

Cases of small pox, subsequent to vaccination, with facts and observations, read before the Medical Society, at Portsmouth, March 29th 1804; addressed to the directors of the Vaccine Institution / [William Goldson].

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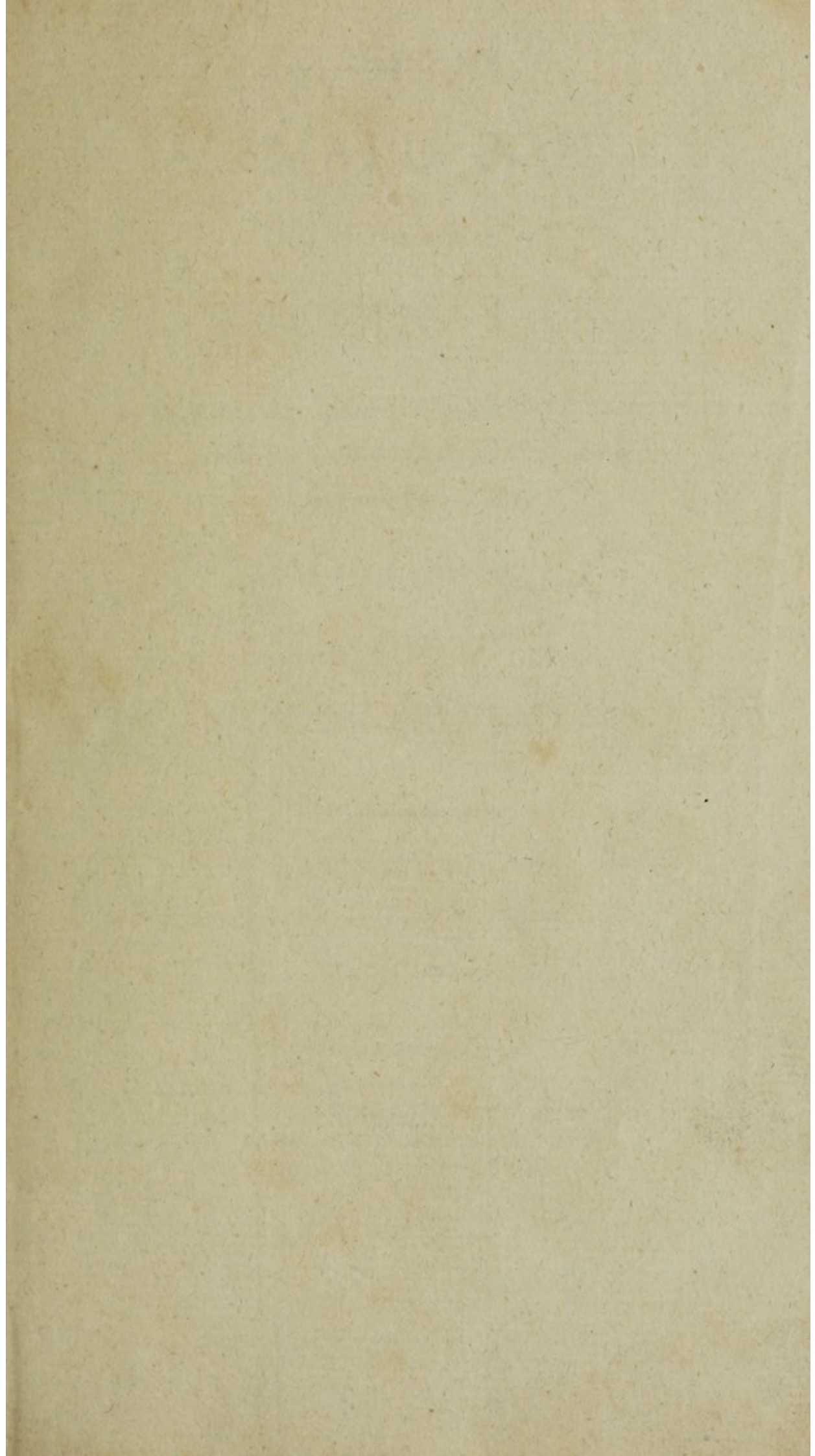
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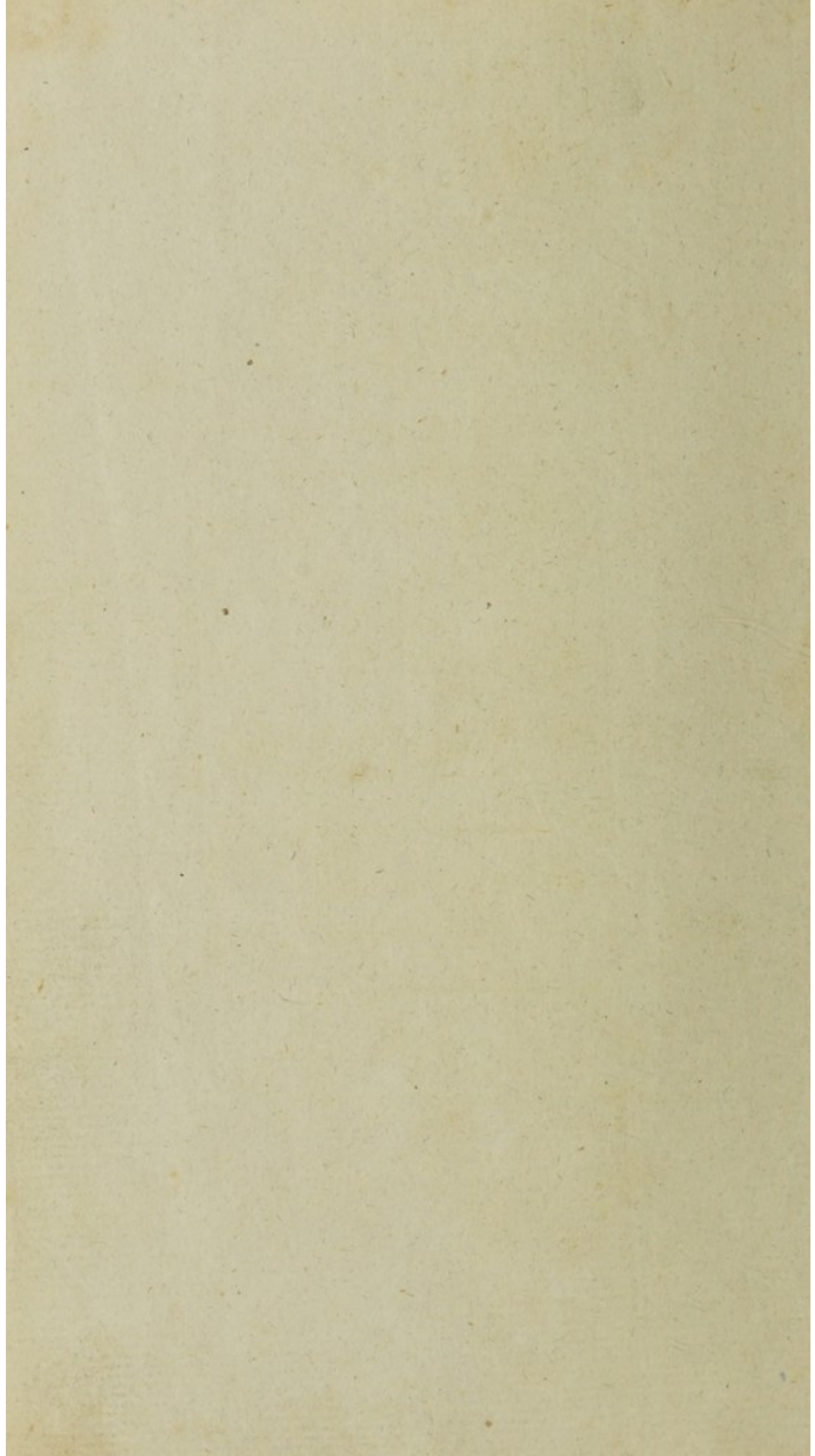


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CASES OF
SMALL POX,
SUBSEQUENT TO
VACCINATION,

WITH FACTS AND OBSERVATIONS, READ BEFORE THE
MEDICAL SOCIETY, AT PORTSMOUTH,
MARCH 29th, 1804;

ADDRESSED TO THE
DIRECTORS OF THE
VACCINE INSTITUTION.

