

A letter to William Wilberforce, Esq. M.P. &c.; &c.; &c.; containing remarks on a pamphlet entitled An account of the discovery of the power of mineral acid vapours to destroy contagion, by John Johnstone, M.D. Published in London, 1803 / by James Carmichael Smyth.

Contributors

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*To the College of Physicians
from the Author*

LETTER

TO

WILLIAM WILBERFORCE, Esq. M.P.

&c. &c. &c.

BY

James Carmichael Smyth, M.D.

PRICE ONE SHILLING.

North College of Physicians
from the ...

WILLIAM WILKINSON, M.D.
TO THE ...

James Cunningham Esq., M.D.

PRICE ONE SHILLING

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A
LETTER
TO
WILLIAM WILBERFORCE, Esq. M.P.
&c. &c. &c.

BY
JAMES CARMICHAEL SMYTH, M.D.

CONTAINING
REMARKS ON A PAMPHLET,
ENTITLED
AN ACCOUNT OF THE DISCOVERY
OF THE POWER OF
MINERAL ACID VAPOURS
TO DESTROY CONTAGION.

BY JOHN JOHNSTONE, M.D.

PUBLISHED IN LONDON 1803.

Videre verum, atque, ita uti res est, dicere.

TERENCE.

London :

PRINTED FOR J. CALLOW, MEDICAL BOOKSELLER,
NO. 10, CROWN COURT, PRINCES STREET, SOHO.
by W. Smith and Son, King Street, Seven Dials.

1805.

LETTER

TO

WILLIAM WILBERFORCE, Esq. M.P.

8c. 8c. 8c.

BY

JAMES GARRICK SMYTH, M.D.

CONTAINING

REMARKS ON A PAMPHLET

ENTITLED

AN ACCOUNT OF THE DISCOVERY

OF THE POWER OF

MIXED ACID VAPOURS

TO DESTROY CONTAGION

By JOHN JOHNSTONE, M.D.

Published in London 1803

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1803.

A

LETTER,

&c. &c. &c.

East Acton,

12th August, 1804.

DEAR SIR,

I EMBRACE the first moment of leisure, to thank you for your attention in sending me Dr. John Johnstone's pamphlet, which I had not seen before*.

As you, no doubt, expect my opinion on a subject in which the committee of the House of Commons, (of which you was chairman) as well as myself, are so immediately concerned, I shall give it you, and with the same freedom and candour, as on former occasions, *sine ira & studio quorum causas procul habeo*.

But before making any observations on the pamphlet in question, it is proper to lay

* Dr. C. Smyth was in France at the time Dr. Johnstone's pamphlet was published, and did not return to England until the end of June.

before you a fair extract, from the publication of Dr. Johnstone's father, (comprehending the whole of what relates to this subject) as it affords the principal, if not the only evidence, upon which any claim to discovery can be founded.

Extract from an Historical Dissertation,
&c. by James Johnstone, M. D.

“ If the external air is immoderately cold
 “ and wet, the room must be kept warm and
 “ dry; and the fumes of amber, benzoin,
 “ myrrh, and camphire, may be diffused in
 “ the room, if sprinkled on hot iron; vinegar
 “ may be sprinkled about cold, if the
 “ weather is warm; and, boiled with myrrh
 “ and camphire, an antiseptic steam will rise
 “ in the air, which the patient breathes,
 “ greatly to his advantage. *These steams*
 “ *will preserve the air free from putrefaction,*
 “ and will insinuate themselves by the absorbent
 “ vessels of the lungs, into the blood
 “ vessels, and *will greatly assist in impeding*
 “ *the progress of putrefaction in the fluids.*
 “ These are the most commodious, if not the
 “ most useful methods of medicating the air
 “ the patient breathes; however, those who
 “ prefer the mineral acids, may order brimstone
 “ to be burnt, or may raise the marine

“ *acid very easily, by putting a certain quan-*
 “ *tity of common salt into a vessel, kept*
 “ *heated on a chaffing dish of coals; if to*
 “ *this a small quantity of oil of vitriol is from*
 “ *time to time added, the air will be filled*
 “ *with a thick white acid steam; but both*
 “ *the marine and sulphureous acids must be*
 “ *disengaged at a considerable distance from*
 “ *the patient, otherwise their extreme pun-*
 “ *gency will be offensive to the lungs.*”——
 Page 51.

