

competent to banish small pox from the army and navy forever ! But in order to carry it into effect, the orders for attending to vaccination in the military and marine, must be as imperative as any part of the discipline. For although the small pox broke out at the fort at Sacketts Harbor, during the last war, your memorialist, who volunteered his services there as vaccinator, could not persuade the brave General Brown that it would be safe to have the army all vaccinated at the same time, as he was probably anticipating an attack from the enemy, or intended to attack them himself. But even then it would have been safe ; for Abercrombie had his immense army vaccinated in Egypt, when he hourly expected an attack by the French, and it was officially stated that it occasioned not a man to be enrolled on the sick list.

Your memorialist vaccinated the troops at several posts at the north, and understood that none of them were entered on the sick list. And when the small pox broke out among the troops on Lake Champlain, the commanding officer sent for the vaccine in various places and directions, and failed of obtaining it ; and had the mortification to see his men die one after another for the want thereof, till your memorialist arrived and put a stop to its ravages.

It is generally understood, by all who have attended to this subject, that the difficulty of procuring the pure vaccine virus and perpetuating it, has ever been the greatest impediment to the practice, both on this and the other side of the Atlantic. But your memorialist having devoted thirty-seven years to this single branch, has now so far overcome those obstacles, that he has sent the vaccine safe to tropical countries and cold regions of the globe. He has sent this preserver of life also to the red nations beyond the Rocky mountains, to the Pawnees and other tribes of Indians where the small pox was at that time destroying them, for which he received, through the agent, Major Dougherty, the warmest expressions of gratitude from some of their chiefs.

Your memorialist would further represent, that he was an early promoter of vaccination in this country, and that, with a zeal somewhat in proportion to the importance of the discovery, co-operated with Dr. Waterhouse many years in the arduous struggle against a strong opposition, endeavoring to convert public opinion from the old inoculation to the new, until we had the satisfaction to see the better practice triumphant ; and that more recently, when this country was first visited by what was termed the epidemic varioloid, your memorialist persevered in his experiments till he found in revaccination an effectual preventive for that malady.

Your memorialist begs leave likewise to state, that quite fortunately for the cause of humanity, his vaccinal research has, in the hand of Providence, proved the means of developing a most happy invention for affording relief to persons in certain cases of long exposure to small pox, where the ordinary method of vaccinating would have failed, and which is to *accelerate* its slow progressive stages, and induce a constitutional action sooner than usual, and which is done simply by inserting the vaccine midway between the shoulders and breast, both right and left, and on each arm, by broad incisions, and well saturated with genuine vaccine virus. Forty-eight hours is gained thereby ; and many persons, by this pathological stratagem, have been rescued, even in forlorn cases, from perilous situations ; and relief has thereby been afforded in many instances to the afflicted sailor, soldier, and citizen. This discovery gained your memorialist the honor, in

the year eighteen hundred and thirty-two, of the Royal Jennerian Society of London; but this is not named here through ostentation, but only to show how highly his services were esteemed by that enlightened body.

Your memorialist would only add, that during these incessant labors for counteracting the energies of a mighty pestilence, (much of his vaccination necessarily gratuitous,) has been attended with a great sacrifice of time; and particularly on the frontier during the late war, for which he never received any adequate compensation. Still he feels not the less zeal in endeavoring to ameliorate the sufferings of his fellow men; and he would now gladly undertake the Herculean task of erasing from the army and navy that scourge of the human race. Your honorable body will perceive that the subject involves not only the dearest interests of human nature, and the soundest principles of national policy, but, in some degree, the reputation of this republic. Your memorialist would, therefore, ask Congress to deliberate on the expediency of instituting a permanent vaccine establishment for the army and navy, and the Indian Department. And your memorialist, as in duty bound, will ever pray.

SYLVANUS FANSHER.

CIRCULAR.

VACCINE INSTITUTION.

GENUINE VACCINE VIRUS, PACKED UP AND PRESERVED WITH GREAT CARE.