BY WILLIAM GOLDSON,
Member of the Royal College of Surgeons, in London.

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CASES OF

SMALL POX,

CONFINED TO

VACCINATION,

WITH CASES AND OBSERVATIONS, READ BEFORE THE

HYGIEIC SOCIETY, AT BOSTON,

MARCH 20th, 1861.



VACCINE INSTITUTION,

BY WILLIAM GORDON,

OF THE Royal College of Surgeons in London.

PUBLISHED

By the Vaccine Institution, No. 21, Essex Street, London, W.

1861.

TO THE

THE **DIRECTORS**

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OF THE

VACCINE INSTITUTION,

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THE following pages are addressed;
from a firm conviction, that they are ready
to sanction every enquiry into a subject,
now become so interesting to society.

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to indicate.

P R E F A C E.

FROM some Cases of Small Pox, in Children whom I had before vaccinated, having occurred within a few months, I feel myself forcibly led to entertain an opinion, that inoculated Cow Pox may prove only a temporary prevention, and that, in some determinate time after Vaccination, varying perhaps according to the difference of constitution, a person, who was at first secure, may again become susceptible of Small Pox.

An account of these Cases is submitted to the Public; from a desire, that the attention of practitioners may be directed to an object of such consequence. In No. III. both diseases were clearly marked, for two years vaccination gave absolute security from Small Pox, under circumstances of exposure particularly strong, while, at the end of three years, it was found entirely to lose its powers of resistance. The others, although not so strongly marked, yet lead to a similar conclusion.

P R E F A C E.

It is far from my wish to spread vain alarms, by making the Cases public, but I consider it a question, that ought as soon as possible to be determined. This I conceive to be within the power of the Vaccine Institution, if they will give directions, for a number of persons to be inoculated with Small Pox matter, or exposed strongly to infection, who were vaccinated early in the practice. The result of such inoculation, for the period included in it, must be decisive.

The report of these Cases with the observations annexed were read before the Quarterly Meeting of the Medical Society of Portsmouth, Portsea, and Gosport, on Thursday, the 29th instant.

To the President and Members, I take this opportunity of rendering my acknowledgments, for the candid and liberal approbation which they unanimously expressed, by directing it be entered on their records. Under their sanction, I feel greater confidence in offering it to the attention of the profession as a subject for further investigation.

MARCH 31st, 1804.

CONTENTS.

	<i>Page</i>
INTRODUCTION	1
CASE I.—VARIOLOUS INOCULATION MORE THAN THREE YEARS AFTER VACCINATION, PRODUCING ERUPTIONS NOT PUSTULAR	11
CASE II.—VARIOLOUS INFECTION THREE YEARS AND TWO MONTHS AFTER VACCINA- TION, LIKEWISE PRODUCING ERUPTIONS NOT PUSTULAR	25
CASE III.—VARIOLOUS INFECTION THREE YEARS AFTER VACCINATION, PRODUCING PUSTULAR ERUPTIONS.—RESULT OF INOCU- LATION FROM THIS CASE	29
CASE IV.—VARIOLOUS INOCULATION AT THIR- TEEN MONTHS AFTER VACCINATION, PRODUC- ING SMALL POX IN OTHER SUBJECTS	36
CASE V.—VARIOLOUS INOCULATION AT FOUR- TEEN MONTHS AFTER VACCINATION, PRO- DUCING ONLY STRONG CONSTITUTIONAL AF- FECTION	33

CONTENTS.

CASE VI.—SMALL POX IN A MARINE AT HASLAR, AFTER VACCINATION, WITH OB- SERVATIONS	41
ORIGIN OF THE VACCINE MATTER USED IN THESE CASES	46
RECAPITULATION OF CASES II. AND III. WITH FACTS AND OBSERVATIONS	49
CONCLUSION	63
POSTSCRIPT.—CONTAINING TWO RECENT CASES OF SMALL POX, AFTER VACCINATION	65



INTRODUCTION.



THE practice of Vaccine Inoculation has been spread, throughout almost every part of the civilized world, with a rapidity which stands without example in the history of science.

To render the human constitution unsusceptible of a disease, so highly contagious, and universally fatal to mankind, as the Small Pox, was an event more to be wished for, than expected. A discovery so generally interesting to humanity, could not fail to attract immediate attention. But no small degree of surprise was excited, when it was understood, that such important consequences should succeed a small puncture with a lancet, without producing any material indisposition, and totally free from any risque of danger. That

an effect, attended by such benefits to society, should be produced by an operation, apparently so trivial, seemed to carry with it an air of mystery. Hence it is not to be wondered, that it should produce some degree of scepticism in the minds of many; indeed it is more surprising, that it should have been so readily adopted, and carried to such an extent into practice.

SUCH a singular fact, soon excited that zeal, in many of the profession, which is so ardently shewn, in every science, in the pursuit after novelty. A zeal which is, in most instances to be commended, but in this, the more laudable, from the importance of its object.

MANKIND, in general, are extremely averse, to become themselves, or to suffer their connections to be made, the subjects of experiment. This aversion has been felt, in the infancy of almost every new theory. It is more particularly exemplified, in the history of the first introduction of Variolous Inoculation. In the present instance, few such obstacles were to be encountered; for the

chance of deformity, even in the mildest state of the Small Pox, together with a natural abhorrence of so loathsome a disease, occasioned less repugnance in adopting this mode of prevention.

THIS was found to be a circumstance so favourable to the zeal of the promoters of the Cow Pox, that thousands were vaccinated in a short space of time. Many of these were, soon afterwards, submitted to the influence of Variolous infection, without effect; whence its prophylactic powers began to be pretty generally established.

SEVERAL instances, however, of its inefficacy were observed at this period, but all of them were pronounced, to arise from some cause or other, not at all inimical to the regular practice, pursued by the discoverer, and his own immediate friends. The success of Vaccination is, indeed, so easily defeated, either from the matter having been originally inefficacious, or what is commonly called spurious, or if genuine, from its being deteriorated, by suffering a decomposition from a variety of means;

that it was not extraordinary, such cases should occur, in the early stages of its introduction. In either instance, the intention would be defeated, and the patient be equally subject to the attack of Small Pox as they were before. Indeed, prior to the nature of the disease being sufficiently understood, to use an expression of Doctor Jenner himself; “ Many practitioners took up the lancet, without having ever seen the true Vaccine Pustule;” but as he very properly adds, “ he could not be answerable for all their blunders.”

THESE necessary facts having been so far ascertained by experiment, the liberality of the discoverer in disclosing a secret, which, if preserved, might have enriched himself and his family, excited a zeal for its propagation in other nations, which fell little short of enthusiasm.

To the thinking part of mankind it was certainly a prospect, fraught with every thing that could give pleasure to the mind. They saw war spreading devastation through the world, and threatening to desolate the Globe.

In this new discovery they saw the means of saving more, than the sword would probably destroy.

HOWEVER commendable the spirit of philanthropy, manifested on this occasion, might be, yet certainly, in some instances, it was carried beyond the common rules of prudence and discretion, giving an opening for those, who could not bring themselves so readily to entertain a decided opinion upon its efficacy, to cavil and oppose it.

It has been asserted that many, either from prejudice, or obstinacy of opinion, have wilfully shut their eyes to conviction. But this assertion I look upon to be as unfair as it is illiberal. Perhaps it would be as generous, and I believe come nearer the truth, to attribute it to a more rational cause—That on a subject both novel, important, and replete with so many difficulties, they required more time and further experience, before they made up their minds on its efficacy, or how far its powers of prevention extended. That this was the case here, I can venture to attest.

It certainly was not before the Autumn of eighteen hundred, that the practice was adopted. This has given occasion for some of the friends of the Cow Pox to say, that the professional men in this neighbourhood are a century behind the whole world in improvement. An assertion readily made, but not so easily substantiated. As a body, the Medical practitioners in these towns are certainly as respectable as in any places of their extent in the kingdom. They are in general of some standing in their profession, and have many of them lived long enough to have seen theories advanced, which when carried into practice, have too often proved nothing more than the mere phantasms of an ardent imagination.

