congress?—A. Yes, sir.

Q. Now, suppose we take up the Light-House Establishment. Here is an estimate: "Supplying light-houses, beacon-lights, and fog-signals, \$340,000." Is that all right?—A. I do not think that can be cut down.

The matter of repairing light-houses is for the engineers to decide. The matter stands just in this way: Important light stations are being neglected every year because you are constantly cutting the appropriations down. They make a calculation how much money it will take to keep the stations now in existence in repair. They send that to Congress, and \$30,000 is lopped off. Of course some stations must suffer. That goes on, and the next year some other stations must suffer. The appropriations for light-houses were expended within \$6 two months ago, and there are a great many of the stations in very bad repair. You gentlemen, understanding that, of course will do your work. We can run the Light-House Establishment without any appropriations, letting them go out and cutting down every year from the estimates.

Q. The estimates were \$350,000 for repairs of light-houses this year, and \$300,000 was appropriated last year, and \$300,000 is in the House bill this year.—A. I think the account shows \$6 to the credit of appropriations for the Light-House Establishment two months ago. The appropriation was \$300,000, and this year it has been cut down again.

By Mr. BECK:

Q. There are some new provisions, I see, on line 7, page 16, of the bill.—A. That clause relates to money expended when provision was made for a light-house and not a light-station at two points, one in California and one in Massachusetts. The accounts were tied up, and that is only to settle the accounts.

By the CHAIRMAN:

Q. The next item is "salaries of keepers of light-houses."—A. We estimated \$600,000 for that. That was before a number of light keepers were appointed.

Q. I notice according to your statement that you expended for the salaries of keepers of light-houses for the first six months of the last fiscal year \$425,000, the appropriation being \$585,000. I do not see how you could get on for the balance of the year.—A. We have to cut down the keepers.

Q. Cut down their pay?—A. No; take them right out. I propose, this year, if the appropriation goes through in this shape, to put out some of the lights. We can not run the stations without any money. That settles it. There have been a number of light-keepers appointed since this estimate was made, and if some of these bills pass, of course the light-houses will be in operation before the end of this year. Instead of increasing the appropriation on that account, they cut us down so as not to allow enough for the one thousand one hundred keepers in the service.

Q. You want the full amount of the estimate, \$600,000?—A. We either have to have that or diminish the number of keepers; it makes no difference to me which you do.

Q. It makes some difference to the efficiency of the light service?—A. It would make a great difference in the efficiency of the men and the service if you keep dropping them.

Q. "Seamen's wages, rations, repairs, salaries, and incidental expenses of light-ships." You estimated for these purposes \$225,000 and we have given you an appropriation of \$215,000?—A. There is something to be charged to light-ships in the way of tenders going out and supplying rations. That comes out of the appropriation for supplies of light-ships, and I presume we could get on with the \$215,000 by pinching the crews of the light-ships, cutting off a man here and a man there, but it is rather a dangerous proposition. We can cut out one there

and another at Cape Charles, and manage to get along with that appropriation.

Q. "Expenses of establishing, placing, and maintaining buoys, spindles, and day beacons, and for incidental expenses relating thereto." The bill proposes \$325,000?—A. We have 200 buoys more to put out this year. We never take up a buoy. A buoy once down is down for good. The demand on the Pacific coast is increasing.

Q. You think you ought to have your estimate?—A. I think we ought to have the estimate of \$350,000 for buoyage.

Q. The estimate for "expenses of fog signals" is \$70,000, and the House have given you \$60,000, the same as this year; how is that?—A. We can get on with \$60,000.

Q. "For mileage or traveling expenses of members of the Light-House Board," \$3,000 is appropriated and you estimated for \$5,000. I suppose you can get on with \$3,000?—A. We can get on with it; but one thing should be known. We wanted the \$5,000 for this reason: There is no money in the Government anywhere out of which we can pay a reward for the apprehension of a man running over a buoy, for instance, or damaging light-house property, and we have one or two very flagrant cases—one case where a buoy was deliberately screwed off and taken away. Of course we want to do something to apprehend those people, but there is no cent of money we can get for that purpose.

Q. Do you expend any of this \$3,000 appropriated for traveling expenses in that way?—A. A very small amount is turned in every year. We can never tell just what the amount expended will be, because we can not tell what traveling there will be.

Q. The bill authorizes you to pay for the apprehension of those damaging light-house property?—A. After inserting that item they cut down the appropriation.

Q. If you had another thousand dollars you could get along?—A. We can get along as it is, but we shall not pay the rewards, because we shall not have the money.

Q. Here is the old story, "lighting of rivers?"—A. The House put in the Connecticut River for which the estimate was \$15,000. That stands this way: There are sixteen lights on the Connecticut River maintained by the steam-boat companies now at their own expense. They brought the matter to the attention of the Board. It has been the policy of the Government to maintain all such lights. Private parties have been held to have no right to maintain lights. They might not be in the right place. If you treat the Connecticut River as you treat other rivers it will take \$15,000 to light it up. Instead of giving that, the House cut down the appropriation.

Q. They give \$10,000 more than you had for the past year and put in the Sacramento and San Joaquin Rivers and the Illinois River?—A. The Illinois is a separate appropriation.

By Mr. BECK:

Q. The best and cheapest lighting is done on the rivers with these low lights, in my opinion.—A. It has been very successful on the western rivers. The pilots of the Mississippi River tell me the best money ever expended on the western rivers has been in lighting them.

Mr. BECK. The lights on the Ohio are better than any other lights that could possibly be devised. No mistakes are made now. They are all low lights and always good.

Mr. EVANS. I should like to state the reasons why we do not want to ask for competitive bids for the Diamond Shoal light.

Mr. BECK. The law requires a contract in all cases.

Mr. EVANS. The law requires a contract in all cases, and as the result of that law you have before Congress now a half dozen claims for damages sustained by those doing the work. The Light-House Board had a prominent case touching the jetty put in for protection around Cape Charles light. The law compelled them to take the lowest responsible bidder. They did. He happened to be a house carpenter in Baltimore. He went to Cape Henry and sunk all his vessels loaded with stone in the wrong place. They were washed away and the light-house came very near following suit, and he is now before Congress asking \$12,000 re-imbursement for money lost in that job. We could not say to that man that he was not responsible, because that would disgrace him in business. His bondsmen were perfectly good. What we wanted was future protection, knowing that he did not know anything about it.

Q. (By Mr. BECK). How could he put anything down in the place without authority from the superintendent?—A. They pointed it out, but he had not the proper appliances. One of his vessels sunk within half a mile of the shore loaded with stone. He was not competent to do the work. Any man backed by capital could take a contract for Hatteras light and it would result in failure, as shown in the construction of the light at the mouth of the Witchie River. The thing was given out by contract to the lowest bidder and after the expenditure of \$37,000 it was pronounced a failure. The General Government then took hold of it and gave it to the best instead of the lowest bidder, and the light-house was successfully placed in position. So it will be at Hatteras. I do not believe the Light-House Board would undertake to do that work if it were given to the lowest bidder, with a guarantee that it would be successful. We want, in other words, to get the best bidder and not the lowest.

THE FISH COMMISSION.

STATEMENT OF COMMISSIONER McDONALD.

MARSHALL McDONALD, Commissioner of Fish and Fisheries, appeared.

By the CHAIRMAN:

Q. I understand that you wished to make a suggestion about the Fish Commission?—A. I want the appropriation for rent of offices in the city of Washington increased from \$2,000 to \$4,000. The quarters we have occupied up to this time are but one on Massachusetts avenue (1443) and one on N street, and in addition to the accommodations afforded by them we have had a building for our officers near the National Museum. To get the offices in a convenient location and the accommodations necessary for work will require \$4,000.

Q. Where can you get such a place?—A. On the corner of New York avenue and Fifteenth street, in a fire-proof building.

Q. You mean the building the Safe Deposit Company is erecting now?—A. Yes, sir; the fifth story. There I shall be enabled to concentrate my entire work under my immediate supervision. We have no abiding place, but are scattered all over the city.

By Mr. BECK :

Q. The building on Massachusetts avenue was convenient to Professor Baird, of course?—A. Yes, sir; but it is now entirely inconvenient to the Commission and to the public. The point I have selected is accessible and near all the Departments.

Q. What rent are they asking for the fifth story of that building?—A. Four thousand dollars. That building is the only real fire-proof building in Washington, so far as I know, that can be had.

By the CHAIRMAN :

Q. What else do you want?—A. In the appropriation under the item "inquiry respecting foodfishes" they have condensed three items of appropriation, which are estimated for in my estimates. I propose to substitute my estimates for the item as reported by the House committee. They consolidated two items and imposed all the duties implied in both and appropriated \$15,000, instead of \$15,000 for one and \$12,000, as I asked, for the other.

Q. You ask in your estimates for \$18,000 for continuing the inquiry into the causes of the decrease of the food fishes on the coast, lakes, and rivers of the United States?—A. They made no allowance for the statistical inquiry, which I consider one of the most important works of the Commission.

Q. I agree with you about the statistics, but I will not express an opinion now. You want an appropriation for researches and investigation which shall be, in the language here, up to the point of "preparation of report?"—A. Yes, sir; under the bill as it stands.

Q. Down to line 16, "and for the preparation of reports relating to the inquiry," in line 15, then, you want that \$18,000?—A. Fifteen thousand dollars and eight thousand dollars.

By Mr. BECK :

Q. The House have embraced all the subject of the three items in this single clause?—A. I would like to explain about the \$8,000 item—why I separated it from the \$15,000 item. That is intended for an exploration of the inshore fishing grounds on these parts which have not been explored at all, the South Atlantic and Gulf coast particularly and the inshore fisheries of the west coast. That was to employ experts to gather statistics, but can be used also in getting information in regard to inshore fisheries. I separated that from the inquiry proper, but really all belongs to the inquiry into the subject of food fishes and may be condensed in one item at \$23,000.

By the CHAIRMAN :

Q. Why do they confine for these fishing grounds to "the South Atlantic and Gulf coasts?" If you want to explore anywhere else, you can not under this provision as it stands in the bill.—A. I was not aware of that.

By Mr. BECK :

Q. Did not Professor Baird go off Newport and make very extensive explorations and reports?—A. Exploration has been made on the New England coast, but not on the South Atlantic.

By the CHAIRMAN :

Q. So I suppose from the language here, because that is just what it says—"For the exploration of the fishing grounds." You stated a moment ago that you wanted to explore the South Atlantic and Gulf coasts and the Western coast?—A. And I thought that was in.

Q. But it is not in.—A. I intended that.

Q. It is not in your own statement, nor is it in the bill. Do you want the phraseology changed and make it "For exploration of fishing grounds in South Atlantic, Gulf, and Western coasts?"—A. Yes, sir.

Q. Or instead of "Western" say "Pacific coast"? That you want \$8,000 for, but if you get \$23,000 you can couple them together. Is that your idea?—A. Yes, sir.

Q. You want a separate item of \$12,000 for the collection?—A. A very small item; but I do not care to ask for more until the subject has been further considered.

By Mr. BECK:

Q. Is not that all here?—A. There is one question that does not involve an appropriation, but is a very serious matter to the Commission. The principal station of the Commission in Washington is what is called the old Armory Building. The custody of that has been under the direction of the Secretary of the Smithsonian Institution. Professor Baird, when secretary of the Smithsonian, allotted that to the Fish Commission, but they continued in the appropriation bills a clause making the custody of that building in the Secretary of the Smithsonian Institution until 1886. Then it does not appear in the appropriation for the Smithsonian Institution until the present year, when I find in the item for "Preservation of collections of the National Museum," line 17, page 57, "and for the care and custody of the so-called Armory Building." That building has been in the custody of the Fish Commission and all expenses of its custody paid by the Fish Commission for years. I desire to have inserted in the bill when you come to it—

By the CHAIRMAN:

Q. In this paragraph?—A. Yes; page 57, line 17, strike out the following:

And for the care and custody of the so-called Armory Building.

We ought to have entire control. It is the important station of the Commission.

Q. You want to strike out that language and insert in lieu of it:

And the Smithsonian Institution is hereby released from the custody of the so-called Armory Building and the same is transferred to the charge of the United States Commissioner of Fish and Fisheries for use as a hatching and distributing station and for offices.

A. Yes, sir. The main portion of my office is in that building. That building and the one on New York avenue will provide entirely for the office.

Q. Who owns the Armory Building?—A. The Government of the United States.

Q. Suppose we should give up the Armory Building to the District militia or some military organization, as has been proposed, which is rather implied in the name, then what would be necessary for you?—A. It would require us to suspend our work in Washington. That is our great distributing station for the United States.

Q. Do you use the whole of the building?—A. We use all of it. We are using now the ground floor and the third floor, but the Geological Survey under some arrangement is occupying a portion of the building.

By Mr. BECK:

Q. Simply with their boxes and things as a store-house?—A. That is all.

By the CHAIRMAN:

Q. If we adopt your phraseology we shall have to send the Geological Survey out?—A. They have nothing in there but storage. I should like to explain that in consideration of the removal of the National Museum from that building, the third-story room will be required for our use. All our distribution takes place from this building.

Q. How many cars have you?—A. Three cars. The building is thoroughly supplied with water. It is one of the best stations in the country. We have spent \$39,000 there in fitting up the hatching station. You will find the whole history of it in my report. We can not find another place in Washington that would answer for our purpose.

FRIDAY, July 6, 1888.

THE REBELLION RECORD.

STATEMENT OF H. V. BOYNTON.

H. V. BOYNTON appeared.

By the CHAIRMAN:

Q. General, you wanted to talk to us about a particular clause in the bill, the clause "For continuing the publication of the Official Records of the War of the Rebellion, and printing and binding, under direction of the Secretary of War." Have you some information on that subject?—A. In the first place my interest in this matter may seem very odd, but as I wrote the clause under which this publication began ten or fifteen years ago, and got it through the committee, and have been following it ever since, I am a sort of father of the publication. I have taken a very great interest in it, as, of course, a great many others have; but then my present interest—and I wanted to make this statement to the committee—is the idea that as the thing is now running it might be better to suspend the publication until some change can be made in the management. I only speak of the head of it, and not of the very competent gentlemen who have long been in that office, and who have to do with the publication of the war records. I speak simply with reference to the management by the present head, a gentleman with whom I have no acquaintance, except to have merely met him once.

By Mr. BECK:

Q. Who is he?—A. Colonel Lazelle, of the regular Army, who was assigned after Colonel Scott died. I simply wanted to call attention first to what was done with respect to Volume 20, Part 2, and then to make a very brief statement in reference to the next volume that was printed, and then in reference to the one that is now partially ready for print. In Volume 20, Part 2, is what purports to be the official history of the mutiny of the Anderson Cavalry at the battle of Murfreesborough, the Anderson Cavalry being the Fifteenth Pennsylvania, raised in Philadelphia and assigned to the Army of the Cumberland. Being ordered into the fight by General Rosecrans on the 26th day of December, 1862, it threw down its guns, with the exception of about 200, and refused to go into the fight, and 415 of them were confined in the jail and workhouse and penitentiary while the battle was in progress within hearing at the front, and absolutely refused to take part. As it was one of the most disgraceful things that happened in the Union Army or on the

other side during the whole war, and a matter of great notoriety in our Army—every private soldier in the Army being fully advised of what took place, because such a thing as that was almost unheard of—when I got hold of this volume, as any other man who served in that Army would have known at once, I saw that a very great wrong had been perpetrated, so far as that part of it was concerned—absolutely useless for the purposes of history. Not only that, but these people who were mutineers are put in here by name—quite a large number of them—as people who went to the front, took part in the battle, according to a report made to General Rosecrans and certified as correct from the Adjutant-General of the Army, when there was no report to General Rosecrans; and these men were mutineers instead of belonging on the roll of honor, a large number of them. There were no reports to compare the matter with in the Adjutant-General's office. The whole thing was simply a cut from a newspaper article that appeared in three Philadelphia papers—the Sunday Dispatch of February 14, 1863, the Philadelphia News of February 15, and the Philadelphia Inquirer of February 15—with the heading and all exactly as appears in this book; and it appears here as the official list of names of those who went to the front and took part in the fight, when, as I said before, a large number of them were in the jail and work-house and penitentiary for refusing to fight.

Further than that, this report which appears here, which was got up in the Department from a newspaper slip, was taken from the Philadelphia Inquirer of Monday, February 15, 1863, when it had appeared in the Philadelphia Sunday Dispatch, the day before, where it appeared originally with the positive statement in the introduction that of the 453 names given in this list only 172 of them took part in the fight. That is left out in this heading taken from the Philadelphia Inquirer, but it appeared the same day in the Philadelphia News, with that heading, which I have, that only 172 of the 453 took part in the fight; and yet it is stated here in a foot-note that Mr. Stanton sent out an officer, who is at present in the Inspector-General's Department, to investigate this thing, and the report as appears on the 347th page of this volume is that—

Some 200 of the Anderson Cavalry, more or less, and all the officers, except Lieut. G. S. Fobes, acting regimental quartermaster, left in charge of regimental property and the camp, obeyed the order, and moved with the Army. The remaining portion of the regiment refused to go.

General Rosecrans in his official order states the number at 700, but that order is published in this book. Now the present management makes a foot-note at the foot of this page:

For names see pp. 505-507.

Pages 505 to 507 read in this way:

[List of the field and staff officers and members of the Fifteenth Pennsylvania Cavalry (or more familiarly known as the "Anderson Cavalry") who went to the front and were engaged in the battle of Murfreesborough.]*

[Made from the official report to General Rosecrans; compared with and confirmed by the official records of the Adjutant-General's office, War Department.]

And then follow 453 names.

That is not in the War Department; it is not in the records of the War Department. There is no report and was no report from General Rosecrans to this effect, and there are no records in the Adjutant-General's office with which this has been compared and confirmed. It was simply a copy from the Philadelphia Inquirer newspaper article

communicated during the war, and copied off here within the time that this volume has been prepared, and inserted in this book.

Q. Your general complaint is not that you want the Record stopped, but you want its management changed. Is that it?—A. I want it stopped until its management can be changed, because the volumes are going on being ruined. This volume is ruined by this thing.

By the CHAIRMAN:

Q. Does it appear anywhere in the volume that anything was taken from the Philadelphia paper?—A. Not at all. It just says here—

Made from the official report to General Rosecrans; compared with and confirmed by the records of the Adjutant-General's office, War Department.

This has all been investigated by the House of Representatives, and it was admitted there that this was a copy from the Philadelphia Inquirer slip.

One point I make is, that if this is allowed—it is bad enough to make a national scrap-book of this great work, the greatest work of the kind that any government ever undertook—it would make a national scrap-book of it if they are going to insert whatever appeared in the newspapers during the war, according to what they choose to select; but when they print what sets forth a lot of fellows who were put in the jail, penitentiary, and work-house while the fighting was going on, and put there because they refused to go into the fight, and print them under the head of a roll of honor as men who did go to the front, I think it is a very serious piece of work.

Q. You have illustrated what you are getting at. The military committee had charge of that work originally and have charge of the men who superintend it, have they not?—A. The War Department. It is a matter of personal honor with me. The President was strongly adverse to this present appointment, but it was made by the Secretary of War against the wishes of the President and against General Sheridan's statement that he was the most incompetent man that could be found in the Army for this particular work.

While he is a very honorable man and thoroughly fitted for certain branches of work that he has been performing in the Inspector General's office, for this particular work of compilation, if the President looked the Army through he could not find a man more unfit for it.

That was General Sheridan's personal statement to the President. The President was opposed to this selection; but as the Secretary of War has been in the habit of making appointments of this character the President would not interfere, and he was allowed to go on. These are matters within my personal knowledge.

Q. You can see the difficulty we have as a Committee on Appropriations in going into the personnel of Army appointments?—A. You make the appropriation by which these volumes continue to be printed.

Q. And you ask us to stop the execution of an existing law for carrying on what you admit to be a great work because an inefficient officer is at present in charge of it, when that can be remedied by another Department. Is not that our difficulty?—A. This thing has been published.

Q. We should make ourselves the revisers of all the appointing machinery if we were to stop the appropriation in this way?—A. I see your point. How are you going to stop this thing?

Q. I do not know. This Committee on Appropriations is not.—A. The Southern men are more interested in the publication of this work than we are.

Q. Mr. Allison is not much of a warrior and I am not, there is the trouble.—A. I was a soldier who served in the field, and I want this work done properly.

By the CHAIRMAN :

Q. What other illustration have you as to the subsequent volume?—A. Just this; that on page 365 there is an official report of one hundred and fifty of these men who did take part in the battle; their names are given, and it is stated that they took part in the battle. Not a single one of them appears in this purporting to be roll of honor in the appendix. There is another list of thirty who went to the front, reported on page 358, and got there and took part in the second day's fight. There is not one of them who appears in this list. The killed and wounded do not appear in this. The men who were killed, the man who commanded one of the companies and was commended by name for taking part in it, does not appear in this list.

Q. I think we have had enough of that to show the inaccuracy. Is there anything else you wish to present?—A. Following this volume is volume 21, which has come out. In that is a whole page map that is indexed as giving the positions of the Union forces at Fredericksburgh. It is nothing but the reproduction of a map that General Hunt, at the Soldiers' Home, lent to Colonel Scott just before he died for his information, and it was lying on his table. They took it and engraved it and put it in, and it is indexed as a map of the position of the Union forces at Fredericksburgh. There is no infantry line in it; there is no positions of batteries; and, as it was a three days' fight, and no designation is given of whether one day or another day or one hour or another, that is put in as a map of the positions of the Union forces. It did not belong to the records. It was merely there as a matter loaned by General Hunt. Then a map of the Confederate forces in the same way is published, which is not attached to any report that is given in the volume at all. It is a map that was made after the fight by some of the engineer officers and drifted into the collection there, and that was selected and put in instead of the official map of the battle, which was connected with General Lee's report and the reports of the other officers.

In reference to the next volume, which is now in the Government Printing Office, that is going through the press with a bungling index. They have dismissed the man who made the index, although it is stated in the Book of Estimates that comes to you that you are asked to make an appropriation for another man in connection with the index. If you can find that, it will be interesting to look into it. The index to this work, as you all know, is the greatest index that the Government has ever made, very intricate in its manufacture, but very simple when it is done. The officer in charge says in the Book of Estimates that this indexing is in charge of one expert indexer, that if anything should happen to him, an accident to him in any way, the work would be very considerably delayed, and yet, having no one else to do the indexing, he dismissed the man upon the supposition that he had furnished me with a statement that this unofficial newspaper business had been put in here as official. Here is the note in the Book of Estimates :

[Office of Publication of Records of the Rebellion.]

NOTE.—Increase of one additional [clerk of class 4] is submitted, as the index is eleven books behind the stereotype print of the work; it is now entirely dependent on a single index expert, and should accident deprive the office of his services, great delay would follow before another could usefully acquire his duties.

And he dismissed the indexer in the middle of his work. He has been at it now nine or ten years, and he and Colonel Scott together studied up the methods of indexing of all the Governments abroad and our own, and the result of this work is the best that has ever been done. Then he undertook to give it to another person, a subordinate, but he declined to do it; he said he could not do it; that there was no one in the office that could do that work at all. Then it was put in the hands of a woman, and she had to give it up, and now it is in the hands of a proof-reader, and they are unable to issue the index to the next volume and have not been able to complete it from the time this discharge took place. The whole thing is in utter confusion up there.

Q. When was this man discharged?—A. About two or three months ago. I want to guard myself carefully against having these remarks apply to any of the subordinates in connection with that office, but only to the management.

Q. To the chief?—A. He is the man who is responsible.

PUBLIC BUILDINGS.

STATEMENT OF W. A. FRERET, SUPERVISING ARCHITECT.

W. A. FRERET appeared.

By the CHAIRMAN:

Q. You have a copy of the sundry civil bill?—A. Yes, sir.

Q. The first item in the appropriations for public buildings is Augusta, Ga.?—A. Yes.

For court-house and post-office at Augusta, Georgia: For completion of building under present limit, one hundred thousand dollars.

Q. Will that complete the building?—A. Yes, sir.

By Mr. BECK:

Q. Is that the estimate?—A. That is the estimate.

By the CHAIRMAN:

Q. And you have your plans showing that that will complete it?—A. Yes, sir.

Q. The next item is "for custom-house at Bangor, Me.?—A. Yes.

For custom-house at Bangor, Maine: For not exceeding one-half the cost of constructing stone abutments and piers for the protection of the United States custom-house and post-office building, and approaches, situated in the Kenduskeag Stream, at Bangor, in the State of Maine, the sum of ten thousand dollars, the expense of such works to be borne in equal proportions by the United States and by said city of Bangor: *Provided*, That the plan of construction of said works shall be approved by the Secretary of the Treasury: *And provided further*, That the entire amount to be thus contributed by the United States shall not exceed the sum hereby appropriated.

Q. That is a necessary thing?—A. Yes, sir.

By Mr. BECK:

Q. The House of Representatives has given you all you asked for that?—A. Yes, sir. The next item is—

For court-house and post-office at Birmingham, Alabama: For purchase of site and commencement of building, one hundred and fifty thousand dollars.

Q. What do you say as to that?—A. At Birmingham there is going to be some trouble in the purchase of a piece of property large enough for the purpose; but the citizens will have to make up the deficiency.

By the CHAIRMAN:

Q. Do you mean to say that you are going to exhaust the \$150,000 in the purchase of a site?—A. No; in purchasing a site and commencing the building.

Q. What is the population of Birmingham?—A. I should say about 4,500. They claim more.

Q. Should we not limit the amount you are to pay for a site? Would you not rather have us do that?—A. I would rather not. Suppose you limited me to \$100,000. If I could buy the site for \$75,000 there would be \$25,000 that I should be asked to put on the building. I would not want that.

The next item is—

For post-office and custom-house at Camden, New Jersey: For completion of building under present limit, sixty thousand dollars, and in addition thereto any portion of the sum appropriated for the purchase of ground on which to erect said building not expended for that purpose may be used for the construction of the building.

Q. Will that sum complete the building?—A. Yes, sir.

The next item is—

For marine hospital at Chicago, Illinois: For approaches complete, ten thousand dollars.

A year ago \$10,000 was appropriated for a breakwater; this year the appropriation is to complete the approaches and the breakwater is left out, but I think it would be better to leave it in that way.

Q. Will this \$10,000 complete the approaches?—A. Yes, sir. If you had my letter it would be seen that I asked for this amount for the approaches and the breakwater, but in place of it it is for the approaches, and the breakwater is left out.

Q. The next item is for the post-office building at Chicago?—A. Yes:

For repairs of post-office and custom-house building, Chicago, Illinois, twenty thousand dollars.

There has been a great deal of repairing about that building. Last year \$60,000 or \$70,000 was appropriated and a great deal of work was done. The plastering had to be cut away; the piers had to be cut away. There was a great amount of work completed, but not finished; that is to say, not put in shape.

Q. Will the \$20,000 complete it?—A. I do not think it will.

Q. How much will do it?—A. I should say \$30,000 would do it. The superintendent there asked for \$28,000.

Q. Have you a good superintendent there?—A. Yes; he is a pretty active, stirring man.

Q. Have you examined that building personally?—A. Yes, sir; I went up on the roof and all through it.

Q. What do you think of it now?—A. I think it is a very good building.

Q. It is not a building that will tumble down?—A. No, sir.

By Mr. BECK:

Q. Has the settling entirely ceased on the north wall?—A. I asked when I was there, and there has been no settling since the iron rods have been put in.

By the CHAIRMAN :

Q. Is the appropriation for the Cleveland custom-house building satisfactory?—A. Yes, sir.

Q. What have you been doing at Denver?—A. The next item is—

For court-house and post-office at Denver, Colorado: For continuation of building under present limit, one hundred and forty thousand dollars.

I am making a set of drawings for it so as to extend it. The trouble lies in this, that to extend it properly it will terminate within 16 feet of the opera-house. The present limit is 40 feet. The question is whether to reduce that limit of 40 feet to 16 feet. I know there is opposition to it. A public building ought to be 40 feet from any other. The opera-house is a very large, tall building, and the question is whether you shall have 16 feet or 40 feet between. The question is whether to reduce that limit of 40 feet at Denver, because within the 40 feet limit there is the opera-house, which is a dangerous building, as all theaters and opera-houses are, but only dangerous on that account, because it is an opera-house. If the limit is reduced to 16 feet it gives an opportunity of putting up a good building there, but the question would be whether the committees would agree to a reduction of the limit to 16 feet when 40 feet is the general average limit of public buildings to be separated from other buildings.

Q. Can you not go in some other direction?—A. No, sir. That is the only way we can do it.

By Mr. BECK :

Q. Why?—A. Because the building is already constructed between this line and that line up to a certain height. I add to the rear, so as to diminish the cost of construction to the right and to the left. We are prescribed there by the limit. The only space we have available for construction is towards the end, and there is where I want to bring out the building.

By the CHAIRMAN :

Q. Then this opera-house is a very high building and not fire-proof, I suppose?—A. I do not suppose it is.

Q. But 40 feet or 16 feet would not make much difference?—A. Twenty-four feet is a good deal.

Q. What do you advise about it?—A. I have always considered in erecting a public building that it ought to be 40 feet away from any other. While I would like very much to finish this building, I dislike to reduce it so as to be consistent with what I have always said—that there ought to be 40 feet between a Government building and a private building. Private people insure. The Government does not insure.

Q. Can you build this building large enough? Will it be large enough under the present limit of 40 feet?—A. No, sir.

By Mr. BECK :

Q. How much have you expended on it already? It becomes on your statement a question of abandoning the place altogether?—A. Oh, no, sir.

Q. Or erecting a building that is not sufficient?—A. It is already used for a court-house.

By the CHAIRMAN :

Q. What have you spent on it?—A. The total appropriation is \$238,000 already.

By Mr. BECK :

Q. And how much has been expended ?—A. We have spent \$208,000.

Q. The alternative is to finish a building which will not answer the purpose or contract the limit ?—A. I would rather put the responsibility on you. There were \$238,000 available. Out of that we have spent \$208,000, and but \$30,000 is available now. I would rather you would leave that open for the present.

Mr. BECK. We will mark Denver "passed."

By the CHAIRMAN :

Q. Detroit, Mich., is the next.

The WITNESS. Yes :

For court-house and post-office at Detroit, Michigan : For continuing erection of building under present limit, three hundred thousand dollars.

That is enough for the time being, but it will not be enough for that building. That ought to be a very fine building there.

Q. The present limit is \$1,100,000 ?—A. To purchase the land—they bought a great deal of land—it leaves us about \$620,000. They have got an entire block of land.

By Mr. BECK :

Q. Have they settled all the controversies about the site and the title ?—A. Yes, sir ; it is all settled up and paid for.

Q. The location is definite now ?—A. Yes, sir.

By the CHAIRMAN :

Q. Are you erecting that building of a size sufficient to enlarge the limit as they want ?—A. Yes, sir.

Q. That is to say, you have commenced it upon such a scale ?—A. We have not done it yet, but we have put it on paper. The law has only just passed.

Q. Enlarging the limit ?—A. No, sir ; only for continuing operations according to the present limit. They have not added any more to it. The limit was eleven hundred and odd thousand dollars and we have only \$622,000 left for construction. The balance of it has gone in the purchase of property. That was done before I got there.

By Mr. BECK :

Q. There is \$622,000 remaining ?—A. Yes, sir ; for the building.

Q. Five hundred thousand dollars has gone into the purchase of land ?—A. Yes, sir ; they have got an entire block. They bought three pieces of property, one of which they propose to sell, and we are going to ask leave to convert that money, instead of letting it go back into the Treasury, so as to let it go toward the construction fund.

Q. What became of the old property you first bought ?—A. As I say, we want to resell that property. That is what we propose now to do. I do not know that it has come up before Congress yet, but it is proposed to resell that property and to convert the money to the construction.

Q. And use the proceeds ?—A. And use the proceeds there for the construction, and not let them go back into the Treasury.

By the CHAIRMAN :

Q. Are your plans complete for the building ?—No, sir.

By Mr. BECK :

Q. What will the old site bring in all probability ?—A. I do not know. I have never seen the property. It was before I got there, but I am

told they will get more for it than what they gave. That was what I was told yesterday in speaking over this matter.

By the CHAIRMAN :

Q. You have now a balance available?—A. Yes; \$620,000.

Q. You have on hand \$18,000?—A. Yes, sir.

Q. And the \$300,000 contained in this item is all you will need?—A. It is all I need this year. I could not spend it this year.

By Mr. BECK :

Q. You have already begun the building on the idea that it is going to cost a certain sum, because you may begin it upon a \$3,000,000 basis— A. No, sir; I will never do that. I have opposed that from the first. I say, no, sir; no humbugging like that. A gentleman came in the office this morning; he said, "Why can you not do this?"

Q. You have not heard all my question. I say you may begin on a \$3,000,000 basis, or a \$2,000,000 basis, or a basis of \$1,500,000, and it would depend upon what basis you started upon?—A. Oh, no; there is too much humbugging in that. As I said, in the office this morning a gentleman said to me, "This plan will cost \$900,000." "Yes," I said, "if you do it." He said, "Why not let the Secretary sign this, and then we will get some more?" I said, "I do not do anything like that. I am going to cut off one-third of the building so as to bring the building down to the money that is there and no more, and then if Congress chooses to add to it afterwards, it can add to it, but it will not be done because I said it was going to cost a certain sum of money when it will cost more. I tell you it is going to cost \$900,000, and if you want me to make plans for that I can do it. I am going to complete the plans to cost \$620,000 or \$630,000." He said, "That is not the way they have been doing." "I do not know anything about that," I said.

Q. Recollect, you want a building for a custom-house and post-office commensurate somewhat with the importance of the city and its business.—A. But you see the law says I shall not go beyond a certain amount, and the plans must be made to be kept in accordance with the amount appropriated by Congress.

Q. What I am trying to get at is whether it is better for us to make any appropriations to go on upon a basis that will be unsatisfactory to the city of Detroit and not commensurate with its business, and not the character of building that ought to be put there, or whether we ought to let it stand without doing anything until the old property is sold and a definite basis satisfactory to the city and satisfactory to you and to the business is agreed upon.—A. I see the force of that.

Q. That is the reason why I am asking the question that way.—A. But it is just the old way of waiting and waiting, and you never get anywhere.

Q. Can you erect a building in such a form that if the needs of the city require it more additions can be made without impairing the beauty or symmetry or uniformity of the plan?—A. Yes, sir; that is what I started, first of all, to say, that I came to the conclusion it would be better to take the amount of money to start the building of brick, and then if Congress next year or the year after chooses to make it of stone I shall have the size and the additional money to build it of stone.

Q. That is the reason why you do not want more than this sum now? You do not want to go beyond the point where a change may be made if necessary?—A. That is all I want now, unless you add to the appropriation. This \$300,000, this half of the \$600,000, is enough unless

you add to the appropriation and make it \$900,000; \$300,000 is enough to begin with.

By the CHAIRMAN:

Q. You are making this a thoroughly fire-proof building?—A. A building of that kind must be fire-proof. The Government has no right to erect a building of that size without having it fire-proof.

Q. That is contemplated in your plan?—A. Yes, sir; I would not put up anything else. The \$300,000 is enough to begin with, if you only make the appropriation \$900,000.

Q. What about Duluth?—A. The bill provides—

For court-house, custom-house, and post-office at Duluth, Minnesota: For purchase of site and commencement of building, seventy-five thousand dollars.

The limit is \$150,000. Seventy-five thousand was appropriated by the House to buy the site and commence the building.

Q. Does the \$150,000 include the site?—A. Yes, sir; you see land is pretty high up there. In the Western cities we must pay very high for land. We ought to pay \$40,000 for the site, and that leaves us only \$110,000 for building with; but that is all that was asked for.

Q. Now, take Fort Smith.—A.:

For United States jail at Fort Smith, Arkansas: That not exceeding four thousand dollars of the unexpended balance of the sum appropriated by the act approved March sixteenth, eighteen hundred and eighty-six, for the construction of a jail at Fort Smith, Arkansas, may be expended for a heating apparatus for said jail.

That is all right. The next item is—

For public building at Frankfort, Kentucky: That the Secretary of the Treasury be and he is hereby directed to ascertain and report to this Congress at its next session the names of the persons who furnished materials for or performed labor on the public building at Frankfort, Kentucky, for which they have not been paid by reason of the Government taking the construction of the building from the original contractor, together with the amount and reasonable value of such material and labor.

Mr. BECK. That is new. Colonel Breckinridge put in and filed a letter from the Supervising Architect, which is to be found on page 5980 of the Record.

Mr. FERRERET. The next item is—

For custom-house at Galveston, Texas: For completion of the building under the present limit, ninety thousand five hundred and eighty-one dollars and seventy-one cents.

That is all right.

By the CHAIRMAN:

Q. Is that the whole of it?—A. No, sir; there is more besides, but that is what is required to complete it.

Q. You will complete it with that amount?—A. Yes, sir.

Mr. BECK. The next item is—

For court-house and post-office at Greenville, South Carolina: For purchase of site and commencement of building, fifty thousand dollars.

One hundred thousand dollars is the limit, and \$50,000 was given for this year's work.

The CHAIRMAN. Has the bill for that building become a law?

Mr. BECK. It is marked "Public act No. 70."

The CHAIRMAN. The limit is \$100,000. One-half of it was appropriated by the House.

By Mr. BECK:

Q. That has become a law?—A. Yes, sir; here it is on my list of public building bills which have become laws.

By the CHAIRMAN:

Q. Is that a wise way of appropriating for a little building like that?—
A. No; that is what I have been telling the House committee all the time; but the committee will put it that way; they think it best to do so.

Mr. BECK. Our arrangement was last year in this committee, as far as we could do it, that wherever an appropriation was to be made for a building with a limit of \$100,000 or \$150,000, to give all the money in order that it might be completed. We have insisted that it was true policy and economy in a building costing \$100,000 or \$150,000 or less to give the necessary amount in order to complete it.

Mr. FRERET. Certainly; that is the proper course.

Mr. BECK. We have been in the habit of doing that so as not to make two sets of contracts.

Mr. FRERET. It is farcical to do otherwise. The next item is:

For post-office at Houston, Texas: For completion of building under present limit, fifty thousand dollars.

Originally it was \$75,000. I have \$16,000 of it available. I could get the whole contract, I think, for \$50,000 but I am stopped.

By Mr. BECK:

Q. There is not a doubt in my mind as to the policy and economy both of making the appropriations at once wherever the cost of the building does not exceed \$100,000 or \$150,000, in order that it may be completed and all the contracts be made at one time.—A. I have done better than that. I have always done it since I have been in the office. I have a list of the buildings here. In constructing the big building at Brooklyn I am giving out the whole thing in one contract—a million and a quarter dollars.

Q. But I am speaking of our method of making appropriations for the smaller public buildings.—A. The appropriations ought to be made all at once. On page 8, line 4, there is this provision:

That the Secretary of the Treasury may authorize contracts to be made for the whole or any portion of any of the foregoing public buildings and the post-office and custom-house at Jacksonville, Florida, and the court-house and post-office at Chattanooga, Tennessee, within the limit of cost fixed by law as to each of said public buildings.

Now I want this put in:

And also as to the public buildings which are not included in this list.

Why not bring them all in? Why make fish of one and fowl of the others? When the money is not available it hampers me. We explained that to Mr. Randall, and finally he agreed to put in the provision I have just read. I want to have your committee go still further. Why should you take the past and two present buildings, and why should the buildings that come to-morrow and the day after be excluded? I ask you to bring them in, too.

The CHAIRMAN. But why not appropriate at once for the whole of these buildings in cases where the buildings ought to be completed within the limit, where the building is a small one? I think we ought to adhere to our original rule.