To the physician or vaccinator to whom this package may be presented in the West Indies, or elsewhere:

SIR: I beg leave to present, for your acceptance, some excellent vaccine virus; for, having received intelligence that the small pox was in the West India islands, and aware of the extreme difficulty in perpetuating this great preserver of life in tropical climates, I presumed that, if needed, it would be an acceptable present to medical men, and welcome to others who might be anxious for that protection which it imparts.

I have also enclosed a little instrument of my own invention, for preserving the vaccine in the fluid state, and which I find very convenient for vaccinating infants in particular, and which I term an *imbiber*. You will perceive, sir, by the engraving, that the fluid is drawn into the glass tube on the principle of the gum elastic syringe; and it can be received from the tube on quill points, and inserted as usual; and it will be like carrying with us an *eight-day vaccine vessicle*.

I presume I need not inform you that the enclosed *resinous particles of the indurated vaccine vessicles*, (for I would not call them pustules,) were selected from the healthiest children, whose vaccine pock never change to purulency in the least degree, but dry away in a *gummy state*. I would say to those who have had but little experience in this nice and delicate branch, *never use the fluid when changed from its pelucidness, nor a vaccine crust where the virus is changed in the least degree towards pus.*

There is one very important improvement in this life-saving practice but little known, and that is the art of *expediting vaccination*, and many persons who, having been exposed to the infection of small pox, perish, because vaccination came one or *two days too late!* It was the painful sight of the excruciating sufferings and death of two fine children in this situation, (for whose relief I sighed in vain for some scheme for forcing the slow march of the vaccine stages, but could then think of none that promised success,) that first impressed my mind with the thought of expediting; but, as visionary as the hypotheses appeared, yet I never lost sight of that object. And, after about twenty years trial, at intervals, when similar cases of long exposure presented, the enterprise was crowned with complete success; and, if the annual report of the R. J. S. London, for the year 1832, has met the eye of the gentleman into whose hands this article may light, he may have seen the whole of my experiments, and the result, and the high encomiums of that honorable body in an improvement that promises to extend the benefits of vaccination. But lest it should be new to the vaccinator, I will say, in case a person shall have imbibed into the system the effluvia of small pox six days, and then apply to be vaccinated, he is too late, at least to be within reach of the influence of kine pock as ordinarily administered. Then you have subject for my invention for expediting. It is my advice, in that case, to insert the vaccine profusely, in broad punctures each side of the breast, midway between that and the shoulders; and on both arms beside, and you will see an early formed pustule, and early symptoms, and the *red areola* on the white person, and the rise of the skin on the black person will appear round the pock on the *eighth day*, instead of the *tenth*. The small pox will be superseded, and the patient, the "forlorn hope," safe. Forty-eight hours is gained by this pathological stratagem, to head the enemy of mankind.

I should be exceedingly gratified to hear from the gentlemen who shall receive this. All applications for the vaccine directed to Dr. S. Fansher, Hartford, Connecticut, will receive prompt attention.

This institution has no other support but donations, and it invites the attention of the generous and philanthropic, and all who have "hearts to feel."

SYLVANUS FANSHER,

Principal.

N. B.—Re-vaccination infallibly prevents varioloid.

I am preparing vaccine packages for the chief of the West India islands. To Burmah, for the south and west; and another circular explanatory of epidemic small pox, and its offspring, *varioloid*.

HIGHLY IMPORTANT IMPROVEMENT IN VACCINATION.

On the history of small pox, and origin of varioloid, and the modes of preventing the one and the other; and also the origin of vaccination.

CIRCULAR NO. 2.

The small pox cannot be traced back on the page of history but about 1,400 years; and it is presumed that it was not known in our Saviour's time,

nor that of the apostles, or we should have heard of its ravages from the pens of the writers of the New Testament. No medical writers further back than about 350 years after Christ describe any disease that would bear comparison with that pestilence; and if that disease existed at all prior to that period, it must have been in the harmless *embryol state*, and what we term the vaccine of our day.