THE doctrine of the Cow Pox was known to them soon after its promulgation. They attended to it with a desire to make themselves masters of the subject. At the same time, they could not remain ignorant of the many instances of failure, which occurred in its infancy. Neither could they help remarking, what must have been obvious to every attentive observer

—the apparent instability of the practice. With every fresh instance of a spurious case they heard of new instructions and cautions in respect to taking the matter. These instructions, deviated occasionally, from the thirteenth down to the seventh or eighth day; and yet they were told, that on this point depended the whole success of the operation. Besides, their local situation prevented them from having any opportunity to see the disease. Common prudence therefore, in a case so important, dictated, that they should not rashly venture on a practice, so seemingly replete with difficulties, the detection of which wholly depended upon experience alone. The vaccine pustule had not been seen by any of them, except in the representation of an engraving. Although those engravings were, most assuredly, very accurate, and the instructions equally explicit; yet, it must be acknowledged, there are many casual circumstances in pathology, which, neither engravings or instructions, however accurate, can convey a

perfect idea of, and which can only be obtained by clinical attendance.

Qualem commendes, etiam atque etiam adspice, ne mox
Incurrant aliena tibi peccata pudorem. HOR. EPIST.

At the period I have just named, the Autumn of eighteen hundred; the sick and wounded board sent some lancets of Cow Pox matter to Mr. Rickman, Surgeon to the division of marines at this Port. His instructions were, to try its efficacy upon such recruits, as might be found at quarters, who had never been infected, in any way, by the Small Pox.

MR. RICKMAN gave the profession an opportunity to witness the progress of the experiment, at the Infirmary. Had I failed profiting from these Cases, I should have deemed myself deserving censure. With matter taken from this source I first inoculated four children, on the eleventh of November eighteen hundred. And in a very short space of time it was pretty generally adopted in the neighbourhood.

THIS is the history of the origin of Vaccination at Portsmouth, Portsea, and Gosport, by which we have obtained a kind of censure—that we are behind all the world in improvement. If we were not so early in adopting it as in places less remote from London; we have embraced one very material advantage by our forbearance—we have experienced a much smaller number of failures. In no instance, have I myself seen any approach to a spurious disease; and very few indeed, to my knowledge, have occurred. A general rule has been observed—never to take matter beyond the evening of the eighth, or the morning of the ninth day, at farthest. In those Cases which failed, the matter appears to have been taken too late, as was evident from its purulent appearance on the lancet.

THE progress of public opinion for some time kept pace with the wish of every practitioner. But the occurrence of Small Pox in Clark, one of the marines first of all inoculated at the Infirmary, by Mr. Rickman, seemed to give some check to the practice. This

Cafe was noticed in the House of Commons, before the Committee appointed, to consider of a remuneration to Doctor Jenner, and I shall have occasion to refer to it again. Time, however, soon wore out the impression this had made; and in common with others, I persevered without meeting with any obstacle; until the following Cafes occurred. These, when compared with each other, are of such import, that I should not conceive myself justified, were I to suffer them to remain unnoticed.

CASE I.

SHEWING THE EFFECT OF INOCULATION FOR THE SMALL
POX IN A CHILD, THREE YEARS AND THREE MONTHS
SUBSEQUENT TO VACCINATION.

IN consequence of the Small Pox having been heavy in some part of his family, Mr. Grant, at that time residing at Deptford, about the month of October one thousand eight hundred, intended to have had one of his children, then about four months old, vaccinated by Doctor Jenner. But the Doctor being at the time from home, it was performed by Mr. Paytherus, to whom he was recommended for that purpose. Two years afterwards, he requested me to vaccinate a younger child; for which he obtained the matter from Mr. Paytherus. This was done in October, one thousand eight hundred and two, and it went through the disease perfectly to my satisfaction. The eschar, on both the children's arms, were as nearly similar as possible, being, *orbicular, concave, and impressed with several little indentations.*

It was always Mr. Grant's intention, that both should be submitted to the influence of variolous infection at the same time. They were accordingly inoculated, on Monday the 19th of December, eighteen hundred and three.

WEDNESDAY 21st. Their arms were inflamed nearly the same.

THURSDAY 22d. There was an appearance of suppuration in both. But the inflammation was greater in that of the eldest, than in the arm of the other.

FRIDAY 23d. I found the arm of the eldest had been rubbed in the night, and had discharged some lymph on the linen. But the inflammation was considerably more than yesterday, and the suppuration was extended to the size of a small vetch. The inflammation on the arm of the other was less perceptible, and from this time it gradually subsided. In three or four days there was only the appearance of a dry scab remaining. The child at no time suffered any inconvenience whatever.

SATURDAY 24th. The arm of the eldest, to which alone it is now necessary to advert, was visibly altered. The areola round the part had extended during the night. The child however was perfectly free from fever, or ailment of any kind.

SUNDAY 25th. The colour of the areola was less florid, the suppurated part rather flattened, and the child was in good health and spirits.

FROM the appearance of the arm, so obviously different from that of the other child, the friends began to be somewhat alarmed. To their enquiries, at this time, I replied, that there certainly was a strong effort to produce small pox, but that it was now subsiding, and would in a few days, in all probability, totally disappear, the same as the other had done.

IMMEDIATELY on seeing the arm however on the next morning, Monday the 26th, I observed a visible alteration. The suppuration was manifestly increased. The areola was become extremely florid, and radiated, so as to be much less circumscribed, than it had hitherto been,

bearing evident marks of absorption. The child was pale, not warmer than usual, but its pulse were quicker than they should have been, or than they ever had been before.

THESE observations I kept to myself, as I perceived the anxiety of the parents led them to watch me with an inquisitive eye. But when I asked them, whether the child had been ill during the night, or whether they had observed any kind of appearance on the body, they instantly shewed me six or seven eruptions. Three of them were on the forehead and temple, one on the right ala of the nose, one on the opposite shoulder, and one or two on the breast. The child had been rather feverish during the early part of the night with restlessness, and according to the servants account transiently delirious.

IN the evening I was sent for in haste. I found it had been seized with a violent rigor, from which the attendants had, with difficulty, recovered him by warm wine and flannels. When I saw him, he was in a high degree of fever, his countenance much flushed, and there

was a considerable efflorescence on both arms. It had the same characteristic appearance as the rash, which is frequently seen in inoculated small pox. Two or three eruptions, of the same kind as those seen in the morning, were readily distinguished through the efflorescence. The degree of fever was so much, that I thought it necessary to order some medicine to abate it, with a gentle anodyne to allay the irritation.

TUESDAY 27th. I found the child better. The fever was considerably abated, the rash had subsided, and the eruptions, which appeared with it, were less distinct, while the others were rather more prominent.

WEDNESDAY 28th. No fresh appearance, and those already out, seemed to be stationary.

THURSDAY 29th. Instead of suppurating, the eruptions were covered with a warty scurf. This encrustation was rubbed off on the following evening, but the marks of four or five of them were visible for some days, red, and a small degree elevated above the skin.

On Monday, and the three succeeding days,

several Medical gentlemen in the neighbourhood, saw the child with me, who were decidedly of opinion as to the nature of the eruptions. That they were variolous. One of them remarked, that he had just before inoculated a child, where, the appearance of small pox was not more than in the present instance.

THE report of this Case was carried to London in a short space of time, and as the child was said to have been inoculated by Doctor Jenner, it seems soon to have attracted some attention. For in about five weeks after the circumstances took place, Mr. Grant received a letter from Mr. Ring, who is known as a zealous promoter of the Vaccine Inoculation. He requested the favour of Mr. Grant, to inform him of the particulars of the Case. This was directly complied with, and at the same time, a copy of the letter was sent to Mr. Paytherus. This opportunity was embraced, to transmit him a copy of my notes.

It appears by a letter which Mr. Grant received, about the beginning of the present

month, that Mr. Paytherus's mind was instantly made up on the subject; but as he differed in opinion from the Medical gentlemen here, he submitted the case to Dr. Willan, and afterwards laid it before the Medical Society in Bolt Court. They all agreed that we failed in our attempt to excite Small Pox. They had likewise no doubt, that the same train of symptoms may be excited, in persons who have passed through the Small Pox, either in the casual manner, or by inoculation.

He further observes, that the circumstances of the Cow Pock inoculation of the child was perfect in his recollection, and he does not hesitate to assert, that he passed through the disease to his entire satisfaction; and that he considered him, as fully entitled to all the advantages, which can be derived from the Cow Pock inoculation.