The preceding passage requires little comment, a fair and candid exposition of the text being all that is necessary, to set aside the pretended claim.

Dr. Johnstone recommends the fumes of amber benzoin, &c. with the vapour of boiling vinegar, as the effectual means of resisting putrefaction, or destroying infection; and only mentions the mineral acids of sulphur, and sea salt, upon a supposition that some persons might choose to employ them. For such persons he gives the common directions how they are to be procured, and a caution respecting the inconvenience or danger that may follow from their use; although his directions (on this subject) are too general and inaccurate to be of much service.

Dr. John Johnstone, in his pamphlet page 5, has asserted, “ that nearly fifty years before
 “ the framing the report of the committee
 “ of the House of Commons, a country physician (his father) had acquired eminence
 “ by the discovery of a *certain method of destroying infection*, which could be used
 “ with perfect convenience in the apartments
 “ of the sick.” I leave you to judge, Sir, how far such an assertion can be justified, or supported by any thing contained in the father’s book; from which no inference can be made, that he ever employed the mineral acid of sulphur or sea salt; and so far is he from recommending them to others, that he cautions us against the mischief they may occasion; nor does he give the most distant hint that the inconvenience attending their use, may be at all compensated by their superior power or efficacy. He mentions the sulphureous and marine acids together, evidently unacquainted with any distinction in their application; but considering them equally safe, and equally useful. And his observation that their extreme pungency might be offensive to the lungs, plainly shews how little he thought them calculated for being employed in the apartments of the sick.

Having laid before you the passage in the father's book, and pointed out the only conclusion that can be drawn from it, I shall in the next place examine the account, or rather misrepresentation of this, given by his son, Dr. John Johnstone.

After mentioning the title of the father's Dissertation, published in the year 1758, he proceeds—

“ In that Dissertation, *adopting the theory*
 “ *of the day*, he proposes to keep the air free
 “ from putrefaction by the steams of vinegar,
 “ or as a *more effectual method*, the marine
 “ acid may be raised very easily, by putting
 “ a certain quantity of common salt into a
 “ vessel kept heated upon a chaffing dish of
 “ coals; if to this a small quantity of oil of
 “ vitriol is from time to time added, the air
 “ will be filled with a thick white acid
 “ steam.”—Page 5 and 6.

The father, in the first part of the extract I have quoted, expresses himself in the strongest terms respecting the steams of medicated vinegar—“ These (says he) will pre-
 “ serve the air free from putrefaction, will
 “ greatly assist in impeding the progress of
 “ putrefaction in the fluids; these are the
 “ *most commodious*, if not the *most useful*

“ *methods of medicating the air the patient*
 “ *breathes.*”

The son, on the contrary, informs us that his father, “ adopting the theory of the day,
 “ proposes to keep the air free from putre-
 “ faction by the steams of vinegar, or as a
 “ *more effectual method*, the marine acid
 “ may be raised,” &c.

I need not observe to you, Sir, that the father neither proposes nor recommends the marine acid, as a more or less effectual method, and that the expression a *more effectual method* is not to be found in his book, but is altogether an interpolation of the son. The father only says, “ Those who
 “ prefer the mineral acids, *may order brim-*
 “ *stone* to be *burnt*, or may *raise* the *marine*
 “ *acid*, &c.” “ Those who prefer”—If language has any meaning, evidently implying that he did not prefer them himself. On the burning of brimstone, Dr. John Johnstone, for obvious reasons, is silent; and suppresses likewise the concluding paragraph. “ Both
 “ the sulphureous and marine acids must be
 “ disengaged at a distance from the patient,
 “ otherwise their extreme pungency will be
 “ disagreeable to the lungs.” This caution, as I have already noticed, flatly contradicting

the son's assertion, that the method of destroying contagion discovered by his father, could be used with perfect convenience in the apartments of the sick. I am persuaded that such a complete perversion of an author's meaning, professing to be merely a declaration of it, has never before been presented to the public. "*Aut non credent homines, aut non ignoscent.*"

But besides the passage quoted above, upon which the son founds his father's claim to discovery, I shall take the liberty of laying before you two extracts from the same work, which prove, so far at least, as a negative proposition is capable of being proved, that Dr. Johnstone, the father, neither knew the superior efficacy of the mineral acids in destroying contagion, nor ever had the most distant idea of employing them with this intention.