According to medical history, this scourge of rations has, at various periods since it first made its appearance, assumed, at distant intervals, a more malignant type than usual; destroying whole armies, depopulating cities and large tracts of country; and, like other distempers, it has its epidemic periods, viz: a greater constitutional predisposition to the disease; and, at such times, it seizes survivors who have once suffered with it severely, and even consigns to the tomb its victims who had reason to believe themselves safe from its attack.

About 20 years ago, the small pox assumed the epidemic type all over the world. In the Burman empire, according to the missionaries, it was appalling, and, according to official accounts, it raged terribly at Santa Cruz, and all over that fine group of African islands. In the Brazil, it swept off the inhabitants like the plague, so that they buried the dead in ditches, in great numbers. About four years ago, it swept off thousands of the natives at the west. It has made awful havoc among the blacks in the West Indies this year, and the passenger ships from England and Germany have been converted into floating small pox hospitals, and the sharks fed with human dead bodies at sea; and still the epidemic continues in our large cities and in the interior.

When the epidemic varioloid appeared at New York, Philadelphia, and the south, it was terrible, at the same time, in France and England; and the captured American sailors and soldiers in Dartmoor prison, during the last war, suffered excessively with it, who gave it the name of the African small pox, because the patients actually exhibited their complexion, and often death would close the scene of misery before any pustules appeared on the victim, and the white man, with a black face and swelled lips and nose, would strikingly resemble that race.

I have said that the epidemic slays those who have had the small pox and also the vaccinated. I come now to speak of the origin of the epidemic varioloid, as it has been termed, but from what I have already said of the epidemic small pox seizing those who have had it before, the reader will probably have anticipated my views of its character, viz: that it is the *secondary epidemic small pox* on persons who had once felt its influence.

The following, it is hoped, will not only shed some light on the dark part of this subject, but, what is still better, make evident to the world an un-failing preventive for what is termed varioloid, and pave the way for ultimately arresting this flying pestilence that still scatters the seeds of small pox and death in its train.

By what I have known of the disease and its extraordinary changeableness during its epidemic seasons, and of its co-operating with other cutaneous diseases, I am well satisfied that these aberrations have bewildered the doctors and writers on this subject; for, according to history, the small pox has, all along down the stream of time, since it slew the Khaliff Omer, been a changeable distemper, and in particular whenever it assumes the epidemic type it is as changeable as the chameleon. These things have no doubt deceived and puzzled medical writers in the old world and in the new.

But in order to render this intricate subject plainer and easier to be understood, it will be proper to notice one important trait in the character of those few diseases which ordinarily assail the human constitution but once; which is, that when one of these assumes the epidemic type, they then frequently *attack survivors the second time*, as before hinted. I have seen persons who had the measles twice, as well as small pox; but when this actually occurs, that a person takes the measles who had had it before, it not being believed that a person can take the measles the second time, it is therefore called the measles rash, and likewise when a person takes the small pox during the epidemic season, for the same reason the secondary case is called varioloid. Now it must be remembered, the small pox has been epidemic just as long as the name of varioloid has been known among us. This at once solves the problem.

When a pestilence bearing this name of varioloid first spread consternation in New York and at the south, before it had visited this region, not having at that time seen a case of that malady, I was inclined to believe what authors had said, that it was a variety of small pox over which vaccine influence had no control; but on witnessing a case, which was that of a young woman in the last stage of the disease, her head swelled to an enormous size, no eyes to be seen, only a couple of dimples over the places where the eyes lay buried deep under the swelled flesh and skin, I therefore hesitated not to pronounce it a malignant epidemic small pox. She died about two days after I saw her. This young female had been vaccinated by a skilful hand. I also saw another case of varioloid, of a woman who had the small pox by inoculation forty years before! varioloid appeared to be no respecter of persons, but attacked all, covering them with small pox pustules from the crown of the head to the soles of the feet, and very rapid in its progress, consigning its victims to the tomb in a shorter time than the common small pox.

This to me was a most disheartening theme, for all our sanguine hopes of the extermination of small pox appeared to be at an end. Not only did I see the firm fabric of vaccination tremble, but inoculation of small pox itself seemed to afford us no more security—even one who had it in the natural way did not feel safe.