Mr. BECK. I think we ought to adhere to it in all cases not exceeding \$100,000 or \$150,000—I have forgotten the amount.

Mr. FRERET. Put in the whole thing. I am giving out the whole thing under one contract.

By the CHAIRMAN:

Q. At Houston, Tex., that is completion too?—A. Yes, sir.

By Mr. BECK:

Q. For Huntsville, Ala., \$50,000. That is the whole estimate?—A. Yes, sir.

By the CHAIRMAN:

Q. The next item is:

For court-house and post-office at Helena, Arkansas: For purchase of site and commencement of building, thirty-seven thousand five hundred dollars.

A. Seventy-five thousand dollars is the amount required.

Mr. BECK. We should give the whole \$75,000 or nothing.

By the CHAIRMAN:

Q. The next is:

For post-office at Hoboken, New Jersey: For purchase of site and commencement of building, thirty thousand dollars.

There is a building to cost \$60,000.—A. And the House give \$30,000. The next item is:

For the court-house and post-office at Jefferson, Texas: For completion of building under present limit, twenty-five thousand dollars.

That finishes it. The cost of the building was put at \$50,000. Twenty-five thousand dollars has been already appropriated, and this is the second appropriation of twenty-five thousand. The next item is:

For court-house and post-office at Louisville, Kentucky: For continuation of building, sixty thousand dollars.

That is all right.

Q. You had an estimate for heating apparatus there?—A. We shall not need that for this year.

By Mr. BECK:

Q. You will get the building under roof this year?—A. Yes, sir. In eight months from now the contracts will be up. We had contracts for ten months, and two months have passed.

By the CHAIRMAN:

Q. At Los Angeles the appropriation is for completion of building?—A. Yes, sir; that is all right.

Q. How at Minneapolis?—A:

For post-office at Minneapolis, Minnesota: For heating apparatus, complete, thirty-one thousand dollars, and for one elevator six thousand five hundred dollars; in all, thirty-seven thousand five hundred dollars.

That is enough.

Q. That will complete that building?—A. Yes, sir. The next is:

For custom-house at New Orleans, Louisiana: For additions, alterations, and repairs, including elevators, one hundred and sixty-seven thousand nine hundred and fifty-nine dollars:

That is the estimate which is in detail.

By Mr. BECK:

Q. The proviso reads:

Provided, That as soon as the work herein authorized is completed all public offices of the United States in the said city of New Orleans, occupying buildings or portions of buildings for which the Government pays rent, shall be removed to said custom-house and to suitable apartments therein, to be designated by the Secretary of the Treasury.

A. Yes, sir; we pay \$6,600 there for rents outside.

Q. You will have plenty of room there when you get the building furnished?—A. Yes, sir. The next item is:

For marine hospital at New Orleans, Louisiana: For approaches complete, twenty thousand dollars.

That is for a wharf. The building is on the bank of the Mississippi River and you have to put a wharf there for steam-boats to land, and there must be a fence around the place. It is a very large place.

Q. Is that appropriation right?—A. Yes, sir. They only gave me \$10,000 at first, but afterward added \$10,000 more. The next clause is:

For public building, Oxford, Mississippi: For completion of approaches, four hundred dollars.

That is enough. We have been at that building for a long time, fumbling and fooling with it, and I believe this will finish it. The next is:

For the United States mint at Philadelphia, Pennsylvania: For an additional story to, and enlarging the building, including vault, alterations, and so forth, two hundred and twenty thousand dollars.

That is necessary.

Q. That is the estimate?—A. Yes, sir.

By the CHAIRMAN:

Q. Do you know anything about the Mint Building at Philadelphia?—A. I went over and examined it myself. The proposition is now to put a third story on the Mint Building. I have the drawings prepared and everything ready for it. I have them in Mr. Randall's committee-room, in this building. It makes a fine finished building, and they really need the additional room. That appropriation is necessary there. I went over there myself and looked at it. I did not send anybody, but I went myself.

Q. How are you going to enlarge the building?—A. By putting a third story to it.

Q. This says, "For an additional story to, and enlarging the building."—A. There are water-closets in the building. We took them out and put them outside, just underneath the terrace. There is a corresponding space on the other side where the machinery is. Then the places formerly occupied by the water-closets we devote to vault purposes, iron and steel vaults, and then we enlarge the height of the building by another story. It makes a good showing. It is a handsome thing. I wish I had a picture of it here to show you. I will send you a copy.

Q. The next item in the bill is:

The court-house and post-office at Pittsburgh, Pennsylvania: For continuation of building under present limit, fifty thousand dollars.

A. That is enough.

Q. Is that building nearly completed?—A. No, sir. That building has been very troublesome. We had to take the contract away from the man.

Q. How much money have you there?—A. We have \$286,000 now, and \$50,000 additional will make \$336,000.

Q. That is all you can use this year?—A. Yes, sir.

Mr. BECK. The next item is:

For post-office at Portsmouth, Ohio: For purchase of site and commencement of building, thirty thousand dollars.

Why not make it \$60,000 if we keep it in at all.

The CHAIRMAN. That is one of the new little buildings?—A. That is one of the new ones that came in this year. The limit is \$60,000 and they allow us \$30,000 for purchase of site and commencement of the building.

By Mr. BECK:

Q. We are going to put it "for purchase of site and completion of building?"—A. Yes, sir; why not give it all at one time? The limit is \$60,000, and the House only gave \$30,000.

Q. I say we propose to strike out the word "commencement" and insert "completion," and to make the sum \$60,000 instead of \$30,000. That is what you want?—A. Yes, sir.

By the CHAIRMAN:

Q. Is the appropriation for the building at Peoria, Ill., all right?—A. Yes, sir; that is all right for completion of the building, \$12,000.

Q. Will that amount complete it?—A. Yes, sir. The next item is—

For custom-house at Richmond, Virginia: For heating apparatus, twelve thousand five hundred dollars.

That is enough. "For approaches, \$1,000." That is only for some iron railing, and some marble coping. The next item is for Rochester, N. Y., \$26,500. That is enough. The next is—

For court-house and post-office at Savannah, Georgia: For continuation of building under present limit, seventy-five thousand dollars.

We just bought a site the other day for \$20,000.

Q. How much have you there?—A. One hundred and ninety-nine dollars and fifty-two cents is all I have. The House only gave \$75,000; I asked for \$150,000.

Q. Would \$150,000 complete the building?—A. I think Mr. Norwood was going to ask for a still greater appropriation this year.

Q. For the enlargement of the building?—A. Yes, sir. The next clause is—

Court-house at Santa Fé, New Mexico: For approaches complete, twelve thousand dollars.

I asked for \$18,000 and Mr. Randall said take off some of those stone posts and he would give me \$12,000.

Q. What do you say?—A. Let it go at \$12,000. I could spend more, but I will put it at \$12,000. They will be satisfied.

The next item in the bill is—

For the old custom-house at Saint Louis, Missouri: For necessary repairs and alterations to the building known as the old custom-house building at Saint Louis, Missouri, including the construction of an additional story thereon, fifty thousand dollars; said structure being intended for its present occupants and for the occupancy of all Federal officers now renting offices in any building or buildings in Saint Louis, Missouri, not owned by the Government and for which the Government pays rental: *Provided*, That all such offices shall be removed to said custom-house building when completed and to suitable apartments therein, to be designated by the Secretary of the Treasury.

That is enough. I have bids for that.

By Mr. BECK:

Q. And you can put them in as soon as the bill is passed?—A. Yes, sir; I have the bids, and the check is all ready to give the man a contract to-morrow if this passes.

The next clause is—

For court-house and post-office at Springfield, Missouri: For purchase of site and commencement of building, fifty thousand dollars.

The limit is \$100,000.

The CHAIRMAN. We shall have to give \$100,000.

Mr. FRERET. The next item is—

For court-house at Springfield, Massachusetts: For completion of building under present limit, one hundred thousand dollars.

That is all right. The next is—

For court-house and post-office at Texarkana, Arkansas: For purchase of site and commencement of building, fifty thousand dollars.

That is the same old story. The limit is \$100,000, and they have given \$50,000. The next is—

Court-house and post-office at Tyler, Texas: For construction of a fence around the site, one thousand dollars.

That is enough.

Q. You need it, do you?—A. Yes, sir; you know there we have to fence cattle out as they do not fence them in. In all those southern places we must have fences around the buildings. Even in the city of New Orleans we have to fence them out. We have a great deal of trouble down there on that account. If we should tell a man in Texas to fence his cattle in we should have trouble.

The next item is—

For custom-house and post-office at Toledo, Ohio: For elevator and mail lift, seven thousand dollars.

That is enough. I am going to do the work cheaper than that. The next is—

For court-house and post-office at Vicksburg, Mississippi: For purchase of site and commencement of building, fifty thousand dollars.

By the CHAIRMAN:

Q. Is that one of the bills passed this year?—A. Yes, sir.

Q. The limit is \$100,000?—A. Yes, sir; and the House gave \$50,000.

By Mr. BECK:

Q. Is it now a law?—A. It is one of the new laws passed. I have it on my list. The bill has been signed by the President.

The next item is—

For post-office and custom-house at Wilmington, North Carolina: For completion of building under present limit, one hundred and fifty thousand dollars.

Q. The House committee put that in themselves?—A. Yes, sir; the next clause in the bill is—

For post-office at Worcester, Massachusetts: For continuation of building under present limit, one hundred thousand dollars.

Q. What about that?—A. That is enough. Then follows the provision:

That the Secretary of the Treasury may authorize contracts to be made for the whole or any portion of any of the foregoing public buildings and the post-office and custom-house at Jacksonville, Florida, and the court-house and post-office at Chattanooga, Tennessee, within the limit of cost fixed by law as to each of said public buildings.

I may say that this provision permits me to make contracts for the full amount even if the money is not appropriated. This was put in so as to help me along with the short appropriations which were made.

By the CHAIRMAN:

Q. Why is Jacksonville, Fla., inserted?—A. Because the House left out the appropriation. They have not given me anything for that.

Q. Did that bill pass this year?—A. There was a good deal of talk about it. It passed last year. For Jacksonville, Fla., the estimate was \$150,000 last year. Congress appropriated \$70,000 of it, and I asked for \$80,000 this year. Of the \$70,000 I have \$69,937 left, the full amount you see, and I have just bought a piece of property, if the title is correct, for \$40,000. Therefore, I will have \$29,937, and they gave me this year nothing, because they say I have \$69,000; but I have not \$69,000; I have only \$29,000, because it will take \$40,000 of it to buy the property, and then it leaves me but \$29,000 to begin the building with.

By Mr. BECK:

Q. That will not do any good?—A. That is just a bite, you know; a sort of a lick and a promise.

By the CHAIRMAN:

Q. The House committee, in their report about Jacksonville, Fla., say—

No site could be secured at a price which would leave a balance sufficient for the erection of a suitable building.

That is an invitation for more appropriations. That is what they want and that is why they did not put anything in.—A. I bought the site, if the title is good, for \$40,000, and I ought to have the title here within a week. That leaves \$110,000 for the building.

By Mr. BECK:

Q. You can contract for a building there for that?—A. Yes, sir; that is enough, because while there is so large a population it is only a floating population, a winter population. There are sixteen or eighteen hotels there, but it is a different business from any other place. It is a watering-place business. One hundred and ten thousand dollars is enough.

By the CHAIRMAN:

Q. It is not a business that goes into the courts?—A. Oh, no.

Q. You will erect a fire-proof building?—A. Yes, sir; we can erect a fire-proof building for that sum.

Q. Of brick?—A. Oh yes; you could not build a stone building down there. It would cost too much money to transport the stone and everything, and we can get all the decoration we want with press-work, terracotta work.

Q. The balance of the appropriation is \$80,000.—A. I want it all, because I can make the contract and give satisfaction there. We can build all winter. There is no necessity for stopping at all, but we can go right straight through.

Q. What about Chattanooga, Tenn.?—A. The total appropriation is \$200,000. The amount appropriated is \$150,000. I asked this year \$50,000, so as to make the whole thing.

By Mr. BECK:

Q. That is, to complete the building?—A. Yes, sir.

Q. Is it under contract?—A. No, sir. We are asking for estimates now. We are excavating the ground now for a foundation, and we are asking for contracts for the basement story.

Q. Have you a title?—A. Oh, yes, sir.

Q. What do you pay?—A. I believe we paid nothing. I think they gave us the property. That is my recollection.

Q. So that you have got the bulk of the appropriation available for the building?—A. Yes, sir.

By the CHAIRMAN:

Q. How much is left of it now?—A. The balance available is \$149,685.

Q. Now?—A. Yes, sir.

Q. You want \$50,000 more?—A. I can run along for the year with that.

Q. But you can not make your contracts for the completion of the building?—A. If the provision I suggest is inserted I can.

The CHAIRMAN. We shall not insert that.

Mr. BECK. We are not going to insert it.

Mr. FRERET. Then you had better give me the whole thing.

Q. (By the CHAIRMAN.) That makes \$50,000 for Chattanooga?—A. Yes, sir.

Q. All these are in except Bay City, Mich., and Bridgeport, Conn.?—A. Yes, sir; you see those came in after the sundry civil bill passed through the House.

Q. The bills for erecting public buildings at Bridgeport, Conn., and Bay City, Mich., have been signed?—A. Yes, sir; all on this list have been signed.

Q. Do you know anything about Bay City, Mich.?—A. No, sir; I have never been there.

Q. You want to purchase a site there?—A. Yes, sir.

Mr. BECK. How much is appropriated for these two buildings?

The CHAIRMAN. There is no appropriation. The acts authorized \$200,000 for Bay City, Mich., and \$150,000 for Bridgeport, Conn.

Mr. FRERET. There are for public buildings eleven House bills that carry no appropriations with them. The Senate passes its bills with appropriations, but of the thirteen or fifteen House public-building bills which have been passed there are eleven that carry no appropriations with them.

Q. (By the CHAIRMAN.) Do you want anything added to the bill?—A. No, sir, except in this item:

For repairs and preservation of public buildings: Repair and preservation of custom-houses, court-houses, post-offices, and other public buildings under control of Treasury Department, one hundred and ninety thousand dollars.

I asked for \$200,000, and they give me \$190,000.

And the Secretary of the Treasury shall report to Congress at its next session a statement of the expenditure of the appropriation for repairs and preservation of public buildings for the fiscal year eighteen hundred and eighty-eight, showing on what public buildings said appropriation was expended and the number of persons employed and paid salaries therefrom.

Q. What do you want?—A. I asked for \$200,000, and I asked for \$25,000 for the marine hospital. The House gave me \$190,000 out of the \$225,000. Alaska is omitted. I asked for plans \$4,000 and they only gave me \$3,500. That means photographs and purchase of things of that kind. They cut off my photographer because I asked to have him cut off, which was \$2,000.

Q. On page 39, beginning at line 19, there is this provision:

Plans for public buildings: For books, photographic materials, and in duplicating plans required for all public buildings under control of the Treasury Department, thousand five hundred dollars.

You had only \$2,500 for the year just closed?—A. Yes, sir. Then I have lost my photographer, which takes out \$2,000, and they give me that amount for photographic services. I asked for the eight large cities, New York, Philadelphia, etc., \$800,000, all in detail. It was to repair all the public buildings, but the House did not give me any of it

except in New Orleans. I do not know why members of Congress have not asked for the appropriations.

The CHAIRMAN. I think we shall have to let that go for this year.

Mr. BECK. The Senate is going to be called on to increase this bill in a thousand things, and it is not decent to make us do it, and then we will be charged by the House of Representatives with extravagance in a political race.

Q. (By the CHAIRMAN.) What do you say to that?—A. I have not a word to say, if the Representatives in Congress will not take care of their own interests.

Q. You can manage these large buildings. They will have to just stand.—A. They will just stand, that is all. They will not fall down. They will have to stand and wait until Congress gives the money for them, but it would be better to have it now. This [presenting a paper] is the balance of appropriations on the 11th of June.

Q. It is the balance of appropriations of all the public buildings now under your control?—A. Yes, sir.

The CHAIRMAN. This list had better be put into the statement.

The list referred to is as follows :

Balances of appropriations available June 11, 1888.

Alaska, construction and repairs of buildings.....	\$15,000.00
Augusta, Me., post-office, court-house, etc.....	73,228.45
Augusta, Ga., court-house, post-office, etc. (site and building).....	18,052.10
Abingdon, Va., court-house, post-office, etc.....	71,583.28
Auburn, N. Y., post-office, court-house, etc.....	110,403.04
Binghamton, N. Y., post-office, court-house, etc. (site and building)....	133,819.97
Baltimore, Md., post-office, court-house, etc.....	136,749.74
Baltimore, Md., marine hospital (approaches).....	3,757.36
Belfast, Me., custom-house, etc.....	392.53
Brooklyn, N. Y., post-office, etc.....	1,220,584.26
Camden, N. J., post-office, custom-house, etc. (site).....	39,757.96
Carson City, Nev., court-house, post-office, etc.....	30,886.42
Clarksburgh, W. Va., court-house, post-office, etc.....	3,180.41
Charleston, S. C., custom-house (wharf).....	139,959.59
Charleston, S. C., post-office, court-house, etc. (site).....	20,000.00
Charleston, S. C., post-office, court-house, etc. (building).....	196,236.98
Chattanooga, Tenn., post-office, court-house, etc. (site and building)....	223,045.77
Cairo, Ill., marine hospital.....	5,379.61
Chicago, Ill., custom-house and sub-treasury (repairs).....	699.10
Chicago, Ill., custom-house and sub-treasury (ventilation).....	8,927.06
Chicago, Ill., appraiser's stores, etc. (site and building).....	130,927.39
Concord, N. H., post-office, court-house, etc.....	517.06
Concord, N. H., post-office, court-house, etc. (approaches).....	3,759.60
Columbus, Ohio, court-house, post-office, etc.....	2,568.21
Council Bluffs, Iowa, post-office, etc.....	15,791.42
Dallas, Tex., court-house, post-office, etc.....	7,667.55
Dallas, Tex., court-house, post-office, etc. (approaches).....	310.60
Denver, Colo., court-house, post-office, etc.....	64,091.33
Denver, Colo., branch mint.....	26,130.00
Des Moines, Iowa, court-house and post-office.....	139,734.73
Dayton, Ohio, post-office, etc. (site and building).....	107,012.66
Danville, Va., court-house, post-office, etc.....	926.00
Detroit, Mich., court-house, post-office, etc.....	18,273.08
Dubuque, Iowa, custom-house and post-office.....	1,063.38
El Paso, Tex., custom-house, post-office, and court-house (site and building).....	139,359.56
Eastport, Me., custom-house and post-office.....	89,672.18
Erie, Pa., court-house, post-office, etc.....	11,680.07
Erie, Pa., court-house, post-office, etc. (approaches).....	5,000.00
Frankfort, Ky., court-house, post-office, etc.....	206.41
Fort Scott, Kans., court-house and post-office.....	28,348.98
Fort Scott, Kans., court-house and post-office (approaches and heating apparatus).....	12,000.00

Fort Wayne, Ind., court-house and post-office.....	\$15, 133. 34
Fort Wayne, Ind., court-house and post-office (heating apparatus, elevator, and approaches).....	7, 965. 75
Fort Smith, Ark., court-house and post-office.....	16, 501. 10
Fort Smith, Ark., United States jail.....	5, 102. 63
Galveston, Tex., custom-house, etc.....	15, 610. 99
Hannibal, Mo., post-office, etc.....	239. 55
Hannibal, Mo., post-office, etc. (approaches).....	740. 01
Houston, Tex., post-office, etc. (site and building).....	1, 389. 07
Harrisonburgh, Va., court-house, post-office, etc.....	9, 947. 43
Huntsville, Ala., court-house, post-office, etc. (site and building).....	38, 634. 97
Jefferson City, Mo., court-house, post-office, etc.....	2, 662. 71
Jefferson City, Mo., court-house, post-office, etc. (approaches).....	286. 10
Jacksonville, Fla., post-office, custom-house, etc. (site and building).....	69, 637. 27
Jefferson, Texas, court-house, post-office, etc. (site and building).....	5, 446. 11
Key West, Fla., court-house, post-office, etc.....	90, 722. 22
Keokuk, Iowa, court-house, post-office, etc.....	64, 872. 61
Leavenworth, Kans., court-house, post-office, etc.....	6, 825. 23
Leavenworth, Kans., court-house, post-office, etc. (approaches).....	316. 73
Louisville, Ky., court-house, post-office, etc.....	234, 300. 86
Lynchburgh, Va., court-house, post-office, etc.....	263. 57
La Crosse, Wis., court-house, post-office, etc.....	43, 884. 40
Los Angeles, Cal., court-house, post-office, etc. (site and building).....	20, 795. 06
Manchester, N. H., post-office, court-house, etc.....	76, 087. 10
Macon, Ga., court-house, post-office, etc.....	11, 281. 48
Macon, Ga., court-house, post-office, etc. (approaches).....	4, 000. 00
Marquette, Mich., court-house, post-office, etc.....	19, 604. 45
Minneapolis, Minn., post-office, etc.....	30, 843. 93
Montpelier, Vt., post-office, court-house, etc.....	119, 478. 27
New Albany, Ind., court-house and post-office.....	11, 984. 67
New Albany, Ind., court-house and post-office (approaches).....	4, 000. 00
New Bedford, Mass., custom-house and post-office (purchase of land).....	6, 274. 71
New Bedford, Mass., custom-house and post-office.....	93, 353. 14
Nebraska City, Nebr., court-house, post-office, etc.....	12, 636. 77
Nebraska City, Nebr., court-house, post-office, etc. (approaches).....	4, 910. 35
Oshkosh, Wis., court-house, post-office, etc. (site and building).....	15, 955. 75
Oxford, Miss., court-house, post-office, etc.....	1, 359. 99
Oxford, Miss., court-house, post-office, etc. (approaches).....	104. 15
Owensborough, Ky., post-office, etc. (site and building).....	14, 221. 10
Peoria, Ill., post-office, court-house, etc.....	833. 90
Peoria, Ill., post-office, court-house, etc. (approaches).....	1, 630. 00
Port Townsend, Wash., custom-house, post-office, etc.....	79, 399. 86
Port Townsend, Wash., custom-house, post-office, etc. (approaches and heating apparatus).....	12, 000. 00
Pittsburgh, Pa., court-house and post-office.....	286, 781. 49
Philadelphia, Pa., custom-house.....	976. 50
Quincy, Ill., post-office, court-house, etc. (approaches).....	384. 55
Reading, Pa., post-office, etc.....	18, 465. 73
Rochester, N. Y., court-house, post-office, etc.....	141, 790. 12
Richmond, Va., custom-house, etc.....	2, 335. 13
San Antonio, Tex., court-house, post-office, etc. (site and building).....	23, 407. 66
Scranton, Pa., post-office, etc.....	39, 311. 63
Sacramento, Cal., post-office, etc.....	69, 582. 88
Savannah, Ga., court-house, post-office, etc. (site and building).....	29, 699. 52
Shreveport, La., post-office, court-house, etc.....	561. 47
Springfield, Ohio, post-office, etc.....	30, 580. 25
Springfield, Ohio, post-office, etc. (approaches and heating apparatus).....	9, 590. 50
Saint Louis, Mo., old custom-house.....	50, 953. 79
Saint Joseph, Mo., post-office, etc.....	117, 270. 64
Saint Paul, Minn., custom-house, etc. (purchase of land).....	64, 693. 87
Springfield, Mass., post-office, etc. (site and building).....	30, 333. 16
Santa Fé, N. Mex., court-house, etc.....	9, 776. 47
San Francisco, Cal., post-office, court-house, etc. (site).....	350, 000. 00
Syracuse, N. Y., post-office, court-house, etc.....	62, 723. 83
Terre Haute, Ind., post-office, etc.....	13, 419. 11
Terre Haute, Ind., post-office, etc. (approaches).....	251. 72
Toledo, Ohio, custom-house, court-house, etc.....	16, 140. 10
Troy, N. Y., post-office, court-house, etc.....	196, 786. 61
Tyler, Tex., court-house, post-office, etc. (approaches).....	120. 45
Williamsport, Pa., court-house, post-office, etc.....	173, 167. 25

Wilmington, N. C., post-office, custom-house, etc. (site and building) ..	\$8,161.13
Winona, Minn., court-house, post-office, etc.	82,083.47
Wichita, Kans., post-office, court-house, etc.	73,433.58
Waco, Tex., court-house, post-office, etc., (approaches)	1,591.16
Wilmington, Del., court-house, post-office, etc. (site and building)	117,596.34
Treasury Building, Washington, D. C., improving sanitary condition..	3,453.99
Treasury Building, Washington, D. C., silver-vault	93.30
Heating apparatus for new public buildings	12,787.87
Charleston, W. Va	52,000.00
Nashville, Tenn., elevator	4,000.00
Jersey City, N. J.	12,155.00
Detroit, Mich., marine hospital	2,500.00
Pensacola, Fla	1,505.52
Newark, N. J	350,000.00
Signal Office, Washington, D. C	32,925.00
Asheville, N. C	100,000.00
Buffalo, N. Y	250,000.00
Indianapolis, Ind.	150,000.00
Lancaster, Pa	100,000.00
Atlanta, Ga	120,000.00
Quarantine station, Ship Island, Mississippi	45,000.00

COAST AND GEODETIC SURVEY.

STATEMENT OF F. M. THORN.

Superintendent of U. S. Coast and Geodetic Survey.

F. M. THORN appeared.

By the CHAIRMAN:

Q. Take the first item of the House bill for the Coast and Geodetic Survey. Is that all right?—A. All the items beginning on page 19 are, according to the figures which we gave to Mr. Randall's committee in response to his request that we would cut down the original estimate contained in the Book of Estimates, to bring the aggregate to \$185,700, which had been appropriated the previous year, and, therefore, I can only say that upon that basis the items are all right, and we are reconciled to abide by the action of the House. There is a separate appropriation for the Alaska boundary survey. One dollar expended in Alaska involves, perhaps, as much work as \$3 or \$4 in any other part of the country. I say we are content to abide by the action of the House so far as it relates to our expenses for field work.

By Mr. BECK:

Q. There is some new language put in the bill in line 5 of page 19—

To be expended in accordance with the regulations relating to the Coast and Geodetic Survey from time to time prescribed by the Secretary of the Treasury.

You do not object to that?—A. We do not. We suggested that ourselves.

Q. Then on lines 21, 22, and 23, in the clause providing "for re-surveys," I find—

And Connecticut River to Hartford, Connecticut, and Hudson River to Troy, New York.

Is that as formerly? Is that all right?—A. That is correct. That will be expended there in the event of its not being used in the first localities mentioned.

By the CHAIRMAN :

Q. Down to what page are you satisfied ?—A. We may say generally down to “pay of office force.” They have given us substantially what we asked for in that respect, except where we asked for an increase of three people whose compensation had been reduced by the abolishment of statistics a few years ago and who deserve more pay than they are getting on account of the services rendered. The House refused to allow it.

Q. Here is an item on page 24—

For contribution to the “International Geodetic Association for the measurement of the earth,” or so much thereof as may be necessary, four hundred and fifty dollars, to be expended through the office of the American legation at Berlin; and for expenses of the attendance of the American delegate at the general conference of said association, or so much thereof as may be necessary, five hundred and fifty dollars.

A. That does not increase the aggregate of the expenditures. It is payable out of the previous item for objects not before named. So it does not exceed the estimates or the aggregates of appropriations, and is simply a response to a very pressing invitation from the German Empire to this Government to become a party to that convention.

Q. And you propose to become a party to it by this appropriation ?—A. Yes.

Q. Is that a permanent association ?—A. Yes; calculated to last for say eight or ten years.

Q. Is it in connection with the geodetic survey they are making throughout Europe now ?—A. It is calculated to bring uniformity and conformity in methods and computations.

Q. The Alaska boundary survey is provided for on page 24 of the bill—

For expenses in carrying on a preliminary survey of the frontier line between Alaska and British Columbia, in accordance with plans or projects approved by the Secretary of State, including expenses of drawing and publication of map or maps, twenty thousand dollars, said sum to continue available for expenditure until the same is exhausted.

Have you any plans about the execution of that work ?—A. Yes, we have; but we make them subject to the concurrence and approval of the State Department, because it is a matter broached by the State Department—an international matter—and one which they ought in a measure to control. The scheme is one which I think I had the honor to suggest, and Mr. Dall also had to do with suggesting a bill to Congress last December, when the President and the Secretary of State recommended it in substantially the same way.

Q. I should like to see the estimate.—A. The notion is to accurately locate the latitude and longitude of certain points that are accessible by the water-ways, the rivers that make way from the sea-coast into the interior, so that those points and the forty-first meridian lines may be established, to enable any joint commission or convention which may hereafter undertake to settle the location of the boundary to have some definite localities which are accessible, which can be used for laying down the boundary.

Q. Is this a work which is to be conducted jointly ?—A. No provision has been made for its joint conduct, but, in my opinion, the English Government ought to send surveyors to act jointly with our surveyors, so that when certain points are located both parties shall agree as to the accuracy of those locations.

By Mr. BECK:

Q. That, I suppose, is the main reason why you are to act in conjunction with the State Department?—A. Yes, sir.

By the CHAIRMAN:

Q. Are these points to be ascertained astronomically; is that your idea?—A. Yes, sir; astronomically. There is no possibility of fixing the points according to the description in the treaty, by reason of the treaty having been originally based upon a map which was pure theory and not in accordance with the actual geography of the locality.

Q. I am told that the country back there is densely wooded; do you intend in this preliminary survey to go back from the coast at all?

Mr. B. A. COLEMAN. We intend to confine ourselves to the water-ways principally. That is the only means of getting into the country or out of it with anything like satisfaction.

Q. Using your little Coast Survey steamers?

Mr. THORN. No; Indian canoes, which will not confine themselves to the sea water-ways, but go to the rivers, getting back into the interior by water, that being the easiest and safest.

By Mr. BECK:

Q. They come down very violently, many of them, do they not?—A. Yes, sir.

Mr. COLONNA. There has been an appropriation for the survey of the coast of Alaska made for some years. In the first place, Congress provided a steamer called the *C. P. Babson* to be built for the survey of the coast of Alaska. She has been at work there, and about one-third of the waters of Alaska available for commerce and fisheries, etc., have been examined.

By the CHAIRMAN:

Q. Is the provision "for pay of field officers" all right?

Mr. THORN. Yes, sir; we abide by that.

Q. Is the provision for "the pay of office force" all right?—A. On page 28, between lines 6 and 7, there should be provision for additional clerks. There should be "for additional draughtsmen, at not exceeding \$900 per annum each, \$4,500." That would leave us to get as many as possible under \$900 as we can, but \$900 will certainly secure them.

Q. You want that item inserted?—A. Yes, sir.

By Mr. BECK:

Q. Is there any paper stating the reasons for these additional draughtsmen?—A. I have a paper in my pocket which states the case, but I can state it in the shape of a formal letter, if you wish.

The CHAIRMAN. Address us a letter on the subject.—A. I shall be glad to do so.

By the CHAIRMAN:

Q. What else do you want?—A. Following line 5, on page 29, I would insert:

For additional engravers, at not exceeding \$900 per annum each, \$2,700.

Q. You want three more engravers?—A. That means three more unless we get them for less than \$900.

By Mr. BECK:

Q. Let your letter embrace that also.—A. Yes; I will give the reasons for that. Allow me now to go back to page 28, after line 18;

there are three classes of employés that we want to include in the same terms; and at that point I wish to insert:

For additional computers, at not exceeding \$900 each, \$2,700.

These three items will aggregate an addition to the House bill of \$9,900; and as a sort of inducement to treat us with your customary liberality I will say simply that in the pay of the field force there is a reduction of \$3,430; and we turned into the Treasury from sales of publications, charts, and from miscellaneous receipts \$7,800 last year, making an aggregate of over \$11,000, which we can offset against this increase of \$9,900, so that the country, the Government, is still a gainer, and will be essentially a gainer in the matter of increased administrative efficiency.

Q. You require this force?—A. They are all necessary, and the draughtsmen are a little more necessary than the others. They are essential, indeed, to going on with the work.

Q. What else?—A. That is the end of any suggestions we have to make.

THE BUREAU OF ENGRAVING AND PRINTING.

Messrs. J. H. Ralston, M. H. Kearney, and E. L. Jordan appeared as representatives of the plate-printers employed in the Bureau of Engraving and Printing, Treasury Department.

STATEMENT OF J. H. RALSTON.

Mr. J. H. RALSTON appeared.

By the CHAIRMAN:

Q. State what you wish.—A. The first amendment we desire to call the attention of the committee to, and to request the adoption of, is in the paragraph on page 14, which reads:

For wages of not more than two hundred and twelve plate-printers, at piece-rates to be fixed by the Secretary of the Treasury, not to exceed the rates usually paid for such work, including the wages of not more than two hundred printers' assistants.

With regard to this it is perhaps proper to say that Mr. Foran moved an amendment in the House of Representatives, which was not however adopted, striking out "not more than 212," and striking out the limitation, also, in the fourth line of the same paragraph, "not more than 200," as applying to printers' assistants. That amendment was voted down at the time, but subsequently the House adopted a proviso which appears at the end of the clause in these words:

Provided, That there shall not be an increase of the number of steam plate-printing machines in the Engraving and Printing Bureau.

The effect of that proviso, as we believe, is such as to perhaps make the limitation 212 a source of trouble to the Bureau; that is, we believe that the limitation to 212 will work obnoxiously to the interests of the Government and to all parties concerned, for this reason: That in case of an unusual pressure, as a special demand for work at any given time, it will be impossible for 212 printers to do the work. The same reasoning which applies to the Government Printing Office upon such proviso as this would apply to the Bureau of Engraving and Printing, where at special times there is a tremendous amount of work, such

as comes on at the Government Printing Office; and if the limitation existed as to that office, it would frequently work a hardship; and in this case, more especially in view of the adoption of the amendment, which is an amendment we ourselves asked for, that there should not be an increase of the number of steam plate-printing machines, at the same time that we ask that there shall not be an increase of the number of steam plate-printing machines we desire that there shall not an embarrassment come to the Bureau by reason of the limitation preceding.

Q. Your idea, if I understand you aright, is that there are two limitations here which, if they are both kept, will embarrass the Bureau; that is to say, if they can not buy any more machines and can not have more than 212 plate-printers, at times there may be more work than can be done.—A. Yes, sir. We desire to make the proviso as effectual as it can possibly be made. We do not desire to embarrass the work of the Bureau, and have convinced the House that there are substantial reasons why there should not be an increase in the number, but we think that the feature of the limitation will result in an embarrassment to the Bureau.

Q. Is there always an abundance of plate-printers at hand?—A. There is a considerable number of plate-printers who in an emergency, as I understand, can be obtained from New York and Philadelphia. There is not an abundance here because there is not employment for plate-printers in Washington outside of the Bureau.

Q. Are you an employé of the Bureau?—A. No, sir; I am in the Census Office.

Q. And have been for years?—A. Yes, sir; and I appear for the plate-printers.

Q. Do they employ plate-printers in the Census Office?—A. They have found a necessity to do it in connection with bringing forward to the various committees of Congress different items. I am here to present the deterioration which has resulted from the use of the steam plate-printing machines. My employment is to test the use of the plate-printing machines and to point out, so far as may be, the deterioration to the securities of the Government which has resulted from their employment.

By Mr. BECK:

Q. Your views affect all steam plate-printing?—A. All steam plate-printing presses.

Q. You desire to go back to the old hand-presses?—A. Yes, sir. I do not know whether your committee cares to go into that discussion in view of the expression on the part of the House in connection with the matter of limitation put on by the House, but if this committee cares to receive any information as to the relative merits of the two presses, we are prepared to furnish everything in our power, and I think pretty complete information as to the comparative excellence of the work and the relative economy.

Aside from the amendment I have referred to, the plate-printers believe that the clause inserted by the House would be more effectually carried out by the further addition to the proviso of these words:

And that the royalty hereafter paid by the Government shall not exceed the amount paid during the fiscal year ending June 30, 1888.

The reason why the plate-printers believe that the intention of the House would be more fully carried out by the adoption of this amendment is this: The intention of the House is that there shall not be an

increase in the amount of steam plate-printing done by the Bureau; but without the further amendment which the plate-printers suggest here, it would be possible to evade the full intent of the clause by running two or three sets of hands on the steam-presses now in existence in the Bureau; that is, there are 19 steam-presses in existence; by the employment of three sets of hands they would be made equivalent to 57 steam-presses, working the full twenty-four hours in shifts of eight hours each; and with a view of guarding against any such condition of affairs as that, the plate-printers submit this further amendment, which I have read.

By the CHAIRMAN:

Q. Is not this all a matter of administration, that should be left to the Secretary of the Treasury rather than that we should hamper him by these restrictions?—A. It might have been a question of administration with the House as to whether they should limit the employment of steam-presses at all.

Q. I am not speaking of the House now. I am speaking of the general question of our undertaking by law to run the Bureau of Engraving and Printing. Should not that be left, as far as possible, to the Secretary of the Treasury, who is the responsible officer in charge of that Bureau?—A. That may be.

By Mr. BECK:

Q. Suppose this state of case: You alluded to the immense amount of work that sometimes comes in unexpectedly; there are nineteen presses working eight hours a day and the men on hand can not do it. Ought not the Secretary to have the right, in order to meet that emergency requiring more than the presses can do or the men can do within the limited time, to use whatever means he has to comply with the emergency? Should the work of the Government be stopped until men can be found when there are presses that could be put to work?—A. In the first place, I am not aware that there is any practical difficulty in obtaining the men necessary.

Mr. BECK. But the Government might be embarrassed at certain times when great pressure of business came.

By the CHAIRMAN:

Q. Is there lack of room for men to work?—A. That is something which could be easily met by the management of the Bureau if the lack existed.

Mr. M. H. KEARNEY. When Mr. Graves took charge there were two hundred and forty odd presses and now only one hundred and fifty-seven. There is room enough.

Q. You are a plate-printer?

Mr. KEARNEY. Yes, sir.

Mr. BECK. Are you now in the employ of the Government?

Mr. KEARNEY. I am now in the employ of the Government; yes, sir.

Mr. RALSTON. In answer to Senator Beck's question I beg to say that the limitation of employment to two hundred and twelve plate-printers might result in hampering the administration of the Bureau; but I know of no practical difficulty in enlarging that number and obtaining additional men when the stress of work demands that there should be additional plate-printers. They can not be obtained in this city, as I said before, but in New York and Philadelphia I know of no practical difficulty in finding persons to supply any demand.

But the object in submitting this amendment is to carry out, if possible, in a fuller way the evident intent of the House amendment, because could these presses be run to the extent of twenty-four hours a day we should have a practical multiplication of the machines now employed by three.

By the CHAIRMAN:

Q. What is the royalty paid?—A. The royalty paid is \$1 per 1,000 impressions. It amounts to about \$20,000 a year.

Q. On the machines now there running eight hours?—A. Yes, sir; all the machines now there are running eight hours per day.

Q. This machine performs the labor of how many plate-printers, the machine running eight hours and the plate-printers working eight hours?—A. That is a question which I can only answer in a measure. It has been answered in several different ways by the present Chief of the Bureau. In the first place, his estimates to Congress, as shown by the Book of Estimates, are based on the theory that one press does the work of five men. In a communication sent to the House of Representatives in March, he estimated that one press did the work of $4\frac{2}{3}$ men, not a very material difference, but in making even that estimate there is a defect which attaches to the whole estimate, in this, that he has compared the actual production of the 160 hand-presses with the actual production of the steam-press, entirely ignoring this element that all the slow and difficult work is done by the hand-press; that all the most difficult fine work and work calling for the highest degree of care is done by the hand-press and enters into the hand-press totals, while the work that the hand-press printers themselves would do rapidly is done by the steam-press. So he has compared difficult work on the one hand with easy work on the other, and is thereby prevented arriving at a just conclusion.