In the Historical Dissertation, we find a chapter on the means of avoiding infection. "To the description (says the author) of a contagious disorder, it is very natural to expect some rules how contagion is best to be avoided."—Page 53. Had he been acquainted with a certain method of destroying contagion, we should have expected, that,

in this place, it would have been mentioned; but nothing of the kind appears, nor is any notice taken of the sulphureous or marine acids.

After giving some common directions about not breathing in the atmosphere of the sick, not swallowing the saliva whilst in the room, &c.—He concludes, page 54, “ Myrrh
 “ may be held or masticated in the mouth,
 “ tobacco smoaked, and the mouth may be
 “ washed with vinegar, or tincture of myrrh
 “ in water.” Another passage in his book furnishes evidence to the same effect—“ The
 “ fever which prevailed during this remark-
 “ able year was very evidently contagious,
 “ for whole families were either altogether,
 “ or one after another seized with it; those
 “ that visited and nursed the sick in one
 “ house, often carried the distemper along
 “ with them to other places, and were seized
 “ with it themselves.”—Page 17. Now Sir, let me ask any one, how are these facts to be reconciled with the supposition, that Dr. Johnstone possessed at the time, the means of preventing the evils he describes. Humanity revolts at the idea, and we must declare him ignorant of the means of destroying contagion, or pronounce him criminal in not employing them.

But I shall conclude this sort of evidence, taken from Dr. Johnstone's own writings, against his pretended discovery, by relating a circumstance, which, in the opinion of every candid mind, must set it at rest for ever. One of Dr. Johnstone's sons, I suppose the eldest, from his having the same name with the father, graduated at Edinburgh in the year 1773, and, agreeably to the practice of the University, published a Thesis on the Angina Maligna; the subject was probably chosen by the father, from the analogy between this, and the fever he had formerly described. " This
 " malignant fever was very often, though not
 " constantly complicated with, and in general
 " bore great analogy to the malignant sore
 " throat, which at this time prevailed very
 " much in many parts of England." Vide H. D. page 6. But, whether the father suggested the subject or not, the son, with a modesty becoming his age, acknowledges, that if his Dissertation has any merit, he owes it entirely to his father—his words are,
 " *Primum omnium patrem, mihi semper quam*
 " *plurimum colendum, ut commemorem sua-*
 " *dent pietas, &c. cujusque consilio amicissimo*
 " *hocce opusculum meritum suum, si quod*
 " *habeat praecipue debet.*" Vide Inaug. Diss.

We can have no doubt then, that Dr. Johnstone did bestow considerable pains, on this first essay of his son, which was to be equally honorable or discreditable to both. It was now *one and twenty years* since the father, according to Dr. John Johnstone, had made a most important discovery in physic, having found, in the marine acid vapour, a certain antidote to contagion; nothing had as yet been published by him on the subject; here was an excellent opportunity for bringing it forward, and making it known; but unfortunately for this pretended discovery, there is not the slightest notice taken of it, nor are the sulphuric or marine acids, so much as mentioned, nor any hint given that they ever had, or ever could be employed in the practice of physic. But the praises of medicated vinegar, and of the other means formerly recommended by the father, are again celebrated, and in stronger terms than ever. The following must be regarded as Dr. Johnstone's creed at the time—"Unum insuper remedium
 " non praetereundum videter, viz. myrrhæ
 " vel camphoræ ex acceto coctae vapores; Hi
 " magnum ægris, angina maligna laboranti-
 " bus, spiritum minus gravem reddendo et
 " salivæ secretionum augendo, levamen ad-

“ferre solent.” Again, “Nullum præter hos
 “aliud topicum est remedium cui morbus
 “cum hæc partes jam occupavit, possis
 “confidere. *Hi vapores præterea per ægroti
 “cubiculum constanter diffusi ante omnia alia
 “contagionem longius serpere et progredi
 “vetare consueverunt.* Vide Inaug. Dissert.
 page 70. The above, which may be looked
 upon as a declaration under Dr. Johnstone’s
 own hand, at once sets aside all pretensions
 to the discovery claimed in his name.