It will be easily seen that as a vaccinator I was now at my wit's end; and felt (figuratively speaking) my situation somewhat like that of a mariner, who had lost his *compass* and *lead* overboard, at sea, in a dark night, and with but one uncertain glimmering star in sight to steer by, which was the thought of *repeating vaccination on those who had it before*; and this thought afforded but a forlorn hope, but better than none.

I now commenced a series of experiments, and re-vaccinated former and recent patients, and, to my utter astonishment, found them more susceptible of the vaccine the second time than formerly. I was now in a greater dilemma than ever; vaccine affairs appeared more hopeless still. But one thought more occurred to my mind, which was to ascertain whether the new susceptibility which the constitution has received, from the epidemic, to vaccination could be diminished by repeated vaccinal action; if not, then all is lost: and, with this most solemn and unavoidable conclusion, I repeated the operation on persons who had actually had the genuine vaccine in a degree twice, and soon had the felicity to see the *Rubicon* passed—very little effect on the arms, and no action on the constitution from a third application of the vaccine virus; and I could now safely predict that my

patients, thus tested and re-tested, would be secure from the epidemic ; or, in other words, that super-vaccination, and vaccination on persons who had once had small-pox, would render them invulnerable to variola in any shape whatever ; and so it has proved.

But, as satisfactory as the result of these experiments was to my own mind, and likewise to all who witnessed them, yet I was aware that, in order to create confidence in this extra preventive, the same trials would have to be repeated over and over, and year after year, and the patients brought in contact with variolous infection, and that it would be necessary to go over the same ground, pretty much, as when we were engaged in the arduous labor of establishing the preventive power of vaccination at first in this country, and for proving the durability of the same ; and I have now the satisfaction to publish to the world that the most scrutinizing experiments have been performed, in families and neighborhoods where the epidemic prevailed, with the most complete success, in Hartford, New Haven, Bridgeport, Fairfield, Stratford, Derby, and other places ; and that the utility of testing and super-vaccination, as a complete preventive of what is termed varioloid, is so well established, that many who have had either small-pox or vaccination once, think it important to have themselves and families tested ; and I am now able, generally, to give my super-vaccinated and tested patients all the assurance of a permanent and unfailing shield against varioloid I could desire ; at least, when it has been in my power to see them as often as I could wish.

The important fact may not be generally known, in our cities, that the wonderful prophylactic is sometimes happily found among the cows of this and neighboring States ; and the friends of humanity will be gratified, no doubt, to know that I have several times met with it in the course of my practice among the dairy farms in the country ; and I have had the satisfaction to propagate the true vaccine from a vesicle on the hand of a milkmaid, who contracted it from the cow, as Dr. Jenner did in England ; and I am satisfied that Jenner's doctrine, that the cow takes it from something in the field, is correct, as they never show it when kept up in the barn ; but several incidents I could name argue most powerfully in favor of that hypothesis. I'll mention two cases :

I have seen, on a farm in New Haven county, a true vaccine vesicle on the fingers of a young female, who, it was supposed, took it from something in the field, while engaged in collecting wild flowers for a flower pot. She had not been near any cow. But I will relate a case still more extraordinary :

The other was a child in the same town, about four years old, which showed, apparently, a number of fine sixth day vaccine vesicles about his shoulders. The fluid, on opening one of them, was pellucid, and differing in no way from the usual appearance of that on the vaccinated arm, other than there was scarcely any depression in the centre. I had come for the purpose of vaccinating the children, six in number ; I vaccinated the whole. On re-visiting them, I found all but that little fellow had taken, and his not ; but these vesicles had, in five or six days, increased in size, each exhibiting a beautiful areola or blush, and perfectly resembling the appearance of the true vaccine pustule of the tenth day. No small pox or vaccination had been practised there for many years before ; nor was any such thing as cow-pock among the cows, as I could learn. No scratch appeared about the neighborhood of the vesicles at all—the skin, also, smooth and sound. I concluded that what communicated these vesicles to the should-

ers of the child must have been about *two feet from the earth*; for if it had been a running vine on the ground, as it was warm summer weather, his feet and ankles would have been more likely to have been infected than the shoulders. I did not make a trial of that *virus*, but have since regretted that I did not.