Q. You think his adjustment is too high?—A. I think his adjustment is one-third too high.

Q. What is the estimate of the printers themselves?—A. About three to one; but the matter of economy is not a matter of three to one by any means. The matter of economy is entirely different, for the cost of running a machine press is vastly at least twice the expense of running a hand-press, which, of course, makes a very material difference.

STATEMENT OF M. H. KEARNEY.

By the CHAIRMAN:

Q. Mr. Kearney, do you want to suggest anything?—A. I want to call the attention of the committee to the fact that Mr. Graves in his own recommendation to Congress suggested that there should be only a certain number of men—187. When the work came to be pushed 187 men could not do the work. He then appealed to the Secretary that the only course left to him was to get some more presses, and by that means he managed to get 12 more steam-presses than there were when he came there. Now he has asked for 212 men; he has asked also for 12 more steam-presses. By leaving this limit of men he will be compelled to work the presses at least eight hours more each day. That is equal to giving him 19 more presses.

Q. That is to say, he works the steam-presses now eight hours, and will have to run them sixteen?—A. Yes, because the Bureau will be embarrassed, and he will be compelled to do that. Another thing, when he gets pushed he is compelled to slight the work.

Q. Do you claim that this steam-press does not do the work as well as the hand-press?—A. Yes, sir; it never does anything but what is considered inferior work. I do not think it is the intention of the Government of the United States to issue any work that is inferior.

By Mr. BECK:

Q. A certain royalty is paid for eight hours' work. Suppose those presses are run sixteen hours, what effect would that have on the royalty?—A. So much more. As many as the presses do are paid for. If they only do 1,000 the head of the Bureau pays for 1,000, and if they do 20,000 he pays for 20,000.

By the CHAIRMAN:

Q. The Government must buy the machines and then pay the royalty besides?—A. No; they first pay \$400 for that patent; then they pay \$500 for the privilege of building the press; then they pay for the last machines, I think, \$1,250 before having them built.

By Mr. BECK:

Q. Who owns those patents?—A. They belong to the estate of Mr. Milligan. They are owned by Mrs. Milligan and a man named Steele, of Philadelphia.

Q. Are they used elsewhere?—A. Only on United States Government work and on postage-stamps in New York, and a few South American people use them. In the exchanges of New York they will not have any work that has machine work done on it.

Q. Are all our postage-stamps printed on these presses?—A. Yes, sir; we have some samples here which will show you the difference between the various kinds of work.

Q. All the work you are talking about is done under Mr. Graves?—A. Yes; except the postage-stamps.

Q. Where are the men employed in making postage-stamps?

Mr. KEARNEY. In New York.

The CHAIRMAN. The postage-stamps are all printed in New York?

Mr. RALSTON. Yes, sir.

Mr. KEARNEY. It was thought of taking all the work from New York at one time because it was done on the machines.

The CHAIRMAN. The postage-stamps you have submitted are postage-stamps ready for use?

Mr. RALSTON. Yes, sir. I have exhibited them to show the variations in the work.

The CHAIRMAN. These machines are only used for printing backs?

Mr. KEARNEY. Only for printing backs and also the revenue stamps.

STATEMENT OF E. L. JORDAN.

E. L. JORDAN appeared and said:

It is a very strange thing that Mr. Graves admits himself as Congressmen and the gentlemen now present that the cigarette stamps can not be adapted to the steam presses. I asked him why. He said: "There is a fine engraving on them." That is an admission that the cigarette stamp is a higher engraving, and can not be done on steam-presses, and yet he subjects the silver-certificate backs to the steam-presses. The silver certificate, as a circulating medium, should have as much care taken of it as a common cigarette stamp.

By the CHAIRMAN :

Q. How do you know that this steam-press does not make a permanent impression upon the back?—A. Because it is impossible for any machine to be utilized to handle a rag. The plate-printer first uses the hand-roll. The lines are engraved in different directions, and he wipes off the plate, and the heavy lines he has to wipe in a certain direction, and the lighter lines he has to wipe in the opposite direction, so as to leave the ink there, and he has to be careful. In wiping the machines, on the other hand, no matter how the engraving in the plate runs, he simply uses the scrub on all. Our object in putting in the limitation read by Mr. Ralston is simply so that Mr. Graves can not double up. The House put it so that he could not employ more than the present number of machines, 19. If he is allowed to put three sets of hands on he can pay a royalty on 57. As long as there is a limited number of men there will always be an excuse for running the machines night and day. The limitation ought to be stricken out for this reason. There is no other department under the Government that has such a limitation. There the work is on orders from the Treasury Department. If the orders do not come they can not put men on to work. So they can not put on more men than are absolutely needed.

Q. You are one of the printers who work by the piece?—A. Yes, sir.

Q. You get piece rates?—A. Yes, sir.

Q. Working eight hours at piece rates what are your wages?—A. The average of the whole?

Q. Per day each?—A. The whole average is about \$3.75 a day.

Q. The provision is for "not more than two hundred printers' assistants"?—A. That comes out of our wages.

Q. One dollar and twenty-five cents per day is allowed for each one employed?—A. That \$1.25 comes out of the pay we receive. We pay our own assistants.

Q. Do you employ them?—A. No; the Bureau employs them, but they are paid out of our wages. If I make \$5 a day, \$1.25 of that goes to the assistant.

Q. And you must have an assistant?—A. Yes, sir.

Q. Every plate printer must have a man at his side?—A. He must have an assistant.

Q. Are the assistants men or women?—A. Ladies, generally.

Q. And they get \$1.25 a day?—A. Yes, sir.

Q. And that comes out of your gross earnings?—A. Yes, sir.

Mr. KEARNEY. The steam-press girl gets 25 cents a day extra.

The CHAIRMAN. Who are the "thirty-eight printers' assistants at the steam-presses?"

Mr. KEARNEY. Young ladies that lay on the sheets and take them off.

The CHAIRMAN. They get \$1.50 a day?

Mr. KEARNEY. Yes, sir.

CARE OF TREASURY BUILDING.

STATEMENT OF E. B. YOUMANS.

E. B. YOUMANS, of the Treasury Department, appeared.

By the CHAIRMAN :

Q. We notice that the appropriations, on page 37 of the bill, for pay of assistant custodians and janitors is \$460,000; you estimated for \$626,000?—A. I think so.

Q. Have you in writing what you want to say to us about this whole business?—A. No, sir; I only expected to appeal to you on the question of repairs of the Treasury Building, leaving the other matters as they are.

Q. Very well; appeal to us in regard to the Treasury Building.

By Mr. BECK:

Q. You do not make any point on the provision relating to custodians and janitors?—A. No, sir; we shall take that appropriation and apporition it among the buildings in accordance with the amount. That is the direction of the Secretary.

Q. What do you know in relation to the clause, on page 38 of the bill, lines 8 and 9, in the appropriation for "furniture and repairs of furniture," which reads "exclusive of personal service except for work done by contract?" That appears in many cases, as in the appropriation for "heating apparatus for public buildings," for hoisting, ventilating, etc., on page 39, lines 11 and 12, "exclusive of personal services except for work done by contract." There are a lot of things there, for hoisting, etc., that you could not make contracts about.—A. I imagine that is to prevent the employment of personal services in the Department under this appropriation. We so construe it, and it must be let by contract.

By the CHAIRMAN:

Q. And that you are going to do?—A. So far as it is practicable. In the case that I speak of it is utterly impossible.

Q. On page 8, beginning in line 10, there is an item "for Treasury Building at Washington, District of Columbia;" what have you to say on that subject?—A. The Secretary's estimate for that appropriation was \$30,000. It is reduced in the bill, as passed by the House, to \$8,520, and distributed and made applicable for special purposes, except \$1,000. From my experience in supervising this appropriation, I can say that we shall have great difficulty to go through the year as this appropriation stands, for the reason that there is but \$1,000 that can be used for general repairs out of the \$8,520.

By Mr. BECK:

Q. And that embraces both the Treasury Building and the Winder Building?—A. Yes, sir; and that includes material as well as labor. So if left as it is, there will be practically nothing for repairs for those two buildings, except that which is specially provided for in this bill, to wit, the roof and roadway. The estimate and the information furnished to the committee I hold in my hand, which will give you the full history of the repairs and why they were deemed necessary. I can state in brief.

By the CHAIRMAN:

Q. If you have it in detail you had better either read that or leave it with us?—A. I think I would prefer to leave this, as the paper I hold in my hand was sent at the request of the House committee for their information. It will give you all the information I could give you if I were to talk for a time.

Q. One item is "resetting and repairing loose tile flooring, \$800;" you want to do that?—A. It is necessary to do that.

Q. Another item is "for flooring rooms, \$2,400."—A. I think that that amount is a little too much at present, for the reason that in the last urgent deficiency bill \$4,000 was given, and a portion of that money went for relaying floors. If it could be used for any other purpose it

would be all right to leave it in, but I do not think we need that much for relaying floors now.

By Mr. BECK:

Q. How much do you need?—A. I should say \$1,500 would do all the relaying of floors that we need to do during the current year; but there are many things that are left out.

By the CHAIRMAN:

Q. You can get on with \$1,500 for that particular thing?—A. Yes, sir.

Q. Now, recurring to the next item which is, "repairs to roadway west of building, \$300;" how about that?—A. It is important that should be done.

Q. And that amount is enough?—A. Yes, sir.

Q. The next item is, "lead calking for joints in the approaches on the north, south, and west, \$350;" how about that?—A. It means the area that runs down where we take in coal and heavy materials. It is not the street.

Q. Then, "lead calking for joints in the approaches, \$350;" is that all right?—A. Yes, sir.

Q. And needed?—A. Yes, sir; all those are important.

Q. The next item is, "reslating southwest pavilion roof, \$1,920;" is that important?—A. Yes.

Q. The next is, "painting remainder of roof, \$1,800;" how about that?—A. That is very important.

By Mr. BECK:

Q. What is of the next importance?—A. The next important thing is the general repairs, which consist, first and most important, of plumbing. I do not know how many miles of pipe there are in the Treasury building, but there is hardly a day since I have been there but what some accident has occurred to some of the pipes which needed immediate attention. In the tanks in the attic which run the elevators, etc., some defect would occur and immediate attention was necessary to prevent some portion of the building being flooded. So it goes from one day to another. A plumber is called from one part of the building to another repeatedly to attend to these matters.

I will add, that under the present system (how long it has been in vogue I do not know, but it was there when I came into the Treasury) the steam is exhausted into the sewer-pots, and in consequence of that, I am told by experts, the constant expansion and contraction of the sewer-pots causes a separating of the joints and a leak occurs either of sewer-gas or steam, or both. At present Assistant Secretary Maynard's room is vacated by reason of that drainage in his room of a pipe running up the wall. The first discovery is that the wall gets moist and damp and clammy, and the air of the room is vitiated. It is very difficult to do this work by contract, to advertise, as you can readily understand, and I have asked that Congress appropriate for a force—a plumber and an assistant plumber, and a carpenter and an assistant. Those four men, I deem, are of vital importance to the good order and care of that building. There is work enough, in my judgment, to keep them constantly employed during the entire year, and their watchfulness, being on the ground, would save many thousands of dollars.

Q. By the "stich in time?"—A. Yes, sir. For the present fiscal year there is no appropriation except this \$1,000, and that does not admit of their employment, and consequently they were dismissed. It was that

particular point that I desired to urge upon this committee. I do not know whether it was an oversight in the House committee or not.

By the CHAIRMAN:

Q. In your memoranda you have estimated for two plumbers, two carpenters, and two painters?—A. Yes, sir.

Q. You provide for them at specified sums per day, aggregating in all \$5,165 for the year.—A. Yes, sir.

Q. Then you estimate that \$2,100 should be provided for supplies, that is, for materials for them to use?—A. Yes, sir.

Q. That is the item that you are especially interested in?—A. I think that is a very important item. With that force we could care for that building.

Q. That, added to the sum already appropriated, deducting \$900, would care for that building; is that your idea?—A. That is my idea.

Q. And with that exception the appropriations here are satisfactory to you?—A. No, sir.

Q. I will not say "satisfactory," but I mean that you accept them?—A. We accept them. You remember the Fifteenth street front is very bad. A portion of it is decaying. I have examined it personally. The stones are crumbling and some of them are loose and have to be tied in with wire to keep them from tumbling into the street. If Congress desires that to continue, it is their business; but providing for that is not an absolute necessity like the other. If, in your judgment, you can not see the way clear to give me this force, then I would ask you to strike out these specific appropriations and give me that money in lump.

Q. Now, suppose we give you in lump the money that you ask here, \$5,165 and \$2,100, and add that to the \$1,000 "for repairs to Treasury Building and Winder Building," and instead of making it \$1,000 we make it these three sums?—A. Leaving the specific appropriations as they are?

Q. Leaving them as they are.—A. The only objection I would have to that is one that is sometimes raised by the Comptroller, that we have no right under the appropriation to employ personal services.

Q. You are performing it by day's work instead of by contract?—A. Yes.

By Mr. BECK:

Q. You can not make repairs with out somebody doing the work?—A. That is true; and we have been doing it, and it has been the custom for years, notwithstanding the statute is square against it.

By the CHAIRMAN:

Q. Suppose we put it in this form: "For plumbers, carpenters, and painters, and materials for their use"?—A. I think that would cover it.

Q. Then, "For repairs to Treasury Building and Winder Building, \$1,000," or whatever sum we propose, "including compensation to plumbers, carpenters, painters, and material for their use"?—A. That would cover it beyond a question, and that is about all that I regard important, and I will state that that is a necessity which you can readily see.

By Mr. BECK:

Q. It must be indispensable to a great building like that, and the Winder Building is an old rat trap.—A. It is in an unsuitable condition at present for the purposes for which it is intended, with no money to repair it. I have come here for that, and am willing to let the other matters pass,

I might add here that we received notice from the House Appropriations Committee that we had no right to employ personal services out of these appropriations, but the Comptroller stated that there seemed to be no other way; that we must attend to this building from this appropriation, and there was no way to do it successfully except to employ men to do the work. It was of such a character that it could not well be contracted for; it would not admit of the delay required for contracts, and so it has been done.

By the CHAIRMAN:

Q. Suppose the paragraph was made to read:

For repairs to Treasury Building and Winder Building, \$8,265, including plumbers, carpenters, painters, and materials for their use.

How would that do?

Mr. BECK. That would cover it.

Mr. YOUMANS. That is about all I dare ask.

I want to call your attention to the item on page 38, "Furniture and repairs of furniture." That appropriation is under my supervision, and within the last three months the Comptroller has held that we can not employ personal services payable out of that appropriation.

By Mr. BECK:

Q. I called your attention to the words "exclusive of personal service, except for work done by contract."—A. The House committee knowing that, we sent a list of employes who were deemed necessary to prepare the plans and specifications and drawings for furniture, both special and standard, for public buildings, and it is not allowed in the bill. I will add here that we have in the Treasury Department an inspector of furniture provided for.

By the CHAIRMAN:

Q. Who is he?—A. Mr. Billingsley, an experienced furniture manufacturer. He has charge, under certain restrictions, of this appropriation. To illustrate, a building is completed by the Supervising Architect and turned over to the Treasury to be furnished. This furniture inspector goes to the building, takes the dimensions of the rooms, talks with the postmaster and the various officials who are to occupy the building, and brings back the necessary data from which can be made the drawings and specifications for the advertising for that particular furniture in that building. It is then advertised, and we have thorough competition upon that and generally receive from eight to ten bids of prominent furniture manufacturers in the West and East—largely in the West. Under this bill as it stands we have no appropriation out of which we can pay a draughtsman or a person skilled in this particular work to properly prepare these plans and specifications; and from my experience I can safely say that there are no two buildings that are alike to that extent that one plan can be applied to the other. We have what we call standard furniture which is general for all the buildings, but special furniture is that which is made specially for a particular post-office, the shape of the room, and the size and general needs of that particular building. It is absolutely necessary, in order to get intelligent bids which we can enforce, that we should have men who are skilled in this work. The Department submitted to the House committee a list of these men.

Q. You will have to bring that here?—A. I do not know, unless there is some change made in that appropriation, what we shall do in that matter.

By Mr. BECK :

Q. What changes do you suggest ?—A. That in addition there be an appropriation for a draughtsman, an assistant draughtsman, a tracer, and a copyist. I can not give you the exact force. It is only three or four people at a correspondingly low salary.

Q. With one hundred and eighty or two hundred buildings under your control you can not do without that force ?—A. That is what we do and have been doing.

By the CHAIRMAN :

Q. That is for the new buildings and not the old ?—A. Not the old buildings. There is very little change in the standard furniture, except desks which fit any building, but the new buildings require particular specifications as to the manner in which the post-office shall be divided by partitions, screens, railings, and such work. All that work is particular to that building, and not general.

By Mr. BECK :

Q. How do you do when anything is broken and needs repairs ?—A. We have an employé in the large buildings in this country, a cabinet-maker, to repair a broken chair, or a broken desk, or anything of that character, and pay him out of this identical appropriation.

By the CHAIRMAN :

Q. How are you going to do it ?—A. Otherwise we should have to send it out to a manufacturer or advertise and get proposals under the exigency, and the result would be that a large amount of the furniture would be shoved into the attics and new purchased in place of it. That is poor economy in my judgment. I think in the court-house and post-office in the city of New York one man would save more than any other ten men appropriated for in repairing furniture and little things that need attention. That is a matter for you gentlemen. Of course we can not employ them unless the law permits it.

Q. The Comptroller has already decided practically what is in the bill ?—A. He has decided that we can not employ them.

Q. That you can not employ a carpenter or a furniture man in the public building in New York City ?—A. Under that appropriation with that restriction.

Q. But without it ?—A. Without it we could. That is what we have been doing, and the precedent is established.

By Mr. BECK :

Q. And the Comptroller has recognized it ?—A. He passes it because it seemed to be so important.

By the CHAIRMAN :

Q. Is there any abuse in the employment of men here under this appropriation, rendering personal services ?—A. Not that I have ever been aware of. It never occurred in this city or any other city where men are employed. As to these that I have described, they work constantly and they are very useful men. I do not know but that the Supervising Architect or some one who has a blanket appropriation might abuse it if pressed by Senators or members for any favors of which he could not rid himself in an honest way ; he might put on a man who was not needed.

I will send you a list of those employés.

Mr. BECK. I should like to have it sent.

The CHAIRMAN. You can send it to-morrow, and also state how many men you employ in New York City under this appropriation, and what they do. I take New York City as an illustration.

DISTRICT ARMORY BUILDING.

STATEMENT OF ALBERT G. ORDWAY.

ALBERT G. ORDWAY appeared.

By the CHAIRMAN:

Q. You want the Armory Building surrendered to the militia of this District?—A. Yes, sir. It is a very plain matter; will not lead to any debate, and scarcely needs an argument. It is a perfectly plain proposition of law. In 1855, in the sundry civil bill, you passed an appropriation directing the Secretary of War to erect a building for the care and preservation of the arms and accouterments belonging to the United States in the possession of the volunteer militia of the District of Columbia, the building to be used by them under such regulations as the President might prescribe. Under that law of 1855 and that appropriation the Secretary of War erected the building on Sixth street, on the Mall, called the Armory Building.

Q. On a Government reservation?—A. On a Government reservation. And that building remained dedicated to the uses for which it was built until after the close of the war, when the militia of the District, not being organized, and the building consequently not occupied, at the time of the Centennial Exhibition foreign governments gave to our Government an enormous amount of exhibits for our National Museum. The National Museum Building was not built, and it became a question what to do with them. Your committees looked about and found that this building was not in use, and they made an appropriation in the sundry civil bill of 1876 appropriating a sum of money to fit it up and repair it for the purpose, in the language of the law, "of storing the exhibits presented to the National Museum," and then each year thereafter in the sundry civil bill you appropriated a sum for a watchman. Finally the National Museum Building was finished, and in 1885 you stopped the appropriation. Since that time the Fish Commission, the National Museum, and the Smithsonian Institution have been in unauthorized, and, as I say, in illegal possession of the building. There has been no authority of law, there has been no appropriation to continue even the watchman.

Q. Was not that Armory Building used during the war by the Government for governmental purposes?—A. Yes, sir.

By Mr. BECK:

Q. It is on Government ground?—A. Yes, sir.

By the CHAIRMAN:

Q. Was not the Fish Commission there before 1875?—A. Not before 1876. There was no appropriation before 1876 for any use of the building other than for the District militia.

Q. Tell us where we shall send the Fish Commission?—A. That is not a fair question to ask me.

Q. Why not?—A. It is used by the Commission merely as a place of storage. It is merely a question of storing their material.

Q. They have fish there?—A. Yes, sir. Until you extend the National Museum the building belongs to us by law, and the Secretary of War made a formal demand on them to surrender. We have no place to put our things. Therefore the Secretary of War directed me to submit the matter to your committee. I can see the difficulty of finding a suit-

able place for the Fish Commission. In fact, that place is very suitable for their purposes, because they can have, and do have, a side-track to the railroad. I present our legal right to the building; but until you legislate for them, to put their Commission in a suitable place, we are perfectly willing to look around for a place. We have in our possession between \$40,000 and \$50,000 worth of Government property.

Q. Where is your armory now?—A. We have none. We have to pay out of our pockets for the temporary care of the property. You turn over to me \$30,000 or more of Government property to protect and I have to pay out of my own pocket for its preservation, as I am responsible for it. The only solution, it seems to me, is this: that until a place can be provided for the Fish Commission permanently some arrangement should be made for us. You should make an appropriation to enable the Secretary of War to temporarily rent a building for the purposes the law designates. It is not a matter of new legislation; it is not a matter subject to any points of order. It is a matter of obedience to law. We have possession of Government property and pay for its preservation out of our own pockets.

Q. You want it for the purpose of storing arms?—A. Not simply for storing, but for the purposes of drill, as this building was designed for a regular armory in which Government property is kept in the hands of the District militia, and as a place for their instruction and drill.

Q. You have a building now used for that?—A. Only for one battalion. There is no place large enough for all the men. We ask for \$10,000. Fix whatever amount you choose and let the Secretary of War hire a place. The Secretary could use any appropriation you deem proper by renting rooms in various places temporarily.

Q. How many militia have you in the District?—A. Two white regiments, two colored battalions, one battery of artillery, and one ambulance company. It is not a large force, but if you removed the regular troops from here, you would find, in case of emergency or danger, it would not be a larger force than was necessary to protect the public property. It leaves you free to remove the regular troops in case of exigency elsewhere. You can remove your artillery, marines, and cavalry, and we take care of the public property. I do not think it needs any argument on my part. The amendment calls for \$10,000. I am free to say we could get along by figuring closely with \$7,500. That would provide pretty good quarters and we could get along as long as you choose to keep possession of the other building.

THE GEOLOGICAL SURVEY.

STATEMENT OF J. W. POWELL,

Director of the Geological Survey.

J. W. Powell appeared and said: On page 51 of the bill, in the first line, I wish to ask for one change. It reads:

For five geologists, at \$4,000 each.

I ask that one of those may be given \$4,500, and may be made assistant director, so that I may have somebody who can sign papers and have some responsibility when I am absent.

By the CHAIRMAN:

Q. Did you estimate for that?—A. I did not.

Q. I am afraid that would hardly be within our purview. You see it would be the establishment of a new office. The officer ought to be confirmed by the Senate, as is the custom with all such officers. Have you the framework of an amendment covering that point?—A. No; but I can give it to you in a few minutes. If it is desired not to change the amount in any way, I have two geologists at \$3,000 each. The geologist filling one of those places died about six weeks ago. I shall have to appoint another geologist, and I would be willing to have one of those cut down in order that one might be raised, so as not to increase the total amount, if it is so desired.

Q. Instead of two geologist at \$3,000 each, you would say "one geologist at \$3,000, and one geologist at \$2,500?"—A. Yes, sir.

By Mr. BECK:

Q. There are five geologists given \$4,000 each now?—A. And just below there is an appropriation for two geologists at \$3,000 each. By cutting off \$500 from one there and putting on \$500 above it would keep the amount the same.

Q. Of the two geologists at \$3,000 each you would cut down one to \$2,500. That would make one geologist at \$3,000 and one at \$2,500?—A. I do not wish it to be understood that I want that cut down unless it should be deemed advisable in order not to increase the total amount of the appropriation.

Q. You could put them at \$2,750 each if you cut them both down.—A. No; I would just cut down one of those, leaving one at \$3,000.

Q. If you cut the other down to \$2,500 that would be below the geologist, who follows at \$2,750?—A. Certainly; but I have no man in that place. The gentleman who occupied that place, Professor Irving, a grandson of Washington Irving, died the other day, and we buried him by the side of Washington Irving. I have no man to fill that place.

Q. And you think you can fill it at \$2,500?—A. Not as well as I should like, but I could fill it at \$2,500, and save the \$500 for the place of assistant director, if the committee should deem it advisable.

Q. What else do you think should go in?—A. I estimated originally \$100,000 more for the whole amount, to be distributed through these items, and the explanation of that I have written out.

By the CHAIRMAN:

Q. Does that cover everything you want to say?—A. No; there are two small items I wish to speak of afterwards.

Q. Suppose we should not change the total amount?—A. Then I should want it left as it is.

By Mr. BECK:

Q. Except the one you have indicated?—A. Except the one I have indicated.

Q. Suppose we were to change it only in part, not coming up to your estimates, and yet going somewhat above the sums appropriated by the House of Representatives; have you indicated in the statement you have prepared the most important changes?—A. I have explained each one.

Q. But you have not indicated some you might get along with and some which might cripple the service. Have you made any distinction as to such items?—A. I have distributed the increase through them all, but the principal part of the increase would go to topography. The

communication which I prepared to submit to the committee is as follows:

DEPARTMENT OF THE INTERIOR,
UNITED STATES GEOLOGICAL SURVEY,
Washington, D. C., June 26, 1888.

Hon. WILLIAM B. ALLISON,
Chairman Committee on Appropriations, United States Senate:

SIR: In providing for the work of the Geological Survey for the next fiscal year I had the honor to submit an estimate for an amount which was \$120,000 more than the appropriation for the current year. Subsequently, at the request of the chairman of the Committee on Appropriations of the House of Representatives, this estimate was revised in such a manner that the total amount exactly equaled the appropriation for the current year. The following is a table of the original estimates and the revised estimates:

	Original estimate.	Revised estimate.
For topographic surveys.....	\$270,000	\$199,000
For geologic surveys.....	125,000	100,000
For paleontologic researches.....	45,000	40,000
For chemical and physical researches.....	20,000	17,000
For the preparation of illustrations.....	20,000	16,000
For the preparation of report on mineral resources.....	10,000	8,000
For the purchase of books for library.....	5,000	5,000
For researches relating to earthquakes.....	5,000	-----
For skilled laborers.....	20,000	15,000

The following is a brief explanation of the reasons for making the increased estimates:

Throughout the United States, in every State, district, county, and in almost every neighborhood, the people have become deeply interested in those industries to promote which the Geological Survey was organized. The statistics of the mineral production of the United States, published annually by this Survey, exhibits the fact that the output of mineral product is steadily and rapidly advancing from year to year. This increase is great when measured by values; but with the increase of output there has been a steady decrease in price, and if the increase is measured by the quantity of material, instead of value of material, the output is shown to increase much more rapidly.

The production of the mines of the United States has now reached a value of more than \$500,000,000, such value being reckoned at the mines without the additional cost accruing from transportation to markets, and also without the additional cost accruing from elaborate metallurgical processes. There is a very growing interest in the mines of gold, silver, copper, lead, and other metallic minerals, and questions of their quantity, distribution, and value are daily urged upon the Survey; and the people are calling for geological examinations in the various portions of the country where these mines are found. The same is true where coal, iron, oil, and gas are found, and a great pressure is brought to bear upon the Survey from various sources, urging that geological surveys should be made in various districts of country.

Everywhere throughout the United States, too, the people have been interested in clays and kaolins for the manufacture of pottery; and to a corresponding extent they are calling on the Survey for information, and urging that geological examinations be made; and there are springing up here and there all over the United States questions relating to the occurrence of minor minerals. Again, modern scientific sanitation has caused the people of all the cities and towns in the United States to take a great interest in water supply, and the Geological Survey is called upon for information on this subject; for topographic surveys exhibiting the catchment basins that are to be utilized by cities and towns, and for geologic surveys to determine the conditions under which artesian waters may be discovered. It is thus that, year by year, month by month, and day by day, the demands for the services of the Geological Survey are increasing. In the same manner the topographic surveys are demanded, and even to a greater extent, to settle questions of town, county, and State boundaries, for the laying out of wagon roads, and the selection of routes for railroads, and for a great variety of local engineering, mining, and agricultural purposes. With this demand, voiced in many ways, through the press, by petitions of citizens and governors and State legislatures, and by members of the Congress of the United States, of both houses, it was not possible for the Director of the Survey to neglect the wishes and requests so forcibly presented. It would not be possible to supply all the demand with any appropriation that Congress would probably be willing to make; and, if large sums of money were appropriated, the development of the science and skill necessary to the accomplishment of the work would of necessity be somewhat slow; but the

Director deemed it wise to review the entire field and to select certain important districts of country in which to begin new work, and the result of such examination of the field led to the preparation of the estimates as above exhibited.

It will be seen that a large part of the increase, namely, \$71,000, was made for topographic surveys, as such surveys are preliminary to all others. With this amount it was proposed first to begin work in the State of Maine; second, in New York and Pennsylvania; third, in Louisiana; fourth, in Illinois, Wisconsin, and Minnesota; and fifth, slightly to enlarge the topographic force on the headwaters of the Missouri and the great mining regions of Montana.

It will be noticed that an increase was asked of \$37,000 for general geologic work and its accessory branches, as follows:

- \$25,000 additional for geologic surveys;
- 5,000 additional for paleontological researches;
- 3,000 additional for chemical and physical researches; and
- 4,000 additional for illustrations necessary to the preparation of reports.

It was proposed, if this additional appropriation was approved, to begin geologic work in Texas, where the topographic work is already well advanced, and to increase the geologic force in the Southern Appalachian Mountains, where there is at the present time great interest in mining operations, and where the maps are now ready. A very little work has already been done in Florida, and it was proposed to enlarge the force in that State. It was also proposed to begin geologic work in Kansas, where the topographic work is already in an advanced state. And, finally, it was proposed to enlarge the work in the region of the Great Lakes, including Michigan, Wisconsin, and Minnesota.

The demands for the work in the several districts mentioned are exceedingly urgent, and it was hoped that the people of these regions could have their wants reasonably met in this manner.

The Geological Survey annually publishes a volume entitled "Mineral Resources," which gives the statistics of production of all classes of minerals throughout the United States, and at the same time records the progress and discoveries made in mining and metallurgy. The book has proved to be one of great interest and value to the people of the country. There are some points in which it can be improved to an important degree, but such improvement will cost an additional amount of \$2,000, for which estimate was made.

The Charleston earthquake excited a general interest in the subject of earthquakes. Earthquakes are of frequent occurrence in portions of the United States, and the wide-spread interest in this subject led the Director to make an estimate of \$5,000 for the purchase of instruments and the general investigation of this subject. If instruments could be secured, the various colleges and universities and scientific societies of the land would, without cost to the Survey, make the necessary observations and records to be used in the investigation of this subject.

Asking that you will carefully consider these statements,

I am, with great respect, your obedient servant,

J. W. POWELL,
Director.

Q. Is there any particular part wherein you think the service would suffer, without going back to the estimates?—A. I think that the appropriation of \$8,000 for the preparation of the volume on mineral resources ought to be increased to \$10,000. You know the volume on the mineral resources of the country, which is published annually. That item is from lines 4 to 7 on page 53.

There is one other item of \$5,000, estimated for researches relating to earthquakes. The people of the United States are very much interested in the subject, and we have done a good deal of work. In order to do it during the last year an officer of the Army was detailed to me.

There is a proposed amendment before you from Mr. Paddock's committee, the Committee on the Improvement of the Mississippi River.

Q. That is for reserving the sites of locations where great reservoirs can be made?—A. Yes, sir.

The CHAIRMAN. We should like to hear you on that.

Mr. BECK. The amendment is as follows:

For the purpose of investigating the extent to which the arid region of the United States can be redeemed by irrigation, and the segregation of the irrigable lands in such arid region, and for the selection of sites for reservoirs and other hydraulic

works necessary for the storage and utilization of water for irrigation and the prevention of floods and overflows, and to make the necessary maps, including the pay of employees in field and in office, the cost of all instruments, apparatus, and materials, and all other necessary expenses connected therewith, the work to be performed by the Geological Survey, under the direction of the Secretary of the Interior, the sum of two hundred and fifty thousand dollars.

By the CHAIRMAN :

Q. You have examined this amendment. Will you tell us what you think of it, and what you would do under it if it should be incorporated in the bill?—A. I have it in print here and will leave it with the committee. A joint resolution was passed authorizing the Geological Survey to investigate the subject of irrigable lands. The effect of the joint resolution was practically to authorize the survey to do what it has been doing. It did not change the law materially in that respect. The law already provided that the Geological Survey should do that work, but we had not entered upon it because the appropriations had been insufficient for the purpose. The work which we are doing in a small way in Arizona, New Mexico, and Montana is practically in that direction, but we have not entered the States and other Territories where irrigation is necessary. However, we would do under this amendment a little more than we are doing. The first thing necessary to be done is to make a topographic survey, just as we are doing, with contour lines. In addition to that it would be necessary to mark out sites for reservoirs and to determine upon the ground sites for headworks and canals for irrigating purposes. It must be understood that the amendment only authorizes a survey and the segregation of such lands. That has come to be a matter of pressing importance in that country.

Q. The segregation?—A. The segregation of the lands.

By Mr. BECK :

Q. You mean by that the withholding from the public of such lands as in the opinion of the Geological Survey should be used for irrigating purposes?—A. It is to be decided hereafter what action should be taken.

By the CHAIRMAN :

Q. How would you segregate them?—A. Simply mark out on the ground.

By Mr. BECK :

Q. Suppose some fellow should jump that claim as soon as it was marked out and say, "Here is a good thing; we have got it from the Geological Survey," what is going to prevent a squatter from taking it?—A. It is our purpose to mark it out so that the people will know what lands can be used for irrigation.

Q. It is just giving a fellow an intimation of where he can get a big thing.—A. Certainly; that is the very purpose.

Q. Then your survey ought to include with it exclusion from private location.—A. I think not; let me explain that to you. In the first place all the lands of that country which can now be irrigated by the use of springs, creeks, and small streams are already irrigated, but the great irrigation depends upon the utilization of the large streams, the rivers. Another great source of irrigation is the storage of water. The season of irrigation is but two or three months during the summer, when crops are growing; during the rest of the year all those streams run to waste, and in order that the whole of that water may be utilized during the season of irrigation the flow of the streams must be stored in reservoirs.

This is an old subject. Irrigation has been practiced for about five thousand years. The irrigation of the valley of the Nile was by the storage of water, and in Spain and in northern Africa and in Italy irrigation is going on to-day. In all those countries they now store the water through the non-irrigating season, and hold it back until the irrigating season comes, so that it may be used at that time.

The lands which can be irrigated by small farmers are occupied. We have come to the time when we have to use the large streams to store the water, in order that they may increase the area of agriculture in that region. I have made a very careful estimate of the amount of land which can be redeemed in this way. It is about 150,000 square miles of land.

Q. Principally in what territory?—A. Through Montana, Idaho, western Dakota, Colorado, Wyoming, New Mexico, Arizona, Nevada, and California. Two-fifths of the United States is so arid that nothing grows without irrigation. It is a very large area, and out of that about 150,000 square miles may be redeemed by irrigation in the manner which I propose, nine-tenths of which depend upon some future action, the construction of storage basins, and the utilization of the great rivers of the country.

By the CHAIRMAN:

Q. Tell us what you would do with the sum of money proposed to be appropriated by the amendment, if you had it.—A. I should make the topographic survey.

Q. First?—A. First.

Q. Of all the region you have described?—A. Yes, sir; not to finish it. We would go on with the other work, but I am speaking of each piece of ground. What would be done first would be to make the topographic survey; that would cost about 80 per cent. That we are doing now; that is, we are authorized by law, and we are doing it in a small way now, but not as the people need it. In addition to that we would study that country and make the surveys necessary for determining the way the reservoirs can be constructed, what valleys and what lowlands can be used for reservoirs, and how the water can be taken to them.

Q. Would that appropriation include the cost of the reservoirs?—A. No, sir; it would have nothing to do with that.

Q. Would they be likely to be inexpensive?—A. No, sir; they would be enormously expensive some day or other, from time to time, but they are beginning to construct reservoirs now. The real reason why this is pressing and why I beg your attention to it is the interference of water rights and the establishment of vested rights as a check to the irrigation of the country. Wherever a great stream is to be taken out with a number of tributaries, the process of development of the country is to take out the springs and small streams first, and to carry those waters into the lowlands along the great valleys by the streams. When that is done it establishes vested rights which practically prohibit the utilization of the great stream. Do I make myself clear?

By Mr. BECK:

Q. Your rule is this: That wherever a man has taken out water-rights for private purposes, even if it is to a limited extent, the law prohibits the use of any water above for any purpose that interferes with the ditch he has dug?—A. Yes, sir.

Q. Therefore your dams above can not be made?—A. They can not be made. Here is a great stream, which will irrigate 10,000 or 20,000, or 100,000 or 200,000 acres of land, and half a dozen men gathering

about the valley have taken small springs and streams and conducted the water into the midst of the valley. All those men have got to be bought out before the stream can be utilized. That condition of affairs has been met in Utah in a very peculiar manner. But a few years ago I reported upon the irrigation of Utah carefully. The irrigation of Utah has been changed on an average four times. Every acre of land in the Territory of Utah, every farm which has been irrigated has had its locus, its locality, changed on an average four times. A little stream would be taken. Then they would conclude to take a larger stream. Then the little stream would have to be vacated; the church would step in and command that to be done. Then a still larger stream would be taken, a second irrigation plant had to be taken, and then the third, and the fourth, and the fifth, and the sixth, and the tenth, in some cases, so that on an average—I got the statistics from the Agricultural Society of Utah—the irrigated lands of Utah have been changed four times.

Q. But that only means that the little streams that are first used by the individual settler still remain very useful to him. They are not destroyed?—A. They are not destroyed, but they are changed to some other lands 5, 10, or 15 miles away.

Q. The water is got out of the big ditches instead of out of the original small ones?—A. The little ones are afterwards used but for other lands than those for which they were originally used. There is a variety of reasons. It would take a long explanation to make the system understood.

Q. Suppose instead of giving you the \$250,000 which means all at once, we were to give you \$50,000 to carry out the joint resolution in addition to what we have given you in the bill, into what parts of the bill would it have to be put? Under what clause would it come if we should increase your appropriation, say, to the extent of \$50,000?—A. It ought to go in on the fifty-second page.

Q. After what line?—A. After the twenty-fourth line, inserting a new clause. Mr. Paddock's amendment covers it, inserting whatever amount you choose to give. You will find all Western gentlemen exceedingly interested in this question. I think that within three months there have been fifty conventions held in the Western country on this subject. All of the agricultural lands of the irrigated portion of California are in litigation to-day over the subject, because no provision was made to distribute the streams where they would ultimately have to go. If the land is irrigated they can raise three and four and five crops a year.