But as the father’s book, though the most
 important, is not the only evidence upon
 which Dr. John Johnstone rests his title to
 discovery, I shall proceed to examine the
 other circumstances, which he has stated, in
 support of his claim; the first of which, in
 order, as in importance, is his father’s ma-
 nuscripts, of which he gives the following
 account—“It would be useless to enter upon
 “such a detail of cases as I could collect
 “from the books of my father, consisting
 “merely of names and prescriptions, without
 “any regular statement of symptoms, or of
 “the particular operation of medicines; such
 “a detail would only prove that the muriatic
 “acid vapour was used subsequent to the
 “year 1756, of which any proof is unneces-

sary, since the publication of the Dissertation on Fevers." Here then we have the authority of Dr. John Johnstone himself, to declare that his father's manuscripts do not furnish a single example of the successful employment of the marine acid, no opinion of its safety, no evidence or even suspicion of its use. He tells us indeed, that they afford proof of the muriatic acid having been used by his father, subsequent to the year 1756, but of this we have some reason to be doubtful, as he finds the same thing proved in his Historical Dissertation. Upon the whole, the report he makes of his father's manuscripts will not, in the opinion of professional men, add much to his character. Such often is the consequence of intemperate zeal, that it injures the person whom it means to serve.

I now proceed to another part of the evidence set up by Dr. John Johnstone, which is his brother, Dr. James Johnstone's Treatise on the Malignant Sore Throat, a publication with which he has taken the same liberty as with his father's; altering the language, making partial quotation, and suppressing entirely what does not suit his purpose.

I have already mentioned Dr. James Johnstone's Inaugural Dissertation as the joint work of himself and father, in which, as there is no notice taken of the sulphureous or marine acids, and the steams of medicated vinegar, are declared to be superior to every other method for destroying contagion, we may fairly conclude, that neither of those gentlemen, father or son, had in the year 1773, the least knowledge of the power of the mineral acids, or had ever employed them in practice.

In the year 1779, Dr. James Johnstone republished his Thesis in an English dress; and in an appendix, which he entitles "Particular Method of Cure proposed"—Page 109, we read as follows—"Antiseptic vapours are to be considered as remedies of the *first importance*; the steams of myrrh and camphire, boiled in vinegar and honey, are of great use in cases of malignant angina, by facilitating respiration and encreasing the flow of saliva."—"The antiseptic vapours above-mentioned, are most immediately and essentially serviceable in correcting any putrid quality of the air, when it is either drawn into, or breathed out of the lungs; by their means the *fomes* of the

“ *disease is altered and counteracted*, at the
 “ same time that the parts already ulcerated
 “ are cleansed and healed.”

After continuing in the next page to enlarge
 on the great utility of these vapours, and the
 various purposes to which they are applicable,
 he adds—“ As it is impossible too cautiously
 “ to guard against the effects of so putrid a
 “ contagion, the *acid* air or spirit of salt
 “ should be kept rising continually in the
 “ room, by pouring oil of vitriol once or
 “ twice a day on sea salt, placed in a con-
 “ venient vessel; this spirit will rise, in the
 “ moderate degrees of heat, from sixty to
 “ seventy of Fahrenheit’s thermometer, so
 “ as to be perceived in every part of the
 “ room by its penetrating acid smell. This
 “ method of correcting vitiated air, which is
 “ useful in this, and every other putrid
 “ disease, was long ago *ordered* by my *father*,
 “ and is *now recommended* by *Dr. Priestley*.”