Possibly the period may not be far remote when the mysterious incognitum which produces the precious antidote may come to light, through some accidental circumstance, and then, perhaps, we may have discovered the true origin of small pox.

As this article will probably meet the eye of many practitioners of medicine in the country, the object of publishing the facts is to endeavor to awaken a spirit of botanical and pathological researches; and who knows, but some of the other diseases to which mankind are liable, are contracted in the fields from vegetation; and how oft does the healing plant grow up beside the poisonous one. The *rhus vernix* gives, through the medium of air, to mankind, a disease which very much resembles the confluent small pox. This is the noxious vapored shrub called the poison elder, or poison sumac.

S. FANSHER.

At a meeting of the Medical Convention of the State of Connecticut, holden at New Haven, October, 1811,

Voted, That whereas Dr. SYLVANUS FANSHER has practised vaccination in the several towns in this State, with skill and ability, this convention, from a knowledge of his successful performance, do recommend him to the notice of the public, as a gentleman deserving employment in this branch.

ELI IVES, *Secretary.*

For an important improvement in the great prophylactic vaccination, he has had conferred on him the honors of the Royal Jennerian Society of London, as may be seen by the following letter from their secretary, A. Johnson, LL. D.

No. 18, Providence row, Finsbury square.

LONDON, *April 11, 1832.*

SIR: I have the honor to acknowledge the receipt of your highly valuable communication of the 6th of February, and which we have printed in our annual report. I also have transmitted to you the honorary diploma of the Royal Jennerian Society, which the managers respectfully beg your acceptance of, they having done themselves the gratification of electing you an honorary member of that institution, which bears the name of the discoverer of the great prophylactic of which you are such a praiseworthy promoter. Wishing you may live long for the benefit of your family and mankind,

I have the honor to be, sir,

Your most obedient servant,

ANDREW JOHNSON, *Secretary.*

SYLVANUS FANSHER, M. D.,

Southbury, Conn., United States.

HARTFORD, April 22, 1837.

To all whom it may concern : I, the undersigned, feel it my duty, as a tribute due to Dr. Fansher, to state the following facts for publication, viz : that when we resided on Lord's hill, a young lady from Newark, where the *varioloïd* then prevailed, joined my school, and boarded with us ; that soon after her arrival here, she was seized with that disease, and exposed my family and the boarders to the contagion ; that Dr. Fansher *tested* or re-vaccinated all the inmates of the house, as a preventive, which *test*, (or the local appearance on the arm,) amounted to a *miniature* vaccination, or fac simile of our former vaccine operation symptoms, and which gave us little or no unpleasant sensations, and yet, as the doctor predicted, it proved a complete and infallible preventive against taking the infection, which, otherwise, it would have been impossible for us all to have escaped.

We all felt satisfied that the mode of prevention adopted by Dr. Fansher was efficacious in hindering the farther progress of the disease in any family, and we felt grateful to him for his sagacity in pointing out its character, and skill in applying the remedy.

JOHN P. BRACE,
Principal Hartford Female Seminary.

Connecticut Vaccine Institution, for perpetuating and extending the precious blessing of genuine kine-pock inoculation among our citizens, to our exposed seamen on the ocean, and to the remote nations abroad in the earth, to the islahders, to the wandering Arabs and Indian tribes.