By the CHAIRMAN:

Q. Do you propose to go into California, for example, with your system?—A. Yes, sir; everywhere where there are public lands, arid lands, that are in need of irrigation.

Q. You think you could expend profitably \$250,000 in a single year?—A. Yes, sir. The gentlemen interested in this matter introduced into the House and into the Senate, where it was reported back, an appropriation for \$500,000. When they asked me I said I could not use \$500,000 the first year.

Q. You could the second, probably?—A. I could the second, but not the first. The first year I could not utilize more than \$250,000. You must appreciate the fact that the system covers a vast area of country.

Q. Have you made an estimate of what the ultimate cost of the system would be?—A. I can give you that very closely. It would not in-

crease the cost of what we are doing more than \$250,000, but the ultimate cost of the whole work would be about five and a half million dollars.

Q. Including reservoirs?—A. No, not including the construction of reservoirs, but simply to furnish the people the information as to where they can construct reservoirs.

Q. Your idea would be that the people themselves should construct the reservoirs?—A. There are three methods which are before Congress in bills. One is to grant lands to people who will make reservoirs; the other is to have the General Government make the reservoirs; and I have myself prepared a bill, which is before Congress, authorizing the organization of irrigation districts by homestead settlers. A group of men coming together could by co-operative work utilize the water in this way if they had the authority to do it.

Q. The latter you consider the best method?—A. I think the organization by homestead settlement ought to be tried first at any rate.

Q. But that can not be entered into until this preparatory work is done?—A. Not until the preparatory surveys are made, so that the settlers would know where to go.

Q. And not until the location of the reservoirs is made?—A. No, sir; not until then.

By Mr. BECK:

Q. Then, unless they are reserved and held for people who go there under an obligation to do something, they can be jumped by people under the present law, and it would do no sort of good until we passed laws reserving them?—A. You must remember that the utilization of a large stream by the construction of a reservoir is going to take combined capital amounting to \$500,000, \$1,000,000, or \$5,000,000, as the case may be. In order that these places may be utilized capitalists have got to go on, or else a community there has got to organize to do it. My judgment is, the best way is for a community to organize.

Q. But to ascertain the point where a reservoir can be made there is bound to be water, so that any man with a pretense of a homestead could take up 320 acres and 160 acres, one as a homestead and one as a pre-emption claim, and get in there and defy the world, and we would be spending this \$250,000 year after year to enable them to do it?—A. They could do so; and in California they go to the right of eminent domain and condemn it, as they are doing to-day.

Q. We are just working for some fellows who will own it all unless there is some guard?—A. A guard will have to be put in the law ultimately. The very proposition is to get facts and present the matter to Congress, so that the sites for reservoirs and irrigating works may be reserved, or else they will have to go in under the law of eminent domain in each State and Territory and condemn it.

By the CHAIRMAN:

Q. You have made your argument on the whole subject?—A. Twelve years ago I sent a volume of 200 pages as a report to Congress on this subject. What I wish to say further is, that if this irrigation work is to be done a general increase of my appropriations ought to be made. I could expand and get scientific men and experts to do both. I could do this work as estimated for.

Q. That is, with the \$250,000?—A. That work I can do and do properly with \$250,000.

Q. Is, there anything else you wish to say to us?—A. I see the Public Printer is present, and I want to say something about my printing. You will notice that the same amount was put in the bill by the House that they put in last year for engraving the maps for the Geological Survey.

Q. The provision in the bill is:

For the United States Geological Survey as follows:

For engraving the illustrations necessary for the report of the Director, eight thousand dollars;

For engraving the illustrations necessary for the monographs and bulletins, thirty-five thousand dollars;

For printing and binding the monographs and bulletins, twenty-five thousand dollars;

For engraving the geological maps of the United States, fifty-four thousand dollars.

That is right up to your estimate in each instance?

A. But the appropriation made for the past year was used only in part. About one-half of it was never used, the Public Printer having a pressure upon him for other printing, so that this year my maps will not all be engraved. Under those circumstances I think that the amount ought to be increased about \$20,000. That is, I have the maps ready to be engraved.

Q. That is for engraving for the Geological Survey?—A. For all the maps. The word "geological" before "maps" ought to be left out, so as to read: "For engraving the maps of the Geological Survey."

Q. For engraving for the maps?—A. No, for engraving the maps.

By Mr. BECK:

Q. That is now \$54,000?—A. It is now \$54,000, but \$54,000 will not engrave the maps which we have ready for the coming year.

Q. What amount will engrave them?—A. It will take about \$20,000 more. That arises from the fact that the \$54,000 could not all be used the past year.

By the CHAIRMAN:

Q. Were the maps not ready?—A. Yes, sir; the maps were ready, and were in the hands of the Public Printer, but he had not funds which he could utilize in that matter.

Q. Do you mean to say that there was no appropriation for the purpose?—A. The terms of the appropriation act last year gave the Public Printer a choice in the selection of what work he would do. He could use the money for the Geological Survey or for other purposes, and Congress pressed him with so much work that he thought he could not do all the engraving for the Geological Survey.

Q. Does the amount unexpended lapse into the Treasury?—A. No, sir; because that amount of money was used for other purposes.

By Mr. BECK:

Q. It was not confined to the Geological Survey, but this time it has been changed so that it will have to be used for that work?—A. Yes, sir; but we shall have more maps ready. When I made that estimate I did not know that. I expected that the Public Printer would engrave the additional maps which are in his hands. He found in the last months of the year that he could not use the money in that manner because of the pressure of other work ordered by Congress. I believe that is a proper explanation, as Mr. Benedict, who is here, will say.

I wish to say one word upon the matter of engraving. There is no commercial work of engraving of that kind done in the United States. Whenever any man does that work he does it for the United States only. There is no copper engraving of this kind done in the United States for anybody whatever except for the Hydrographic Office, the Geological Survey, and the Coast Survey. The Hydrographic Office and the Coast Survey control their own engraving. The Geological Survey gets its engraving done through the Public Printer. If that amount was transferred to the supervision of the Director of the Geological Survey, and if he were authorized either to employ engravers or to give out the work by contract, my judgment is that a great saving would accrue thereby. My reason for making this request is because there is no competition proper in the matter. There are only two firms who can do that work in this country—one in New York, and some gentleman here. The gentleman here, under my representation, bid on the contract. You remember you estimated, Mr. Chairman, that it would cost \$400 a plate in your own report which you draughted. We got that work down to \$250 a plate last year because I induced two men in this city to bid for it. But those parties have combined and now there is no competition left, and they propose to increase the amount, I believe, and I think the Public Printer will join in the belief, that that work could be done more economically if latitude was given.

By the CHAIRMAN :

Q. Then this engraving is not done in the Public Printing Office?—
A. No, sir; it is done by contract outside.

Q. Your idea is that the items embracing engraving should be placed under the charge of the Director of the Geological Survey?—A. Only the one item for the maps.

Q. Not the item on page 100 for engraving the illustrations necessary for the report of the Director?—A. No, sir. Many houses can do that work and it can be given out in the ordinary way.

Q. You would have this one item transferred to the Geological Survey?—A. Yes, sir; and taken out of that category.

By Mr. BECK :

Q. You want to have it increased \$20,000?—A. I want to have it increased \$20,000, because we have those maps on hand to be engraved, and I want authority to have it done either by contract or by the employment of engravers, as the case may be. Then if they would not do it favorably by contract we could employ the men and do it ourselves.

By the CHAIRMAN :

Q. Suppose we did not change the phraseology, but simply said "for engraving the maps of the Geological Survey of the United States," would that allow you to do it by contract?—A. Yes, sir; it would allow us to do it either way. That is all that is necessary.

By Mr. BECK :

Q. I doubt whether, under the general law, you could make a contract, except by letting it to the lowest bidder. There is a general law on that subject.—A. But that we could do; we could either let the work to the lowest bidder or do it ourselves. If we found that we could not do it properly by contract we would reject the bids and do it ourselves.

PUBLIC BUILDINGS.

STATEMENT OF HON. GEORGE G. SYMES.

Hon. G. G. SYMES, of the House of Representatives, appeared.

Mr. SYMES. I understand that Colonel Freret, the Supervising Architect, has been here to-day. Did he go over the matter of the Denver public building?

The CHAIRMAN. He did; but he passed it over, because he wants to make an additional statement to us after a little further examination, it being the question between a space of 40 feet or 16 feet.

Mr. SYMES. That is the particular point.

The CHAIRMAN. What do you think of that yourself?

Mr. SYMES. I think it ought to be done.

The CHAIRMAN. That is to say, we ought to make it 16 feet?

Mr. SYMES. Yes; I will state the reason for it. The post-office business there is increasing at a rapid rate. It is a remarkable post-office. You will find the street sometimes almost half blocked, so many strangers are there, although we have the free-delivery system. The building across the alley is five stories high. It is not a fire-proof building, of course, but it is a very finely constructed building.

Mr. BECK. You mean the opera house?—A. I mean the opera house. The cost of the building is \$500,000. It seems there is no other way to enlarge the post-office but what it will be crowded and jammed and inefficient for the purpose for which it is being erected without that one-story extension. That extension is only one story. It is absolutely fire-proof, with a fire-proof roof. I just want to present the matter to this committee, for I was a member of a fire company and run with the men to a fire when I was a boy, when they were volunteers. If the roof of that opera house was on fire it would be a great assistance to them to have that one story permanent fire-proof structure extending nearer the opera house, for the purpose of getting on top of it to throw water. I have given the matter serious consideration and investigation, and have asked the opinion of experts. It can not in any degree whatever endanger the permanency of that building. For that reason I would wish to impress it upon the committee. I will simply say that the resolution passed the Senate and went over to the House, but when we can get it out of the House committee and pass it of course is one of the problems of the future which you gentlemen can appreciate. Being the only member from the State I probably have twenty-five more matters to call up than any other member. For that reason I appeal to this committee.

May I be heard one minute upon one branch of the Geological Survey, in support of what has been said by my distinguished friend, Major Powell? On page 52 of the sundry civil bill I find this paragraph:

For geological surveys in the various portions of the United States, including the pay of temporary employees in field and office, and cost of all instruments, apparatus, and materials, and all other necessary expenses connected therewith, one hundred thousand dollars;

The estimate was \$125,000. As I understand, the money is used more particularly for the branch offices that direct the operations in the field through Major Powell's assistants in the Rocky Mountains, practical mining geology.

Mr. POWELL. Yes; it is distributed throughout the country.

Mr. SYMES. Major Powell was almost compelled, for want of sufficient money to carry on the expenses of the branch offices, to withdraw the branch office from Denver last fall. It has not been in practical operation there during the winter. He wants to restore it there and make it again useful, but needs a little more money for that purpose. Taking this \$25,000 off of the estimate would embarrass him very much, I understand, in rehabilitating that office and carrying out the operations of it as heretofore.

Denver is the metropolis of the Rocky Mountain country. Mining superintendents and mining men gather there from all over the Rocky Mountain region. It is their habit to go to the branch office there on account of the great efficiency of Colonel Emmons in charge of that office, who has produced works that I challenge the history of mining geology in the world to equal as practical works, which are read by both the theoretical and practical mining superintendents, because they take the actual results of mining and draw the ordinary deductions therefrom, and do not start out with the dogmatic theories which only scientists may understand. It has been the custom to my knowledge, and I have a good deal of practical knowledge on the subject on account of following special mining litigation for years, for mining superintendents from all over the country when they come to Denver to go to that office and give their experience and give the peculiarities of new developments in their mines, the geological formations and different histories, many of which have been discovered, I may add, on account of the maps produced by Majors Powell and Hayden and others years ago, showing the formations in different districts, which caused prospectors to go and sink shafts where there were no indications on the surface. Such is the value of the practical work of the two branch offices in practical mining geology at Denver and San Francisco. There was formerly one at Salt Lake, which has been withdrawn because sufficient money was not furnished to justify keeping it there.

I may add further that they occupied, I believe, the whole of the fifth story of the Tabor Block, in Denver, a large five-story building, and they also used most of the basement. It was leased at a nominal rent. If it was any object to the Government, the capitalists there or the mining men would be glad to make up a purse and give it rent free. To take the laboratory away, to take that office away, has been protested against, I may say, all over the eastern slope of the Rocky Mountains in the mining regions. Therefore, on account of the great value of the work that has been done by that branch office and the great value to the mining interests in keeping it there, I appeal to the committee to increase the appropriation from \$100,000 to \$125,000.

Regarding the first paragraph on page 52 of the bill, where the appropriation is \$199,000, I will state that \$270,000 was estimated. I can not speak with so much personal knowledge upon that point. I would simply add, though, as in my judgment from some general knowledge, a little more general knowledge perhaps than falls to laymen entirely outside of the profession, that that appropriation ought to be as high as Major Powell has asked for it. I had a little experience with the members of the House Committee on Appropriations two years ago in a contest over this question. I brought in the drawings and exhibited them. We had quite a debate on it until a large majority joined with me against a number of gentlemen who fought my proposition, and I succeeded in showing that it was of some practical benefit as distinguished from what some of them at least called theoretical science.

Mr. POWELL. You say that the maps and reports of the Geological Survey are in every practical mining camp in the United States?

Mr. SYMES. Yes. I have been among the miners, and I have found those reports in miners' cabins and intelligent men reading them all over the Rocky Mountains.

I shall say just one word more, with your indulgence, Mr. Chairman, and that upon the question of appropriating what you may think necessary. I think it ought to be at least \$100,000 for the current year for the military post at Denver. Has anything been said before the committee on that question?

The CHAIRMAN. We do not make special appropriations for military posts. We make a general appropriation, and then allow the Secretary of War to apportion it. That has been the custom for the last year or two.

Mr. SYMES. We do do it; and it belongs in the sundry civil bill, after a law is passed, as in this case. The House refused to put it in the Army bill.

The CHAIRMAN. It is a new post?

Mr. SYMES. It is a new post.

The CHAIRMAN. Senator Teller has an amendment before the committee relating to that matter.

Mr. SYMES. He has an amendment here, and that is what I wish to say one word upon. This post has been contemplated by the General of the Army for many years, and after struggling we succeeded in getting a bill through the Forty-ninth Congress. The citizens of Denver raised a purse, I think of about \$30,000, and bought a section of land and presented it to the Government, and it was upon that condition that the post was established. General Sheridan came there about one year ago and made the selection. It is a magnificent site, right near the mountains, where the soldiers would be healthier perhaps than in any other part of the world. I have personally conferred with General Sheridan a good many times in years past about the great advantages of having a regimental post at Denver, because every one knows that the railroads reach that point from all over the Rocky Mountain country, and it is the best place that could be selected for a regimental post. It was one of his pet schemes. He would have made a special recommendation if the poor man had not been sick. One hundred thousand dollars was appropriated. The Quartermaster-General has made an estimate that it would take to complete the whole post practically \$400,000. Of course, like an ordinary post, it has four sides. One side is in course of construction with the \$100,000 already appropriated. There ought to be \$100,000 added in this bill, where an appropriation was made for Fort Riley for \$100,000 more for the current year.

The CHAIRMAN. You got \$100,000 last year?

Mr. SYMES. We got \$100,000 last year, and the estimate was sent here by the Secretary of War and by the Quartermaster-General, saying that it would take \$299,019 more to complete the other three sides. One hundred thousand dollars will complete the first side, and then if another \$100,000 is appropriated, with two sides completed it will be half done, and it will take four years at that rate to complete it.

I thank you very much, Mr. Chairman, for this hearing.

THE PUBLIC PRINTING.

STATEMENT OF TH. E. BENEDICT, PUBLIC PRINTER.

TH. E. BENEDICT appeared.

The CHAIRMAN. The appropriations for public printing and binding begin at page 98 of the bill.

Mr. BENEDICT. I have no interest myself in any item until we get down to line 19 on page 101, except one point. I sent to you, Mr. Chairman, copies of two communications I gave to the committee of the House. I am only anxious to meet any requirement that Congress may make of the Government Printing Office, but there is a single word I wish to have changed in line 7 on page 99, the introduction of the word "shall," making it read that the printing and binding "shall be done" in lieu of the word "may," that has heretofore existed. That brings up a condition of affairs in the office which is referred to in the letter I addressed to Mr. Randall, of which I sent you a copy.

The Government Printing Office is of course an institution operating under law, and under the system that has prevailed, every thing pertaining to the Government Printing Office has been met out of the general appropriation for public printing and binding, which heretofore has been made to the office and has always been construed by the Treasury Department as an appropriation to the office, to which the Departments of the Government might come and obtain their public printing. We were instructed under the law that we might do printing to the extent of the certain sum allotted to the various Departments and Bureaus, the total appropriation being so allotted. In fact, the Government Printing Office has never furnished the Departments until the past year printing to the value of their allotment; yet during the year just ended, Mr. Chairman, the Departments have had to come to you and ask for appropriations for themselves during the past winter, rather than that the Public Printer should appear before you and ask for them, having furnished them the amount of printing accorded to them by law. The Departments come here, and the Post-Office Department got \$98,000 additional, the Agricultural Department got some \$10,000 additional, and the Interior Department got some \$72,000 additional, I think.

This proposes to require the Public Printer to give to each Department the total amount of printing under their allotment. I will admit that it looks like a business proposition upon the face of it. I would say it will hardly bear any but a business construction that, the appropriation being made, the Departments should have the printing if it became necessary.

Major Powell has just referred to a case. Here is a Bureau of the Government that has had an allotment for certain engraving. He stated to you that the work referred to is practically in the hands of a monopoly.

The records of the office show that the office has paid \$650 a plate and as low as \$250 a plate for the same work to be engraved on the same material. If one was worth \$650 in a mechanical point of view the other was. Last year we bought in competition, and the price came down to \$250. In June, the past month, Major Powell brings

to me a number of these plates for the same work and asks me to make contracts, there being a balance of his allotment unexpended. I immediately sent out and asked bids. The same parties who a few months ago bid \$250 a plate now put up the price to \$460 and \$470. That is, they have joined hands and made a combination. I have asked for other bids, but I have not got the bids in yet. Yet it may be that under a correct construction of the proposed law I could not refuse, with these bids before me, prior to the 30th day of June, when he furnished me the copy, to make the contract, because the language is that I *shall* do it. It does not say that I shall do it at the best attainable rates, or that I shall have an opportunity to get the best attainable rates, but it says I *shall* do it. I only ask your attention to that point that you may judge yourselves.

By Mr. BECK :

Q. The present law reads "may"?—A. Yes, sir; it reads "may," and that has always been the condition heretofore.

By Mr. HALE :

Q. The clause of the bill to which you refer reads :

And from the said sum hereby appropriated printing and binding shall be done by the Public Printer to the amounts following :

Do you think the force of the words "shall" there is so general as to prevent your exercising discretion about bids and about reducing the price of contracts?—A. Here is a Department or Bureau presenting me with copies of illustrations for a work on the 1st of June; I send it out and I am not satisfied with the bids. Can I stand before that Department or before Congress in the face of this proposed law and allow that appropriation to lapse to the Treasury because I was not satisfied with the bids received at that time? Ultimately it might be proved that I was in error. But I must have other bidders. To-day, just before I left my office, I went to the clerk and asked if the bids in the case I refer to had come in. He said, "No, not yet."

By the CHAIRMAN :

Q. For the State Department the printing appropriation is \$15,000. Under the word "may," do you exercise a discretion whether to allow them \$10,000 or \$15,000?—A. I will tell you as to the fact. The State Department two months ago commenced canceling requisitions in our office and substituting other requisitions, because two months ago they had made requisitions for the total amount of their allotment for the past year, and they were only able to get through the year by canceling requisitions that they had duly made and substituting other necessary printing in the place of them. That fact applies to nearly all the Departments for the past year.

Q. Although they had requisitions on file covering, say, \$15,000, could you print \$10,000 for them in value and put the other \$5,000 on the Treasury Department, for instance, or on Congressional printing?—A. Oh, no, sir.

Q. You can not shift your appropriations?—A. No, sir. In fact, since I have been in the office every penny of the appropriation has been expended. Here is my financial balance-sheet up to the 1st of June, representing the appropriations for the year past. There was the appropriation of 1887 [indicating]. You see every dollar of it was expended. Yet on the first of the fiscal year the bills unpaid and contracts made but unfulfilled amount to \$97,000. Since then all contracts and requisitions have been met and every dollar has been expended. This finan-

cial statement shows every expenditure of the year just ended up to June 1, and shows the total amount available and unexpended of all appropriations on the 1st day of June. The balance of the appropriation for public printing and binding has been totally expended during the month of June just past.

By Mr. HALE:

Q. As I understand it, the condition that you state and the question that you raise looks to me absurd. In your dealing under this provision, which says that you shall from the gross sum expend so much for each Department in the course of the year, before its end approaches, in the exercise of a proper discretion, you scrutinize these requisitions. You have your proposals made for the work and you cut down where there has been a proposal for \$600 to \$400, or from \$400 to \$200; and thereby you save some of the Government's money; you do not spend so much. Then you go on in that way until within the last fourteen days of the year, when you, by the very proper method that you have pursued, have saved this money. You have got to the credit of one of the Departments \$10,000 or \$20,000, and they come in with a requisition and you are confronted with only one bid, which is three times as much as you have got the same work done for before. The year is running out, and you ask us whether the force of the word "shall" would not oblige you to go on and expend the whole of that \$15,000 at three times the rate you have been doing the work for before. I say that is absurd. There is no force in the word that obliges you to do anything of that kind.—A. I only raised the question.

Q. I do not have any question about it. I do not know how it strikes the other members of the committee. If you exercise this discretion in the proper way through the year you ought to exercise it at the end of the year.—A. But the Department concerned then comes before Congress and says that the Public Printer has not done its work. Major Powell has just so stated.

Q. Then it is their fault in not bringing in the requisition earlier.—

A. It is a fact that within thirty days such has happened in our office.

By the CHAIRMAN:

Q. Is that the only instance?—A. It is the only instance I speak of now. I do not see why I should be asked, under the guise of public printing, to be making contracts for Bureaus and Departments of the Government for lithographing and engraving that do not employ labor or material in my office, and taking it out of my appropriation for public printing and binding. Here is the Agricultural Report which this year jumps in with from \$10,000 to \$15,000 worth of additional lithographing and takes it out of an appropriation that has been running the same for years. It comes now with an increased number of pages over former volumes, and the result is it brings the appropriation short of the amount necessary to complete the work.

Q. That you know occurs all the time and every year. In other words, your appropriation is smaller than the work you are called upon to do. That is all there is of that.—A. The appropriation has always been treated as the Public Printer's appropriation. This bill puts it in as the appropriation of the various Departments. Suppose the Departments do not make requisitions?

Q. The Public Printer has no appropriation here?—A. Certainly not.

Q. It is his business to print what is sent to him?—A. Certainly; and here to-day in Congress somebody dies and you shut up my office,

and I pay from \$5,000 to \$7,000 for labor of which I do not get a stroke of work. It costs my office \$50,000 a year for holidays and funerals. How am I to estimate these expenses? The office has got to be watched and guarded against fire. There is no provision in the law for it. There is no provision in the law for buying a pound of type or for cleaning my office. It has always been treated heretofore as having been appropriated for. The office and the Public Printer have paid for those things out of the appropriation. During the last four years prior to my administration \$185,000 of the appropriation for public printing and binding alone lapsed to the Treasury, so much being unexpended. These men could have had all the printing they wanted done with that money. Yet they did not even call for it; and now every dollar has to be expended. I feel it to be my duty to do it. Last Saturday I drew paper bills for upwards of \$10,000 to use a little balance of my appropriation that I found unexpended, it being the closing day of the fiscal year.

By Mr. HALE :

Q. Because of the force of the word "shall"?—A. It was "may" then. That paper goes into my general supply for the benefit of the Department. Under this proposed law I do not see how I could use any of that money unless there was a requisition before me showing the work to be ordered by a Department.

By the CHAIRMAN :

Q. You were speaking of the Agricultural Report. Have you a special appropriation for that?—A. In that connection I was speaking of the fact that I am required to spend money where I use no material or perform no labor in my office and where I have no control over the amount of lithographing to be ordered.

Q. This agricultural appropriation seems to be amply guarded. It provides that everything shall be done under the supervision of the Public Printer in accordance with the recommendation of the Joint Committee on Printing, the illustrations, etc., to be subject to the approval of the Commissioner of Agriculture. Then you are given \$200,000 for the work. You do not pay for any of that out of your regular appropriation?—A. I am only speaking in connection with the matter referred to by Major Powell. His bureau comes in and asks for lithographing. I have no control over it. How can I prevent the Commissioner of Agriculture asking for \$200,000 worth of lithographing for his report? How am I going to print it? I buy the paper and set the type. It seems to me that the Department and bureau officers should have the appropriation direct for themselves for any expense that does not incur the purchase of material or the employment of labor under the roof of the Government Printing Office. Major Powell asked you a few minutes ago to give him that appropriation and let him make his own contract for engraving and not saddle it on me and hold me responsible. I am held responsible for everything. As I said, I made a contract one year at \$250 a plate and now I shall have to make it for \$470 a plate from the same house and for the same work unless I can break the combination.

By Mr. HALE :

Q. You propose that the appropriation shall be made direct to the bureaus?—A. Yes; for that class of work.

Q. And that the head of the bureau shall be directed to make the contract with you?—A. No; I should have nothing to do with it.

Q. He could get the work done anywhere outside?—A. Certainly; let him take the responsibility, and do not place it on me.

Q. That would change radically the whole system?—A. Major Powell asked that it be done, and I am in favor of it.

The CHAIRMAN. That only applies to such work as the Public Printer himself must hire to be done outside, such as engraving and other work that is not done in the Government Printing Office.

Mr. HALE. We have always had such work done by the Public Printer. To shift it over to the Departments would be an entire change.

Mr. BENEDICT. Major Powell asked that it be done by his bureau, and I say that I concur.

Mr. HALE. I suppose each Department would like to have a direct provision to do the work to suit itself.

By Mr. BECK:

Q. What about the amount appropriated? Has the House given you all you want?—A. On page 101 as to the allotment I am tied up. Only 25 per cent. of the appropriation is to be expended in the third quarter of the year, from January to April, when Congress is here and when you are calling upon the office for the heaviest work of the year. It seems to me while it is proper to have the first allotment of six months, it would be a great advantage to the Government Printing Office if we could make the next allotment of six months, so that if during January, February, and March the work of the office required, as it actually does, the heaviest expenditure of the year, I might not be required to hold back in those three months the appropriation which is not needed so much in April, May, and June. It was a great deal of embarrassment this year, and I had to let off men in my bindery to get through and keep within the limitation.

Q. The language of the existing law is used in the bill?—A. I propose two allotments of six months each. If it should be the judgment of the committee I know it would relieve the office a great deal, because when Congress comes back after the 1st of January it just goes booming, and the printing of bills and of Department reports and everything is required to be done, and this year I had not funds to do it; that is, under the limitation. I had funds that I could not reach.

By Mr. HALE:

Q. You do not have such pressure the last quarter of the year, ending in June?—A. Not so much; the work is more apt to be easy, because we work a good deal less, especially in the short-session year; but I am tied up in that way; and yet there is possibly adequate funds unavailable.

On page 102 of the bill there is a clause in relation to leaves of absence to employes of the Government Printing Office. I saw in the discussion the other day in the House the \$15,000 appropriated was intended apparently to stand for the present year, 1889. I understood the \$15,000 was to pay for the leaves now due, which under the law I am not permitted to pay, because the parties have already received fifteen days' pay during one year, and the law says I shall not exceed fifteen days during one year, and if a man, having received such a payment, resigns or dies or is discharged, I am unable to settle his pro rata account. If they are going to hold this out until they can get a deficiency bill through, it is only injustice to these people who have this money due them to deprive them of it. It should be fixed so that just as soon as this bill is a law I can settle these accounts.

By the CHAIRMAN :

Q. This appropriation is intended for leaves of absence that may be granted during this fiscal year from July, 1888, to July, 1889?—A. Yes; but this is all under the decision of the Comptroller. The law at first did not contemplate pro rata leaves or did not so state. Mr. Randall, in remarks on the floor, made a statement, when this bill was up, that this \$15,000 was meant for persons who should be discharged or die during the fiscal year 1889. There are many people who have resigned and died and been discharged during the last fiscal years who are unpaid.

Mr. BECK. This bill has nothing to do with that.

Mr. BENEDICT. Can not this be made to apply to such cases?

Mr. BECK. Oh, no; this applies to what takes place after the 1st of July.

Mr. BENEDICT. Then these people have to suffer. I have been trying to get the money for them.

Mr. HALE. They will be in the same situation with others who have to wait for the deficiency bill.

Mr. BENEDICT. Now, gentlemen, I will go right on to what I would like you to do. If Congress would give the Government Printing Office money to run the office and make the appropriations to the Departments and let them make requisitions on us for their printing and then pay us for it, or pay the Treasury for it, or any other way, it would suit us; but I have to provide for these people and these supplies out of this general appropriation which is left after the Departments are supplied.

By Mr. HALE :

Q. What remarkable embarrassing circumstances are there now that nobody ever met before?—A. Well, I will say that the Departments have for the first time in the history of the office asked for their full amount. The gross amount of printing has been equal to the total amount of the allotment, and the Public Printer has never adopted a way of estimating what is the actual cost of the printing in connection with expenses of the office outside of material and labor.

The CHAIRMAN. The trouble about the whole business is that you are trying to show that you run this Printing Office cheaper than anybody else ever did, which you are not doing. That is the trouble.

Mr. BENEDICT. Senator, I have spent every dollar that Congress has given me and available. The record of the office work shows for itself. I am willing it shall stand.

The CHAIRMAN. I know you have; but last year you told Mr. Randall that you did not want any more money, and yet you needed more money; that is the trouble; and now I do not believe you have money enough in this bill.

Mr. BENEDICT. I know I have not.

The CHAIRMAN. Very well. I am sure you have not enough; but they have given you your estimate, I believe, in most cases.

Mr. BENEDICT. No, sir; my estimates to Congress for this year are two million four hundred and odd thousand dollars. I do not like to come over to the Senate and talk about the House side, but the statement you have made seems to require an explanation. You will find in the printed documents of Congress the statement I made to Mr. Randall last year as well as my estimate of \$2,300,000 odd. In answer to both requests I received but \$2,000,000. I never told him what you have

stated. I went before the committee last year. The item was in the bill. Mr. Randall said to me, "That was all we gave Mr. Rounds and all we propose to give you." Mr. Randall, of course, is entitled to his opinion. I felt a little diffident about making any question with Mr. Randall's committee. Last year when I was before you and had a talk with you I admitted to you that I had not been in the Government Printing Office then long enough to give an estimate of what I would require during the year as against the opinion of the House committee. How could I? I had been in there only four months and I would not undertake to give such an opinion; but I do ask this: I say that the electric light plant of that office should be extended and should be put in a condition to give permanency to it. To-day the dynamos are in the second story of a building that is actually shaking down from the jar, and we have had to wedge the bricks in to keep them from falling out. The heat generated by the gas in some of the divisions is ruining the health of the employés and makes the place unendurable at night when we have to work; and in the name of humanity we ought to have the small sum of money necessary to extend that plant. I have written down here what I want, \$6,000.

By Mr. HALE:

Q. What would you do with that \$6,000?—A. Extend the plant, put in a larger dynamo, and extend it to different divisions of the office where it does not exist now at all. We have none in the second or third division or in the job room.

Q. To take the place of the gas which leaks?—A. Yes, sir; Captain Brian is here and can speak in reference to that. I refer to it from a humanitarian stand-point, and that is the reason I plead for it. The roof of one of the main buildings is very much out of repair. I need \$1,600 to repair it. I can not spare it out of the public printing and binding appropriation, and if the Departments come in and ask for their money what am I to do? I can not foresee and estimate all these little things. If I did estimate for them there would be kicking. The Departments are very careful to hold us down to what they call the actual cost of printing. The heating plant of the office has been made up of a continued yearly extension of a simple original plant until it is complicated and inefficient. It ought to be run over and made a good system. Three thousand dollars I estimate will do it. I want to conduct large pipes direct from the boilers running to all the floors separately, making independent connections therewith. At present you shut off one floor when it is too warm there, and the people are freezing on the next. There is constant complaint, but I can not remedy the trouble for want of funds. I need in my machine shop some new lathes whereby I can repair the presses in the office. We have many presses there that could be put in good repair if I had good machinery.

By the CHAIRMAN:

Q. Can you not do it under this appropriation?—A. I can, but I can not spare the money when I have such an increased amount of printing to do. I can not figure on what Congress asks of me. We are nothing but a convenience. I think it is an unbusiness way to spend what is appropriated for public printing and binding in renewal of plant or in making these additions, and yet I have had to do that when it was actually necessary. I would like to have the authority of Congress before spending money outside of actual cost of printing and binding, or in the purchase of material for binding, paper, and cost of type-setting.

Captain Brian is here and can speak for all this. Here is what he reports in his report to me :

A large portion of the type has been in constant use for many years and its face has become so badly marred that it is impossible to keep the character of the work up to the standard which should be required. A careful examination of the type in the main office and several branches shows that a large amount of new display and job type is imperatively needed.

Q. Why do you not buy new type ?—A. I can not afford to buy it out of the \$2,000,000 appropriation because the Departments and Congress want the printing, and that uses paper and binding material and requires the employment of labor. I would certainly do it if I had the funds to spare.

By Mr. HALE :

Q. You want so much more money, and you want it for these special purposes which have always been answered heretofore by the general appropriation. What you want is more money, more general appropriation, or you want that general appropriation eked out by specific appropriations for subjects that have always heretofore come under the general appropriation. That is the sum and substance of it ?—A. Yes, sir.

Q. You want more money ?—A. Yes.

By the CHAIRMAN :

Q. That you ought to say.—A. If I asked this committee to give me \$100,000 more money to-day, what would they do with it? They would allot it to the Departments and the Bureaus, and say I shall give them printing, and paper, and binding material and labor for it. How can I estimate these things? The United States boiler inspector walked in the office last year and condemned my boiler and said, "I would never let you put a fire under it again had you other source of power." How can I estimate for the \$5,000 or \$6,000 that that costs me? How can I estimate that some distinguished citizen will die this month or next month, which costs me \$6,000 in labor?

By Mr. HALE :

Q. None of these things are creations of this present year; they have always occurred. You have always had more money in that office than you used ?—A. I stated to you that \$183,000 of the appropriations in four years prior to my time lapsed to the Treasury, unexpended. There was from \$40,000 to \$80,000 every year spent for type and presses. I have not spent on an average the last two years over \$17,500 in that way. The result is that the plant is running down. I would be glad to improve it, and have estimated to that end.

Q. It costs more money under you than it ever did before ?—A. I have not spent more money than has been appropriated.

Q. But if you kept it up as formerly you would not save money ?—A. You may put it in that way.

Q. You can do it. I do not say that comes from increased demand.—A. Certainly it does.

Q. But it is absurd to suggest that it is more economically used under you when it costs more money. Nobody knows it better than you, because you come here and tell us so.—A. I am not on the defense for anything I do. There is the record; you may look at it. I am only speaking as to facts. I am very frank to say, though, that the way you gentlemen talk of the Government Printing Office is entirely different from the way gentlemen on the other side of the house talk. They make up their minds before I go there what they are going to give me, and they give it to me.

By Mr. BECK :

Q. The next session of Congress will be the short session, expiring on the 4th of March, and there is no probability of anything more than a short executive session of the Senate after that. What difference does that make in your expenditures?—A. It does not make one iota's difference except that you do more work in the short session than the long one. There is more heavy work and costly work to be done in the short-session year than in the long-session year.

By Mr. HALE :

Q. Why is that?—A. I will tell you. We have all the bound edition of the Record to print, excepting the one volume I have out. That is something we never had out before during the session of Congress. I have one volume of this year's Record now bound. That takes more work and more labor and more costly material for the Record up to this time than for the whole session of Congress.

Mr. BECK. That is a fact I did not know.

Mr. BENEDICT. Next we take up the reserve that is held back on account of the current work and execute it as far as possible.

By Mr. HALE :

Q. So that the second year of any Congress, in cleaning up the work of that Congress, is more expensive to the Printing Office than the first?—A. Yes, sir; it is material that costs. Last year up to June the necessities of the office required and used 112 tons of paper more in eleven months than in the twelve months of the year before, ending June 30, 1886, and 80 more tons of binders' board, besides an increased amount of other material. The office always has work on hand, current and delayed.

I want to present to you now a list of work ordered during and from the Forty-sixth Congress for the different years, showing when the work was ordered and what is yet incomplete in the office.

When I took charge of the office there were 233,000 volumes of what we call reserve work printed and ready for the bindery and unbound. I have brought that down so that there were 104,000 volumes of reserve work on the 1st of June yet unbound.

By the CHAIRMAN :

Q. How much more money do you want?—A. I think for new type we ought to have \$30,000.

Q. We shall not put that in that form.—A. Then I want all these items for the Departments. They will come in and say that I shall give them printing up to the amount.

Q. Suppose we increase your fund by the specific items you have named and leave the allotment to the Departments just as it stands now?—A. That is what I should like to have. That is what I asked the other House to do. The law requires me to estimate the cost of the office. I make an estimate. You allot a less appropriation than I ask for. The Departments make a system of estimates which does not include all the cost of the office; say they shall have the whole in printing.

Q. No matter what they say. That is exactly what every other Public Printer has done.—A. This is the condition now. I have to stand it, and I say that the printing costs more than the estimates of the Departments have ever covered.

Q. Undoubtedly. What is this but the cost of printing? Is not the value of the type a part of that cost?—A. Certainly, but when you have ample funds you can continue a system of estimates that do not cover the cost. When you had ample funds you could underestimate

the cost. As far as the printing is concerned and the amount of printing, of course that shows for itself.

By Mr. BECK:

Q. Does not the money you pay out for type and for keeping your material in the same condition as it was a year ago appear?—A. It shows in the report, but you cannot estimate these things satisfactorily to the Departments. I only resort to this plan with a view of securing the approbation, if possible, of the other House.

There is another thing I wish you to think of. The private printing in this Congress is almost enough to paralyze the Government Printing Office.

By Mr. HALE:

Q. What do you mean by "private printing?"—A. We have orders for 500,000 to 5,000,000 speeches for a member of Congress. They demand them right off, and I have to put the office at work on the order and push the public work out of the way.

By the CHAIRMAN:

Q. Does it require more force?—A. It takes the regular force. I can not anticipate such an order as that. I can not anticipate the force necessary until work is already in place. I am afraid that the campaign committees will come in and monopolize my office under the conditions now existing; and how am I to do the public printing when they take my presses and take my material needed for other work? It is a practical question; it is a mere business proposition.

By Mr. BECK:

Q. They pay for the work?—A. They pay for it.

Q. And the money is paid before the work is done?—A. I understand that.

Q. There is then so much money with which to buy more material?—A. But my point is that it interferes with the regular and urgent public business.

Mr. BECK. That is public business.

Mr. HALE. Anything that appears in the Record is public business.

Mr. BENEDICT. The House of Representatives not only cut down my estimates, but put in that word "shall," which requires me to estimate with the greatest carefulness every expense of public printing and binding, seen and unforeseen, or there will be a deficiency, and if the Departments do not come in and make requisitions for printing I can not spend the money, and it lapses to the Treasury. Heretofore the money was appropriated and expended for the office.

By the CHAIRMAN:

Q. How do you mean "for the office?"—A. Buying material and machinery for the office just as I did last Saturday night. To run such an office as the Government Printing Office requires careful supervision to bring it down to \$3,000 at the close of the business year. Last Saturday night, the close of the fiscal year, I found exactly how much money I had unexpended. I immediately drew requisitions covering that unexpended balance so as to have the material so purchased carried into the new year and not permit the money to return to the Treasury, where it was not needed, while I needed the paper and other current material so purchased and which I would have had to order on Monday or Tuesday of this week. Under this proposed law could I have made such a purchase with my unexpended balance when the Departments had not ordered their printing? There is the point.