So far Dr. James Johnstone. Let us, in
 the next place, see the account given of this,
 by his brother, Dr. John Johnstone.

“ In the year 1779, Dr. James Johnstone
 “ published his *Treatise on Sore Throat*; in
 “ that treatise he recommends the muriatic
 “ vapour in the following terms:—“ As it is

“ impossible too cautiously to guard against
 “ the effects of so putrid a contagion, the
 “ *acid air* or *spirit of salt* should be kept
 “ rising continually in the room, by pouring
 “ oil of vitriol on sea salt, placed in a con-
 “ venient vessel; this method of correcting
 “ vitiated air, was *recommended by my*
 “ *father.*”

Here, Sir, you have another example of
 Dr. John Johnstone's talent for quotation.
 His brother, still retaining his antient pre-
 judices in favor of the steams of vinegar,
 recommends these in the same style of high
 panegeric as formerly—“ These (says he)
 “ are most *immediately* and *essentially* ser-
 “ viceable in correcting any putrid quality
 “ of the air—by their means the fomes of
 “ the disease is altered and counteracted;”
 “ adding, as it is impossible to guard against
 “ the effects of so putrid a contagion, the
 “ *acid air, &c.*” The marine acid gas there-
 fore is recommended by him, not as a remedy
 of more efficacy than the steams of vinegar,
 not as the sole preservative against contagion,
 but as an additional security; whereas Dr.
 John Johnstone, by omitting what his brother
 says of the use of medicated vinegar, wishes

to have it believed, that the acid air was the sole method employed.

The brother, (Dr. James) says, not very accurately indeed, that "this method of correcting vitiated air was long ago ordered by my father, and is now recommended by Dr. Priestley."

But Dr. John Johnstone proceeds more boldly, and asserts, not that it was *ordered*, but that it was * *recommended* by his father; and with equal candour suppresses entirely what his brother says, of its being now recommended by Dr. Priestley, although it is extremely obvious, to any one who reads the pamphlet, that it was solely from the recommendation of Priestley, that Dr. James Johnstone was led to mention the marine acid. He had taken no notice of it in the year 1773, although the father's book, in which, according to him, it was ordered, had been published fifteen years before; but he explains this paradox, when he informs us, page 86, "that
" a series of curious and important discoveries made by the persevering genius of
" Dr. Priestley, upon different kinds of air,

* I cannot suppose Dr. John Johnstone so unacquainted with his own language as to take the words *ordered* and *recommended* for synonyms.

“ has excited an almost universal attention
 “ to that subject.” Besides, the chemical
 language is not that of his father, but the
 language of Priestley. *Acid air* being an
 expression peculiar to Priestley, who like-
 wise commonly mentions the marine acid by
 the name of the *spirit of sea salt*. From
 Priestley also he learned the moderate tem-
 perature at which the marine vapour may be
 raised. Priestley says *, “ The heat of a per-
 “ son’s hand will often be sufficient to throw
 “ out the vapour, and in warm weather it will
 “ often keep smoking without the application
 “ of any other heat ;” whereas Dr. Johnstone
 the father directs a chaffing dish of coals
 for this purpose. And although Dr. James
 Johnstone asserts, that this was *ordered* by
 his father, he does not say that he had known
him use it ; or that he himself had employed it,
 or ever seen it employed by others : in short,
 he was evidently without experience on the
 subject, equally ignorant of the powers of the
 marine acid, and of the inconvenience which
 an imprudent use of it might occasion.
 Neither can we suppose that his friend, Dr.
 Priestley’s knowledge on these matters, was

* Vol. II. page 279.

much superior to his own. Priestley being no physician, could have no experience of contagion, and therefore must have derived his information from some other source. And in this instance the source from which he derived it is apparent. At the time mentioned he was running an honourable race of discovery with the French chemists, and of course read every book that came out in France on the subject. He must therefore have seen Morveau's Memoir, published in the year 1773, first in the Memoires of the Academy of Dijon, afterwards in the Journal de Physique of the same year, although Dr. John Johnstone, with his usual accuracy, affirms, that no account of Morveau's experiment was published until ten or twelve years after the year 1773, and then in the Memoires of the Academy of Sciences. This gentleman's ignorance on a subject, where he conceives his father's honour so immediately implicated, is scarcely to be credited; but I leave the explanation to himself: it is sufficient for my purpose to have shewn that the father had no knowledge whatever, so far as we can judge from his published writings or manuscripts, on the subject of this pretended discovery; and if his son, Dr. James Johnstone, shall be thought to have

made any approach towards it, he owed this entirely to Priestley, and he probably to Morveau.