MR. RING's opinion is to the same purport, but his observations, in his letter to Mr. Grant, which letter he has been so obliging as to suffer me to peruse, are more desultory, and consequently he enters more fully into

the subject. First of all he premises, that the case might well stagger those, who are not very conversant in the different experiments of inoculation. He then observes very accurately that the pustule appears earlier, and makes a more rapid progress, in those who have had the Cow Pock, or the Small Pox, than in those, who have not yet undergone either of those diseases. Sometimes also from the irritability of skin, the pustule becomes large, and is attended with considerable inflammation. The same thing now and then occurs, in those who are vaccinated, after they have had the Small Pox. Some cases of severe illness, he remarks, have taken place, in consequence of matter inserted by deep incisions, in variolous inoculation, after Cow Pock.

He notices likewise having seen a case of a child, who was inoculated with variolous matter after vaccination, in whom the arm rose, and continued to have a pustule more than ten days, when a few small pimples, or spots, appeared, so as to alarm the father, a medical man, but they disappeared in a few

days, similar to Mr. Grant's child. Here he makes an observation which experience does not confirm. "This is a sufficient proof that it was not the Small Pox ; *which always continues a longer time.*" We well know, that in many instances, the inoculated Small Pox does not mature, but retires in a few days, although the patient be perfectly secure. And as I before observed, one of the gentlemen, who saw Mr. Grant's child, remarked, that he had very lately inoculated one, where, the appearance of eruption was not greater than in that instance.

MR. RING then proceeds to mention that, it is improper to call an eruption pustules ; unless they contain matter. Pimples is a more proper term. But even pustules, sometimes appear from simple inflammation ; whatever be its cause.

IN the present instance, he says, *if we admit variolous matter to have been the cause, the Cow Pock, at least, is innocent ; because it is not necessary, but only a matter of choice, to put a patient to the test of variolous inoculation after the*

Cow Pock. And under this idea, he has long since discontinued the practice ; and advised others to do the same, being satisfied with exposing them, in various ways, to natural infection.

To convince Mr. Grant of the truth of these observations, on the possibility of exciting an eruption, in one who is insusceptible of the perfect Small Pox, he quotes a fatal case of that nature, and another, which, although it terminated more favourably, yet was attended with considerable difficulty. These cases are quoted from Buchan.

He concludes, by saying, that “ the frequent coincidence of such symptoms, after inoculation succeeding the Small Pox or the Cow Pock, leaves no room to doubt that they may be the effect of such inoculation. But it by no means follows, that the eruption is of the variolous kind. On the contrary there is no variola or small pock, for there is no pock, which is not likely to be the case in so many instances, were the eruption of the true species. It then seems probable, that it is only

from a sympathetic affection of the skin, which is too slight to produce the variolous pustule a second time, and, of course proves abortive."

" But even if it could be proved, that the Small Pox could recur after the Cow Pox, it is no more than can be proved to have happened after the Small Pox. One case is recorded in the memoirs of the London Medical Society, and others are well authenticated."

I am ready to pay a proper deference to Mr. Ring's experience. And no one can have a greater respect for the opinion of the Medical Society in Bolt Court, from a personal knowledge of some of the members. I am likewise aware of the consequences attending the introduction of morbid matter into the constitution, well knowing what effects it will excite on the skin. But they will pardon me for differing from them in their conclusion. " That we failed to produce Small Pox." And that, " the same train of symptoms may be excited, in persons who have passed through the Small

Pox, either in the casual manner, or by inoculation."

THAT this might have been the case, in some instances, I do not pretend to deny; the facts having been substantiated on good authority. Yet I believe it was almost as seldom observed, as the recurrence of Small Pox by infection. And in support of this position, I will appeal to the candour of the profession, whether the cases with eruptions, *pimples*, or under whatever other denomination they may be classed, arising from inoculation, in persons who have passed through the Small Pox, were ever known to bear any kind of proportion to what has occurred in variolous inoculation after Cow Pox.

I will further venture, to appeal to the candour of the most zealous promoters of the Cow Pox, whether it is not very rare, if ever it does happen, when inoculation takes place at an early period after vaccination. I cannot recollect, that Doctor Jenner has noticed a single instance, among the numbers which were inoculated in the early part of his practice, when

it was done early, in order to ascertain the extent of its prophylactic powers. He recommends the adoption of subsequent variolous inoculation, in his second publication, as a matter of prudence, observing, that "No injury or *inconvenience* can accrue from it." While Mr. Ring, from later experience I presume, discontinues the practice, and advises others to do the same. I never saw an instance of it myself, in any of those whom I have inoculated, at an early period after vaccination; nor can I learn, that it has ever occurred to any gentleman within the circle of my medical acquaintance.

SUFFER me once more, to call the reader's attention to the circumstances of the case. During the night of Sunday, the inflammation of the arm rapidly increased, the child was rather feverish, and as the servant observed, slightly delirious. Early in the morning, six or seven eruptions were seen, which had come out during the night. Through the whole of the day no more appeared; and it was not until the evening, when the rigor took place with such

accession of fever, that the efflorescence shewed itself. This is exactly what often takes place in inoculation. Immediately on the arm shewing marks of absorption, a few pustules appear, and afterwards, in some hours, or even perhaps a whole day, an accession of fever occurs, accompanied by rash, but with few fresh eruptions.

IF this idea be correct, these eruptive appearances must depend upon something more than sympathetic affection of the skin. If the same had arisen from accidental infection, no one would have ventured to doubt, I presume, of the eruptions having been various, although they did not mature, a circumstance so frequently witnessed in inoculated Small Pox.

The following Case is an instance of such an event taking place:—

CASE II.

CASE II.

AN INSTANCE OF VARIOLOUS CONTAGION, THREE YEARS AND THREE MONTHS SUBSEQUENT TO VACCINATION, PRODUCING ERUPTIONS, NOT MATURATING, ANALAGOUS TO THE PRECEDING CASE.

A DAUGHTER of Mr. Worsfold, a publican in Havant Street, in the Town of Portsea, was vaccinated by me on the tenth of December eighteen hundred. At this time she was about four months old. The pustule was perfectly satisfactory, and the marks of absorption both from the areola and tenderness in the axilla, were as evident as they usually are in children of that age.

At no time since that period, has she been prevented from going where the Small Pox might have been; but on the contrary, was often known to be with children labouring under the disease. Indeed I always entertained an opinion, that she never would be susceptible of infection, the eschar bearing evident marks of what has been supposed a

strong criterion of the pustules having been effective.

ON the sixth of February last I inoculated a younger child in the same house with variolous matter. The disease proved mild, producing about a hundred pustules. These terminated in the usual manner about the seventh and eighth day from their appearing. I desired that the other child might be suffered to sleep in the same cradle, so that we might fully ascertain whether it would resist the infection or not.

On Thursday the first of March, eight days from the time the pustules had gone off on her brother, the child was brought home from school very ill, having considerable fever, and complaining much of pain in her head and back. The fever continued until Saturday noon. On Sunday, seven distinct eruptions appeared on the face, neck and arms. These were so characteristic of the Small Pox, that neither Mr. Hill, Mr. Seeds, or Mr. Weymouth, three respectable practitioners in Portsea, who saw the child with me, hesitated to

pronounce them the effect of variolous contagion, which she had received from the other. The eruptions remained about five days, but never matured.

THIS Case differs from the other, in one circumstance only; which I think is worth attending to. Here the eruptions were not accompanied with rash. It was more strictly similar to what occurs in Small Pox from infection. The efflorescence being more frequently seen in inoculated Small Pox, than it is in casual; and in cases subsequent to Cow Pox, similar to the last, may, with more propriety, be deemed a sympathetic affection of the skin, than the eruption can be.

IN the short period between the two preceding cases, the following occurred:—

It is a case, to which much importance is attached; as it seems to decide two very material questions.

IN the first place it proves, that exposure to infection, even as far distant as two years

from vaccination, does not remove the possibility of taking Small Pox, at a period more remote.

And in the next, it ascertains, that the eruptions, which have hitherto been confounded with the efflorescence or rash, and considered simply as sympathetic affection of the skin, may become pustular, and produce, in other subjects, true variola.

CASE III.

CASE III.