The generous patrons of this humane and laudable enterprise, and the enlightened friends of vaccination in general, are respectfully informed, that the zeal and arduous labors of the subscriber for counteracting the mighty pestilence still remain unabated, and that in addition to diffusing the vaccine in the United States, and among the natives at the south, and beyond the Rocky mountains, he has seized opportunities that presented, and has furnished, *free of expense*, commanders of outward bound ships, and missionaries, with the only means for subduing the small pox ; and our flag has wafted it to various regions of the globe, to people of various nations, color, and climates ; and if we now should pursue the pleasing theme further, and say any more, it would be to remark, that our patrons, who have contributed to promote this life-saving practice, will have the consolation to think, that their endeavors are not only calculated to *relieve* the distresses of thousands of their fellow-citizens of the present and the rising generation, but actually to *prevent distress*, and ultimately *save millions and millions of lives*.

The subscriber will receive donations for the further carrying into effect the object of the institution at Treat's Exchange Coffee House, Hartford.

S. FANSHER.

MAY 10, 1831.

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VACCINE INSTITUTION, FOR EXTERMINATING THE SMALL POX.

To navigators of vessels, and other gentlemen bound on voyages, who may be desirous of doing good, by disseminating the blessings of vaccination in distant lands, as well as preserving ship's crews from the small pox. This packet of durable vaccine matter is left with the collector of the port of _____ by Dr. S. Funsher, to be presented for their acceptance; together with proper directions for using the same.

Should any gentlemen thus furnished have occasion for using the matter, either on ship-board or on shore, during the voyage, the result of their experiments, or any communication from them appertaining to the subject, or that of the *small pox*, will be interesting. Also any minerals, curious marine shells, petrefactions, or any other durable natural curiosities they may meet with, and be pleased to present them to this benevolent institution, for the cabinet of minerals, left at any of the custom-houses in the northern or middle States, directed to Fansher & Waterhouse, Philadelphia, and will also have the goodness to transmit to them a line by mail, stating the places where the articles were found, together with the donor's name, they would be both serving the cause of humanity, and at the same time contributing towards the promotion of the useful science of natural history.

DIRECTIONS FOR USING THE VACCINE MATTER.

☞ *The shining crystalline substance, in the inner quill, is the matter.*

Take a particle, half as large as a mustard seed, and insert it dry, or put it on a bit of glass or some hard, smooth, and level surface, and with another hard surface, (a pen-knife handle will answer,) make it fine as flour; take a quill made like the nib of a pen, touch the point to water, take up as much of the powder as will adhere to it, and in a minute it will be diluted to the consistency of paste; introduce it into the puncture made by a lancet in the arm, half way between the elbow and shoulder, so slight as scarcely to draw blood, cover it with a small piece of thin paper, moistened with the saliva of the tongue, in order to prevent a drop of blood exuding, which might wash out the infection and prevent its taking effect.

Progressive stages of the genuine vaccine pustule.

The appearance of the genuine vaccine pustule on the arm of a white person, with some variations, as follows, viz :

The third day after vaccination, it resembles the sting of a fly, or the bite of a flea or mosquito.

Sixth day, A small pearl, little larger than a pepper corn.

Eighth day. A mallows seed or shirt button : the edge commonly elevated, and centre depressed, of a circular or short oval form, about the one-fifth of an inch diameter. The virus should be taken about this time, that is to say, before the blush appears round the incision.

Tenth day. A red rose, or efflorescent blush surrounding the pustule, attended with a rise and hardness in the skin.

Twelfth day. Areola or rosy appearance fades: the pustule, too, begins to change its complexion to a darker hue.

Sixteenth day. The pustule is dry: commonly of a tamarind stone color, but in some instances it resembles a little lump of gum arabic or gum myrrh, of a bright amber; the latter of which are found by happy experience to contain genuine vaccine virus, at least as long as they retain their semi-transparency.

Symptoms.—The constitutional affection is similar to that produced by a cold, and generally takes place between the 6th and 8th days, but frequently so slight with children as not to be noticed by the most attentive mothers or nurses.

N. B.—Vaccine matter should never be taken from the incision for inoculation, but when in a transparent state.

The vaccine packets and papers are to be free of expense to mariners and travellers by sea; and as the institution depends for support on the humane and well disposed, any donations will be gratefully received, and the name of the donor enrolled on the list of patrons.

SYLVANUS FANSHER,

Principal.

Office of the Institution, Hartford, Conn.