The only point that Dr. John Johnstone's evidence goes to establish, is the use of the marine acid vapour by his father; and the only proof of this, excepting his own assertion, is the testimony of a surgeon at Kidderminster. He informs us of two occasions where it was employed in his own family; upon which I must needs remark, that to state the cases of his two brothers and a cousin seized with the jail distemper, as a proof of his father's knowledge of a certain method of preventing it, is a singular and new mode of induction. He might, with equal propriety and sound logic, have attempted to prove, that his father's antidote to contagion, might be used with perfect convenience to the sick, from his declaration, that, unless discharged at a distance from the patient, their extreme pungency would be offensive to the lungs. We are farther assured by Dr. John Johnstone, that owing to the marine acid vapour, employed on those occasions, the fever was not communicated to the rest of the family. But as the jail distemper seldom spreads or is communicated by an individual, when re-

moved from the fomes of contagion, such instances afford at best but equivocal proofs of the efficacy of any means employed to prevent it.

As for what he says, of his brother, Dr. Edward, having mentioned the marine acid at Edinburgh, in the year 1779, and that it was tried for one day in the Royal Infirmary of that city, it only shews that Dr. Edward, as well as his brother, Dr. James, had at the time, heard something concerning the marine acid from Dr. Priestley. But supposing the fact to be exactly as he has stated it, it would not impress us strongly in favour of the marine acid vapour, to know that it had been tried and rejected at Edinburgh, whilst Dr. Cullen the celebrated professor of chemistry, was at the head of the medical college and chemical wards; whom, no one who ever knew him, will accuse of having been an enemy to experiment, or even to novelty.

The inconvenience and danger therefore attending its use, was probably the true cause of its being discontinued, and it was never afterwards, so far as I know, either tried or mentioned at Edinburgh or any where else.

This supposed discovery remaining a dead letter for fifty years; and Dr. John Johnstone,

who now comes forward, as the claimant for his father, and champion of the family, was, for twenty-three years at least, silent on the subject; although, on various occasions, his zeal might have been roused to have brought forward his father's pretensions.

In the year 1780, the three mineral acids were employed by me in the prison and hospital at Winchester; and my opinion of their superior efficacy for destroying contagion, was communicated by letter to the Board of Sick and Hurt, and mentioned publickly by me on many occasions.

In the year 1795,* in a treatise on the Winchester fever, the superiority of the three mineral acids, over every other means for destroying contagion, was declared, and in part, at least, established. An account likewise was given of some experiments instituted to

* Within these few days a volume of Medical Essays was put into my hands, published this same year (1795) by Dr. John Johnstone—These essays are chiefly the productions of his brother Dr. James—but there is one of his own on mineral poisons, in which, although he mentions particularly the three mineral acids and their gases, there is not the most distant hint of their application to destroy contagion; and yet such an idea, had it existed, was of more real utility and would have done more credit to his brother and to himself, than all the essays he has published.

ascertain in what manner, and to what degree they could with safety be employed. It was then, for the first time, proved, by experiments made on different animals, that the marine acid gas could be respired with less inconvenience and danger, than the sulphuric, though in this respect greatly inferior, to the nitric acid; which last had formerly been considered as of such dangerous use, that no one had ever thought of employing it. This treatise contained also a relation of the trials, made with the marine acid gas, in the hospitals of France, by order of the Conseil de Santè; and Morveau's experiment in the cathedral of Dijon was noticed as the foundation of those trials.