CONTAINING AN INSTANCE OF SMALL POX FROM INFECTION, WITH PUSTULAR ERUPTIONS, THREE YEARS AFTER VACCINATION; ALSO THE RESULT OF FOUR EXPERIMENTS MADE WITH MATTER, TAKEN FROM THE SAME SUBJECT.

IN the latter end of January, eighteen hundred and one, I vaccinated an infant, the daughter of Mr. Lufcombe, keeper of the goal in Portsmouth. The progress of the arm was extremely regular, and carried with it every mark of absorption. The child was restless, and somewhat feverish, about the eighth and ninth days. It seemed altogether as much indisposed as children of that age generally are.

MATTER was taken from the pustule early on the ninth day, which I used on a child who had the disease nearly in the same manner; and has since been in situations, where it must have taken the Small Pox, if the constitution had been susceptible of receiving it. Mr. Merritt, of Portsmouth, likewise vaccinated a

child with matter from the same source. The pustule, and consequent symptoms in this case, were equally well defined.

IN fact I never entertained any doubt of its having properly taken effect; the arm shewing at the time, and until the present moment, marks of the pustule sufficiently strong and satisfactory. And it is perfectly in my recollection, that when some alarm was excited, by the case of the marine at Haflar, somewhat more than a year after, the parents wishing to have her inoculated, I advised them to the contrary, saying, that "if there were any efficacy in the Cow Pox, she never would suffer from the Small Pox, having undergone the disease so decidedly."

This opinion seemed to be verified, not only to my own satisfaction, but that of the friends, some time after. For on the tenth of April, eighteen hundred and three, I inoculated another of their children, which they chose rather to have done with variolous matter. The disease could not occur more favourable to my design of infecting the other child,

if possible, than it did. As it produced near three hundred well matured pustules.

By my desire, which met the wishes of the parents, the children were kept constantly together. They were alternately suffered to sleep in the same cradle. And when the cap was taken from the head of one, it was constantly put upon the other, the same cap being used through the whole of the contagious period of the disease, without any effect whatever.

ON Monday the 13th ult. I was desired to call at the house, but being from home at the time, I did not go until the following morning. They then told me, that the child had the Small Pox. This I discredited, supposing it impossible, as she had so decidedly resisted infection before. I was surprized however to find their account correct, upwards of a hundred eruptions appearing in different parts of the face, body, and extremities; several of which were *pustular*, and well advanced towards maturation.

Not having been called early enough to witness the beginning and progress of the disease, I was the more particular in my inquiries. This I found was the fourth day of the eruption; she was taken ill on the Wednesday evening preceding, complaining of sickness, pain in the head and back, accompanied with considerable fever. On Thursday and part of Friday, she continued nearly the same. Supposing it to arise from cold, the mother was not alarmed, but gave her some diluting drink, and kept her in bed. About Friday noon she began to be better, but not totally free from fever. On Saturday morning she was perfectly recovered, but while she was dressing, a few eruptions were perceived in her face, neck and shoulders, but were not much attended to at the time. On Sunday the number increased, and still more came out on Monday morning. They now began to consider them as something more than pimples. For the first time they suspected Small Pox. In this they were justified, from variolous infection being in the school; two or three other children having

taken it, one of which died, in a confluent fort, under my care soon after. This induced them to send for me.

IN a case so important, I should not have been justified in trusting to my own opinion. The case was therefore seen by Doctor Kerr of the Military Hospital, Doctor Thompson and Mr. Stevenson of Haslar, Mr. Rickman of the Marine Infirmary, Mr. Taswell and Mr Merritt of Portsmouth; and by Mr. Gaselee, Mr. Hill, Mr. Seeds and Mr. Weymouth of Portsmouth; all of whom expressed themselves perfectly satisfied of its being Small Pox. Mr. Wilkinson of Portsmouth likewise saw the child, but entertained some doubts from the pustules drying off early on the seventh day. These doubts were removed however by the subsequent experiments.

FOUR lancets of matter were taken about the end of the fifth day. Mr. Seeds, Mr. Weymouth, and Mr. Cooper, obligingly offered to try them on three children, then ready to be inoculated. The fourth I used myself.

My own patient was a delicate child, about six months old. It had considerable fever and rash, which was preceded by two or three convulsions. The rash subsided about the usual time; when I could not discover more than eight or ten eruptions; four of which matured, and went off on the seventh day.

THE child which Mr. Weymouth inoculated was ten months old. It had about fifty eruptions, most of which matured kindly, and went off about the same time.

THE child upon whom Mr. Cooper tried the matter, was nearly of the same age. It was followed by more than a hundred pustules, which, like the former cases, went off on the seventh day.

MR. Seeds's patient was a strong plethoric child at the breast, seven or eight months old. This child had considerable fever, with extensive rash, and more than a thousand pustules; most of which did not turn until the ninth or tenth day.

THIS case was so decisive of the experiment, that more particular attention was paid to it

than to the others. And I believe, most of the gentlemen who saw the child from whom the matter was taken visited it several times; all expressing themselves perfectly satisfied of the nature of the disease.

It is scarcely necessary to remark, that each of the children's arms exhibited as strong specimens of inoculated Small Pox, as I ever witnessed.

I forbear noticing any cases of failure upon mere report. Some are said to have happened in the Isle of Wight, which I am informed will be published. It is not my intention either to be particular, or lay much stress upon any that have not occurred in my own practice. I think it however necessary, to pay some attention to the two following cases. They are communicated to me by Mr. Weymouth, whose accuracy I can fully depend upon, and having seen the subjects, while under Small Pox inoculation; I shall take the opportunity to recite them.

C A S E IV.

VARIOLOUS INOCULATION, THIRTEEN MONTHS AFTER
VACCINATION, PRODUCING SMALL POX IN OTHER
SUBJECTS.

MR. DUNNING'S child, of Portsea, was inoculated, with vaccine matter, on the 18th of March eighteen hundred and one, which Mr. Weymouth took himself, on the commencement of the ninth day, from a child he had previously vaccinated.

THE arm inflamed, he observes, and put on every appearance described by Doctor Jenner. Febrile symptoms followed, and some enlargement of the axillary glands, though not so great as in some cases; yet he considered it, together with the fever, the appearance of the arm, and the length of time the fever kept up, sufficient to justify the idea of the child having passed the disease satisfactorily.

ON the 18th of April 1802, it was inoculated with Small Pox matter. The arm inflamed and matured in the usual way.

ON the afternoon of the ninth day, the child became feverish, with vomiting, pains in the legs, and much heat of the skin. The symptoms continued, with restlessness through the night, the next day, and following evening. On the eleventh morning several pustules appeared. One on the face, one on the arm, at some distance from the place of inoculation, three on the right hand, and several about the body. The pustule on the arm was the only one that matured, from which he tinged two lancets, and inoculated two children; both of which had the Small Pox in the most satisfactory manner.

Several of the most respectable practitioners in Portsmouth and Portsea were witnesses of the case at the time.

CASE V.

CASE V.

VARIOLOUS INOCULATION, FOURTEEN MONTHS AFTER
VACCINATION, PRODUCING STRONG CONSTITUTION-
AL AFFECTION.

ON the same day he likewise vaccinated a child of Mr. Light's, in the same house. The arm inflamed, and went through the usual stages. On the eleventh day, the inflammation was near two inches in diameter, and extended more than half round the arm. The child became exceedingly hot and feverish. The axillary glands were enlarged to nearly the size of a walnut, the feverish symptoms continued for two days with much restlessness. The inflammation and enlargement of the glands also kept up.

During the progress of the disease, the child was visited by Mr. Fitzmaurice, surgeon at Haslar, who considered it a case, exceeding strongly marked. He took matter from the arm, with which he vaccinated two patients, both of whom, some months after, resisted the Small Pox.

MR. WEYMOUTH inoculated this child on the fourth of May, eighteen hundred and two with variolous matter. Inflammation took place, and continued to increase, and, on the ninth day, it was attacked with fever, head-ach, pains in the legs, foul tongue, sickness at stomach and vomiting. Most of these symptoms continued through the night, and next day. At this time the arm was full of matter, and the inflammation round the part extended near an inch and half in diameter.

IN this state, the child was seen by some of the Medical Gentlemen at Haslar, and by several Practitioners in Portsea; all of whom were satisfied, that this was the effect of variolous infection.