Mr. BECK. I do not see why you should not; I do not see any difficulty.

The CHAIRMAN. I think the word "shall" is simply put in there to compel you to do the printing that is ordered. That is all.

Mr. HALE. If the Departments do not send you requisitions to cover the amount set apart for them, I do not think you are called on to exercise your own ingenuity or ask them to exercise theirs to spend all that money.

Mr. BENEDICT. If that is the construction to be put on it, it relieves the office; but that is contrary to the view I took of it, and my view of it I fear will be the Treasury construction of the amendment proposed.

Mr. HALE. The force of the word "shall" is to make a division between one Department and another. You shall not use for one Department what has been set apart for another, but it does not mean to oblige you to spend so much.

Mr. BENEDICT. I will tell you how it came to be put in; Major Powell had it put in. I understand it was put in on account of the contracts for his office. It is new.

By Mr. HALE:

Q. It was put in by the House of Representatives?—A. Yes, sir; but it has always been "may" heretofore.

By the CHAIRMAN:

Q. Can you do the work of your office effectively if we add to your current appropriation the amounts you have put on the back of the copy of the bill you have handed me?—A. If you will give me the whole \$150,000 additional.

Q. Leaving the allotments to the Departments as they are now?—A. I believe with the additional sums appropriated I have asked for and the change in the half-year allotments suggested it will do. Otherwise I may have to come and ask for a deficiency if I find I can not get through the third quarter, but if you give me this money I feel confident during the current fiscal year we can get along and bring up all the delayed work in the Government Printing Office as far as we have copy of same. You see some of these works are held back because the copy has not been furnished. I believe during the current fiscal year I can bring the work of the Government Printing Office up. I have spent during the past twenty months, during which time I have been in the office, at least \$200,000 on work ordered from one to eight years before I came into the office.

Q. That was always so?—A. I do not doubt it. The reserve of the Forty-ninth Congress, second session, has not been printed yet; because what is the use of printing it and piling it up waiting the bindery? I shall commence printing it now. I had the reserve of the Forty-sixth, Forty-seventh, and Forty-eighth Congresses in part on hand unfinished. Two million five hundred thousand dollars is about as much as we can use to advantage, with the plant and working-space we have, in labor and material during one year. We expended altogether during the year past up to June 1 the sum of \$2,675,572.35. This included all special appropriations and the total for public printing and binding, and included also unsettled contracts and unpaid bills at the beginning of the fiscal year. On the first of June there was \$508,590.71 of all available appropriations unexpended. Of the agricultural report appropriation I spent only about \$70,000 up to the first of July, for the reason I could not get the copy from the Commissioner of Agriculture until in May.

SATURDAY, July 7, 1888.

WASHINGTON CITY POST-OFFICE.

STATEMENT OF D. M. DICKINSON, POSTMASTER-GENERAL.

D. M. DICKINSON appeared, and said:

I shall not take up many minutes of your time, Mr. Chairman. In January last Congress authorized me to lease a building for a city post-office. Since that time the city postmaster and the inspectors and myself have been anxiously seeking a proper place for a post-office building. We are unable to get anything for less than \$11,000 or \$12,000 a year; and, indeed, if we stay in the present quarters we shall have to pay, as we are paying for the delay in removal, about \$11,000 a year. The fact that it is contemplated to build a public building for the purpose, it appears, interferes with the making of a lease for the city post-office, as I insist in every negotiation that a clause shall be inserted in the lease terminating it when a public building is ready for the office. Of course, I need not say to the committee that the present quarters for the city post-office are a discredit to the Department, if not a disgrace to the Government.

By Mr. HALE :

Q. At the old Seaton House?—A. Yes, sir. It is dangerous, I think, to health. I have recently been obliged to put props under the ceilings to protect the lives of the employés. In this condition of things the suggestion which has been made about the Pension Office Building arose in this way: There is now a law providing that the Secretary of the Interior shall transfer to the Pension Building the Bureau of Education, the Land Bureau, and various other Bureaus of the Interior Department.

The CHAIRMAN. That we understand.

Postmaster-General DICKINSON. You know all about that. The Secretary of the Interior and the Commissioner of Pensions were satisfied that they could give those bureaus no accommodations in that building except by utilizing the upper story of the Pension Office Building; and in that story the heat is intolerable. Men can not live there during the summer months. There was a feeling in the House of Representatives at least against any change in that law. I then made the suggestion that we utilize the main floor or the inauguration ball floor for the temporary use of the city post-office. I do not propose to attach it to the freehold or make it more than a chattel; but to put up boxes right on the floor without changing any of the arrangements of the Pension Building. We propose to put it within the outer line of pillars without removing even the fountain in the center.

By Mr. HALE :

Q. Making a wall?—A. No; we propose to use glass partitions; and nothing will be put in there that can not be removed in fifteen or twenty or thirty days.

By the CHAIRMAN :

Q. Are you going to make it one story?—A. One story.

Q. All on the ground floor?—A. All on the ground floor and within the outer line of pillars. The Pension Bureau will be accommodated so far as their mail service is concerned, and furthermore the Commissioner of Pensions believes that it will make the building much more

comfortable to him, much more dry. It is very cold in winter now from the draughts, and this will make it more comfortable for him. We do not propose to have our mail-carriers drive into the building. Everything is to be delivered at the door. I have submitted a plan which you can examine.

By Mr. HALE:

Q. How many employés are there in the service of the city post-office?—A. I can not give you the number accurately, including carriers and stations. There are many stations; there are in all about three hundred and fifty in the office proper and at the stations.

Q. Probably one hundred and fifty men employed there in the local service?—A. Yes, sir; and with the repair-shop two hundred and over.

The objections to a change in the law removing the Bureaus of the Interior Department to this building on the part of some members of the House are obviated by this suggestion, as they seem to regard the removal as a measure of economy for the Bureaus. We met this objection, however, in the House, that if this removal was made it would be considered as a permanent location for the city post-office, and so we should not have a public building for this purpose. The objection came from the Committee on Public Buildings and Grounds. Inasmuch as the Department and the Post-Office Committee are on record in favor of a public building, that objection was obviated. We have no idea of using this except for the temporary needs of the service as a measure of economy.

We pay now for light in the present quarters \$5,000, fuel \$1,200, rent \$5,000. That is the old rate, and we are now called on to pay \$10,000. We pay for offices of the railway mail service which are accommodated on this plan, \$1,500; a total of \$17,700, which is the lowest we can rent an office for here. The item of light in the Pension Building will be cut down \$3,000. It will cost not to exceed \$2,000. That is the maximum. The item of fuel will amount to very little.

Q. What kind of a place will that be? Will it be warm enough for this service in winter?—A. That has examined carefully, and it is reported that the whole building will be warmer with it in.

By Mr. BECK:

Q. Will not your apartment in that great hall be cold?—A. I think not.

By Mr. HALE:

Q. There will be no roof over it?—A. There will be no roof over it, but the hall is kept reasonably warm now.

Q. Do you think it will be habitable?—A. It is so reported. I am entirely satisfied on that point. It has been very carefully examined by an inspector who is qualified to examine the question. The Commissioner of Pensions said that the court, with the exception of the draught through, was as warm as the second floor. The saving on these figures would be about \$15,000. I can remove the office and put in the glass partitions and fully equip it for what we have been paying for the rent of the Washington City post-office, \$5,000.

By the CHAIRMAN:

Q. You can put in all these glass arrangements for \$5,000?—A. Yes, sir.

Q. How long will it take you to do it?—A. We can do it inside of forty-five days.

By Mr. HALE :

Q. Will it interfere with ingress or egress of those engaged there in other work ?—A. Not at all. We use no entrance that the Pension Department uses for the Pension Bureau proper, and so far as the public entrance is concerned, for the people at large, that can be used in common by all who choose to enter that way.

By the CHAIRMAN :

Q. Do you use the four entrances to the building ?—A. No, sir ; we only use two entrances. The entrance for the public will be the one facing to the east.

By Mr. BECK :

Q. You use the north entrance for your carriers and the east entrance for your wagons ?—A. Yes, sir ; the Commissioner of Pensions thought we might as well have the other entrance and use three, as he uses but one.

By Mr. HALE :

Q. Which entrance is used now, the south entrance ?—A. The one used now is the north entrance.

Q. From G street ?—A. Yes, sir ; the other one is open also, but the one to the east and to the north are seldom used.

By the CHAIRMAN :

Q. You regard this as thoroughly feasible ? You and Secretary Vilas both favor it, I understand. That is to say, he is willing that this building should be used for the purpose you have indicated ?—A. Yes, sir ; and very anxious for this disposition of the question.

By Mr. HALE :

Q. In passing the statute which directs the use of the building for the other Bureaus outside of the Pension Bureau, I do not think we contemplated that the lower floor was to be occupied. That is a new feature entirely ?—A. That is a new feature. Inasmuch as there will be a saving in this the objection that our economical friends of the House have made is obviated. It is a measure of economy.

Mr. HALE. I have no doubt the Pension Department, who are very much opposed to the invasion of outside forces, will seize upon this as a reason which to them will be unanswerable, why nobody else should come in there. But, in our provision that the other Bureaus should be put in there, we did not contemplate any occupation of the lower floor. That was not then thought of.

The CHAIRMAN. Secretary Vilas will be mistaken in his idea that he is going to get rid of the question as to these other Bureaus, except the Land Office, by this arrangement. The law now requires the Land Office to move there. In the legislative, executive, and judicial appropriation bill we have excluded that idea, but the Bureau of Education, and of Railroads, and one other Bureau are still to go in there, unless the law is changed hereafter. Mr. Vilas must make room for them somewhere.

By Mr. BECK :

Q. From the corridors above, with your glass sides and your open top, all your working machinery will be subject to inspection by people above ?—A. That may be.

Q. The handling of the money-order stamps and other things will be exposed to the people on the corridors above ?—A. We can obviate that for a few hundred dollars by putting on a glass cover.

By the CHAIRMAN :

Q. Have you looked into the square between Eighth and Ninth and F and E streets, where the Le Droit building is?—A. Yes; part of it is occupied for the foreign mail service.

Q. We are paying \$8,000 a year rent there?—A. Yes, sir; \$8,000 for the building on the corner of Eighth and E streets.

Q. Have you ever looked into that to see what you could do with that square as a location for the city post-office?—A. As a location for the site of a new building, there is nothing there now that could serve for a city post-office building.

Q. Could not the Le Droit building be utilized temporarily?—A. No, sir.

Q. There are many buildings there on F street?—A. They would have to be rebuilt. A bill has passed the Senate for the acquisition of that property for a departmental building, I think.

By Mr. BECK :

Q. What can that square be bought for?—A. I think the limitation was \$500,000 in that bill.

Q. There are about 100 feet from the post-office building to the houses on the opposite side of Eighth street, between E and F. That would be gained if we took that square?—A. Yes, sir.

By the CHAIRMAN :

Q. You have now rented what is known as Marini's Hall. Have you looked into that to see how the people are located there?—A. I have not been there.

Q. We have heard some complaint respecting the ventilation and comfort of that hall. Is that one of the overflows of your Department?—A. Yes, sir.

By Mr. HALE :

Q. What do you rent outside of the Post-Office Department?—A. The topographer's office, on Ninth street, the foreign-mail office, the repair shop, and the building now occupied by the city post-office.

By the CHAIRMAN :

Q. You pay over \$20,000 rent for your Department alone outside of the Post-Office Department Building?—A. Yes, sir; and we are very crowded in the building. I have sent a communication to the committee on the subject.

Mr. HALE. If that square is acquired and a building put there it should be for the double use of the city post-office and other parts of the Post-Office Department.

The CHAIRMAN. And such other bureaus as could be put there. There is an overflow of the Interior Department, and it is convenient for them that a building should be put up there that would accommodate them.

Postmaster-General DICKINSON. I am strongly in favor of the purchase of new quarters for the city post-office.

By Mr. BECK :

Q. Suppose we buy that square and close up Eighth street from E to F, would that brick building you are now using for the money-order office or the foreign-mail service be worth using as part of the new building?—A. No; it ought to come down. We should have to tear down everything on the square. I heard that this provision of the sundry civil bill had been antagonized by gentlemen who feared it would

result in locating permanently there the post-office, and possibly prevent an appropriation for a new building.

The CHAIRMAN. We have not heard that.

Postmaster-General DICKINSON. Then I need not meet that argument, as I was ready to do.

THE LIBRARY BUILDING.

STATEMENT OF A. R. SPOFFORD, Librarian of Congress.

A. R. SPOFFORD appeared.

By the CHAIRMAN:

Q. You have examined the clause proposed by the House of Representatives, on page 45 of the sundry civil bill. Does that meet your approval?—A. The matter is a very grave one, and my responsibility in connection with the Library and its protection and its administration is such that I deemed it best, as you granted me a hearing, to reduce to writing, for the sake of brevity, what will occupy eight or ten minutes to read, if you will permit me I will read it:

The Librarian of Congress, being charged with the custody, safe-keeping, and constant production, for use and reference, of the stores of information in the Library, deems it his duty to make the following statement to your committee, in view of a provision inserted by the House in the sundry civil bill regarding the Library Building.

The Congressional Library now exceeds 600,000 volumes of books, besides 200,000 pamphlets and nearly a million publications other than books received under the law of copyright, by which the Library is made the official repository of such publications. Much less than half of this great collection is provided with shelves, and all means of furnishing additional room within the Capitol have been long since exhausted. The daily wants of Congress itself and the provisions of the copyright law require the Librarian to produce at call any part of these accumulated stores. The great mass of the books are systematically arranged and classified, and demands are met with reasonable promptitude; but the rapidly increasing overflow of publications of all kinds renders it impossible that the cardinal rule of having a place for everything and everything in its place should be carried out when there is no longer any place to be found. The extensive collections are daily growing more extensive, while no increase of space, except by utilizing, under great disadvantages, the crypts underneath the Capitol has been provided. Even the latter temporary resource has now been exhausted, and the number of books which must be piled upon the floors is continually increasing. The daily growing obstacles to the proper administration of the library service have reached a point where the prompt supply of books and information to those using the Library is naturally obstructed by the time consumed in hunting for books which it is absolutely impossible to provide with any definite place in the Library. Serious injury to the books from overcrowding and piling in heaps, involving the warping and straining of bindings, has also been sustained, and is increasing day by day.

The Senate has three times passed, with practical unanimity, bills for providing a separate Library Building, and the House, in April, 1886, passed by more than two-thirds majority the existing law, by which the erection of an adequate fire-proof structure is proceeding, under direc-

tion of a Commission, consisting of the Secretary of the Interior, the Architect of the Capitol, and the Librarian of Congress.

Delays and obstructions have been encountered, but these have been surmounted, and the work is being actively prosecuted. While the building must be of great dimensions, planned with a view of holding the vast accumulations of the coming century, the portion needed to accommodate the existing Library and all additions for at least fifteen years to come can be erected without the delay and cost which would attend the building of the entire edifice. The imperative necessity of immediate relief by removal from the Capitol has led the Commission to confine the construction now contemplated to that portion of the building embraced in the western front, together with the reading-room and the book repositories immediately connected therewith. All the force employed on the working plans has been directed to the end of completing these portions, which can be built and roofed in as a finished construction, while the other sections of the Library Building, which will be ultimately needed, can safely be left to future construction.

This plan of carrying into effect the intention of Congress in passing the act to provide permanent accommodations for the Congressional Library was virtually accepted in the bill making appropriations for the sundry civil expenses of the Government as first reported to the House, together with a provision by which the future prosecution of the work was to be placed in charge of the Secretary of the Interior instead of a commission of three. This last provision was entirely acceptable to the Architect of the Capitol and to the Librarian, who would gladly be relieved of a care which has drawn heavily upon their time and other and multifarious labors, while the employment of a skilled superintendent of construction renders it the less necessary to continue the Commission originally constituted to superintend the work. This has now reached a stage of advancement where the main features of the building have been settled, and the Librarian and the Architect of the Capitol can at all times be consulted and will contribute their judgment without the continuance of a formal commission.

But the bill as it has passed the House, under what appear to the undersigned to have been grave misapprehensions, stops the work of library construction, undoes virtually all that has been done, and proposes to invite new architectural plans for a wholly different edifice, involving a delay and an expense neither of which can be easily measured. This action appears to have been based on representations made asserting that Congress had been misled into passing the Library Building act by misrepresentations that the ultimate cost of the entire construction would be under \$3,000,000. Upon this point a statement of the architect, whose plan was adopted by Congress, is subjoined.

Without assuming to pronounce any judgment as to the proper style of architecture or ultimate cost of a public building which Congress has determined to erect in close proximity to the Capitol, the Librarian deems it his duty to call the attention of the committee to these points:

(1) The requirements of the growing Library and the necessary storage of copyright publications, the entries of which now exceed 36,000 annually, will demand ultimately every foot of space embraced in the foundation plan of the building, being nearly three acres.

(2) The plan adopted by Congress is the fruit of many years of labor, and is signally adapted to the end in view, of a building to contain our great national collection of books, and the copyright publications of the country, in all their complex variety, properly arranged and classified.

(3) The plan of construction adopted admits of a gradual expansion

of the Library Building in strict harmony with the first completed structure, now in progress. The chief element of cost is the iron alcoves for the storage of books.

(4) The gradual extension and completion of the structure as the wants of the Library and the copyright department require would be far more economical than any plan that might be adopted for a cheaper building. The limits of space in any such building would necessarily be exhausted in a few years, when a new edifice must be erected, abandoning the old, or unsightly and incongruous annexes must be built, increasing greatly the labor of administration. This is the unhappy and costly experience of most extensive public libraries at home and abroad. True economy would see the end from the beginning, and design a building not for a decade or even for a generation, but for centuries.

(5) All the conditions of ample accommodation, perfect and convenient arrangement, and creditable architectural effects, together with permanent economy of construction being met in the plan adopted, the question whether it is expedient to arrest the work and virtually to throw away all that has been done, and very much of what has been expended, is one which addresses itself to the discretion of this committee and of Congress.

By Mr. HALE :

Q. How would the work that has been done on the foundation be lost even if a new plan was adopted?—A. Unless it was a copy of the one already adopted in its measurements.

Q. You have not yet done any work in the way of rearing walls?—A. We have wrought out the working plans in close detail, with every stone to go into the full construction of this part that will accommodate the present Library, and those dimension stones are now being received.

Q. Those stones do not cover anything above the basement and sub-basement?—A. They do not.

Q. How is the structure that is to be imposed upon this basement and sub-basement specially affected by the work which has been done already?—A. The shape, the design, the general outlines, and the particular details of a library building have been fixed upon and adopted by Congress by formal act. Now, if Congress chooses to undo that, it has the power.

Q. What I am getting at is this: If Congress chooses to do that and adopt new plans for the structure, I do not see how the work that has been put into the basement and sub-basement is to be lost.

The CHAIRMAN. That supposes that the new plan provides for a building on those foundations.

Mr. HALE. I do not think we should have to go to work and tear out these foundations.

Mr. SPOFFORD. You mean another construction on a wholly different plan as regards the upper surface, to be put on these foundations.

Mr. HALE. Yes, it might be largely changed. Of course the area occupied would be the same, the outlines of the walls would be the same. I should think any good architect could devise another scheme for the construction of a building so as to utilize what has already been done.

By Mr. BECK :

Q. Have you in fact laid any stone there at all?—A. We have not as yet laid the stone. We are receiving the third vessel load now, and it requires, I understand, two more vessel loads to enable them to go on with what is already marked out.

Q. You have not, in fact, laid anything at all?—A. We are laying the foundation. That is the work now going on.

Q. The concrete foundations that you are now laying could be utilized?—A. If the new plan covered just that area exactly.

Q. So the only loss would be either an addition to or a subtraction from the foundation, so that there would be very little loss no matter what plan was ultimately adopted, so far as the concrete is concerned, and that is all the work that, up to this time, has in fact been done. The other work has been the selection of a certain character of stone, which is now being delivered to suit the plan adopted?—A. For the basement and subbasement.

Q. The stone, however, could be used in great part in any form of basement?—A. Not in any form unless it was in the form of geometrical lines. They are all drawn to measured dimensions.

By the CHAIRMAN:

Q. Has this stone been dressed at the quarry?—A. Yes, sir; all ready to put in position. The stones must be exact, according to the specifications, which are in detail.

Q. You are laying the concrete foundation?—A. Yes, sir.

Q. Is that concrete foundation confined to the structure which you propose to build presently?—A. No, sir; the contract for the concrete foundation covers the entire superficies. The excavations had to be made in order to establish the proper level for the ultimate great building. We could not build this little section at once, in other words, without laying out the ground for the whole. That is all explained in this paper of the architect.

Q. I should like to hear that.—A. I will read the statement of the architect.

By Mr. BECK:

Q. Does the architect say that he has to lay the concrete for buildings that are not contemplated to be built perhaps for years to come, beyond what he proposes to build now, in order to secure uniformity?—A. He proposes to lay the whole concrete foundation. We authorized it while Secretary Lamar was still chairman of the Commission. Soon after the new chairman came in we began to look about and to confine our whole plan to this part that would accommodate the Library immediately.

Q. Then all the concrete foundation that is now being put down beyond the building you are now going to erect will have to lie idle for years?—A. Yes, sir; but it will not suffer any injury; on the contrary, as the architects all tell us, it will be improved.

Q. But it will be utterly useless for all purposes until you do build the addition?—A. That is true.

By Mr. HALE:

Q. Suppose you had when you started the concrete work contemplated, as you do now, this later plan of only building the smaller building at once, would you then have gone into the concrete work outside of the smaller building?—A. It is doubtful whether we should. I think this Commission learned as they proceeded. But I will read the statement of the architect. It is as follows:

STATEMENT OF THE ARCHITECT OF THE CONGRESSIONAL LIBRARY BUILDING.

On June 8, 1880, the Forty-seventh Congress passed an act entitled "An act to provide additional accommodations for the Library of Congress;" and in compliance with that act a committee of expert architects, three in number, was appointed. These gentlemen were instructed to examine into the feasibility and expediency of

extending the Capitol Building for the purpose of affording better accommodations for the Congressional Library. This committee made a careful examination, and reported that in their judgment it was neither feasible nor expedient to make an extension to the United States Capitol for the purpose proposed. They (as well as Mr. Thomas U. Walter, the architect of the Capitol extensions) estimated the cost of such an addition at \$4,500,000. This high figure is largely owing to the costliness of the style of architecture of that building, with which the addition would obviously have to correspond. They also stated that such an addition would only afford temporary relief, and would mar the architectural beauty of the Capitol. They reported in favor of a separate building, which should be *designed to suit the growing demand of the Library*, until it reached its full capacity of many millions of books. The committee of experts were each instructed to prepare a plan for a separate building for the Library with that view, which they did.

It may be pertinent here to state that the very plan which is now proposed to be discarded was selected as the one which best filled those requirements. This plan has previously passed through the ordeal of open competitions from the year 1872 (when it was first selected from among twenty-eight competitors) to a later time, when the number of competitors had increased to forty-one, among whom were many distinguished architects of this country and of England. Every requirement contained in the prospectus for the Library prepared by the committee of Congress in 1872 was strictly complied with in the adopted plan, and it was made with a view of being built either in whole or in parts, as desired. This plan received the sanction of the various committees of Congress during that period, both Democratic and Republican. It has been published in both hemispheres in architectural and other journals, and has elicited favorable criticism from every quarter, and was finally adopted by Congress in 1886. (Plan No. II.) No valid reason, therefore, can be given for discarding it now.

By the terms of the sundry civil bill passed by the House of Representatives June 22, the act of 1886, authorizing the construction of a Congressional Library building, is abrogated, and in lieu thereof "designs" are to be invited from five eminent architects for a Library building, and for the preparation of which six months are to be allowed. This really means a postponement of the work for twelve months, if not longer, without gaining anything by it, and besides postponing the relief to the existing Library in its overcrowded condition, which necessitates the most speedy action. It is obvious that no satisfactory plan can be made for a Congressional Library building in *six months*—at least none which could, under any circumstances, be favorably compared with a plan which has been perfecting for *twelve years*. Nor is it to be presumed that *five* architects, however eminent, can produce better results in *six months* than *forty-one* in *twelve years*.

Considerable stress has been laid upon the supposed ultimate cost of the building, and inferences have been made that Congress was deceived in this matter. It is certainly not to be presumed that a building of the magnitude and character of the contemplated Library Building could be erected in *three years*, and for the sum of \$2,300,000. This edifice will cover 111,000 square feet of area, or about 21,000 square feet more than the State, War, and Navy Department building, and about 40,000 square feet more than the Post-Office building in New York City. It will be absolutely fire-proof, and constructed of the best building material.

In the course of debate in the Forty-eighth Congress a request was made by the Committee on Additional Accommodations for the Congressional Library to indicate upon a separate plan (marked "A") what portion of the adopted plan should be *pushed ahead* to speedily accommodate the present collection of books, pamphlets, charts, etc., making a reasonable allowance for the accretions for a few years to come, the remaining portion of the building to be erected in whole or in parts, as rendered necessary by the rapid increase of the collection, and as Congress should elect. The cost of the portion referred to (marked "A") was approximately estimated at \$2,300,000 in three years, or \$3,000,000 as the *ultimate* cost of that portion. This was done for the purpose of demonstrating the economy of erecting a part of the adopted plan, instead of attaching so expensive an addition of white marble and fire-proof structure to the decaying old sand stone fronts and wooden roof of the old or center portion of the Capitol Building. It was argued at that time that, besides the great economy effected by constructing a separate building, the present collection could at an early date be permanently housed, and all accretions in the near future could be accommodated therein; while for the accumulations of future years additional provisions could be readily made in accordance with the demands of the time. The House received this information from the committee and debated the matter, but no action was taken upon it.

It is not fair to regard an estimate made eight years ago as of value now, its accuracy being entirely destroyed by the fluctuations in the cost of materials since that time. Neither is it fair to presume that an accurate estimate of the quantity of material required can be made from hastily-prepared sketch-plans. Nor is it possible to make an accurate estimate without a specification showing the quality of materials

required and their kind, whether marble, granite, sandstone, or brick. The estimate made for Plan "A" in 1880 was based upon a brick building with stone trimmings, brick being about that time regarded as a very suitable material for public structures, as is evidenced by its use in the construction of the Pension Building.

The error of regarding such an estimate as accurate is apparent from a glance at the attached schedule of bona fide bids for stone and drain-pipes for the Congressional Library Building, made by highly-responsible contractors within the last six months. These bids vary from 40 to 100 per cent., and were made from detailed drawings and minute specifications, while the estimate just referred to was made upon a general sketch-plan without details.

Stone for cellar.

Highest		\$554,000
Lowest		257,760
Difference		296,240

Basement stone.

Highest		\$63,313
Lowest		33,919
Difference		29,394

Drain-pipes.

Highest		\$13,997
Lowest		8,249
Difference		5,748

It is probable that the estimate for \$2,360,000 above referred to would not vary very considerably from the actual cost of the building shown on Plan "A" if constructed of brick and finished correspondingly on the inside.

In view of the fact that stability is one of the chief requirements of a public edifice, special care was taken to secure that result by the introduction of a system of uniform foundations. Practical tests developed the fact that the soil upon which the building is to stand is of varying compressibility, unlike rock, gravel or sand; and in order to secure a uniform strength for every part of the structure (as it will finally be built) and to guard against cracks and breaks in the superstructure (which occur at junctions of walls built at different times, caused by the uneven settlements of these respective walls), it was thought to be a wise precaution to establish at once a suitable and continuous bed in the shape of a concrete foundation for the entire structure, which takes the place of a continuous underlying rock stratum, upon which the whole building can be placed at once, or in part, without producing any cracks or breaks. It would, in fact, be a good precaution to build the massive cellar walls for the whole structure now, and cover them up until the superstructure may be built upon them. A massive building like the Congressional Library, with high and long, continuous walls, requires special care and precaution in construction.

Finally, in 1886 (Forty-ninth Congress), the committee recommended, and Congress adopted, the plan in question for the Congressional Library building, and \$500,000 was appropriated for commencing its construction. The act appointed a commission for constructing the building, which took possession of the property acquired by the United States. They appointed the architect, whose plan was adopted by Congress, and commenced operations. The site was cleared of buildings, stone-yards, etc. Contracts were entered into for laying the sewerage and drainage, for excavating the cellar and areas, digging the trenches, and for laying the concrete foundations. A controversy arose over the quality of cement furnished for the foundations, but this matter was finally settled by the Commission, and the work of construction began in earnest, and has since been pushed forward energetically, and in accordance with Plan No. 1. To stop the work now, after two years of preliminary work and an outlay of over \$200,000, would be an almost irreparable error, and possibly lead to all the irritating delays of extensive litigation.

The plan adopted by Congress in 1886 contemplates the erection of a library building which will meet the requirements of the existing library and its accretions for a few years to come, as well as (ultimately) the extreme demands of the future. Such a portion of this comprehensive plan (shown on Plan No. 1) as will relieve the pressing necessities of the Library should be speedily erected. This would furnish at once the requisite space for the overflowing collections now suffering injury, while the final completion of the building will not be required for many years. The plan, for the

execution of which the Forty-ninth Congress made the first appropriation, requires the construction of a building which will be, when completed, abundantly capacious to accommodate eight or ten millions of books, and the great multitude of charts, maps, engravings, manuscripts, works of graphic art, and the numerous productions received by copyright.

By the CHAIRMAN :

Q. In the contracts for stone for the foundation have you followed Mr. Smithmeyer's suggestions, and are you constructing the entire foundation?—A. No, sir. The commission have not authorized or let any contract whatever for stone which goes beyond the plan marked there as No. 1.

Q. In red?—A. In red.

Q. So that the foundations you are now constructing are confined to that space?—A. Strictly so.

Q. But the concrete contract is let?—A. The concrete contract, which is \$90,000, is let to Mr. Barnes, and he is proceeding with the work. He has not quite finished all that will be necessary for the plan marked No. 1; but his contract embraces the laying of the concrete foundation for the whole surface. About \$90,000 is his contract.

By Mr. BECK :

Q. There would be as much or more concrete laid outside of what you do not propose to use as what you propose to use? In other words, he is going to concrete all that space [indicating].—A. Yes, by his contract.

Q. Will he concrete the open courts as well?—A. No, sir; nothing of that kind is done. That is a question for the future entirely. Nothing but this is embraced in the contract [indicating]. Wherever there is a wall there is a concrete foundation, including the interior which opens on the courts.

Q. All is being concreted except the courts?—A. That is it, by the contract. The contract, of course, can be modified.

By Mr. HALE :

Q. In other words, he makes the concrete for all the building you now contemplate, not only the exterior walls, but all inside work, and for the rest of the building he makes concrete for the exterior work, but does not fill in inside.—A. That is it.

By the CHAIRMAN :

Q. What amount of money appropriated is now unexpended?—A. There was expended up to July 1, \$141,027, which has been spent on contracts and on running expenses. There have been contracts made and signed by the Commission for \$348,326.

Q. In addition or altogether?—A. In addition to what has been expended.

Q. In addition to the \$141,027?—A. Yes, sir; making \$489,353, so that of the \$500,000 appropriated, supposing all the contracts to be executed, which would take time, there would be left about \$10,000 or \$11,000.

By Mr. HALE :

Q. Would that cover the basement?—A. Yes, sir; that covers the basement—stone and all.

By the CHAIRMAN :

Q. The basement of the contemplated building?—A. The basement of the contemplated building entirely.

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Q. When does the architect expect to complete the building?—A. Six months ago he said we should be in it in two years and a half. We have urged him forward and prodded him until he has got the working plans for every stone in that building up to 2 feet above the surface all done, an instance, it is said, of very rapid work.

By Mr. HALE:

Q. How much of the work has been done of stone, or has any of the stone been brought here yet?—A. It is all made and measured. Three cargoes have arrived and it is constantly arriving.

Q. Others are coming?—A. They are.

By the CHAIRMAN:

Q. All dressed?—A. All dressed, ready to put in.

Q. Is the contract for laying made?—A. It was supposed by the Commission, after consulting the Attorney-General, that we had the power either to make a contract for putting up all the walls, or to put them up ourselves by day's work under superintendence, or, thirdly, to put up by contract such as did not involve nice work where peril might result from rushing things, and also to put up a part by day's work.

By Mr. HALE:

Q. You might do it by contract, or day's work, or partly by both?—A. So the Attorney-General tells us, by the law.

By the CHAIRMAN:

Q. How are you doing it?—A. We concluded to follow the suggestion of the best architects (Clark and Smithmeyer concurred in that entirely), to let all the rough work by contract and to do all the work that involved nice brick-laying or cornering by day's work; and we should contract, of course, with day laborers or their foreman for such work, having the power as has been decided.

Q. Where is Mr. Smithmeyer's office?—A. It is in the office of the Commission. We reserved the house on the corner of East Capitol and Second streets, which was built by a member of Congress who vacated it when the site was selected. Our superintendent, Mr. Bernard R. Green, is there, and the clerks of the Commission are there.

By Mr. HALE:

Q. What is he superintendent of?—A. He is the superintendent of construction. He was appointed as, perhaps, the most expert man by long years of trial. Two-thirds of the War and Navy Building was erected under his immediate supervision. He was Colonel Casey's right-hand man.

Q. He is a practical builder?—A. He is the practical builder, the architect being responsible for all the plans and seeing that the material corresponds with the plans.

By the CHAIRMAN:

Q. They are both receiving annual salaries?—A. Yes, sir.

Q. Does the architect have the employment of his own force?—A. He does, entirely. He has eighteen draughtsmen there now. His head draughtsman, Mr. Peltz, receives \$3,000. His salary was fixed by the Commission in October, 1886.

Q. How much has been paid for salaries?—A. I can not answer decisively at the moment.

Q. About how much for salaries and labor?—A. I do not permit myself to guess on a question where exact knowledge alone is of value, but

I will give you that fact afterwards. It involves many months of separation. I could give it to you up to the date when the report was made to the Senate, but that was eight months ago.

Q. You have not paid for the concrete work at all?—A. In part. By the terms of the contract as fast as the work is inspected and approved we are entitled to pay over, and we do so on the requisite vouchers, which pass the Treasury officers, of course.

By Mr. HALE:

Q. Who does that inspection?—A. That is done by our superintendent of construction, he employing under him an expert who is familiar with the whole process of concreting in all its details, the proper admixture of stone and sand and cement, the three substances that go to make concrete.

Q. What was the basis upon which the matter of the cement was adjusted?—A. It was upon the adherence to the rejection of what had not passed the tests submitted, but which were in the contracts, and the acceptance of other lots, submitted by the same contractor, which did pass the test made by Colonel Hains.

Q. The adjustment between the contractor and the Commission stands just in that way?—A. Entirely so. He has been going on with the contract for months past and furnishing cement that is satisfactory. What is rejected is thrown out as we go on.

By the CHAIRMAN:

Q. Are the drawings made in the Architect's Office?—A. Yes, sir; they are all made over in that building. That \$141,000 includes these items: clearing the site of the building, excavating the grounds for the entire structure (3 acres), grading the ground, digging trenches, laying of the drainage pipes, and moving the water mains (they had to do that at very considerable expense); laying the concrete foundations, and laying the terra-cotta pipes necessary in the basement. The stone goes on, but that has not been paid for. Not a dollar has been paid on account of the stone contract.

Q. Mr. Smithmeyer and Mr. Pelz, of course, have received their compensation as architects from the time the first appropriation was made?—A. No, sir; they have not. They were not appointed until long after the ground was cleared of buildings and the excavating had been done. We appointed them, I think, in October, 1886.

Q. Suppose you have sent to us a statement of the entire expenditure up to the 1st of July?—A. How much detail do you desire?

Q. The entire expenditure up to the 1st of July, the amount of contracts made by the Commission, specifying the contract, in what form, and when it is to be executed; how much of the \$141,000, or whatever has been expended, has been expended for salaries of architects, assistants, and draughtsmen; how much for excavation, and so on, and how much for incidental labor, such as watchmen and employés who are called clerks or outside people, and if clerks, clerks of whom—whether clerks of the commission or clerks of Mr. Smithmeyer, the architect.—A. I will do so.

Q. Suppose the building contemplated in plan No. 1 should be constructed, for what length of time, in your judgment, would that accommodate the growing wants of the Library?—A. From the present rate of accessions, I have computed that it would be ample for storage for fifteen years to come.

PROFESSOR BAIRD'S SERVICES AS FISH COMMISSIONER.

STATEMENT OF SENATOR EDMUNDS.

Hon. GEORGE F. EDMUNDS appeared :

Mr. BECK. To what part of the bill do you wish to call the attention of the committee?

Mr. EDMUNDS. I propose that you shall insert an amendment to pay Mrs. Professor Baird \$50,000 for the fifteen years and a half of unrequited service that Professor Baird did for the United States; and this is my statement as a witness, which I have condensed as much as possible, to save your time:

By the act of 9th February, 1871 (vol. 16, p. 594), Revised Statutes, section 4395, page 851, it was provided that—

There shall be appointed by the President, with the advice and consent of the Senate, from among the civil officers or employés of the Government, a Commissioner of Fish and Fisheries, who shall be a person of proved scientific and practical acquaintance with the fish of the coast, and who shall serve without additional salary.

Section 4396.

The Commissioner of Fish and Fisheries shall prosecute investigations and inquiries on the subject, with the view of ascertaining whether any and what diminution in the number of the food-fishes of the coast and the lakes of the United States has taken place, and, if so, to what causes the same is due; and also whether any and what protective, prohibitory, or precautionary measures should be adopted in the premises, and shall report upon the same to Congress.

From this it will be seen that the scope of the duties of the Commissioner was limited to a purely scientific inquiry into an existing state of things, and it is apparent from the language of the statute that it was to be a temporary affair.

Under this act Professor Baird (who was then assistant secretary of the Smithsonian Institution at a salary of—— dollars) was appointed Commissioner to make these investigations, and he immediately entered upon the vigorous prosecution of his duties, and after his report Congress, in 1872, made provision for continuing the inquiry. And by the act of 10th June, 1872 (vol. 17, p. 350), it extended the duties of the Commissioner to the entirely new work of the introduction of shad into the waters of the Pacific States, Gulf States, and the Mississippi Valley, and of salmon, whitefish, and other useful food-fishes into the waters of the United States to which they were best adapted.

This enactment changed the character of the duties of the Commissioner from that of mere scientific investigation into an extensive and most important administrative work, involving time, labor, and responsibility many times greater than the inquiry to be made under the act first above mentioned into the causes of the decrease of food-fishes. From 1872 down to the time of Professor Baird's death, in 1887, his work was continually increasing under the provisions of the acts of Congress passed from year to year, enlarging the area of his labors in respect of the hatching of fish and their establishment in all the waters of the United States, as well as the shipment of eggs and young fish to other countries having similar establishments, etc. And in addition to all this Professor Baird was required to take the responsibility of and provide for the exhibition of the fishery products, etc., of the United States at the Berlin International Exhibition, at the British International Exhibition, at the Philadelphia Centennial Exhibition, and at the New Orleans Exhibition, and he was also required to de-

vote a great amount of time and labor in the preparation of statistics and furnishing facts for use on behalf of the United States before the Halifax Commission. And yet it was not until the year 1883 that provision was made for his having any responsible and official assistant. In all this work, scientific and administrative, he made himself familiar with every detail and gave many hours of nearly every day in each year to the personal management and supervision of it, to the great advancement not only of science and scientific knowledge, but to the successful development of the scheme of restocking the waters of the United States with fish as provided for in the acts of Congress; and his management of the fishery exhibits of the United States at the various exhibitions referred to conferred the greatest honor upon his country.