The treatise above mentioned was sent to Birmingham, where Dr. Edward Johnstone is or was a physician. Public trials were made with the nitrous vapour at that place, by order of Dr. Withering, and the result of them published in Dr. Duncan's Annals of Medicine. All these particulars could not escape the notice of Dr. John Johnstone; or if they did, two other tracts of mine on the same subject, containing still further evidence of the efficacy of the nitric acid on contagion, were published previous to the year 1802;

but from the year 1795 to the year 1802, Dr. John Johnstone remained a silent spectator. Nor does he appear to have been roused to exertion, until he heard that my petition was before a Committee of the House of Commons. *Then* it seems to have struck him, for the first time, that there was possibly some reward annexed to discovery.

Quis enim, Virtutem amplectitur ipsam,
Premia si tollas?

His first essay was an anonymous paragraph in a newspaper, in which, if I rightly recollect, he only affirmed that his father had employed the marine acid, whose efficacy on contagion had since been proved by Morveau.*

* Extract from the Morning Chronicle, 12th of March, 1802.

This method of correcting vitiated air, was long ago recommended by my father—vide Treatise on Malignant Angina, 1779.

It is singular that this same method was afterwards used by the celebrated G. de Morveau, for correcting the putrid exhalations of dead bodies that infested one of the churches of Dijon—vide Mem. de L'Academie Royale des Sciences. And it still remains to be proved, whether the diffused vapour of muriatic acid be not equal in efficacy and equally convenient in application with the nitrous acid vapour, for correcting vitiated air in ships, prisons and hospitals. Thus in the year 1782 it still remained to be proved, what in his pamphlet he affirms to have been proved fifty years before.

Finding, however, that this newspaper communication attracted no notice, he came forward, *propria persona*, by a letter addressed to you, as chairman of the committee; and his friend, Sir William Pulteney, brought for your inspection the father and brothers' publications. These you examined with your accustomed impartiality, and the claim was entirely set aside. This gentleman, however, not satisfied with your decision, has returned again to the charge; and from his dedicating his pamphlet to the House of Commons, it would seem his intention, to appeal to the House, from the judgment of the committee; and, to take this step, he has probably been encouraged by some late experiments of his friends, who, since the report of the committee, have made trial of the relative advantage of the nitrous and marine acids. On their observations I shall only remark, that they come too late, and prove too much.

That the marine acid gas, disengaged without heat from common salt, was to a certain degree respirable, had been already proved by the experiments made by me in the year 1795. The superiority of the nitrous acid over the other two, in regard to the ease and safety with which it may be breathed, was proved,

at your committee, by the evidence of the ablest and most experienced chemists of this country. The same fact has been established by a number of physicians of eminence both here and on the continent of Europe; even Morveau's friends have, wherever people are present, laid aside the marine and adopted the nitrous acid. Of the many instances I could quote in proof of this, I shall only mention three. The first you possibly may remember, of the other two you can have no knowledge. I shall give you them in the author's own language, with which I know you are acquainted, to avoid the suspicion of my having made any alteration in my translation.

The first is from Professor Odier, of Geneva, who writes as follows :

“ On a essayé de substituer le sel marin,
 “ au nitre ; les fumigations ont été beaucoup
 “ moins agréables aux prisonniers ; ils s'en
 “ sont plaints, elles occasionoient à plusieurs
 “ d'entre eux, de la toux, de l'oppression, et
 “ des maux de têtes. Le President du Tri-
 “ bunal Criminel, m'a dit lui-même, que se
 “ trouvant aux prisons dans le moment, ou
 “ on les parfumoit de cette maniere ; il ne

“ put supporter ce gender des fumigations,
 “ il demanda instamment qu’on les remplaçat
 “ par celles de gaz nitrique, qui ne l’incom-
 “ modoient point.” Vid. Observations sur
 la Fievre de “ Prison,” &c. par Lewis Odier,
 Docteur and Professeur de Medecine à Ge-
 neve.