IN this case there were not any eruptions, but there were a number of pustules round the inoculated arm. On the twelfth day the inflammation abated, and gradually disappeared, leaving the usual mark on the part.

NOTICES of these cases were sent by Mr. Weymouth to the sick and wounded board, at the time when they happened.

I saw these children myself during the inoculation for Small Pox, and have since seen them within this week. I find the mark of vaccination small, but orbicular and stronger to appearance, even now, than that made by variolous matter.

MR. WEYMOUTH was induced to try the effect of variolous matter on these children, in consequence of the recurrence of Small Pox in Clarke the marine, at Haslar. And as there are some circumstances in that case, not generally known, and which did not, perhaps, come before the Committee of the House of Commons, I shall briefly recite them, without wishing to lay any material stress upon it, or to draw any inference from them.

CASE VI.

CLARKE was vaccinated by Mr. Rickman on the fourth of November eighteen hundred. He had used the matter, transmitted him by the Board, upon five marines, on the twenty-fifth of the preceding month. It was from one of those cases, he took that, which he used on this occasion. There was no apparent reason to suppose, that he had not received every benefit from it, as he noticed no difference in the appearance of the arm, or the symptoms, from any of the former.

ON the eighteenth of November, he vaccinated a child, Sarah Smith; as one of the punctures was rubbed off very early, he did not think it proper to note this as a characteristic case. About the middle of March eighteen hundred and two, he understood that the child had taken the Small Pox from infection.

This excited his attention, and, about the sixth day of the eruption, I saw her by his

request. The number of eruptions was very considerable; but I was struck with a peculiarity in their appearance, which was extremely evident, on comparing them with a child in the house adjoining. In each the number was nearly the same, yet they were more prominent, and forward in the one than in the other. For while they were, in the other child, in many places confluent; yet in Sarah Smith, although they might be strictly said to approximate; yet still they were distinct, and never ran into each other so as to constitute a confluent Small Pox.

THIS, which I consider as a remarkable circumstance in the case, was observable in the arms of the *unvaccinated* children, who were inoculated from her. In these, the small pustules round the puncture, which generally become confluent, appeared warty, pressing, so as to ride over each other, perfectly in contact, but without intermixing.

CLARKE, since the time of his vaccination, had been a voyage to the West Indies, from whence he returned with chronic dysentery.

He was at this time just recovered. And Mr. Rickman inoculated him with matter from this child on the twenty-fourth of March, eighteen hundred and two. He sickened on the first of April, and was sent in consequence to Haslar. He was there under the care of Doctor Hope. On the appearance of eruptions he invited the Medical gentlemen in the neighbourhood to see him.

I believe it was about the third, or fourth day at farthest, I went over. He had some hundred pustules. They were more maturated, for the time, than might be expected. They were likewise, remarkably conical, an observation I had made in the child from whom the matter was taken. The arm had, at the same time, a very different appearance from the common Small Pox arm; as there was an unusual livid appearance in the maturation of the puncture. The same was observed, as similar as possible, in the case of Mr. Grant's child.—CASE I. The eschar from vaccination was not perfectly seen, from two pustules in part covering it.

EXACTLY at this period, the Committee of the House of Commons were examining evidence on the bill for remunerating Doctor Jenner. A case like this could not fail making considerable impression at such a juncture. The peculiar appearance of the pustules,* connected with what I considered an unusual aspect in the arm, induced me to write to him on the subject, conveying the suspicions I entertained, at that time, of its being an anomalous case of varicella; having before witnessed that disease bearing a strong similitude to Small Pox. It was, however, afterwards clearly demonstrated, to the satisfaction of every body, to have been variola, the matter taken from him producing evident proofs, in several instances.

As it was at that period of some material import, I requested Doctor Jenner, to take the trouble of coming to Haslar himself, or to send some confidential friend, to see the pa-

* Might not this be the same appearance which Doctor Jenner observed in Riddiford, Case XV of his first publication, who was casually affected by morbid matter from the heel of the horse?

tient. Neither of which was done; and the Committee, if they did not immediately, and in express terms, deem this a spurious case; they considered it as weighing nothing against the evidence already produced. In this they were certainly justified, for in examining evidence, they were to be guided in their judgment, by what was before them. And this single instance, if it had been ever so decisive, could not weigh in their minds, sitting in a judicial capacity, against that of a person's having inoculated ten thousand, many of whom had resisted future infection.

BESIDES, the *casual* Cow Pox had been proved to be a permanent prophylactic, and the cases before produced had determined the question, as far as it could then be decided, whether inoculation from thence would produce the same effects. It was not for them then to argue, whether such would be only for a definite period, a point, which time and the further observations of practitioners alone could ascertain.

THE preceding Cases are published with no other view, than that of wishing to excite the most complete and impartial investigation of the subject. I feel some pleasure, therefore, that I can so decidedly trace the source, from whence the matter was derived.

MR. PAYTHERUS having inoculated Mr. Grant's child, there can be no doubt entertained of that matter being genuine. He certifies him to have received every advantage that could be derived from the Cow Pox.

IN respect to the Cases of Worsfold and Lufcombe, it has been before remarked, that Mr. Rickman received the first matter used here, in his official situation as Surgeon of the Division of Marines, from the Commissioners of sick and wounded. It is not to be presumed, that a public board, directing experiments to be made on the subject, in an infirmary under their controul, would be so inattentive as to send such as was improper for that purpose. There could be no opportunity of its being decomposed, or deteriorated while in possession of Mr. Rickman, as he used it on

the same day he received it, which was the twenty-fifth of October eighteen hundred, on five men then ready for the purpose.

WITH matter taken from these men, he inoculated other marines, among whom was the subject of the last recited case, Clarke, on the fourth of November. From one of these a man named Langley, whose arm shewed a fine specimen, strongly characteristic of the disease, matter was taken for me on the eleventh, which I used on two children of Major Noel's, of the Worcester Regiment, then quartered here, the same day, and from them I vaccinated others in succession. I was satisfied of its being efficacious in these children, as they both resisted variolous inoculation six months afterwards. And Langley was found likewise to resist it at Haslar, where he was intentionally sent for more than a month into the Small Pox Wards, and was during his continuance there inoculated more than once.

This was the source of the matter I first used. And in the succeeding cases, great care was taken that the pustule should be well de-

fined, the period of taking it never extending beyond the ninth morning, when it was perfectly limpid, appearing like thin transparent mucilage on the lancet. From the same source likewise, I believe, the greater part of the matter, originally made use of in this neighbourhood was derived, and I have always understood the same precautions to have been adopted. It was in several instances renewed afterwards from the Foundling and other places in London; but I never could see any difference in the symptoms, the appearance of the pustule, or subsequent eschar.

To render the investigation more compleat, I have subjoined the following extract of a report, made to the Board, of forty-one men inoculated with vaccine matter at the Marine Infirmary, between the twenty-fifth of October eighteen hundred, and the twenty-eighth of April following, which Mr. Rickman has been so obliging as to suffer me to make use of.

26 were characteristic of the disease.

4 were considered as inconclusive cases.

9 resisted it altogether. Three of these

were since found previously to have had the Small Pox.

2 were infected with Small Pox at the time, one of whom died in Haflar.

In the course of these experiments Mr. Rickman soon found, that the matter ran rapidly into a purulent state after the eighth day, of which he advised the board, and on referring to the preceding account, it will appear that the matter taken from Langley was not quite so late. He was vaccinated on the fourth, and the matter was taken on the eleventh.

I shall now take the liberty of briefly recapitulating, to shew at one view, what determined me to pronounce the diseases, in Cases I and II, to have been genuine Cow Pox and genuine Small Pox:—

I. I considered, that the vaccine matter had been derived from a good source, sent from a public board for a public service; the vaccination of marine recruits. That this mat-

ter had been employed to vaccinate others, and had communicated to them a satisfactory disease; and that in the three principal instances of Langley, and the two children of Major Noel, who were inoculated soon after vaccination with Small Pox, it rendered them not susceptible of its infection.

II. That it had produced on the arms a regular well defined pustule, which continued as long as it usually does, leaving a dark shining scab, like the *operculum* of a winkle, and was followed by a *strongly marked orbicular indentation*.

III. That the pustule was attended, on the ninth, tenth and eleventh days, with an areola, such as accompanies absorption into the habit, with affection of the axillary glands, and with symptoms of constitutional indisposition.