During all this period of more than fifteen years I was a near neighbor and intimate friend, and saw him and his work almost constantly from week to week, and so I can state from personal knowledge that in my deliberate opinion his work as Commissioner of Fish and Fisheries occupied not less than six hours on an average of every day of the whole period. During a large part of this time he had his office at his house, occupying rooms set apart and devoted exclusively to these purposes, and he had the almost constant assistance of his daughter in the examination of the very voluminous correspondence, the writing and revision of letters, and in all such incidental ways as that most competent young lady was able to help her father; and a few years ago he enlarged his house at an expense of many thousand dollars from the controlling motive of having more space for carrying on his Fish Commission work. From early morning until nearly noon he devoted himself to it at his house constantly. He would then go to the Smithsonian Institution and spend several hours there in intense personal application and labor to his duties as assistant secretary and after the death of Professor Henry as secretary; and having fully performed all his duties there would return to his house and devote most of his evenings, and often far into the night again, to the work of the Fish Commission. I speak of all these details during these long years from intimate personal knowledge of his course of life. He could almost never be persuaded to take a holiday, when year after year his family and his intimate friends who knew that he was overworking himself would remonstrate and beg him to leave some share of these great responsibilities and exacting labors in other hands. The result with him was what many of his friends feared would happen—he literally worked himself to death in most valuable and meritorious and honorable service to the United States, the largest part of which was never contemplated nor provided for when his office of scientific investigation was created without a salary.

In such a case it appears to me that both the dignity and the justice of the United States require that a suitable recognition of this unrequited labor should be made to his widow, who has been for many years a great invalid, and who, with their daughter, is left in decidedly slender circumstances.

Here is a memorandum which I think was mostly made by Professor Baird himself about his work in the last year of his life, when he knew, and his family did not know, that he was going to die, which I will read. I am certain privately that Professor Baird left this memorandum, except perhaps the last word or two of it, among his papers for his wife. I will add that I dictated the paper, my own statement as a witness, without knowledge or recollection of the fact that such a mem-

orandum as this existed. Then I came up again and asked Mr. Cleaves to let me see the papers, and I found this, which I had entirely forgotten.

MEMORANDUM AS TO THE RELATIONSHIPS OF S. F. BAIRD TO THE U. S. FISH COMMISSION.

The Commission was established in 1871, with myself as Commissioner, solely for the purpose of investigating the alleged decrease of the food fishes of the sea-coast and lakes of the United States, and its causes and remedies. The service was only expected to occupy the summer months of one or at most two years, requiring comparatively little trouble and responsibility; and an appropriation of \$5,000 was made for the purpose the first year. The law expressly stipulated that no additional compensation was to be paid to the Commissioner for his work.

In 1872 the subject of fish-culture was added to the work to be done by the Commission; and an appropriation of \$15,000 was made for continuing the inquiry into the food-fishes, and meeting the cost of the new division.

Year by year the appropriations were increased, the scope of the work enlarged, and the labors of the Commissioner amplified in proportion; until, including the appropriations for the fiscal year 1896, the sum amounted (in all) to over \$2,000,000.

The average amount of time required of the Commissioner exclusively for the duties of the Commission is not less than six hours a day, mostly in the early morning, and in the evening after the office work of the Smithsonian is completed.

The Commission is organized on a business basis, corresponding to that of other Bureaus of the Government, although more completely than most of them.

The correspondence of the Commission is enormous; the letters received, and requiring the attention more or less direct of the Commissioner, amounting to at least 15,000 per annum, and as many more circulars and blanks. The letters written by the dictation of the Commissioner, or by his direction, and reviewed by him before signing, represent half that number.

The death of Professor Henry, in 1878, and the succession of the present Commissioner to the office of Secretary of the Smithsonian Institution, so greatly increased his work as to make it necessary to give up all outside work which has enabled him to add to his private revenue.

For a number of years all the office accommodations and conveniences required by the Commission were furnished gratuitously by the Commissioner in his private residence. From 1871 to 1875 one of the best rooms of his house on New York avenue was given up for the needs of the Commission, including office accommodation of the clerks. The increasing magnitude of the work made other additional space necessary, and the Commissioner built a large house on Massachusetts avenue, mainly for this purpose, arranging it entirely in the interest of the Commission. These accommodations included two basement rooms with iron safe, closet, and other necessities. This for a time answered all the purposes of the Commission, but with the increasing growth it became inadequate, and an appropriation was obtained from Congress for renting a house next door to the Commissioner's residence, and connected with it by an iron door, allowing free access between the two buildings.

A few years later the accommodations again became insufficient, and the Commissioner extended his private residence for the purpose of obtaining an additional room. No rent was ever asked or received by the Commissioner for any of the quarters furnished by him. At present all the expenses of lighting, heating, etc., in the rooms of No. 1445 Massachusetts avenue are borne by the Commissioner. The rent paid by the Commissioner for his house on New York avenue was \$55 per month, and the house was quite sufficient for his own needs. The cost of the building on Massachusetts avenue has been not less than \$30,000, plus the taxes and insurance and extra expense of maintaining so large an establishment, representing the increased cost to him of hardly less than \$1,500 for continuing for fifteen years to act as the unpaid servant of the Government in connection with Fish Commission work.

The alternation of the headquarters of the Fish Commission office for three or four months in the summer from Washington to some point on the sea-coast from which investigations could be prosecuted, made it necessary for the Commissioner to take his family with him, involving much additional expense in passenger fares, board, etc. The necessity of spending the summer in small fishing villages along the coast has also involved more or less inconvenience and almost privation.

The construction of the Commissioner's residence on Massachusetts avenue was made in part at the expense of Mrs. Baird's share of her father's property, and in part of the moneys earned by his own editorial work. If his money had not been invested in this manner it would have been invested otherwise so as to have produced a corresponding income, the house on New York avenue being amply sufficient for his needs. It may be safely said, therefore, that apart from any question of compensation for services rendered, the many questions connected with the accommodations the Commission and the loss of interest on the investment—the Commissioner has

been a loser to the amount of from \$1,800 to \$2,000 a year; this, independent of the expenses of furnishing gas and coal, unreturned cost of the summer work, etc.

Since the completion of the buildings at Wood's Holl for the accommodation of the work of the Commission, the Commissioner has paid all expenses of board of visitors to the Commission; this sum, in 1885 (including the board of his own family and that of visitors to the station), amounting to over \$300. It may here be distinctly and emphatically stated that all the subsistence of visitors to the Commission has been paid from the Commissioner's private funds.

In conclusion, attention may be called to the fact that the Commissioner receives his entire pay from the Smithsonian Institution, which is not a Government establishment, and that consequently the Government does not make 1 cent of compensation to him either for his work as U. S. Fish Commissioner or as director of the National Museum. There is and has been nothing to prevent his receiving pay as Commissioner even under the law of prohibition of double salaries.

It may also be stated that, on several occasions, when it was proposed to pay him a salary he declined to entertain the proposition, on the ground that it might impair his usefulness as Commissioner by the impression that he derived benefit from appropriations made for its maintenance.

The fact may be well emphasized that the clause providing for non-compensation of the Commissioner was inserted at the request of the Commissioner; but that the increase in the duties and responsibilities was made by Congress at the suggestion of an outside association and not at that of the Commissioner.

Additional memoranda in regard to the relationships of S. F. B. to the U. S. Fish Commission

The act establishing the U. S. Fish Commission provided that the Commissioner should serve without additional salary. From the time of the appointment of the present Commissioner to the secretaryship of the Smithsonian Institution, he has received no salary whatever from the Government; and therefore any compensation for the service would technically not be additional to anything already received. In view of this fact Mr. Edmunds proposed to ask for a specific appropriation to pay a salary, but the Commissioner discountenanced the movement, on the ground that it would take away from that disinterestedness and freedom of action in requesting appropriations which were desirable under the circumstances.

Some years ago the Commissioner, feeling the burden of furnishing quarters to the Commission, asked for an appropriation to pay for the renting of rooms or a building outside; but Mr. Holnan, who was then chairman of the Appropriations Committee, declined to entertain the proposition, as he was opposed to anything "that looked like fastening an additional Bureau upon the Government."

It will, of course, be understood that the expense of keeping up a house large enough to furnish a number of rooms for the service of the Fish Commission, in addition to the needs of his own family, will be much greater than that of an ordinary private residence. The house contains twenty rooms, of which three are in constant use by the Commission. The expense of lighting and heating a house of this magnitude amounts to about \$600 per annum.

Mr. HALE. Why did we not take this matter in hand years ago, and give Professor Baird a salary?

Mr. EDMUNDS. I proposed it to Professor Baird (and that is what his daughter or somebody must have referred to in making the end of that memorandum after he died), and Professor Baird said, "No; Congress will do whatever they think is proper for me in the end, and I do not want to have anybody say, as this thing is expanding all the time, that I am nagging around Congress to get something for myself; I am willing to trust the future for all that sort of thing when my work is done." That was the reply he made to me. I talked with Mr. Randall about it once, and Mr. Randall said it ought to be done, but the professor was so reluctant to bring himself in, that, under the circumstances, we never did anything. I introduced a bill, and I want to turn that bill into an amendment.

The CHAIRMAN. You want to have whatever we do put on this bill?

Mr. EDMUNDS. Yes; that is exactly what I want, and it is perfectly suitable and proper if it is right to do it at all, because it is not a private claim, but is a miscellaneous donation that under the circumstances it is proper for Congress to make, if you think so.

Mr. HALE. How much is the amount?

Mr. EDMUNDS. Fifty thousand dollars, which is just about \$1,500 a

year, including the rent of all the rooms; and, according to the rates you are paying for other rents, if they had been hired by the United States you would have paid more than that for the rent of rooms for doing this business. I will just change the bill to an amendment, so as to read:

To enable the Secretary of the Treasury to pay Mrs. Mary H. C. Baird, widow of the late Spencer F. Baird, the sum of fifty thousand dollars, full compensation for the services and expenses of the said Spencer F. Baird during his administration of the office of Commissioner of Fish and Fisheries, from February twenty-fifth, eighteen hundred and seventy-one, to the time of his death, in August, eighteen hundred and eighty-seven.

That is the amendment I desire to have made.

Mr. BECK. You have Professor Langley's letter?

Mr. EDMUNDS. I have a copy of it here.

The CHAIRMAN. We had better put that in the record.

Mr. BECK. I think so. It is a very full statement.

Mr. EDMUNDS. It is an exact copy.

The letter is as follows:

SMITHSONIAN INSTITUTION,
Washington, D. C., February 4, 1888.

MY DEAR SIR: I have before me your letter asking for information in regard to the public services of the late Prof. Spencer F. Baird. It would have given me much pleasure to prepare a fuller statement than that which I now send you, but I have here done what the time allowed.

Professor Baird was appointed assistant secretary of the Smithsonian Institution July 5, 1850, and on October 3, at the age of twenty-seven, he entered upon his life work in connection with that foundation for "the increase and diffusion of knowledge among men." In May, 1878, after the death of Professor Henry, he was, by the unanimous vote of the Regents of the Institution, elected secretary of the Smithsonian Institution, a position which he held until his death, August 19, 1887.

He was for thirty-seven years continuously in the scientific service of the Government. In connection with his duties as an officer of the Smithsonian Institution, his principal work was the development and care of the National Museum of the United States, which, under his wise administration, has always been an important element in the scientific and educational progress of this country, its scale of operations becoming each year greater and more highly appreciated both in this country and abroad. He was also especially instrumental in organizing the system of international exchanges of publications, which was always under his direct charge, and which has been one of the most important agencies in the development of the public libraries of the United States, particularly in the departments of pure and applied science. He was, furthermore, during his entire official career, directly or indirectly concerned in the organization and administration of the scientific work of the numerous expeditions and surveys sent out under Government auspices, from the time of the Wilkes' exploring expedition until his death. The reports upon the natural history of the Pacific Railroad survey, Mexican Boundary survey, and many of the other surveys of the West, were prepared under his direction, and the two volumes of the Report of the Pacific Railroad Survey devoted to mammals and birds were written by him and are still standard works of reference. In addition to these reports, he was the author of several hundred important papers upon the natural history and natural resources of the United States. In 1876 he was a member of the board on behalf of the United States Executive Departments at the International Exhibition of 1876, and the collections prepared under his direction were acknowledged to be among the most instructive and impressive exhibited on that occasion.

I have thus briefly alluded to these labors to show that his position as an officer of the Smithsonian Institution was not a sinecure, but that he devoted to it, to the Museum, and to other allied Government interests the full time and labors of an exceptionally active and conscientious official. In spite of this, and in addition to it, his most important work, from an administrative and economic stand-point, and certainly the most self-sacrificing work of his life, was begun at the time of the organization of the United States Commission of Fish and Fisheries in 1871, when Professor Baird was appointed Commissioner, an office which he held in addition to all the preceding, and to the duties of which he gave himself uninterruptedly during the remainder of his life. I mean to say that he served continuously in both capacities, doing, not figuratively but literally, more than the work of two active men, in order to do this working ordinarily and constantly over twelve or fourteen hours a day, on Sundays as well as week days. During the sixteen years in which he was constantly at his post he never deputed his responsibilities to another, except during the five months pre-

ceding his death. There can be no doubt that his death was hastened many years, not by his independent regular labors as an officer of the Smithsonian, but by the labor, anxieties, and responsibilities of his peculiar position as Fish Commissioner, which became more burdensome each year with the expansion of his work.* After this, it is saying little to add that out of his slender private means he gave the equivalent of at least \$1,500 per annum, for sixteen years, to the Commission, in the form of uncharged house and office rent.

As Commissioner of Fisheries he rendered a twofold service. The scientific work, which was considered by him to be of the utmost value as a foundation for the practical work which was to follow, has been exceedingly extensive and important, and the achievements of the United States Government in this direction are recognized throughout the world as evidence of its enlightened and liberal attitude towards scientific research. Fifteen years ago less was known in this country of the natural history of our waters than perhaps in any other civilized country of the world. In 1887, however, it was generally conceded by foreign naturalists that the United States was further advanced than any other country in this department of science. The scientific work of the Commission has always been conducted with reference to definite and practical results, and the economic side of the work of the Fish Commission is comparatively in a still more advanced condition.

It seems scarcely necessary to dwell upon the results in fish culture attained by the Commission under Professor Baird's direction. You are thoroughly familiar with the manner in which certain fisheries, such as the shad fishery of the Atlantic coast, the salmon fishery of the Pacific coast, and the white fish fishery of the Great Lakes, have been saved from destruction; how the Asiatic carp has been planted in the 20,000 or more ponds and lakes in almost every township in the United States; how the shad-fishery has been established in unfamiliar waters, such as the Ohio River and Pacific Ocean; and in addition to this, how many other steps of great magnitude have been made in the art of fish-culture.

I dare not attempt to estimate the practical value of the work of the Commission to the country, but can not doubt that it amounts to very many millions of dollars. I presume you are familiar with Mr. Goode's "Review of what has been accomplished by the Fish Commission in fish-culture and in the investigation of American fisheries;" but I venture to send herewith a copy of this pamphlet, and to direct your special attention to pages 26 to 34, in which are quoted numerous commendations of the Fish Commission from the principal authorities of Great Britain, Norway, Holland, Germany, Belgium, France, and other European nations. Professor Huxley, in an address at the London Fisheries Exhibition, said that he did not think "that any nation at the present time had comprehended the question of dealing with fish in so thorough, excellent, and scientific a spirit as that of the United States;" while M. Raveret-Wattel, the principal French authority on this subject, states that "to this day pisciculture has nowhere produced results which can be compared with those obtained in the United States." No one can question that the peculiar excellence of the work of our Government has been directly or indirectly due to the presence of Professor Baird at the head of the Commission. He had no rivals, and during his administration no word of criticism was ever uttered by competent persons.

All this, it may well be remembered, was accomplished while filling effectively the distinct duties of an officer of the Smithsonian Institution, for which alone he was paid. And it may be added that during the first half of his term of service as Commissioner, and while he was assistant secretary of the Smithsonian, his entire salary was less than that received by several of his assistants during the last few years.

In reference to the possible precedent of the action of Congress in the case of the late Professor Henry, I would state that a communication from the Secretary of the Treasury was received by the House of Representatives June 4, 1878, and by the Senate June 5, 1878, recommending an appropriation of \$500 for each year during which the late Professor Henry was employed as a member of the Light-House Board, for the benefit of his family. On June 20, 1878, an act was passed "to pay to the legal representatives of the late Joseph Henry, for services rendered by him as member and president of the Light-House Board, \$11,000." (Second session, Forty-fifth Congress, p. 214.)

In the absence of time for a fuller statement, let me ask your attention to the few words in which the benefits to his country of Professor Baird's labors were described by a recent most competent biographer:

"The Fish Commission was an agency of research; but it was more. He made it an agency by which science is applied to the relief of the wants of mankind; by which a cheap, nutritious, healthful, and luxurious food is to be given to the millions of men. He affirmed that for the production of food an acre of water was more than equal to 10 acres of land, thus giving to the gloomy doctrine of Malthus its ultimate

* NOTE.—It is, at the same time, but proper to say that this expansion was deprecated rather than recommended by him, and was the result of the interest exhibited by the public at large in the advancement of the work of fish culture.

refutation, and clearing away the veil of despair from the horizon of the poor; for when the sea shall serve man with all the food that can be gathered from its broad expanse, the land will not contain the millions whom it is thus possible to supply."*

Professor Baird's services as Fish Commissioner were entirely unremunerated. When he knew he was dying, looking to the position of his family and the slender provision that the sacrifice of all opportunities for private gain had left, he only told them that he could not but think that Congress, in view of these sixteen years of unrequited service to his country, might be trusted to see that justice was done.

I am, sir, yours, very respectfully,

S. P. LANGLEY.

The Hon. JAMES B. BECK,
U. S. Senate.

THE FISH COMMISSION FISH-CULTURE STATION.

STATEMENT OF HON. WILLIAM H. WADE, OF THE HOUSE OF REPRESENTATIVES.

Hon. WILLIAM H. WADE appeared and said :

The amendment I wish to have made to the bill was introduced by Senator Cockrell, and is to insert the following :

For the construction of buildings, ponds, and appliances for a station for fish culture at Neosho, Missouri, eight thousand dollars.

For maintenance of same, five thousand dollars.

The reason why this item was not put on the bill in the House was because I did not get before the committee in the way I ought to have come, so Mr. Randall says. In the first place, I filed a statement from the Fish Commission. The clerk told me that that was what I had to do. When I wanted to go and make a statement before the committee they said that was not the way to get there at all; that the statement must go through the Secretary of the Treasury and through the Speaker of the House, and be referred to the committee. I got that done the last day of the consideration of the bill by the committee. Then they would not hear me because they said they had disposed of that clause. So you see I was barred out, perhaps for want of information.

The CHAIRMAN. What is the special reason for a station there ?

Mr. WADE. When Professor Baird was alive he wanted to establish an interior fish hatchery. You understand that the fish hatcheries are now either on the ocean or the lakes. Believing that it was a good thing to have a fish hatchery in the interior, he sent Colonel McDonald out, and he investigated the matter. He went all over the country. There is an executive document here that explains the whole thing. He investigated the matter and found that the Ozark region was the place to establish the hatchery. The people of Neosho, Mo., gave to the Government 17 acres of ground for the purpose of establishing a fish hatchery. It is very strongly urged and recommended in the executive document to which I have referred.

The CHAIRMAN. Then the ground is owned there now ?

Mr. WADE. Yes, sir; it was given to the Government. I have no doubt that I would have gotten this provision on in the House if it had not been as I have stated.

The CHAIRMAN. It is recommended by Mr. McDonald ?

Mr. WADE. Yes, sir; and it was started by Professor Baird. The executive document to which I refer gives all the reasons why it should be established.

* Address of Maj. J. W. Powell before the scientific societies of Washington, January 11, 1888.

TUESDAY, July 10, 1888.

THE LIBRARY BUILDING.

The chairman submitted the following letter:

LIBRARY OF CONGRESS,
Washington, July 10, 1888.

SIR: Herewith I have the honor to inclose the statement of contracts and expenditures, in detail under the several heads, on account of the Congressional Library Building, asked for on Saturday.

Very respectfully,

A. R. SPOFFORD,
Librarian of Congress.

Hon. W. B. ALLISON,
Chairman of Senate Committee on Appropriations.

Amount expended on contracts for Congressional Library Building, name of contractor, date to be completed, and amounts remaining involved and due:

October 28, 1886, Bartley Thornton, tearing down houses (contract completed and paid December 21, 1886.)	\$225.00
October 28, 1886, John T. Mocabee, tearing down houses (contract completed and paid January 14, 1887.)	1,000.00
October 28, 1886, Bartley Thornton, tearing down houses (contract completed and paid January 19, 1887.)	210.00
October 28, 1886, Michael Horan, tearing down houses (contract completed and paid December 23, 1886.)	150.00
October 28, 1886, Thomas J. Collins & Co., tearing down houses (contract completed and paid December 21, 1886.)	442.50
October 28, 1886, Thomas J. Collins & Co., tearing down houses (contract completed and paid January 19, 1887.)	690.00
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April 20, 1887, Thomas H. Lyons, excavating trenches for concrete foundations, work to be done as required by architect (estimated amount of contract)	7,740.00
Paid on account	\$2,929.22
Ten per cent. retained	325.46
	<hr/> 3,254.68
Remaining liability on this contract for work not completed	4,485.32
About \$250 due since last payment on work done since.	
April 22, 1887, Elias E. Barnes, for excavating cellars and areas, work to be completed July 21, 1887, contract completed and paid December 8, 1887	10,852.93
April 30, 1887, James Ragan, furnishing and laying drain pipes to be done as required, contract completed and paid October 18, 1887	8,046.61
<hr/>	
August 24, 1887, Elias E. Barnes, for furnishing materials and laying concrete foundations, to be completed in 120 days. Time of contract extended by supplemental contract as follows: West wing, June 1, 1888; rotunda and connections, July 1, 1888; remainder of foundation of whole building, November 1, 1888 (estimated cost of contract)	81,600.00
Paid on account	\$9,849.60
Ten per cent. retained	1,094.40
	<hr/> 10,944.00
Remaining liability, July 1, 1888, on this contract	70,656.00
<hr/>	
About 500 cubic yards, equal to about \$2,415, done since last payment of June 22.	
December 31, 1887, Trenton Terra-Cotta Company; for terra-cotta pipes and bends, to be furnished as required (estimated cost of contract as per schedule)	7,051.00
Paid on account	\$1,068.64
Ten per cent. retained	118.73
	<hr/> 1,187.37
Remaining liability on this contract	5,863.63

December 16, 1887, George F. Adams, furnishing materials and erecting fence; contract completed and paid in full January 30, 1888.....	\$3,500.00
April 21, 1888, William H. B. Stout, Cyrus J. Hall, and Isaac S. Bangs, for furnishing stone granite for the walls of cellar or sub-basement of west wing and rotunda and connections (cost of contract)	257,760.00
One cargo of stone on ground, but has not yet been paid for. No payments have been made on this contract. Deliveries to be made as required.	
June 6, 1888, John S. Ellis, for 1,600 cubic yard of sand, subject to increase or decrease of 20 per cent.; deliveries to be made as required (estimated cost of contract).....	1,552.00
No deliveries have been made.	
June 8, 1888, David L. Shoemaker, for 400 cubic yards of broken stone subject to increase or decrease of 20 per cent., deliveries to be made as required (estimated cost of contract).....	896.00
No deliveries have been made on this contract.	

RECAPITULATION.

Liabilities on contracts, including the 10 per cent. retained:	
Thomas H. Lyons	\$4,810.78
Elias E. Barnes, concrete.....	71,750.40
Trenton Terra-Cotta Company.....	5,982.36
Stout, Hall & Bangs.....	257,760.00
John S. Ellis.....	1,552.00
David L. Shoemaker.....	896.00
Total liabilities under contracts.....	342,751.54

Expenditures made on rolls and vouchers for labor otherwise than by contract.

Clearing site of building, taking down houses, cleaning and piling old material, removing debris, taking up street pavements, sidewalks, sewers, trees, etc.....	\$10,567.43
Grading and terracing grounds outside of the lines of the building.....	8,516.98
Making and repairing tools, testing-machine, etc	1,074.93
Carpenter and laborers assisting modeller.....	217.50
Superintendent and engineer, civil engineer, foremen, time-keeper, weigher	5,641.01
Inspectors and laborers on drainage	655.62
Inspectors were on contract work.	
Miscellaneous labor on grounds, water-boys, sorting and delivering old materials sold, cleaning sidewalks, laying lines with engineer, piling lumber, etc	1,782.29
Laborers testing grounds with testing-machine.....	982.88
Laborers excavating filled-in ravine, cleaning out fallen-in trenches.....	329.25
Laborers and mechanics fitting up scale-house, tool-house, shops, watch-house, etc., making roadways, and repairing fence.....	1,577.02
Inspectors on concrete work, testing cements	1,338.62
Making tests of stone, and preparing specimens, etc	152.28
Miscellaneous work by mechanics, laborers, etc., in offices:	
Mechanics and laborers fitting up offices in No. 145 East Capitol street.....	\$690.80
Plumbing in same offices	1,059.36
Repairs to heating apparatus in offices.....	109.00
Janitors	1,071.00
Washing towels.....	43.53
Livery bills for carriage (now sold)	392.31
Hire of driver.....	267.00
Labor on blue-print room.....	406.87
Making drawing-boards.....	389.25
Making cases for architect.....	135.00
Trays for photograph-room.....	39.00
Repairs to desks, etc	36.00
Miscellaneous labor, cleaning cellar, sewers, etc	65.68
	<hr/>
	4,749.80

Expended for tools, stationery, drawing materials, furniture, materials for fitting up offices, horses and coupé, and other miscellaneous supplies.

Miscellaneous tools, testing-machine, etc.....		\$1,050.90
Stationery, drawing materials, and tools, etc.:		
For architect's office	\$2,368.04	
For general office use.....	255.12	
Printing specifications, blanks, etc.....	339.89	
		<u>2,963.05</u>
Furniture, materials for fitting up offices, and miscellaneous supplies, etc.:		
For architect's office.....	2,666.97	
For horses and coupé.....	875.25	
Fuel, gas, ice, for offices.....	518.79	
For general office use, including weigher's office.....	1,381.14	
		<u>5,440.15</u>
Additional pipe bought for drainage		525.15
Materials for fitting up scale house, etc.....		189.72
Expended for changing location of water mains in the vicinity of the site of the building, work done by the District of Columbia, and payment made on their certificates.....		2,368.49
Hire of watchmen about the site of building and in offices of Commission and the architect		4,767.09
Miscellaneous materials for testing cements, etc.....		43.15
Advertisements for proposals, etc.....		1,325.66
Paid District of Columbia for building sewers.....		1,646.15

Expended for salaries and pay of office employes in the offices of the Commission for the Construction of the Congressional Library Building, to and including June 30, 1888.

In Commissioners' office:		
Secretary, accountant, disbursing agent, messenger		\$8,898.88
In architect's office:		
Architect, assistant architect, computer, draughtsmen, experts, engineer, modellers, messengers, blue-printer, etc		39,344.30
		<u>48,243.18</u>

RECAPITULATION.

Appropriation of April 15, 1886		\$500,000.00
Expended to and including June 30, 1888.....		145,112.80
		<u>354,887.20</u>
Remaining not disbursed.....		354,887.20
Liabilities:		
Under existing contracts.....	\$342,751.54	
Miscellaneous accounts outstanding.....	1,500.00	
		<u>344,251.54</u>
Remaining available for all purposes on July 1, 1888.....		10,635.66

List of persons employed in construction of the building for Library of Congress, in Washington, D. C., on July 1, 1888.

IN COMMISSIONERS' OFFICE.

J. B. Trainer, secretary.....	per annum	\$1,800.00
Edwin C. Fitzsimons, disbursing agent	do	2,500.00
J. V. Wurdemann, accountant and clerk.....	do	1,500.00
C. B. Thornton, messenger	per month	60.00

IN ARCHITECT'S OFFICE.

J. L. Smithmeyer, architect	per annum	5,000.00
Paul J. Pelz, assistant architect.....	do	3,000.00
F. W. Pease, computer	per month	125.00
L. F. Graether, draughtsman	per day	7.00
R. Godeffroy, draughtsman	do	7.00
Ewald Schmitt, draughtsman.....	do	6.00
Fred. C. Schlaich, draughtsman.....	do	5.00

Paul Bausch, draughtsman	per day	\$5.00
H. J. Lindemans, draughtsman	do	5.00
W. J. Shaw Rouse, draughtsman	do	5.00
James M. Stewart, draughtsman	do	4.00
Ed. P. Simons, draughtsman	do	4.00
A. J. Tolman, draughtsman	do	4.00
Howard Sill, draughtsman	do	4.00
Clary Ray, draughtsman	do	2.00
E. W. Keyser, draughtsman	do	2.00
Snowden Ashford, draughtsman	do	2.00
H. F. Ashton, draughtsman	do	2.00
Louis Wirth, draughtsman	do	1.00
Elliot T. Bassett, draughtsman	per month	150.00
Frank Lemon, draughtsman	do	60.00
H. W. Spofford, clerk	do	120.00
Frank Milliken, blue-printer	per day	3.50

ON GENERAL WORK ABOUT BUILDING AND OFFICES.

Bernard R. Green, superintendent and engineer	per annum	4,000.00
R. P. Tomassek, civil engineer	per day	6.00
John T. Morgan, foreman	do	4.00
John J. Dickson, timekeeper	per month	90.00
James Carroll, inspector concrete	per day	5.00
M. M. Magruder, inspector concrete	do	5.00
James W. Davis, carpenter	do	3.00
N. B. Cooper, carpenter	do	3.00
David Crowley, rigger	do	5.00
Thomas Broderick, rigger	do	2.75
J. G. Craig, stone-setter	do	4.50
Edward Boland, chainman	do	2.00
Daniel Sullivan, skilled laborer	do	1.75
John McGuire, skilled laborer	do	1.75
Patrick Crowley, skilled laborer	do	1.75
Edward Burke, janitor	do	1.50
Frank Crusoe, janitor	do	1.50
Simon Hollahan, laborer	do	1.50
Michael Henley, laborer	do	1.50
J. F. Fahrenkrug, laborer	do	1.50
John Smith, laborer	do	1.50
George Sherry, laborer	do	1.50
M. J. Kirby, laborer	do	1.50
James Keenan, laborer	do	1.50
Conrad Ellis, laborer	do	1.50
Timothy Allen, laborer	do	1.50
W. T. Reid, laborer	do	1.50
Samuel Coe, laborer	do	1.50
George Melone, laborer	do	1.50
N. B. Field, laborer	do	1.50
Edward Casey, laborer	do	1.50
John Sullivan, laborer	do	1.50
James O'Day, laborer	do	1.50
Sifer Hamer, laborer	do	1.50
M. C. McNamara, watchman	per month	60.00
William Holahan, watchman	do	60.00
John Hickey, watchman	do	60.00
George A. Williams, watchman	per annum	720.00
R. W. Ballinger, watchman	do	720.00

THE GEOLOGICAL SURVEY.

ADDITIONAL STATEMENT OF J. W. POWELL,

Director of the Geological Survey.

Senators Bowen, Stewart, and Teller were present.

J. W. POWELL appeared and said: I have prepared a map which will exhibit the main facts as to the area of the country where irrigation can be employed in agriculture. I have drawn a line in pink on the eastern border of the area where irrigation is needed, and again on the west. Approximately the eastern border of the region is the one hundredth meridian, it varies from that.

By Mr. HALE:

Q. Running about midway between Dakota, Nebraska, Kansas, right through the center of those States, and about the center of Texas?—A. Yes, sir.

By the CHAIRMAN:

Q. West of the center?—A. West of the center in all of them a little. Along this margin [indicating] there is a debatable ground. There is a zone of country along this margin where irrigation may or may not be used. Some years there is a sufficient rain-fall, and other years there is not. If agriculture is prosecuted along this border of country permanently without irrigation, every few years there will be disaster, as there has been in the history of that country for the past fifteen or twenty years. Again, in the western portion of California there is a district of country where very much is raised without irrigation but where irrigation would be advantageous, and where they do irrigate to some extent. I have left that district outside of the area where irrigation is necessary, because some agriculture is prosecuted without it. The total area where irrigation is necessary within those lines is 1,300,000 square miles.

Q. Extending from the one hundredth parallel to what point?—A. To this irregular line which I have drawn [indicating], leaving a portion of Washington, a portion of Oregon, and a portion of California to the westward of the line, where irrigation is not absolutely necessary.

By Mr. HALE:

Q. Do you mean to say that in all that portion of the Territory of Dakota, the States of Nebraska, Kansas, and Texas, which lies west and immediately west of this line of yours, irrigation is needed to develop agriculture?—A. Yes, sir.

Q. Is that the case in the western part of Kansas and the western part of Nebraska?—A. Yes, sir.

Q. Is there any marked difference, perceptible to everybody, between the western parts of Kansas and Nebraska and Dakota and the eastern part, as shown by this line of yours?—A. There is a very great difference. We have in eastern Kansas 35, 36, and 37 inches of rain-fall. It runs out here to western Kansas [indicating] where we get but 18 inches of rain-fall.

Mr. TELLER. There is still less in some parts of Colorado.

Mr. POWELL. There is still less in some parts of Colorado.

By Mr. BECK:

Q. What do those large blue blocks indicate?—A. That is the survey which has been already made. We have already done something.

By the CHAIRMAN:

Q. What is the nature of that map?—A. It is topographical and geographical both, but for the purpose here, topographical.

By Mr. HALE:

Q. Bearing upon the question of irrigation?—A. Yes, sir.

By the CHAIRMAN:

Q. What are those yellow lines?—A. [Indicating.] That is work which was done by Wheeler; that by Hayden, and this by Clarence King, where we have rough maps of the country comparatively, but where a part of the work is already done.

Q. Is the topography all done?—A. The topography is not done sufficiently; it is done for the general map of the country, but not for all the irrigable districts.

Mr. TELLER. That is, you mean, in King's work.

Mr. POWELL. In King's work.

Mr. STEWART. Is the work which has been done in such shape that in laying the topography it is sufficiently definite, so that you can connect your work and show where the reservoirs, etc., ought to be made?

Mr. POWELL. I shall come to that directly. All the blue area I have mapped and colored on the map is irrigable area, as you see, one about Salt Lake City [indicating].

By Mr. HALE:

Q. What does the red represent?—A. The irrigable areas.

Q. What are the others?—A. The blue is water—the lakes that are there.

Q. What is the red?—A. Pastoral lands—regions which can not be redeemed by irrigation.

Mr. STEWART. You can attach to this very readily your reservoir sites and locations of ditches?

The WITNESS. Yes, sir; and if you will permit me to go on I will explain the process by which we propose to do the work.

By Mr. HALE:

Q. Of the 1,300,000 square miles embraced, about what proportion do you think is irrigable?—A. By the utilization of the small streams, about 1 per cent.; by the utilization of the large streams, about 7½ per cent.; by the storage of water, about 15 per cent.

Q. Leaving about 76 per cent. hopeless?—A. Leaving about 76 per cent. hopeless for agricultural purposes.

Mr. TELLER. Not valueless?

Mr. POWELL. Not valueless, but hopeless for agricultural purposes.

Mr. TELLER. Pastoral lands, etc.?

Mr. POWELL. Yes, sir.

By the CHAIRMAN:

Q. I would like to have you go on and state your plan.—A. The plan is to make a topographical survey of that whole region, and that we are proceeding to do already under the law.

Q. You do that under your general appropriation?—A. We do that under our general appropriation. We are going on to make that map, and in thirty years we shall have it done, as we are going on now. The first thing, then, is a topographical map. Upon that map we want to segregate and lay out the areas which can be redeemed by irrigation; then to select the sites for canals and headworks, the dams and works necessary to divert the water from natural channels into artificial lakes.

The sites for the reservoirs should be selected for that purpose. That is all, so far as the method has been laid before me, that it is proposed the surveys should do. The future policy of the Government in regard to those lands is not a question for a geological survey to discuss, yet I wish to say a few words on that subject.

Two methods have been presented, and there are two parties in Congress and two parties about the country as to the best method of utilizing that land for irrigation. It should first be understood that all the land within that area—that is, 14 or 15 per cent. of the country which is to be redeemed—can only be redeemed by the utilization of large capital. To build the headworks, canals, and reservoirs necessary to do this work large capital must be used. The experience of the world is very full upon that. The British system is for the General Government to irrigate in India and in other countries, but especially in India, by the General Government building the headworks, canals, and reservoirs, and taxing the people by collecting tolls. The British Government has in India irrigated about 3,000,000 acres of land in this manner within three years. The British Government, in the prosecution of that plan, has done all the work itself. It maintains the canals, reservoirs, and head-works; it employs a little army of officials who are supervisors of irrigation, and it taxes the land to pay the maintenance of the irrigation works, to pay for the supervision of irrigation, and to pay $4\frac{1}{2}$ per cent. on the original plant; so that the income of the British Government from India is chiefly from tolls on its irrigating canals. The plan is that those tolls shall make an income of $4\frac{1}{2}$ per cent. after paying the current cost of maintenance and the cost of supervision.

Q. Who owns the land?—A. The people of India. It is communal, very largely.

Q. There are no individual proprietors?—A. Not to a large extent.

Q. Practically they pay a rental?—A. Yes, sir. The Spanish system is advocated to some extent in the United States.

By Mr. BECK:

Q. Before you go to that, is the chairman right in the suggestion he made, that under the English system the Government holds the land that it has thus improved?—A. No, sir; it is held by village communities in the main, not altogether.

Q. I understood you to say that the people paid rent?—A. The tenure of land is very variable in India, but the prevailing system is that it is held by village communities in common.

Q. To whom do they pay rent?—A. It is an exceedingly mixed system, but the prevailing system is that a village community, or a number of people who are related to one another by blood and occupy one town, by affinity and consanguinity hold a body of land about their village, and repartition the land from time to time. It is not always the case, but often they repartition it so that individual A takes a field for three years, gives up that field and takes another field for the next three years, and another field for the next three, so that the tenure of the land is in the village community at large, and it is partitioned among the people.

Q. They pay no rent to the Government?—A. They pay no rent to the Government for the land, but they pay a tax for the quantity of water put upon their land.

Mr. TELLER. A considerable portion of the people in India pay rent for their land to the British Government. They originally paid for the franchise, you know.

Mr. POWELL. That is true, especially for new lands that have been wholly redeemed by the British Government.

Mr. TELLER. The British Government derives quite a large income from the land. It is not a very high tax.

Mr. POWELL. The tenure of land is very variable. There are many different systems.

Mr. BECK. The only thing I want to get at is whether the British Government did have a system in some form of collecting water rent, and when the people failed to pay they were not allowed the use of the water.

Mr. TELLER. They cut off the water.

Mr. POWELL. They cut off the water.

Mr. BECK. Therefore it is substantially, for all practical purposes, a rent in another form.

By the CHAIRMAN:

Q. It is the water system of the District of Columbia, I suppose, applied to a great area. It is a water rent?—A. It is a water rent.

Q. The Government furnishes water and the people pay for it?—A. The people pay for it.

Mr. STEWART. I think you will find, if we ever get the facts before Congress so that they will know how to legislate, that our people can manage the system better than even the Spanish or India people, because they are more intelligent and the local communities would take care of the water rights. There would be no trouble in our people doing it if they could only get the privilege of doing it.