The second example is contained in an ex-
 tract of a letter from Dr. Mojon, professor of
 chemistry at Genoa, to Monsieur de Morveau,
 and by him published in the Moniteur of the
 18th of January, 1803. After giving an ac-
 count of the employment of the marine and
 oxygenated marine acid in purifying the
 churches, &c. he adds:

“ Pour purifier l’air des lieux reserres &
 “ habités, j’ai pratiqué de preference les fu-
 “ migations d’acide nitrique, qui ont égale-
 “ ment reussi, en detruisant les miasmes
 “ contagieux, sans causer la moindre incom-
 “ modité aux malades, *il n’y a pas eu d’ex-*
 “ *ample, que quelque un ait reçu la contagion*
 “ *des malades, près des quels se faisaient ha-*
 “ *bituellement ces fumigations.*”

The last instance I shall trouble you with is
 a quotation from a late ingenious publication
 of Dr. M’Gregor’s, superintending surgeon

to the Indian army in Egypt. Upon the subject of the plague, and the best means of obviating it, *he says,*

“ Much is to be attributed to the nitrous
 “ fumigation ; in several instances, it was
 “ attended with the best effects. The lamps
 “ with this were kept constantly burning in
 “ the observation rooms, and in the rooms
 “ from which the cases of the plague had
 “ come. Vessels, with materials for the fu-
 “ migation, were likewise placed under the
 “ beds, and in the corners of the rooms.
 “ When our stock of nitre was at length ex-
 “ hausted, we substituted marine salt for it ;
 “ but *this fumigation* could *not* be kept up
 “ in rooms where the *patients were confined to*
 “ *their beds.*”

The preceding authorities is the only answer I shall give to the experiments of Dr. John Johnstone's friends.

That future experience may improve upon what has been already done I am ready to allow, but certainly in discovering the qualities of the nitrous vapour, or during the prosecution of this subject, I was not indebted to Dr. Johnstone's writings. I never even heard of his name until his son's anonymous para-

graph, in the Morning Chronicle, led me to enquire for his book, of which I with some difficulty, procured a copy; and had I been possessed of it at an earlier period, it is now evident I could have derived no useful information from it; for to be told that sulphur cannot be burnt, nor sea salt decomposed in a sick room without inconvenience, is certainly nothing new. He appears to have been acquainted with the deleterious qualities only of those acids, but entirely ignorant of their superior power on contagion. He declares the steams of vinegar, if not the best means of destroying infection, which was evidently his opinion, to be at least the most commodious; and, after twenty years further experience, he again declares, by the mouth of his son, the steams of vinegar to be of superior efficacy to every other agent. Dr. John Johnstone, however, informs us, that in opposition to these his father's avowed sentiments, he occasionally used the marine acid in the workshops at Kidderminster, &c. But even admitting this *ex parte* evidence, it is far from establishing the point in question. To entitle him to the merit of discovery, he must have ascertained, by repeated experiment, the su-

perior power of the marine acid on contagion, and before being entitled to any recompence, he must have communicated his observations to the public; but so far from this being the case, even his manuscripts, I speak on the authority of the son, do not contain the slightest suspicion of its efficacy, or a single recorded instance of its success, and his son Dr. James Johnstone so late as the year 1779, though disposed to give his father all manner of credit, does not pretend to say that he had ever seen or known him make use of this antidote, or that he had ever recommended it to others. Dr. John Johnstone however in the face of all these facts, does not hesitate boldly to assert, that fifty years before your report, his father had acquired celebrity, by the discovery of a means of destroying contagion, which could be used with perfect safety in the apartments of the sick. How far the evidence he has brought forward can justify such an assertion, I leave the public voice to decide—Candour, however, must acknowledge that his manner of stating the evidence is not always unexceptionable, nor always perfectly correct.

I have confined my remarks on Dr. Johnstone's pamphlet, to what appeared to me ab-

olutely necessary to justify my own claim
and your decision; having no wish to criticize
any man's writings, however much they may
be liable to censure, unless when provoked by
insult, or impelled by duty,

I have the honor to be,

DEAR SIR,

with the most perfect consideration and regard,

Your most obedient servant,

Ja^s. Carm^l. Smyth.