IV. That both the children thus vaccinated, resisted sometime afterwards Small Pox infection, when purposely for trial exposed to it.

THESE circumstances, and the exact conformity of the disorder in every respect, with the

Cow Pox, determined me to consider the evidence in both cases to be complete.

RESPECTING the Small Pox in Case II, Worfold's child:—

I. Three years and three months after vaccination, she was exposed to infection from a child in the same house, who was inoculated for that disease.

II. There appeared seven or eight eruptions, attended with all the symptoms which usually precede, and accompany Small Pox, exactly at the period when such infection might be expected to take place. They went off in a few days without maturing, as frequently happens in the inoculated disease.

RESPECTING the Small Pox in Case III, Lufcombe's child:—

I. Three years after vaccination, she was exposed to variolous infection, in a school where several of the children were taken ill of that disorder, one of which died of it under my own care, and three others, as I have been informed, experienced the same fate.

II. There was an eruption of above a hun-

dred pustules, attended with the usual symptoms of Small Pox, some of which fully matured, and continued to the seventh day, the others going off rather earlier without maturation, as frequently happens in distinct warty Small Pox.

III. MATTER taken from these pustules communicated the Small Pox to four patients, under four different practitioners. In that under my own care, it produced but a few pustules, in two other cases, from fifty to a hundred, and in the fourth, above a thousand, accompanied with protracted disease. In all of them the pustules corresponded exactly with those of genuine Small Pox. Therefore in both the subjects of Case II. and III. I consider the disease to be truly variolous.

THIS detail, on examination, will lead any one to judge, how far I am correct in forming these opinions, or enable them to point out wherein I may be mistaken. I should conceive that neither of them can be denominated spurious. For, if I entertain a proper conception of that accidental disease, it has no prophylactic

powers, more than any other morbid matter would have, when introduced into the constitution, and does not resist variolous infection at all. Its pustule is irregular, and not defined like the *true* vaccine pustule, and the eschar partakes of the same appearance, materially different from that of the true disease.

If they should be deemed as so many instances of imperfect vaccination, for I understand, it has lately been advanced, since so perfect a knowledge must have been obtained, by almost every body, as to preclude the idea of a spurious disease; that "the degree of security depends upon the degree of vaccination," it is time, that some line should be drawn, and a more accurate criterion be adopted, to enable us distinctly to ascertain, where imperfect vaccination ends, and where permanent security begins.

THAT the regular casual Cow Pox possesses permanent powers of prevention, there remains little room to doubt. And it was no small inducement, for several to adopt my

recommendation of vaccine inoculation originally, when I produced a very old woman in the neighbourhood, who had the disease early in life, and had repeatedly resisted infection in her situation as a nurse.

THAT the inoculated disease likewise possesses strong powers of resistance, is evident, even in these cases of its failure. And from theory we should be led to presume, there could be no difference in their effects, both being produced by the introduction of the same virus under the skin. But to argue from analogy, circumstances should always be similar. This is not exactly the case in the present instance. The casual Cow Pox is produced by virus immediately from the animal; while the inoculated disease is the effect of *new matter*, generated by the action of the other on the human subject. Whether that *new matter* be possessed of the power, to produce the same *permanent* properties as the *parent* virus, time alone can decide.

There certainly is a difference in the appearance of the pustules. In the casual disease,

they are more prominent, and have a bluish cast, which is characteristic, and distinguishes it from any other infection. In the first vaccination it retains this colour, but according to Dr. Woodville, this is not to be distinguished after it has passed once through the human body. A circumstance of some material import but which has not been sufficiently attended to.

Too much reliance in my humble opinion, has likewise been laid upon the similarity which exists between the variolous and vaccine pustules. Dr. Jenner says, speaking on the subject, "this appearance was in great measure new to me, and I ever shall recollect the pleasing sensations it excited; as, from its similarity to the pustule produced by variolous inoculation, it incontestibly pointed out the close connection between the two diseases, and almost anticipated the result of my future experiments."

It would extend these observations beyond the limits I intend, were I to enter upon the hypothesis, that the two diseases are only modifications of each other, and that they might

have originally arisen from the same source. At present there certainly exists a distinct difference. The variolous pustule, however mild, produces a disease, *sui generis*, *eruptive and contagious*, exciting that certain *something* in the constitution, which, as it is not yet known, it is impossible to describe, that resists its own recurrence. While the vaccine pustule generates a disease, in itself, neither *eruptive* or *contagious*, yet it is to prevent the occurrence of what is fully possessed of both those properties; while, totally different from the variolous pustule, it does not possess the permanent power of resisting its *own* reiterated action.*

* DR. Jenner has expressed some suspicion, that Small Pox as well as Cow Pox, might be the effect of morbid matter from the horse. Whether he has ever prosecuted the idea, I do not know; but I am much inclined to entertain the same opinion. And as every thing, that can in the most distant manner tend to illustrate the subject, must be in some degree interesting, I flatter myself, I shall be excused introducing the following observations.—

As morbid matter from the horse, passing through the nipple of the cow, produces a secretion of *new* matter, possessing such peculiar properties; what would be the effect were it inserted into the nipple of the milch mare? And if it be

To avoid erysipelatous inflammation, and at the same time, to render the disease milder,

capable of producing any disease, what effect would the *new* matter secreted, have in the human constitution?

The Small Pox is supposed to have originated in Arabia, the first and best accounts we have of the disease being by Arabian Authors. REISKE, from an inedited M. S. in the Leyden Library, has settled its first appearance there, to have been about the birth of Mahomet, five hundred and seventy two. As the Arab shews wonderful attention to his horse, seldom trusting it to the care of a second person; as part of his food likewise is derived from the mare, which he never fails to milk himself; and as, from the arid soil of the desert, the animal frequently contracts diseases of the fetlock, might not the matter transferred in this way to the teat of the mare equally produce pustules as in the Cow? And might not the matter secreted there, when introduced into the human constitution, cause a pustular disease similar to the Small Pox?

I have not leisure, and if I had, I should want the opportunity to put this to the test. Yet I presume it might be done with great ease at the Veterinary College. Should it produce any pustule on the nipple of the mare, the effect might be tried, either in the Small Pox, or Foundling Hospitals. If there should be any foundation for the idea, the result would materially illustrate the doctrine of the Cow Pox, and could not fail to be highly gratifying to the physiologist, while it might lead to some very important discoveries in pathology. Is it possible, that the mild Small Pox in Gloucestershire, which so much attracted the attention of the Faculty about 12 years since could have arisen from the same cause?

it has been directed that the insertion of the matter should be as superficial as possible. This arises likewise, from relying too much on the connection between the two diseases. As this part of Doctor Jenner's publication, wherein he adverts to the practice of Doctor Hardwicke, of Sodbury, prior to the introduction of Sutton's method, gave rise to some reflections, which have made considerable impression on my own mind; I shall take the liberty to make an extract from it.

“As it is not the identical matter inserted which is absorbed into the constitution, but that which is, by some peculiar process in the animal œconomy, generated by it, is it not probable that *different parts of the human body may prepare or modify the virus differently?* Although the skin, for example, adipose membrane, or mucous membranes are all capable of producing the variolous virus by the stimulus given by the particles deposited upon them, yet I am induced to conceive that each of these parts is capable of producing some variation in the qualities of the matter pre-

vious to its affecting the constitution. What else can constitute the difference between the Small Pox when communicated casually or in what has been termed the natural way, or when brought on artificially through the medium of the skin?"

It is that part of the passage, wherein he says, "that different parts of the body may prepare or modify the virus differently," which I allude to; and although it seems not to be intended that it should be construed in any other manner than as adverting to its different effects when deposited on the Cutis, or on the adipose, or mucous membranes; yet I could not help reflecting, that in order to produce the disease by inoculation, the matter is inserted into the arm; while that which occasions the casual disease, is constantly deposited on, or within the Cutis, on the hands. This, at first sight, may be considered as a distinction without a difference, as both parts are equally absorbing surfaces.