Mr. POWELL. The system of Spain was originally to grant to individuals and corporations the right to take out water. That is not accompanied with the tenure of the land, but it was the right to take out water and to sell water to individuals. The Spanish system did not give the land, but only the right to the water. In the main that was usually the case, but it had the further condition that after a term of years, usually thirty-nine years, but variously in different portions of the country, sometimes fifty years and sometimes even a hundred years, the right to that water was yielded by the company; that is, it could only hold the right to carry the water for a term of years, and after the expiration of that term the people who owned the land owned the water, and could after that time take possession of the canals and irrigate the land.

Mr. STEWART. In the beginning, by all the decrees the people of Spain holding the land had a right to the water, so that it could not be taken away from them if they complied with the conditions.

Mr. POWELL. The whole drift of the legislation and of the imperial decrees is at once, or after a term of years, to have the right to the water inhere in the land.

Mr. STEWART. The right to buy inhere in the beginning in the land?

Mr. POWELL. Yes, sir.

Now, I will speak about what probably will be the American system, for that relates to the work which ought to be done in this country. It seems to me that the American system would be to organize throughout the whole of the region where irrigation is necessary, irrigation districts, each district to embrace a catchment area, the whole area upon which the rain-fall flows into one stream of water, and to organize each catchment area into an irrigation district, with the right of the people within that district to control the use of the water. It must be understood that if but 15 per cent. of the region can be redeemed by irrigation, there is more land than there is water. The value does not inhere

in the land, but it inheres in the water. If, then, a company owns the water, wherever a company owns the water it practically owns the land; that is, it owns all the agriculture. As you know, there has been a great deal of difficulty in the West, and shot-gun law has prevailed in some districts to prevent companies from taking the water from the land.

Mr. STEWART. The difficulty we meet here is utter ignorance in Congress of what we have and what we want the appropriation for. It is to survey these districts, make the reservoirs, so that irrigation will be possible, and then we can discuss how the people can manage them. There is no difficulty about the American people managing them if they can only have a survey and have the reservations made so that they can have an opportunity. We want to know where they are.

Mr. POWELL. Having said this much, I want to add what I think should be done from the engineering standpoint. The questions that come before statesmen are not the questions for me to solve or speak about. What is necessary to be done is to make such a survey of that district of country that each catchment area, each catchment basin can be segregated from every other catchment basin so that we can show that the lands, townships, sections, and so on, fall within a certain catchment area. That is the first point; and then within that catchment area to select the best lands that may be redeemed by irrigation.

By the CHAIRMAN:

Q. And separate them?—A. Yes, sir; segregate them; that is to say, define them by township lines and section lines.

Mr. STEWART. You would have to make meandering lines occasionally.

Mr. POWELL. It would be very much better to have meandering lines, but we have gone to the expense of surveying that land.

Mr. STEWART. If you had thrown away millions, you would have to have meandering lines, because nature has fixed it that way.

By Mr. HALE:

Q. You can use the other lines to inclose some land that is irrigable?—A. You will see from the map the regularity of the districts which can be redeemed by irrigation.

By the CHAIRMAN:

Q. Are those lines drawn from actual surveys?—A. Yes, sir; from actual surveys.

Q. What work is done?—A. All except the reservoir system. That is not done there.

By Mr. HALE:

Q. You have in your mind the feature of segregating irrigable lands?—A. The law specifies that the Geological Survey shall classify the lands, and one of the legal classes is irrigable lands, another is the timber lands, the coal lands, the mining lands, and so on. That is the legal classification.

Q. Then you would not have to go over the work again for that purpose?—A. Not for that purpose. This area covered in blue [indicating] is surveyed, you see, that having been in view from the first and we now want to complete the survey of this area [indicating].

By the CHAIRMAN:

Q. Have you made this topographical survey in the line of what you call catchment districts?—A. Yes, sir. Wherever we have made the survey, every catchment basin can be outlined on the map.

Q. That is to say, you have in your surveys the necessary data for outlining those basins?—A. Yes, sir.

By Mr. HALE:

Q. You could select the sites for reservoirs without a new survey?—A. No, sir; not for the reservoirs. The approximate sites for the reservoirs can always be made on these maps, but the outlining of those particular sites is necessary.

The basis for estimating the area which can be redeemed by irrigation ought to be explained to you, so as to show to you that there is a body of land worthy of being considered. In the first place, the experience in California, Nevada, Utah, and Colorado, compiled, tabulated, and averaged, gives us the fact that somewhere between 90 and 100 acres of land can be irrigated by the use of a cubic foot of water per second. A stream which gives a second foot of water, as we call it, will irrigate from 90 to 100 acres. The basis of my computation is 100 acres.

Mr. STEWART. Have you taken into account the additional quantity that can be irrigated, which is almost without limit, as the ground becomes saturated?

Mr. POWELL. Yes, sir.

Mr. STEWART. They find in California when the ground is saturated but a few acres that they can get some thousands of acres after a few years. I think you will find that you have underestimated the amount which may be reclaimed ultimately.

Mr. POWELL. There are many districts of country where 200 acres will be utilized with a second foot, but there are many other districts where only forty or fifty acres will be utilized.

By Mr. HALE:

Q. By a cubic foot of water per second?—A. By a cubic foot of water per second, called the second foot. That is variable in different districts of the country. To utilize the water which flows during the non-irrigating season, reservoirs must be constructed. The season of irrigation is two, three, and four months in different portions of the country. The water flows to waste during all the rest of the season. So these artificial lakes have to be made, and canals and reservoirs constructed.

There is another method very rarely employed in this country which has been employed in Spain largely, and which has been employed in a few places in this country, where the water will not be put in lakes. In a district of country that has a sandy soil of from 2 to 10 feet in depth, with an impervious clay subsoil, the water during the non-irrigating season may be conducted upon such land and thrown into deep ditches, 5, 6, and 10 feet in depth, and it will itself permeate through the sandy soil below and come up to the roots during the season of growing crops, and be utilized in that manner. It so happens that in a very large part of the irrigable country that geological condition exists. There are many regions of country where there are sandy soils overlying clay subsoils, due to the fact that in a late geological time it was a region of great moisture, and it is covered everywhere with the dry basins of old lakes. In all that region of country there is an impervious clay below and sands which have accumulated during the arid geological period above, and it is not necessary to construct reservoirs, except as distributing reservoirs, to store the water of excessive floods, which could not be managed in the manner which I have stated. So, in all that region of country the construction of reservoirs will be reduced to a minimum, and that is a very large region of country.

The lands thus irrigated are by far the most productive on the face of the earth. If you will cut canals or ditches 10 or 12 feet through the sand, 100 or 500 or 1,000 feet apart, and fill the ditches with water and allow it to permeate through the sand on either side, the district of country that is thus irrigated will be of exceeding fertility, far surpassing that of any lands known on the face of the globe. A large area in all that district of country can be irrigated in this manner by utilizing the winter flow and spreading it underground for the summer.

Mr. STEWART. Even in that case is it not desirable in many instances to have distributing reservoirs, so that you can save the enormous waste of the floods?

Mr. POWELL. Distributing reservoirs and flood reservoirs are still necessary in those cases, but the construction of reservoirs can be reduced very materially in this manner.

There is one other point to which I wish to call your attention. Many years ago Professor Henry became interested in the preservation of the flood-plane of the valley of the Mississippi, and the Smithsonian Institution published a quarto volume on the method of redeeming that flood plane from fall, in which it was set forth that various methods which had been used as an experiment would ultimately prove unsuccessful, and that the only method was to store the water. Congress has done a little toward the storing of the waters of the upper valley of the Mississippi, as I know, by appropriations which have already been made. Now, the Upper Mississippi is not the place to store that water. The three great rivers which form the Lower Mississippi are the Ohio, the Upper Mississippi, and the Missouri. The Ohio gives the largest volume of water, the Missouri second, and the Upper Mississippi third. The Upper Mississippi, then, is the smaller stream.

By Mr. HALE:

Q. Does the Ohio River furnish a larger body of water than the Missouri?—A. Yes, sir; the Ohio furnishes the largest body of water.

Mr. TELLER. In high water, you mean.

Mr. POWELL. The annual flow is greater.

By Mr. HALE:

Q. Greater than from the Missouri River?—A. Certainly.

Mr. TELLER. Of course; it has a greater rise. The Ohio River rises to 50 and 60 feet at certain seasons.

Mr. POWELL. But the annual flow, the flood-line, of the Ohio is greater.

Mr. STEWART. The rain-fall is greater in that region.

Mr. POWELL. The rain-fall is very much greater. The water should be stored in the arid lands, if stored at all. We store what we can there so that we can use it twice. We store the water to prevent the flood here [indicating], and use that water in irrigation on the Plains. There is another very important reason for that, however. It is not the quantity of water which causes a flood primarily. Every river, if not overloaded with sediment, will cut a channel which will discharge all its flood. It is a geological principle recognized by all great geologists that every river will cut a channel to discharge its own floods unless some secondary agency comes in to prevent it. The agency which prevents the Mississippi River from discharging its flood is the excess of sediment which is brought into that river.

Mr. STEWART. Mostly from the Missouri?

Mr. POWELL. Eighty-six per cent. of the sediment comes from the Missouri River. All of that sediment is of inestimable value for the

Plains. That is the source of fertilization of irrigable lands. One reason why irrigable lands are so fertile is that they get from the adjacent country the wash of the hills and valleys and mountains, which is spread upon the lands themselves. That is a source of fertility for the Great Plains. Pardon me, perhaps it is egotistical to say it, but I have studied this subject for many years, and I am satisfied that the whole overflow of the valley of the Mississippi can be prevented and the whole of that vast area of country now flooded annually or from time to time can be redeemed and made dry by the storage of water on the Great Plains.

By the CHAIRMAN :

Q. The storage of the water of the Upper Missouri would not aid the water that falls into the region of the Upper Mississippi?—A. No, sir.

Q. So that the water would still go on?—A. It would still go on.

Mr. STEWART. That is clear water.

Q. (By the CHAIRMAN.) That overflow, you know, is very great.—A. I know what it is.

Q. The difference is 24 feet in my town between high and low water.—A. The storage of water in that region of country will not relieve the flood-plane of the Upper Mississippi, nor the flood-plane of the Ohio, but curiously enough the flood-plane of the Ohio is exceedingly narrow. There is very little alluvial land, river-bottom, along the Ohio; the bluffs lie close on either side. On the Upper Mississippi there is a vast area which can not thus be redeemed by the utilization of water, but the alluvial lands of the Mississippi from Cairo down can be protected by the utilization of the water of the Missouri and the Arkansas and the Platte and all of the streams which come across the Great Plains.

Q. Are you through with your general statement?—A. Yes, sir; but I want to speak something about the cost.

Q. That is what we want to hear you upon.—A. To complete the survey as we have been going on, without laying out the reservoirs, without laying out the sites for headworks and canals and so on, would take about \$5,000,000. We have expended about \$1,000,000, so that it would now take about \$4,000,000 to complete that work.

By Mr. BECK :

Q. And what length of time?—A. At the rate we have been going on it would take between thirty and forty years.

Q. With ample means how long would it take?—A. It could be done in ten years.

Mr. STEWART. Is it necessary to wait until you work up all the geological data in order to make the preliminary survey with a view to reservoirs?

Mr. POWELL. No, sir.

Mr. STEWART. That only refers to the local topography?

Mr. POWELL. To the construction of the maps.

The CHAIRMAN. Major Powell is speaking only of the topographical survey.

Mr. STEWART. No, of the geological.

Mr. POWELL. Not of the geological, but the topographical, survey which we are conducting over the country.

Mr. STEWART. Can you not vary your survey so that these reservoirs can be located more rapidly than that?

Mr. POWELL. We can with the necessary appropriations. We could do it in six years if sufficient appropriations were made.

Mr. STEWART. You could locate the reservoirs in five or six years?

Mr. POWELL. Yes, sir; we could make the maps, outline the catchment basins, and lay out upon the ground the headworks, the canals, and the reservoirs in six years, with sufficient appropriations.

Mr. STEWART. Do you not regard that as the most urgent work?

Mr. POWELL. Yes, sir.

Mr. STEWART. Because then settlement can take place, and the geological part of the work could go on afterwards just as well.

Mr. POWELL. Oh, yes. We are pushing the topography very far ahead of the geology all the time.

Mr. STEWART. Then, if you had the requisite appropriations, you could locate the reservoirs and make the surveys for settlement in five or six years?

Mr. POWELL. Yes, but it would take about \$5,125,000 to do it.

By the CHAIRMAN:

Q. At the rate of about \$1,000,000 a year?—A. That is my estimate.

Q. That would complete the topography?—A. It would complete the topography. I have made a second estimate. I have been working the last three days on it.

Q. It would complete the surveys of the basins and districts?—A. Yes, the catchments.

Q. And locate reservoirs, canals, and so on?—A. Yes, sir.

Q. In other words, the additional cost of this contemplated survey would be about a million and a quarter dollars over and above what you are now doing in the way of topography?—A. Precisely.

The CHAIRMAN. It will cost \$4,000,000 to complete this area?

Mr. TELLER. Anyhow.

Mr. POWELL. Anyhow, for topography.

Mr. HALE. And it would take thirty years the way they are doing it now.

By the CHAIRMAN:

Q. Of course, topography is the first thing?—A. Topography is the first thing.

Q. It is the essential thing?—A. And the chief cost.

Q. If you run this whole area into a six years' term you must spend your \$4,000,000 for topography, and then the remainder of the work can be done for a million and a quarter?—A. It could be done for a million and a quarter according to my estimate, and could be done *pari passu* with the other work.

By Mr. HALE:

Q. In round numbers it would cost about a million dollars a year?—A. About a million a year; but we could not use a million this year, because the engineers are not trained yet; they would have to grow.

By the CHAIRMAN:

Q. Probably a million next year or the year after?—A. Yes, sir.

Q. There is proposed to be appropriated in this bill \$199,000 for topography?—A. Yes, sir.

Q. Mr. Bowen has submitted an amendment which has been reported by Mr. Paddock from the Committee on the Improvement of the Mississippi River, proposing to give \$250,000 for the purposes we are now discussing. If we provided that \$250,000 what would be the natural way of expending it the current year?—A. It would be at once to select a series of points, and I have selected those in my mind. I think the first thing would be to go to the headwaters of the Rio Grande for

one of them, and survey the valley of the Rio Grande. The next would be to take the Madison and some of those streams that enter into the Upper Missouri. The next would be to complete the survey of the Bear River and the Jordan River in Utah. The next would be to take the upper streams which flow from the Sierra Nevada Mountains; and the next to take Southern California.

Mr. TELLER. Do not forget Colorado.

Mr. POWELL. I forgot to mention Montana and Colorado both.

By Mr. HALE:

Q. You have given us your idea of the locations where you would put your work if you had this appropriation of \$250,000, and I notice that you locate the work at the headwaters of the great streams, or great tributaries of the large rivers. Are you bearing in mind in that location this feature of irrigation and the reservoirs for the lands below, or are you more largely controlled in what you have just been telling us by saving the water at the head of those great streams and great rivers, which have you in mind first?—A. I will state the reason which controls me. The water, so far as possible, must be stored in the most humid regions. In the valleys of Nevada there are from 60 to 80 inches of evaporation from a body of water. If you go up into the high country the evaporation may be but 11 or 12 to 15 inches. To store water where the evaporation is 50 or 60 inches is to store it to be evaporated to the heavens. These reservoirs are to be constructed in the high lands where the country is moist. So I commence in each case at the headwaters of a great stream.

Q. Would there be any immediate effect in the development of irrigable lands in the neighborhood by opening the reservoirs to use and settlement?—A. It is a long talk, and I do not want to engage in it; but practically your land laws do not permit the proper settlement of those lands. If there were a land system in this country which would permit the proper settlement of the lands, then those lands would be developed by irrigation very rapidly indeed.

Mr. TELLER. Perhaps not right in the neighborhood of the reservoirs, because that might not be arable land, but they would let the water run down stream and take it out below.

Q. (By Mr. HALE.) It is one thing to have a project that shall concentrate the water, so that it can be used somewhere in its neighborhood for irrigable lands that shall be open to settlement and cultivation and increased population and wealth. I understand Senator Stewart has that in mind. It is entirely another thing to go into the broad domain of establishing great reservoirs that shall affect the flow of great rivers and affect the alluvial deposits of those great rivers thousands of miles away. State what you have in mind about these particular places—if there is going to be any more land opened to irrigation and thereby made good for settlement, or whether you propose that the money shall be spent in these other general projects?—A. In the first place, I must explain the physical conditions. In that region of country there are from 15 to 18 inches of rain-fall if it was spread over the whole country. Upon the mountains there are from 20 to 70 inches of rain-fall. Upon the plains and valleys below there are from 5 to 15 inches of rain-fall only, so that the rain-fall is mainly in the high mountains. All the great streams that run through the valleys and across the plains bring the water from the mountains. They have no plain tributaries at all. So the water must be stored in the mountains for economy where it falls, for if it runs down across the plains it is wasted in the sands.

By Mr. BECK :

Q. I should like to have you finish your statement in regard to the Mississippi, saving the great country below from overflow. Your idea is to utilize the water from the country where the reservoirs are. That is an extremely important point, and I want that made plain.—A. Nine-tenths of the reservoirs will be made in regions of country where agriculture is impossible, but 10, 20, 30, or 50 miles below the water will be conducted by canals.

By Mr. HALE :

Q. Then you must have canals 15, 20, or 50 miles in length?—A. Yes, sir; the water will be stored above in the cold region where it falls, and will be carried 10, 20, 30, and 50 miles below.

Mr. STEWART. I do not believe that a survey can be made in the United States showing that you could reclaim a body of land, and enact laws to make it possible for colonies to go in, that it would be vacant three years. Letters are pressing for such places and hunting them up,

Q. (By Mr. HALE.) You were giving a description of how reservoirs could be made up in the mountains, where there was no possibility of agricultural development, and the result on the lands below.—A. I will take the Yellowstone Lake. It is itself a natural reservoir of water. The capacity of the Yellowstone Lake can be greatly increased by the expenditure of a very small amount. The water from the Yellowstone that is now stored can be tapped and taken to lands 40, 50, or 60 miles below. Reservoirs must naturally be above the region where the lands are to be irrigated in order that water may flow down hill, and they are built in the mountains so that the regions below may be irrigated thereby. Suppose the waters of the Yellowstone Lake were all utilized, and that was made a reservoir, it would hold all the water of the year which now runs to waste. Then the water would spread out over the land in the valleys below. A part of it is re-evaporated into the heavens, and a part finds its way again to the stream. Then you go below 50 miles, or just below the region first irrigated, and make another reservoir; gather the water that remains; and the second time, and the third time, and the fourth time the same water may be used, so that ultimately the system of reservoirs will extend down all the rivers, but they must begin above.

Q. So it is not so much in relation to the nature of the land as it is the nature of the streams and the height and the fall?—A. Yes; the physical conditions under which the waters must be used are that the water must be first utilized above and then below, and then again below.

By the CHAIRMAN :

Q. Will it not gradually evaporate until it will run out?—A. Yes, sir.

Q. That is to say, when you use the same water three or four times there will be less and less all the time. Some will go through evaporation, some one way and some another, and it will finally be lost and will not enter the streams at the point below at all?—A. Not at all.

By Mr. HALE :

Q. Instead of gathering with great devastation as in a flood, it is saved and taken off in this way?—A. It is evaporated to the heavens.

By the CHAIRMAN :

Q. Then you would begin, say, with a reservoir at the headwaters of the Missouri River or Madison River. There would be the first reser-

voir; and there would be a canal, possibly 40 or 50 miles long, which would take in a region of country that would be irrigated from that reservoir?—A. Yes.

Q. Then below that point there would be another reservoir, and then another canal, and so on. Is that the idea?—A. That is it, precisely.

By Mr. HALE :

Q. It would follow the streams?—A. It would follow the streams.

Mr. BECK. Those canals would not follow the streams necessarily, because the water would have to be taken out where there are rich lands that lie lower.

By the CHAIRMAN :

Q. They would follow the streams in the sense that they would go up to what are called the foot-hills. You would not cross mountains with the canals?—A. They would keep within the catchment area; that is the point.

Q. Suppose you run a canal from one of these rivers down and another river comes in and another valley intervenes?—A. That is a question of very serious importance, involving interference with water rights.

Q. Rights already acquired in water?—A. Yes. That is a very serious difficulty, and that is one of the reasons why this matter is of imminent present importance. Here is a river with half a dozen branches. The people who first settle the country desire to utilize the little streams first. They can be taken out without great expense. One thousand dollars or \$10,000 or \$50,000 will take out a little stream and conduct the water on the low ground in one region of country. Instead of conducting it on the ground above towards its source, it will be conducted on to more valuable low lands. When the great stream is to be taken out it should serve the low lands, but the low lands are dotted over with rights everywhere, so that it would be impossible to utilize the water of the main stream. These questions have arisen very largely in California, but still more in Utah. They have not risen to so great an extent in Colorado, because of certain physical conditions in that State, but still they have risen to some extent there. Wherever irrigation is practiced this question comes up.

By Mr. BECK :

Q. I understood you to say that where water was stored at a high elevation in the mountains the evaporation would perhaps be 10 per cent., whereas, if it was stored at a lower level in the sandy plains the evaporation might run to 45 per cent.?—A. To 40, 50, 60, and even 100 per cent. You may take it down so low that you can not keep it at all.

Q. That evaporation, of course, ascends to the clouds and again returns in rain-fall. It must come back again.—A. Not in that region.

Q. It falls somewhere.—A. Yes, sir.

Q. Over the arid region you are speaking of, beginning at the 100th parallel and running almost to the Pacific, is there not now, to the extent that the settlers can use it, immense irrigation spread all over the ground by private enterprise?—A. Yes, sir; of the small streams, and without storage.

Q. And of large ones as well?—A. Not much of the large ones; very little, indeed.

By the CHAIRMAN :

Q. Why not of the large ones?—A. Because of the cost; it takes such a large plant.

By Mr. BECK:

Q. Have you ever been along the eastern line of the Big Horn Mountains? They are 100 miles long and about 40 miles wide, I believe.—
A. Yes, sir. Not of late years, but many years ago I was there.

Q. I doubt whether there is a foot of land or drop of water which can be used that has not been taken out in irrigating hundreds of thousands of acres there to-day. What is the effect of that rain-fall? The water is taken and spread all over that land at an elevation of 5,500 or 6,000 feet with the hot sun of that region. You know how hot it is there. How much of that evaporates within a day or two or three or four days after it is deposited?—A. It depends on the nature of the soil. Very often one-half or two-thirds will evaporate, sometimes not more than one-third.

Q. If that condition of things extends from the one-hundredth parallel almost to the Pacific coast and the people are irrigating to that extent, is it not now, to your knowledge, changing the condition of that country, and is not the rain-fall double what it was ten years ago?—A. I do not think it is.

Q. What is your information upon that subject?—A. I do not think it is possible to detect in the records any change whatever. There was a single record, which has been published by almost every railroad company in this country and published all over the world, which seemed to be a contradiction of my statement, and that was the record at Fort Leavenworth that there was an increase there. The record at Fort Leavenworth showed an increase of from 7 to 8 inches in the last ten years, but the explanation of that is that the record had been kept from 1837 to within ten years by army physicians. Subsequently to that time it was kept by an enlisted man, and the enlisted man in keeping the record measured the snow-fall instead of melting the snow, and that fact was only discovered about a year ago. There is not a single record in the United States that shows any increase or decrease of rain-fall in any portion of the country. None of the records of rain-fall that have been kept from Washington to Maine, from the first settlement of the country to the present, although the forests have been denuded to a very large extent in all that region, show one fraction of 1 per cent. change in the rain-fall, and the same is true of every other portion of the United States.

By Mr. HALE:

Q. The rate of evaporation has changed?—A. The rate of evaporation has changed, and all such things have changed; but the natural rain-fall has never been affected in any manner. The records of France, the records of Italy, the records of Spain, the records of England, all show a constancy, not from year to year, but in a period of years, in the rain-fall. That is because the rate of rain-fall is dependent upon the higher currents of the air and not on the lower currents.

By Mr. BECK:

Q. Then I understand you to say that by the irrigation which has been utilized up to this time, and all you proposed to do in that arid region, spreading the water over the land, will have no effect on the rain-fall of that region at all?—A. I think it would have an effect.

Q. Has it had any effect up to this time?—A. I think it would have no effect which would be of sufficient quantity to affect agriculture; I think it would have some slight effect.

Mr. STEWART. Would not the moisture caused by spreading the water over the surface prevent a rapid evaporation?

Mr. POWELL. Very much; the moisture of the atmosphere is very advantageous, but it does not change the rate at all.

Q. (By Mr. BECK.) Is not the rain-fall affected by the mountain ranges? Take the Big Horns. When the irrigation is going on to a large extent for hundreds of miles on each side and the clouds are passing over charged with moisture which is drawn from the earth by evaporation, is it not deposited in those mountains more than it would be without it?—A. Let me explain it to you.

Q. That is the belief of everybody who lives in that country. I know that is the way it is working. Whether scientific or not, it is true.—A. Here is a great region of country running along that line [indicating]. There is where the rain-fall occurs, just in there [indicating], in the mountains. Then it rolls out to the plains and runs through the plains where there is very little rain-fall. As it passes from the mountains to the lowlands it spreads through the sands of the country and evaporates to the heavens. Very little of the rain-fall of the Rocky Mountains gets to the Gulf of Mexico. Very little of the water gets to the Mississippi, except at flood time. The greater part of it has already evaporated in that country.

Q. It does not stay in the clouds?—A. It enters into the general circulation of the atmosphere. It travels on tens of thousands of miles, rapidly, in the upper air.

Q. When that very moist atmosphere strikes the Rocky Mountains or the snow-capped Big Horn, or any other, is it not condensed and dropped to the earth?—A. The general drift is eastward. When the water is evaporated into the heavens and carried into the general circulation of the atmosphere it drifts eastward, not westward. All the irrigation west of the Rocky Mountains will improve the eastern slope of the mountain, and all the irrigation in California will improve the climate of Nevada to some slight extent. All west of the Rocky Mountains will improve the eastern slope of the Rocky Mountains because the general drift of all moisture is eastward.

Mr. TELLER. Have you not heard it stated by pretty intelligent settlers that while they thought the aggregate amount of rain-fall was no greater than it had been, perhaps there was a greater number of showers and the rain did not fall in the tremendous storms we had earlier?

Mr. POWELL. Meteorology teaches that to be the case. The rain-fall is more diffused.

Mr. BECK. In the part of that western country where I have been in habit of going for five or six years, where they have irrigated all the irrigable land, they have showers every summer, although they may never have had a drop of rain before.

Mr. TELLER. The rain-fall is spread over the season; it may not be any more in the aggregate.

By the CHAIRMAN:

Q. You have told us of the cost of the surveys, the location of the reservoirs, the segregation of the irrigable lands, and the establishment of catchment districts. Suppose all that is done and completed, take for illustration the upper waters of the Missouri; what would the cost of the construction of the reservoirs and the canals be, in your judgment? What would be the range of cost? You have never gone into that subject.—A. I have never gone into that; that is outside of my work. It would be an enormous sum in the aggregate.

Q. Nobody, so far as you know, has entered into any calculation of the cost of that work?—A. No, sir.

By Mr. HALE:

Q. Your purpose would be to go on and complete the survey of that country and designate sites for reservoirs and canals, and there your work would end. Would that be of any practical use in any development of the country unless either the General Government or individuals or organizations were ready to go on with a great sum of money and construct the reservoirs?—A. No, sir.

Q. Then when the reservoirs are constructed at a great expenditure of money, would they be of any use unless the system of canaling which you point out is also built by the expenditure of vast sums of money?—A. Precisely. The cost will be great.

Mr. TELLER. I should like to suggest that while that might be true generally, if the water were let down the streams the people would take it out themselves. It may be beyond the power of the people to take these large basins and expend the money, but if it were expended on the head of the Platte River, for instance, which goes dry for 200 miles when it goes into Nebraska, and if at the head of that river there was a series of reservoirs, as there might be, it would double the capacity of that river for irrigation.

Mr. HALE. If the Government would build the reservoirs?

Mr. TELLER. If the Government would build the reservoirs the people would take care of the water themselves; they would take it out.

Mr. POWELL. If those catchment basins were defined—if the areas that waters could be stored were fixed and the area to which water was to be applied was determined—within one year \$200,000,000 would be offered by capitalists to do that work. It is one of the most inviting investments that can be made.

By Mr. HALE:

Q. In what form would capital enter into the work?—A. To construct the reservoirs.

The CHAIRMAN. Corporations?

Mr. HALE. Would corporations construct the reservoirs for the toll they would get?

Mr. TELLER. We have \$15,000,000 invested in irrigating ditches in Colorado.

Mr. POWELL. You have I do not know how many bills before the present Congress, asking for those rights. The capital of this country is ready to be poured right into that work.

Mr. STEWART. There are more than \$100,000,000 invested in it now.

Q. (By Mr. HALE.) Then they have been going on selecting their own sites?—A. Not all, but a very large part of the irrigation of this country has been made possible by the Spanish grants. A very large part of it has been made possible for the irrigable district marked out by the Mexican Government.

Q. Then the Government is to go on with this colossal expenditure and furnish the survey, then furnish the reservoirs, and then furnish the canals. Mr. Teller indicates that the Government in a certain region of country ought to build the reservoirs.—A. My judgment is that it will be done in this way: that a catchment basin will ultimately be declared to be an irrigable district and the people residing there to be a body politic who can contract and who can be made responsible; and that the people who settle in that irrigable district hereafter can

get capital and pay to the capitalists a royalty for bringing water to them.

Q. You think this work will be done just as corporations go now to our Eastern cities and villages and put in water at their own expense for the tolls collected of the inhabitants?—A. I have no doubt of it at all. That is my judgment of the proper way to do it; but still that is a political question, and I do not know that I ought to have said anything about it.

Mr. TELLER. With reference to meeting the objections that Senator Hale seems to have, that this would be valueless unless the Government goes to a great expense, I have drawn here a rough map of the true state of affairs in Colorado in the immediate vicinity of Denver, which is the most thickly settled portion of the State. Each stream [indicating] represents substantially a stream as it exists in the country, commencing with Plum Creek, Clear Creek, Bear Creek, the Boulder, Left Hand, St. Vrain, and Cache la Poudre, with their tributaries. I have passed over the whole of that region from time to time. It comprises a district of about 70 miles across there [indicating]. I have hunted over it and traversed it so that I know every foot of it. On the head of every stream, without exception, there are natural basins, more or less, which could be utilized. They are high up in the high mountains, practically of no benefit to anybody in the world because they are away above agriculture. These along here [indicating] are 10,000 feet high on an average.

Mr. HALE. What do you mean by "natural basins"—depressions?

Mr. TELLER. Depressions; places where, by putting a dam across perhaps 300 or 400 feet, you would flood several hundred acres. That is the only place that I know of where any such attempt has been made [indicating], and that is called Chambers Lake. That was taken by a company, and they put a dam across here [indicating] and filled up a very large lake of water. It was originally a lake. The question arose whether they had a right to do it. Our supreme court held that unless the Government of the United States interfered with them they had; that it is all right; but when you talk to a capitalist about going and damming these natural reservoirs to increase the capacity of these streams he asks you if you have got your title the first thing, and he will not touch it unless you have a title to it.

The CHAIRMAN. Will not Major Powell have that laid off when he comes to make the surveys?

Mr. TELLER. When Major Powell makes the surveys the streams can be withdrawn. We can not do everything at once, and we want to get these streams withdrawn first. We want to know where they are before we withdraw them, and then they can be withdrawn. Take the stream here that represents what is called Mammoth Creek [indicating]. There is a series of lakes there. With a small sum of money I can double the water in Mammoth Creek. It is a stream to-day you would not dare to ford with a horse, and in two months or in a month from now it will run down so that you can walk over it. But by going to work and filling up these natural depressions with small dams, comparatively, you can make a large amount of water. So you can do with all these streams. If you can do that you can let the water run down here until you strike a ditchway which will end out here [indicating], which to-day has not half the water that will irrigate the land that surrounds it. The ditch is already built, but there is not the water for it. But a very small portion of this land can be watered because the water is all used up. There streams are all dry before they

reach the Platte. In the irrigating season we take out every particle. If you would go to work and make these reservoirs up here, either by the Government or by individuals, you could double the water in those streams at a comparatively small cost. I will take a stream running into Arkansas on which I own property. Sometimes, I suppose, it will be 500 feet broad and 20 feet deep, and in forty-eight hours there will not be water enough to water a horse in it. You can not maintain a fence across it or anything of that kind. It has a great area above; but at the head of that stream there are seven lakes, and any of them can store water enough to irrigate thousands of acres of land if only dams were put across it. For the purpose of going where these basins are, and for the purpose of giving people an opportunity to know how much it would cost to dam them, that information can only be given by intelligent engineers, and nobody else is going to do it. In the first place, you can not induce a man to go up there and do that work unless he has some interest in it some way. The seven lakes could all be utilized with \$50,000. We can raise \$50,000 without any trouble to utilize them. Then we could run down these streams, catch the storms when they come, and irrigate the finest land the sun ever shone on. No better land was ever made by the Almighty anywhere than there is on that stream, where there is not water enough, as I say, half the year to water a horse. Those lakes could be utilized and thousands of people could live on the line of the stream. It is 30 miles long before it reaches the Arkansas.

Mr. HALE. Take such a case as stands here marked by itself. Within an area of less than a hundred miles in width, with such land as you describe, one would think that the enterprise of the people, the necessity of the case, would result in their having made and utilized reservoirs.

Mr. TELLER. They have done so to some extent. Chamber Lake is the only one that has a reservoir.

Mr. HALE. Why do they not do it? Is it on account of the question of title?

Mr. TELLER. In the first place, there is the question about the title; and in the second place, it is an indefinite thing; nobody knows anything about it; nobody makes an exploration. Over some of this country I do not suppose twenty white men ever passed. If I could say to a capitalist, "There is a Government survey showing that with \$50,000 a great water basin can be made, and that the water in that basin will irrigate 20,000 acres of land, for which you can readily get \$1 or \$1.50 an acre," he would see income coming, and he would ask, "How much would it cost to build the ditch?" That is the only question left.

Mr. HALE. If the Government interposes and locates the reservoirs, and brings to the knowledge of the public their availability, are you going to stop there, or is the next thing going to be that the Government is asked to build reservoirs?

Mr. TELLER. Suppose the Government is asked to build the reservoirs? Suppose the Government says, "Having made this location we will allow, under proper restrictions, somebody to utilize it?" They can do that. I called your attention the other day to an area on the Arkansas River which has already been surveyed, an area of 20,000 acres, but nobody will touch it because no one can get title to the land.

Mr. HALE. I am not talking about title, but I am speaking to the point whether, when you have done this, the Government is going to be called on to build reservoirs?

Mr. TELLER. Let the Government do it, unless the people think it worth while. Do you mean to withhold the information for fear that the Government will be led into doing something that ought not to be done?

Mr. HALE. That is certainly one reason that would control me. If I thought it was going to develop into a great system of building reservoirs and canals at the expense of the Government I should think more deeply than if I thought it was only going to be simply the locating of reservoirs.

Mr. TELLER. I think the purpose is first to find out what we have, and when you have found that out we shall be prepared to act, and if we say the scheme is beyond our possible means, then we may come to Congress.

Mr. HALE. I think you will.

Mr. TELLER. I do not think we shall.

Mr. STEWART. I do not think we shall, and I am opposed to coming to Congress. I do not think Congress has any business with it, and I do not want for one to ask Congress to do anything with it.

Take my State. I will take three rivers. There is the Walker River, with three branches; the Carson River, and the Truckee River. All these rivers head up in the Sierra Nevada Mountains, very high up. There are flats and lakes all through there. The water is exceedingly valuable. They are litigating now about what they have taken out to use. On the Carson River there is constant litigation because there is not water enough for their use. So on the Walker, and so on the Truckee. There are several hundred thousand acres of good land there. Schemes have been contemplated frequently to increase the water, but there is no way of obtaining title to the places above. If they should go and locate it somebody would come and take it from them. The people of Virginia City and Carson and all below there had some preliminary examination made of the Carson River, and found they could store a great deal of that water. Ninety per cent. of that water goes down in a month in flood time, and the rest of the year very little; but it may be stored there. If we had a survey and a reservation made for these reservoirs, so that we could build dams and not be disturbed, private enterprise would take hold of those streams.

Notwithstanding the millions that were spoken of, it is no more difficult to reclaim this region that has been pointed out than it was to settle the Eastern country. It would not require as much labor to build those reservoirs as was required to clear the lands in Ohio or Kentucky. It takes nothing like the labor per acre to make it complete for cultivation. There is no other place for people to go, and the land would be so productive, the climate is so healthful, there is no doubt about private enterprise taking hold of it if you put it within their reach.

The only thing the Government need to do is to make these reservations and then survey the arable land and make proper laws. The subject wants to be studied carefully to prevent monopoly, and at the same time to allow a combination of settlers and leave the localities to local government as much as possible.

I have the greatest faith in local government. I have had a great deal of experience in that. I started in California in early days. The people made regulations for their districts, first making their own regulations as to mining claims, and then making regulations as to water rights, and rules and regulations as to distributing the water. There were some \$15,000,000 invested in ditches to irrigate mining claims. The people made their local regulations, and the court simply adopted

them. They formed their combinations and distributed water regularly. There is no difficulty about it.

You have a community in the Western country peculiarly adapted to take care of these things if you will only put it within their power. Now a man can only go where there is a big stream and take what water there is there in a private way. He can not go into any enlarged scheme because he can not get a right of way. He is troubled about a right of way; he can not get a title for that.

The CHAIRMAN. That requires legislation.

Mr. HALE. And very careful legislation.

Mr. STEWART. You can have the needed legislation if you will adopt the amendment I propose, that all rights in that region acquired hereafter shall be subject to the right of the Government to locate these reservoirs. Then let the Geological Survey go on under the appropriation proposed, and we shall get careful information on the subject. The amendment I have drawn and presented to the committee makes all the reservation necessary, and it should be added to the amendment submitted by Mr. Bowen, which was reported favorably from Mr. Paddock's committee.

Mr. BECK. Would not the effect of your amendment be that no private man could take a homestead and dig a ditch that might not be taken away from him by any corporation that wants to use the reservoirs that are built about it?

Mr. STEWART. No, the Government of the United States would locate the reservoir.

Mr. BECK. A man can not take a homestead unless he can irrigate the land in that part of the country, and all the little ditches taken out for his own use would be subject to the superior right that you propose to give?

Mr. STEWART. No, not as to ditches; it is a place for reservoirs that is to be located. His homestead is not going to be on the site of a reservoir. Those places are away up on the high mountains.

Mr. BECK. But he may homestead along the line.

Mr. STEWART. Then a ditch will not hurt him any. He has his legal rights, and they will not be disturbed.

THURSDAY, July 12, 1888.

THE LIBRARY BUILDING.

STATEMENT OF BERNARD R. GREEN (CIVIL ENGINEER),

Superintendent and engineer of the construction of the Congressional Library Building.

Mr. BERNARD R. GREEN appeared.

By the CHAIRMAN:

Q. State the exact condition of the work on the Congressional Library Building at this moment.—A. At the present time the site of the building has been almost entirely cleared and inclosed by a fence. The ground about the immediate location of the building has been considerably graded and the excavation made complete for the whole building in accordance with the plan adopted by Congress. In addition to

that, trenches have been excavated and filled with concrete for the foundation of the walls for about two-thirds of the west front; that is, all the west front except the main central feature of the building, and for about one-third at least, perhaps rather more, of the rotunda or central portion of the building.