But nature in designing the hands, in the human subject, as the more immediate instru-

ments of the organs of feeling, gave them a peculiar disposition to irritation, whenever the cuticle is abraded. Hence the vesication from simple cutaneous Paronychia, or the simple puncture of any instrument, scarcely penetrating through the Cutis, will produce inflammation extending through the whole course of the Lymphatics to the axillary glands, beyond any thing that would occur, were the same accidental circumstances to have taken place in other parts of the body. Hence perhaps may be deduced the reason, why the inoculated disease is so much milder than the casual, and why so much less constitutional affection takes place. And may not this ultimately, prove to be the cause why the casual Cow Pox possesses such decided effects? May it not arise from its being deposited on a part of the body, where the skin, from its sensibility, is more capable of giving the necessary stimulus to the particles deposited upon it than any other?

If this should prove to be the fact, would not the insertion of the matter into the hands

or fingers ensure compleat success? Following the mode by which the disease was accidentally produced, will, perhaps, be the most certain means of reaping the same permanent advantages. And as methods have been found effective, to check the progress of inflammation, which may arise in those parts, the feelings of humanity require, that if future investigation should find the present mode an uncertain preservative, some such imitation of the casual disease should be adopted; rather than a discovery, so replete with beneficial consequences to society, should be relinquished altogether. I have advanced this idea merely as matter of opinion. It might perhaps be corroborated by referring to the known absorption that takes place, on immersing the extremities of debilitated persons in any fluid. Yet I do not contend for its being a more positive *permanent* prevention.

For if the Cases now published, should be confirmed by future experiments, I am led to believe, that no mode of vaccination what-

ever, will have any such effect after the *first* remove from the Cow. I have before observed, that sufficient attention has not been paid to a circumstance of some considerable import, that the *blue* characteristic colour of the pustule in the animal, is lost immediately after passing through the human constitution.

THEREFORE, "as it is not the identical matter inserted which is absorbed into the constitution, but that which is, by some peculiar process in the animal œconomy, generated from it," it is the less likely to have the same permanent effect.

To conclude. It is far from my wish to provoke controversy. I only ask for further investigation. Vaccine inoculation must stand by its own merits, or fall from its own immediate defects. To suffer zeal for the discovery to shut their eyes to conviction, and, by deeming every failure spurious, to conceal it, is beneath the dignity of the profession. If it does not ultimately prove a permanent prophylactic, the consequence must be, that the Small Pox, at some future period, will be-

come a greater scourge to the world than ever; independent of the distress of men's minds from their being left in such a dreadful state of anxiety. Let me beg therefore, that in conducting this investigation, the words of Doctor Jenner may be had in remembrance, "I again repeat my earnest hope that it may be conducted with that calmness and moderation which should ever accompany a philosophical research."

Hæc scripsi non otii abundantia sed amoris erga te.

TULL. EP.

F I N I S.

ERRATA.

Wherever it is connected with Cow Pox the reader is requested to substitute *vaccinated* for *inoculated*.

Page 9, line 6—for *less* read *even more*.

49, —17, for *I. and II.* read *II. and III.*

POSTSCRIPT.

I Have delayed the publication of the preceding pages a few days, to wait the event of exposure to infection, in three children vaccinated at three different periods. Tenth of December eighteen hundred. Nineteenth of April eighteen hundred and one, and ninth of April eighteen hundred and three.

A child of Mr. Callard, Ordnance Row, Portsmouth, a strong healthy boy eight months old, was vaccinated on the tenth of December eighteen hundred, the same day as the subject of Case II, and consequently with the same matter. The disease was peculiarly marked,—by the pustule—by the constitutional affection, which continued two or three days—and by the eschar. This is at present strongly indented, and, as far as can be carried in my mind, without immediately com-

paring it, strictly similar to that of Case I. Constantly in the way of infection, by being in a school where several had been taken with the Small Pox, he could not have escaped it, had he then been susceptible of it.

ON the twenty-first ult. I inoculated an infant in the same house, who had not more than twenty Small Pox, half of which did not mature. On Wednesday the eleventh infant and the following day, the vaccinated child was observed to be dull and inactive, complained of pain in his head, and was feverish. On Friday morning the feverish heat continued, and some eruptions in the face, hands and body, were seen characteristic of the Small Pox. Three or four more appeared during Saturday night, and as many on Sunday. They were mostly small, but prominent, and all of them, about twenty in number, went off on the sixth or seventh day; none of them maturing, but some exuded a small portion of lymph, which incrusted on the apex, and gave them a warty aspect. This was soon rubbed off, leaving them less elevated above the skin.

MR. WEYMOUTH and Mr. Merritt, two of the Medical gentlemen who were witnesses of the former cases, being in the vicinity on Friday, saw the child with me, both of whom have visited him since, and are fully satisfied of its being the effect of variolous contagion.

THE daughter, a younger child, exposed in as great a degree to the same infection, wholly resisted it. She was vaccinated on the ninth of April eighteen hundred and three.

I inoculated two children of Mr. Warner in Prince George's Street, Portsea, on the same day that I did Mr. Callard's. This was another opportunity to try the effect of exposure to infection in a boy vaccinated at four months old on the nineteenth of April, eighteen hundred and one. The disease was strongly marked by considerable tumor in the axilla, and was in every respect so completely defined as to leave no doubt of its efficacy. Near two years afterwards a child in the same house had the casual Small Pox when it was

exposed with the fullest confidence, as much as possible, but resisted infection.

ON Monday the ninth instant the child complained of being tired, was very fretful, and rather feverish; was sick on Tuesday evening and vomited, and on Wednesday morning four or five eruptions appeared. On Thursday his tongue was white and he was still rather feverish. A few fresh eruptions were seen. On Friday he was more feverish and less inclined to his usual activity; the eruptions increasing in size, particularly those in the face and one on the pubis. A few others still came out on Saturday, and I could now distinctly see twenty-five in different parts of the face, body and extremities.

ON Monday the sixteenth, the eruption on the pubis had a whitish glassy appearance as if it contained a fluid, but it never became perfectly pustular. Similar to the other case, the apex of most of them exuded a small quantity of lymph, which incrusted and they gradually died away after the seventh day, but the marks are still visible rather above the skin.

MR. SEEDS, Mr. Weymouth and Mr. Merritt saw this child at different times and they entertain no doubt of the nature of the disease.

THESE in themselves are not prominent Cases, but they certainly lead to the same conclusion as the others,—that a person, at one time secured by vaccination, may at another more distant, become susceptible of Small Pox.



When the note at *Page 56* was sent to the press, I was wholly ignorant that the subject of it had ever been noticed by any one since Dr. Jenner's publication. The idea of trying the effect of morbid matter from the horse on the nipple of the mare has engaged my attention for some time, and, from the Small Pox having originated in Arabia, I was induced to believe that it might derive its source from some such cause. Within these few days, through the channel of an anonymous paper in the last Medical and Physical Journal, I find, Mr. Abernethy, in his present course of

lectures, has taken the opportunity to announce, that a learned orientalist has lately discovered an Arabian M. S. which traces the origin of the Small Pox, from a disease in the *Camel*, conveyed by the Arab milkers to that animal, in a manner similar to what happens here in the cow.

THIS differs from the idea I have advanced, yet I flatter myself it will be a further stimulus to the experiments I have proposed. If it should not prove to be the source of Small Pox, it may possibly lead to a stronger mode of prevention than vaccination, excepting *immediately from the cow*, seems to possess.

AND here let me add, that, instead of encouraging the reveries of individuals who call for the interference of Parliament, to suppress variolous inoculation altogether, the Vaccine Institution would be rendering the most essential service to the country, were they to petition them to lend, once more, their fostering hand, so that the profession might be better enabled to procure matter immediately from the cow. This would be soliciting them

to exert a power truly consistent with their constitutional prerogative, and suited to the temperate wisdom of their deliberations as a legislative body.

RELIGIOUS prejudice, as much as any other cause, has tended to prevent those benefits, which were to have been expected from the introduction of variolous inoculation. Many, even at the present moment, think it presumption to excite a disease, which Providence might suffer them to pass through the several stages of life without taking. But this idea does not prevail so strong, even with the most rigid predestinarian, as to prevent them from embracing any *certain* mode of security.

IF therefore such method of vaccination be adopted, as will leave no doubt in the minds of the profession themselves, the prejudices of the people will readily subside, and the Small Pox be exterminated, without having recourse to any unconstitutional interference of Parliament.

QUEEN-STREET, PORTSEA,

APRIL 23d, 1804.

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QUEEN-STREET, PORTSEA,
April 23, 1854.