Q. That is, the concreting?—A. The concreting, and that work is now in progress. The drainage system in accordance with the architect's plan is principally in place.

Q. And the excavation has been done for all this?—A. For all this; that is, for the cellar, excepting the trenches. The excavation below the surface of the ground is about 12 feet deep.

Q. For the entire rectangle?—A. Yes, sir.

By Mr. HALE:

Q. As originally contemplated?—A. Yes, sir; it is all one rectangular excavation.

Q. What was done with the soil excavated?—A. It was partly used for filling in around the southwest corner, that being the lower part of the ground as it originally stood. Some of it still remains in mounds. That will be required for filling in behind the area walls when built, and a little more grading. The rest of it was hauled away. I do not know where it was taken.

By Mr. BECK:

Q. How far is that below the surface?—A. I do not know precisely; I have not measured it; but I might say 11 feet, or possibly 12. It is one rectangular excavation.

By Mr. HALE:

Q. What are the dimensions of the rectangle?—A. It must be at least 490 feet long and 360 feet wide. The excavation covers about 4 acres. I suppose that is about what that comes to.

By the CHAIRMAN:

Q. The excavation is 12 feet below the surface?—A. I will say about 11 feet. I have not measured it exactly.

Q. What is the system of drainage there now? Does it connect with the general drainage system?—A. Yes, sir. Most of the drainage system was put in last year. It consists of a girdle around outside of the excavation of pipes running each way from the northeast corner, or near there, around the excavation and connecting again at the southwest corner in a large main or sewer that runs into the city system; and all that outside of the main drainage has tributaries to it, branches running from all the courts inside to take the down spouts of the building and drain the courts when they shall be built.

Q. That keeps it practically dry now, I suppose?—A. Yes, sir.

Q. Suppose Congress should decide to do nothing at present with that portion of this plan [exhibiting] which is embraced within the blue line and not within the red line, could the surface there be so arranged as not to be annoying; and if so, what would be the probable expense?—A. It would never be annoying as it stands, other than as an eye-sore; it would not look well. There would be no collection of water or anything else there that would do any harm. The ground is rather porous; a great deal of water will soak away; but it is well drained already. The system will drain that area thoroughly for any length of time by a slight adaptation of strainers over the outlets of the pipes, and space could be sown with grass seed.

By Mr. HALE:

Q. On the present grade?—A. On the present grade. It is clay and sand, which was filled there when the excavation was made; but a very slight expense, as for sowing down a field anywhere, is all that would be necessary to make it look a little more respectable than now.

By the CHAIRMAN:

Q. What do you call this great rotunda?—A. It is the rotunda; the grand reading-room.

Q. What is the material of that exterior to be, brick or stone?—A. As it is now going on, or as the plans and specifications have been drawn up by the architect and adopted by the Commission thus far, all of the exterior walls of the building will be of stone. You asked me in regard to the rotunda. Those are the interior walls, of course. They are all to be of granite from the ground to the top, a light-colored granite, so as to reflect the most light. The interior, however, is to be lined with brick. The main piers and walls which carry the rotunda and the main roof are to be of stone and brick. But the interior of the reading-room the architect has designed to be built of white marble, so as to be ornate and elegant.

Q. All these walls are interior; that is, they are walls that are eventually not to be exposed?—A. They are exposed to the weather but not to view, except from the rear windows. They are court-yard walls. They are exterior to the building, but are interior to the main building, just as the court-yard walls of a hotel, or of the Treasury Building, or any of the public buildings here.

Q. Of what material will be the exterior wall of the west front?—A. Of granite. That is to say, the exterior walls of the west front have been contracted for to the top of the basement story of granite. Bids have been received for granite for the basement story, but no contract has been awarded. The plan consists of a basement and two stories. It is to be practically, however, a four-story building—a cellar, a basement, and a first and second story.

Q. Two stories only above the ground?—A. Three stories above the ground.

By Mr. HALE:

Q. And a basement?—A. A basement and a first and second story.

Q. Does the basement come up above the ground?—A. Yes, sir.

Q. How far?—A. About 14½ feet.

Q. What would be the height of the other two stories?—A. They are very high. I can not give the figures with perfect accuracy, because these plans have not been finished. They are not in a state to get at anything very definitely. They have not come to me. I have not had charge of them, and consequently have only a general idea from the figures that have been given to me. The first story, if I recollect aright, is 21 feet high, and the second story about 32 feet. There will be two very lofty stories, a basement of moderate height, and a cellar.

Q. So that it would stand above the ground something like 70 feet?—A. Yes; the front wall would stand above the ground something like 70 feet or more. The general appearance of the building, if you are not familiar with the design, is something like this Capitol Building. There is a basement and one or two principal stories above it.

By the CHAIRMAN:

Q. Have you turned your attention to giving us a description of the structure as contemplated in these red or pink lines?—A. Yes; I tried

to make up such a description yesterday. I talked with the architect. Before seeing him, however, I had thought that a good description would be so much of the plan adopted by Congress by the act approved April 15, 18²⁶, as is comprised by the west front, the rotunda, and the four shortest book repositories connecting with it. That describes it, but I do not know that you care to allude to the whole plan, because it would be describing a part of that plan instead of stating that it is the plan that is being carried out, and the whole of it. That is a description of the portion of the original plan that is now being carried out. There is another way of describing it, and that would be to say plan No. 1, now in process of execution.

Q. Execution or construction?—A. Construction. It is the plan upon which the building is now being constructed and known as Plan No. 1, on file in the Architect's office or in the office of construction.

Q. The office of construction is your office?—A. Yes, sir; it is the office of the Commission, you might say. You might have a copy of that plan and put it on file with the Librarian and say it is Plan No. 1, now being executed and on file with the Librarian of Congress. That would define the plan, so that it could be found any time you wanted it, and you would know exactly what was contemplated by the act.

Q. Is it on file with the Librarian?—A. Not now; but we have photographs of that plan which could be furnished at any time.

By Mr. HALE:

Q. The original plan of constructing the building, I understand, embraced the large rectangle that is covered by the large plan here?—A. Yes, sir.

Q. The intention was to build the entire building?—A. Yes, sir; evidently.

Q. Now, tell us when that purpose was changed and when that plan was abandoned, and the scheme of building only a portion of the original plan was adopted, as disclosed by the plan which you have just been describing.—A. That was done by the Commission last March, after Mr. Vilas became Secretary of the Interior, succeeding Mr. Lamar. Of course I do not know what the Commission may have determined upon in their own minds before, but no direction to the office was given, and I do not think the Commission had decided much before that time to confine the construction to that section of the plan. I knew very little of the building, the plan of it even, before I went there as superintendent of construction.

Q. When was that?—A. It was on the 1st of last April. I was then quite ignorant of almost everything pertaining to the work. I did not know the plan at all, having never seen it. It was at one of the first meetings of the Commission at which I was present that they said they would confine the construction of the building to that section of the general plan. I know, of course, that that must have been a very recent decision of theirs, because at that meeting, or one immediately subsequent, they considered the bids that had been received for the granite for the cellar walls of the whole building, the bids being received in three parts, one for granite for this section of the plan, one for granite for all the rest of the building, and a third for using rubble-stone for the rest of the building instead of the cut granite as shown on the plans. They accepted only the bids for this section of the building, Plan No. 1.

Q. So far as the interior goes that is all the plan covered by any contract?—A. Yes, sir.

By the CHAIRMAN:

Q. Except the contract for the concrete foundation?—A. Yes, sir; for the concrete foundation. That contract is in force; but it is in progress at the present time only, as I said before. according to this Plan No. 1.

By Mr. BECK:

Q. What is to be the cost of concreting the whole foundation?—A. It will amount to \$75,000 or \$80,000. It is at a price per cubic yard which will, for the whole foundation, according to the plans that have been made, amount to that gross sum.

Q. What proportion will the concreting of the part now proposed to proceed with bear to the whole?—A. I should say about one-half; I have never calculated it.

Q. So as to the contract for laying the foundation, if the contract is made for the whole, the proportion would be about the same—about one-half?—A. About one-half.

By the CHAIRMAN:

Q. But the contract is not made for the whole?—A. Not for the cellar walls. The concrete contract is for the foundation, and covers the whole building, as the contract now stands.

Q. But no other contract has been made for the whole building except the contract for the concrete foundation?—A. That is all.

By Mr. BECK:

Q. I thought that a contract was made for stone?—A. No; bids were received for stone for all of the building in two parts, one part by Plan No. 1 and the second part for the rest of the building. The contract was made only for Plan No. 1, as represented here.

Q. And there was no contract for laying the foundations in any part of the building that you proceeded with?—A. No, sir; no stone-work is contracted for beyond this section of the plan, Plan No. 1.

Q. Do I understand that the change in the plan involves no change, or rescission, or limitation of any contract already made except for the concrete?—A. And the excavations of the trenches to receive the concrete. There are two contracts in the hands of two different parties. One is for cutting out trenches and the other is for putting the concrete into them.

Q. You have already cut the hole down about 11 feet below the level, and you propose to cut the trenches down how much deeper?—A. They are being cut 6 feet. The concrete foundation is very deep and strong.

By the CHAIRMAN:

Q. The concrete foundation is 6 feet below the 11 feet?—A. Yes, sir.

Q. And is 6 feet in depth?—A. Yes, sir.

Q. Of solid concrete?—A. Yes, sir.

Q. What is the width of it?—A. It varies according to the walls and the load upon them. Of course some are very thin—say 2½ feet wide—while there are some that are 15 feet wide or more.

By Mr. HALE:

Q. What is the concrete made of?—A. It is made of Portland cement, sand, and broken stone.

By the CHAIRMAN:

Q. It is made on the ground, of course?—A. It is made on the ground, by the contractors, by machinery.

By Mr. HALE :

Q. While not an architect, you have had the experience of a man's life in superintending the building of large public buildings, have you not?—A. I have had to do with large public works; with the construction of fortifications first, and buildings afterwards. For eleven years I have had to do with the construction of large buildings.

Q. You were connected with the construction of the State, War, and Navy Department Building?—A. Yes, sir.

Q. Do you think that any building of this design would be likely to have been adopted if in the beginning it had been proposed to erect a building costing only about \$3,000,000?—A. I do not think it would. It is hard to answer that question very briefly. The trouble of it all is that when Congress adopted that plan all they had was a plan something like that [indicating], and an elevation, and a plan of the next floor above. That is all that was shown by plans or drawings. There was nothing to show what the material was to be, nor the degree of elaboration, ornamentation, or interior details were to be; and therefore nobody could have told at the time, in the absence of any detailed drawings or specifications to show how the plan was to be carried out, whether the whole building would cost \$5,000,000 or \$10,000,000. Different architects, unlimited as to cost, would have made that difference easily, and to good advantage, too, in carrying out that same plan.

By the CHAIRMAN :

Q. Depending on the material used?—A. Depending on the material used and the ornamentation, or the lack of it. The building was to be fire-proof, as the law says, and in the Italian renaissance style of architecture; and there was a general design which, to the architectural eye, would indicate that it ought to be built of a light-colored stone of some kind, and it might have been worked up by different architects to cost anywhere from 50 to 100 per cent. of a given amount.

Q. How much of this general plan is now completed—worked out architecturally?—A. You mean in drawings?

Q. I mean in drawings for the whole building.—A. I can not answer that very well, because I am not familiar with what the architect has done. I am quite sure that he has made general plans of the floors, but has not quite decided upon all the little details of them.

Q. For the entire building?—A. For the entire building. But lately he has been confining his work to Plan No. 1, and making the detail drawings for it as fast as he can, mainly for immediate use, to be ready for the stone contracts—getting out stone-work drawings. Those are for the interior and exterior main walls chiefly. He has made studies and models, and some perspectives of the interior arrangement of the rotunda and of the main vestibule, to be finished in white marble, he says.

Q. Then the plans are not complete in the office of construction for even this No. 1 plan?—A. No, sir.

Q. They are still in the brains of the architect, to a certain degree?—A. To a certain degree, and are capable of expansion or contraction as to cost to that degree.

Q. Depending upon the material?—A. Depending on the material and the manner in which he works it up. The building now could be built for a more or less sum according to the degree of finish and decorations with which the plan is worked up.

Q. So if we were to describe this in a statute as Plan No. 1, it would simply be a description of a picture on paper?—A. It would be a de-

scription of a plan on the ground, not an elevation. There is a distinction between the two.

Q. It would not be an elevation or a plan for the details of construction?—A. No, sir.

By Mr. HALE:

Q. None such exist?—A. None such exist to any degree of completeness. They are partly made. The details have been but partially worked out.

Q. Have you ever seen any sketch of the appearance that this building would present as indicated by this Plan No. 1 with its elevations?—A. The drawings, the elevations of these interior walls, will show patches of plain stone-work. They have made some drawings of that stone-work.

Q. I mean in any one picture. Have you seen it, or has anybody seen it?—A. No, sir.

Q. On that one point—and I do not ask you to criticise others—what would be the appearance of this building from the south facing to the west and with the rotunda in the rear?—A. It would be simply a mass of vertical, plain, smooth granite walls, interlarded with brick walls, more or less rough, which would have to be left at the proposed junctions of the other wings. If you remember how the State, War, and Navy Building looked as it went on from one wing to another, with certain blank spaces of brick wall left for the other wings to join to, the shape of this building from the rear, anywhere south, east, or north, would be very much like that, only it would have more angles and more numerous brick walls.

Q. Did you ever see any building that in any way bore any resemblance in its outlines to this building as, if it is finished, it will show for, say, ten or fifteen years?—A. No; I have not exactly. It would look a good deal like the rear side of a city street, that is, the backs of the buildings.

Q. The original plan is intended to show?—A. You would not see anything of what is to be the architectural appearance of the building from its court or rear sides.

By the CHAIRMAN:

Q. What is to be the height of the rotunda in the center?—A. I think it is to be something like 120 feet high.

Q. That will be complete and finished?—A. That will be complete and finished.

Q. The wings will be just one-story wings?—A. No; they go up as high as this part of the building [indicating]. It would be about 80 feet high here [indicating]. This central part here [indicating] would rise above those high enough for half-moon windows to light the reading-room.

By Mr. HALE:

Q. And that is to be a great dome [indicating]?—A. Yes. The architect has a plaster model of the rotunda as he has been working it out. He has gone to the labor of making a plaster model of it. It is probably 2 feet and a half in diameter and a corresponding height, showing the interior arrangement and its relative height and general appearance.

By Mr. BECK:

Q. Any architect in building such a structure as that, with a central dome and its projections, would build it with a good deal more ornamentation, if it was to be the permanent outside view and finish, than

he would if it was ultimately to be surrounded by other work?—A. Certainly. These walls will be simply plain granite walls, perfectly flat, with but few moldings or projections, and with a cornice around the top, so that the aspect of them will be very much like the court-yards of the Treasury Building and the State, War, and Navy Department Building. They will be clean, smooth granite walls, finished at the top with a plain cornice, sufficient to throw the water off.

Q. So that during all the years we fail to complete the building according to the original plan, by extending the south, east, and north sides, we will have a building that will not be either prepossessing to the eye or built in such a form as the architect intended that the world should look at it as a finished building?—A. Yes, sir.

By Mr. HALE:

Q. All the labor there will be at the western front?—A. Yes, sir.

By the CHAIRMAN:

Q. If you wanted to have what would be called a finished portion of this building in plain granite, you could put thin layers over the brick?—A. Yes; it could be veneered with granite, or the brick might be painted, or laid with some view to a better appearance, temporarily.

Q. Without great expense?—A. Yes, sir.

By Mr. HALE:

Q. You know something about what buildings cost. This is a very large building even as now contemplated. Do you think it could be built and finished as it ought to be, and that it would be safe to limit the cost to \$3,000,000 with a view of some time making the building complete? I refer now more particularly to the inside work and to having this spacious rotunda or reading-room, and have it a noble room, not lacking in proper ornamentation?—A. If you were going to build the whole building and have no more book space around it than this I suppose the rotunda should be made smaller and the whole thing would be brought down to a different design, which would be more elegant when finished, and at a less cost than ought to be that of a building of these dimensions, which is to be ultimately made the full size. This rotunda is in keeping with the whole plan of the building, to accommodate a great many more books than these little repositories would hold. You see all these are to be book magazines for generations to come, for the accumulation of books in quantities as much greater than these four little magazines would hold as those spaces on the plan are larger. So I should say that to carry out that plan with a view to an ultimate completion of the whole building and to an extent of ornamentation and finish that would be in keeping with it, \$3,000,000 would be rather too much of a limitation to make on that large building.

Q. You mean it would not be safe to limit it to \$3,000,000?—A. No, sir; I do not think it would be safe.

By the CHAIRMAN:

Q. What are the spaces to be used for here, in the great west front [indicating]?—A. They are designed to be for administration, for the copyright business, etc.

Q. There are to be no repositories of books in the west front?—A. No; there will be no repositories of books there, I understand. The clerks for the business of the office will be located there. Mr. Spofford can tell you about that a great deal better than I can.

By Mr. HALE:

Q. From whom do you take your instructions, if I may call them so?—A. From the Commission, generally. I am not under the Architect, but we have not our division of duty very well defined yet. The idea is that I shall have charge of the outside work entirely—of the construction—but the Architect makes the plans, and I get what I can from him. The Commission have never given me any definite instructions where I shall begin or leave off. They have rather wished to let matters go along smoothly without undertaking to define very accurately what our relative duties shall be.

Q. That has got to be done some time?—A. Yes, sir; it must be done. There should be one head of the whole business. There should be a superintendent and engineer of construction, who is everything but the designer and architect. Then the responsibility of the style of the building would be with the architect, and the responsibility as to strength and economy, and quality of construction, and business management would be with the superintending engineer.

ADDITIONAL STATEMENT OF A. R. SPOFFORD (LIBRARIAN OF CONGRESS).

A. R. SPOFFORD appeared.

By the CHAIRMAN:

Q. We were looking into this matter a little further. Some things occurred to us upon which we were not quite clear. We had doubt about the appearance of the building. What do you think of that? Will it be an ornate building?—A. It will be, from the Capitol, a very slightly edifice. From other points of view, as you go along the sides, it will be neither slightly nor unsightly. It will look somewhat like any unfinished building. Some of the walls will not be ornate, but it will be a most creditable and handsome building. You must observe that there will be nothing visible from the Capitol except a very handsome façade or elevation.

By Mr. HALE:

Q. The top of the dome will show?—A. Very slightly. The dome is to be kept down because of the immediate vicinity of the Capitol. It would not do to have a public building that would be soaring in character so near this magnificent Capitol, which ought to be left the unique ornament of Capitol Hill.

Q. What is to be the height of the dome?—A. It will be less than 110 feet.

Q. What is the height of the dome of the Capitol?—A. Two hundred and eighty-eight feet. My idea is to have no roof visible; that is the handsomest building which exhibits a fine front elevation or façade.

By the CHAIRMAN:

Q. According to the plan what will all this part of the building [indicating] be used for? Here is the library reading-room [indicating] and here are the alcoves around it, and here are the repositories for books.—A. They will be filled to the utmost capacity with the existing library and the growth for the coming fifteen years. This section will be used primarily, nearest to the library, for the copyright and record rooms, and for lesser-sized rooms for Senators and Representatives to have a quiet place to study, which they never can have in this Capitol. I have

not fixed the ultimate designation of these great rooms here [indicating] because there was no antecedent necessity for fixing it, but probably one of these will be devoted to an immense storage-room for our newspapers.

Q. For daily use?—A. For daily use; incessant use. You would be astonished to see the call for those papers published in all parts of the country.

By Mr. HALE:

Q. There will be no books there?—A. Yes; there will necessarily be some books. We have something like 500,000 objects of graphic art, like fine-line engravings, chromos, lithographs, photo-gravures, steel engravings of every description, and photographs, and we can make an exhibition of the arts of design that will be very interesting and instructive. I think perhaps one of those had better be filled in that way, and the other used for newspapers.

By the CHAIRMAN:

Q. Are there three stories or two stories to be used?—A. There are two stories to be used.

Q. The lower story will be a work-room?—A. It will be a work-room. I shall have to put a bindery under there, or here [indicating], but for that we shall have to depend upon future legislation.

Q. Your idea is to do your own binding?—A. It ought to be done in the building, on account of the risk, and wear and tear, and loss in using the Government bindery. We have lost probably two hundred volumes in the last eighteen years just from the fact that there are 2,000 people employed, and there is no special responsibility. Now and then a book will disappear and not come back.

Q. What is the width of that?—A. It is 47 feet wide, I believe, at that point. We must have ample room for the copyright ledgers; that is, record books running away back to the beginning of the Government. I have them from every State in the Union, by the law of 1870, and they must be easily accessible.

Q. What are these central rooms [indicating]?—A. There must be a lavatory and water-closets, and there must be good rooms, the best that can be, for Senators and Representatives to use as private study-rooms.

Q. You are familiar with the act of April 15, 1886?—A. Entirely so.

Q. It provides for—

The construction of said building, substantially according to the plan submitted to the Joint Select Committee on Additional Accommodations for the Library of Congress, by John L. Smithmeyer, in the Italian renaissance style of architecture.

Where is that plan?—A. In the Library, near the entrance, as you enter. I can have it here in about three minutes. That is the renaissance style, and contains the elevation and the ground plan.

Q. What does that plan contemplate as respects the material of the building and the method of its finishing?—A. As to the material, nothing was determined upon. That was left to the Commission.

Q. How was the interior to be finished?—A. It was to be finished on the lines of this ground plan.

Q. But was it to be finished in granite, or in marble, or in walnut, or in pine?—A. All that was left to the Commission.

Q. Nothing of that kind was contemplated in the plan?—A. Nothing of that kind was contemplated or discussed.

Q. The plan referred to here is nothing more nor less, practically, than a picture?—A. It is a sketch plan. An architect would call it a sketch plan as contradistinguished from working drawings or final plans.

Q. It did not embrace material?—A. No, sir.

Q. Or the method of construction?—A. No, sir; except that it was to be fire-proof, which is always held to be iron, stone, or brick. Whether it should be stone and brick, whether it should be marble, or whether colored marble or plain—all those matters were untouched entirely. I have always been in favor of a not very ornate finish and no statuary inside or outside.

By Mr. BECK :

Q. The sketch plan you have in the library, which you say you can show us, would give us no idea, after looking at it, as to whether such a plan would cost \$3,000,000 or \$10,000,000, and it might be made to cost either, depending upon the character of material used and the amount of elaboration?—A. You are entirely right, sir.

By the CHAIRMAN :

Q. The act says :

With such modifications as may be found necessary or advantageous without materially increasing the cost of the building.

To what did that refer?—A. I do not know.

Q. You did not know what the building would cost?—A. No.

Q. This plan did not disclose what it would cost?—A. No, sir.

Q. And nobody knew? Mr. Smithmeyer did not know?—A. I do not think he did.

Q. Is there anywhere now a detailed plan or working plan of this building showing what it would cost if absolutely completed, I mean taking the whole?—A. As to the first branch of the inquiry, there are complete working plans which we have required the Architect to push forward with regard to all these parts marked in red [indicating], but with regard to the rest of the edifice there is nothing which would show the ultimate cost of the building.

Q. In what state of completion are the working plans for the red?—A. They are completed absolutely, as I understand, up to the first story of the building.

Q. That is, the basement plan is completed?—A. The basement plan is completed.

By Mr. HALE :

Q. Including cellar and basement?—A. Cellar and basement. He is going on with the greatest activity. He has a force of eighteen draughtsmen, an unusual number, and is making rapid progress with the two stories that are to form the superstructure.

By the CHAIRMAN :

Q. The working plans of the cellar and basement story are completed?—A. They are completed.

Q. Including material and dimensions?—A. Quite so.

Q. With the work on the first and second story going on?—A. Simultaneously. He was instructed to go to the roof on both of them.

Q. Will the first and second story be all of stone?—A. The Commission have never settled the question as to the superstructure. They have supposed in their own mind, each one of the three, that it would be stone, either marble or granite.

Q. How can he make working drawings without knowing what material is to be used?—A. He has made the basement of stone.

Q. Making it on the basis of either granite or marble or some kind of

stone?—A. An enormous quantity of brick will be put in these interiors.

Q. Has he made a working plan of the dome, so as to show how it is to be completed?—A. Those working plans are now in progress. They involve a very large amount of iron. The books will nowhere come in contact with stone or brick, but with iron, of which all of the shelving and surroundings will be made.

Q. What you allude to now is what would be called the shelving, but what of the structure?—A. On the superstructure, including all the stone and all the iron that enter into the building, great progress has been made.

Q. Has he the first story completed?—A. I can not say as to that. I have not looked at it in the last ten days.

Q. Do the Commission know what the red [indicating] will cost?—A. They only know from the estimates of such architects as Clark, Smithmeyer, and Green. I think they have had opinions from each of the three.

Q. What is the estimate?—A. Inside of \$3,000,000.

Q. Constructed of what?—A. Of stone, brick, and iron, keeping down costly marble, interior ornamentation.

By Mr. HALE:

Q. Do you not think the great reading-room ought to be marble inside?—A. The chief ornament of that great reading-room would be the books themselves. Nothing can be richer in their varied binding than that. It would be the most beautiful, the most appropriate, the most successful ornamentation we could have. I thought myself, although the architects think rather differently, and it is an unsettled question which the Commission, if it were to continue, would have to settle, that it would be best not to put marble in there at all, but to have ornate iron, floriated iron ornamentation in the library.

STATEMENT OF J. L. SMITHMEYER (ARCHITECT).

J. L. SMITHMEYER appeared.

Senator Voorhees was present.

By the CHAIRMAN:

Q. [Exhibiting.] This is the plan of the first story of the Library Building as filed in the office of the Librarian of Congress?—A. Yes, sir.

Q. Is this the plan upon which the act of 1886 was passed?—A. Yes, sir.

Q. Here is another plan on a different scale [indicating]. That is the west front of the building?—A. That is the perspective view of the principal and north fronts.

Q. What other plans had you at that time except these two?—A. Up to that time I presume there were (and I should have brought them to you if I had known you desired them) ten different plans, perhaps eleven.

Q. Those were experimental plans?—A. Plans of a smaller building, and plans of portions of it.

Q. They were drawing plans that you prepared before the passage of the law in various ways?—A. Yes, sir; for various committees during the last fifteen years.

Q. But this was the plan [indicating] adopted by the committee and afterwards adopted by Congress?—A. Yes, sir.

Q. Was the plan of the second story also made at that time?—There was a sketch made of the second story, but there was nothing required but a general disposition of space, making allowance for so many books. It was very sketchily drawn.

Q. There is one provision in the act we could not quite understand. Perhaps you can explain it? It provides for—

The construction of said building, substantially according to the plan submitted to the Joint Select Committee on Additional Accommodations for the Library of Congress, by John L. Smithmeyer, in the Italian renaissance style of architecture, with such modifications as may be found necessary or advantageous, without materially increasing the cost of the building.

Q. What was that idea?—A. I can explain that to you by these two plans. When we are first called upon to make a plan we proceed in the way a lawyer does, *i. e.*, we make out a sketch for a brief. We give a general idea, just the skeleton of the thing, as it were, and afterwards when we get time and are called upon we make the details, and we find very often that the skeleton is a little defective in one thing or in another. So you will notice here in this plan four octagonal book repositories [indicating], which, instead of being finished square and in this way, are finished in that way, which is better. That is a waste of space and also makes the alcoves dark.

Q. That is an open space?—A. It is an open space. We left that space upon the second and third study, and so on. That arrangement darkens all these alcoves wherever it occurs [indicating]. By cutting the corners off and making these ends octagonal, which was done on our last study, we gain all that space, and we also gain light all around, which is a great advantage.

Q. And you do not increase the cost?—A. We do not increase the expense. That is one of them.

Q. That is enough for illustration. This is the west front [indicating]. How many stories high is that?—A. Three stories.

By Mr. HALE:

Q. Including the basement?—A. Including the basement. It is just as high as this Capitol.

By the CHAIRMAN:

Q. Two stories above the basement?—A. Yes, sir.

Q. Is there a hall-way running through?—A. In the first floor there is a hall-way.

Q. This is the hall-way I point to now [indicating]?—A. Yes, sir; here [indicating], and here [indicating]. These are supposed to be offices [indicating].

Q. That hall-way opens into open space or into these lateral spaces?—A. Yes, sir.

Q. So there is no place for anything on the east side of the west front?—A. No, sir.

Q. What is to be done with the room and space on the first floor?—A. I presume the Librarian would want it on one side for offices for himself and his assistants and for the service they have, and on the other side for the copyright records.

Q. What is that great central space there [indicating] to be used for? A. The stairs run up in that space; they are double stairs [indicating.] There are water-closets on each side of that space. We have provided liberally for those. Back here [indicating] are the elevators to send people up into the second and third story. It is our idea that spectators shall not be admitted on the first floor, where the readers

are, disturbing them. I have noticed in London, Paris, and Liverpool that they are taken up by means of stairs and elevators to the third story, where there is a gallery over the book-cases. The third story will be a gallery, which can be used for a picture gallery if desired, and from this gallery spectators can look down on the people reading without disturbing them in their studies. So I would say the central space of first floor is to be used for the elevators, for water-closets, for stairs, and for a general vestibule for people coming together from all parts, promenading and passing out.

Q. Is the second floor finished in the same way?—A. The second floor has no hall-way in it. The second floor is intended to be used on each side for articles of the graphic art, of the copyright records, of which Mr. Spofford says he has thousands on hand. They are of great value, something like the model rooms of the Patent Office, only more so. This part [indicating] may be used, and was intended to be used, for maps, of which we have 8,000 or 9,000 on hand now; and these two alcoves [indicating] are to be used for lithographs, photographs, engravings, and rare specimens of typography. So a disposition of this space is well made.

Q. I do not see what you are going to do with this corner [indicating] or the other one on the first floor.—A. I think this would be used perhaps for collating-rooms, cataloguing, and one thing and another.

Q. Working-rooms?—A. Working-rooms. I am not as well acquainted with the Librarian's plans as I am with my own.

By Mr. BECK:

Q. How long is the third story?—A. It is one story above the second; just like this building.

Q. You thought the back part of it should have books?—A. I think so.

Q. There is not a book repository in the west front, so far as I can see.—A. You can put them there.

By the CHAIRMAN:

Q. What is the basement to be used for?—A. The west front will be used for a book-bindery, the central portion for a store-room generally; large store-rooms will be necessary.

By Mr. HALE:

Q. Are you speaking about the basement or the subbasement?—A. I am speaking about this part here [indicating] for the bindery, etc. The machinery is below that.

By the CHAIRMAN:

Q. That takes up the west facade of the building, and utilizes practically that whole space. Here is the library proper [indicating], with the main entrance there [indicating], and these wings [indicating]. How high is this great space [indicating] leading into the rotunda—the three stories?—A. The first story is 14 feet high, the second story is 21 feet high, and the third story is 36 feet high.

By Mr. HALE:

Q. I do not understand that this goes down into the basement.—A. Yes; the basement is under there [indicating].

Q. I got the impression that the floor of this main, large, noble room here [indicating]; this circular room with alcoves making out from it, is the floor of the basement, too.—A. Of the first story.

Q. It does not go down to the basement?—A. It does not go down to the basement.

By the CHAIRMAN:

Q. You say the first floor is 14 feet high. You mean the basement floor?—A. The basement floor.

Q. It is not the first floor, then. It is the basement floor.—A. Yes, sir.

Q. The next story is 21 feet high?—A. Yes, sir.

Q. And the second 36 feet?—A. Thirty-six feet. The stories are divided in that way into spaces of 7 feet, which is the height of each book-case. That is the way the heights come out.

Q. The floor of the reading-room is the floor of the first story?—A. It is the floor of the first story.

Q. There is a stairway from the first story to the second story here [indicating]. Is this intervening space [indicating] which leads to the reading-room proper, three stories, as the other?—A. It is all the same height.

Q. How high are the side alcoves here [indicating]?—A. They make seven stories for books.

Q. Are the outside alcoves higher than the rest?—A. Not at all. For instance, two stories of 7 feet each would make 14 feet here [indicating] for one story, and three stories in the next story would make the second story 21 feet high.

Q. The books are to be deposited in these four book repositories?—A. Yes, sir; and around here [indicating] in the alcoves.

Q. What are these white spaces [indicating]?—A. They are open spaces for air and light.

Mr. HALE. When Mr. Smithmeyer speaks of the first floor he means the basement?

By the CHAIRMAN:

Q. The floor of your reading-room is on a level with the floor of the first story?—A. Yes; with the principal entrance.

Q. It rises first 21 feet?—A. Yes, sir.

Q. And then 36 feet?—A. Yes, sir.

Q. That is 57 feet. Your alcoves or side-book repositories are of the same height?—A. Exactly, but divided.

Q. But seven stories high?—A. Exactly.

Q. The library proper begins on the first floor above the basement?—A. It does; at the same time the basement floor can be used if there is need for it.

Q. Does this wall [indicating] run clear around?—A. Yes, sir; only the space would be pretty dark down here [indicating]. When the rest of it is built up it would be just like the crypt of the Capitol.

By Mr. BECK:

Q. There is no arrangement along these fronts [indicating] for six or seven stories of books like there is here [indicating]?—A. They can be made in time.

By the CHAIRMAN:

Q. How can they be made in time?—A. By putting shelves in.

Q. By putting in shelving and an iron stair-way you can use it of course for books, but you can not do it in any other way. You could use it just as we could use this room.—A. In this room you could put two rows of book-cases.

By Mr. BECK:

Q. But there is no arrangement of that sort?—A. They can be put in at any time.

By the CHAIRMAN:

Q. This is plan No. 1 [indicating]?—A. This is plan No. 1.

Q. I see on a little memorandum that there was here a statement that your original estimate of the plan of this part of the building was \$2,350,000. Did you ever make such an estimate?—A. Here is a copy of the plan [exhibiting].

Q. When was it made?—A. It was made in 1880 and with a view of building a brick building with iron and stone.

Q. That was \$2,350,000?—A. Yes, sir.

Q. In other words, that was a section of this great building, and it then contemplated that expenditure?—A. Yes, sir.

Q. Have you an estimate derived from working drawings of the probable cost of that structure as you now contemplate it?—A. No, sir; I have not been able to do so.

Q. You do not know what it will cost?—A. I made an approximate estimate of it.

Q. Based on what?—A. Based on various buildings that are somewhat like it, reduced to cubic feet and divided by their cost, and then taking the price for that.

Q. What buildings?—A. For instance, the General Post-Office Building cost 61 cents a cubic foot. If you throw this building into cubic feet and multiply it by 61 you get an approximate cost of a marble building, and this will be marble or granite.

Q. What is that estimate?—A. It comes in the neighborhood of \$3,000,000. It is a little more, but I think by economizing on the inside perhaps it could be curtailed.

By Mr. HALE:

Q. Do you want to economize on the inside?—A. No; I do not want to do so, but the cost would compel me to economize.

Mr. VOORHEES. When you stated you had not made an estimate you meant in the technical sense that you had not made a careful estimate of every stone?

Mr. SMITHMEYER. Yes, sir.

Mr. VOORHEES. You have given it all the attention you could since this question came up?

Mr. SMITHMEYER. Yes, sir. You can see in the regular bids here made for the cellar of the Congressional Library a difference of 100 per cent. in a single item. With such results before one it scares a man to make an estimate.

By the CHAIRMAN:

Q. Have you ever made an estimate of the total cost of this rectangular building?—A. There never was a full estimate made of it, really; we were not called upon. There were forty-one plans on hand; at first there were twenty-eight, and they kept coming in until there were forty-one plans on hand, but we were not required to make an estimate of the cost. We all worked up to the programme as it was laid out by the Librarian to show the capacity and to show the conveniences, etc. The one that was best and came nearest to the programme, I suppose, is the one they took, but there was never anything done that could be construed into an estimate.

Q. You have the plan before you called Plan No. 1, which is a section

of the rectangular building. What would it cost to construct that according to the plan which seems to be in your brain largely, because I do not think you have working plans even of that now?—A. I have sketches, that is all.

Q. To be built of suitable material and workmanship what, in your judgment, would it cost?—A. That is a very broad question to answer. It is like finishing a private residence. You can put in a \$10,000 house a \$20,000 finishing, and so you can immensely more so in this building. For instance, you can make a white polished-marble front.

By Mr. HALE:

Q. Suppose you say finished as it ought to be finished?—A. Not as it ought to be, but to make it the finest building, as contemplated.

By the CHAIRMAN:

Q. Contemplated by whom?—A. Everybody said to me, "We are going to have the finest building of that kind in the world; do not be stingy; nobody will be stingy hereafter." We got the best plans.

Q. Finished according to what everybody told you ought to be done, what would it cost?—A. I have no doubt in the world you could put in \$4,000,000 or \$5,000,000.

Q. In that section?—A. In that section.

By Mr. HALE:

Q. On this Plan No. 1?—A. Yes; you could do that.

Mr. VOORHEES. What could it be respectably finished for?

Mr. SMITHMEYER. As contemplated originally, work of finishing could be done for a million or a million and a half dollars. Three million dollars ought to finish that building in iron and plaster just as the Department buildings here are finished.

By the CHAIRMAN:

Q. Upon the plan on which you have been working, looking to a suitable interior arrangement of the reading-room and library, covering marble stairways, pillars, etc., what would be the cost of the building, approximately?—A. It is a very difficult thing for me to jump at a conclusion.

Q. You must have thought of that?—A. No, I did not; because there was no limit given to us in this matter. There has never been any limit given. It was just intended that it should be the finest building of its kind.

Q. Then you have never contemplated the question of what the building would cost?—A. The whole building? Never, of course.

Q. But this part?—A. This part was undertaken upon the suggestion of Secretary Vilas. We had not contemplated it in the beginning.

Q. This limited part is Secretary Vilas's suggestion, I understand you to say?—A. Yes, sir.

Q. And you do not know what that would cost to finish as contemplated?—A. I would obligate myself to finish that building at \$3,000,000.

Q. With plaster and iron?—A. Yes, sir; such as the Department buildings are finished, the State Department Building, etc.

By Mr. HALE:

Q. Nobody wants it finished in that way?—A. I do not know that anybody before that time had any idea of finishing it in any other than the best way. I am not aware of it. When you leave an architect a *carte blanche* to go on he usually goes beyond anything previously seen or had.

By the CHAIRMAN:

Q. We do not contemplate expenditure merely for the sake of expenditure, but expenditure that will appear well in its entire general effect, and at the same time be of most durable material, such as marble, and of course it must be polished marble. Was that contemplated by you, or did you intend to finish it in stone and iron?—A. No, sir; it was not contemplated to have it finished in that material. No estimate was made because we thought Congress would appropriate from year to year what was needed to finish it in that way, and if there was any objection to this expenditure we could change it and make it of plainer and cheaper material.

Q. I wish you to describe the vestibule entrance to the reading-room and library, and the general appearance of the library, including its height and the character of the inside finishing. Describe that in general terms as you contemplate it.—A. I am speaking now of the first story. It was contemplated to be in marble, a colonnade on each side to be of marble, the same as the stairs. The work in the second story all around was to be vaulted, such as the Capitol Building. Entering the large reading-room, 100 feet in diameter, with galleries all around it, making it 144 feet out to out, alcoves 20 feet deep, books on each side, and the central side passing to and from the book repositories as they radiate from the center. That work was also intended to be of marble, the screen work and the columns were to be of marble, and from the galleries up the work was to be of iron and other metals. The dome and the book repositories are all to be of iron.

Q. But the walls, of course, are stone?—A. They were to be stone. They were contemplated to be of granite.

