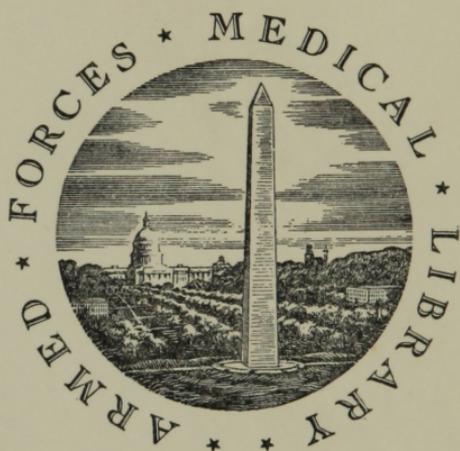


UNITED STATES OF AMERICA



FOUNDED 1836

WASHINGTON, D.C.

COLLECTION OF FACTS

INTERSPERSED WITH

OBSERVATIONS

ON THE

NATURE, CAUSES, AND CURE

OF THE

YELLOW FEVER:

IN A SERIES OF LETTERS,

ADDRESSED TO THE INHABITANTS OF THE

UNITED STATES.

 PART I. *all out.*

BY THOMAS RUSTON, M. D.

OF THE UNIVERSITY OF EDINBURGH, AND OF THE ROYAL INCORPORATED MEDICAL SOCIETY; A. B. OF THE COLLEGE OF NASSAU HALL, AT PRINCETON, IN THE STATE OF NEW JERSRY; MEMBER OF THE AMERICAN PHILOSOPHICAL SOCIETY AT PHILADELPHIA; AND HONORARY MEMBER OF THE ROYAL SOCIETY OF FRIENDS OF THEIR COUNTRY, AT VALENCIA, IN SPAIN.

“ Omne tulit punctum qui miscuit utile dulci.”

 PHILADELPHIA:

PRINTED BY BARTHOLOMEW GRAVES,

NO. 40, NORTH FOURTH-STREET.

 1804.


DEED

1870

THIS DEED WAS MADE AND ENTERED IN THE PUBLIC RECORDS OF THE COUNTY OF ... STATE OF ...

... OF THE COUNTY OF ... STATE OF ...

... OF THE COUNTY OF ... STATE OF ...

... OF THE COUNTY OF ... STATE OF ...

... OF THE COUNTY OF ... STATE OF ...

DEDICATION.

TO MRS. ELIZA POWEL, OF POWELTOWN.

MADAM,

THE high estimation in which you are held, not only by your acquaintances, but also by all who have the pleasure of knowing you, in which I most heartily concur, is a sufficient inducement for me to wish to lay the following publication at your feet.

But, besides this, there is a singular propriety in doing it; because, as it respects the health of your native city, in which, not only your affections, but your most essential interests, are concentrated, it cannot be doubted, but, that you have its happiness and prosperity much at heart.

I, too, have an interest in making this dedication; because, whatever may have received the sanction of your approbation, cannot fail to bespeak a favourable reception from the public. It also affords me an opportunity of expressing the unspeakable satisfaction with which I subscribe myself,

Your most obedient,

Most devoted,

And very obliged humble servant,

THOMAS RUSTON.

INTRODUCTION.

MUCH has been said on the subject of the Yellow Fever; from which some may be led to infer that the subject is exhausted.

Amidst such a variety of publications, it would be strange, indeed, if some light had not been thrown upon it; but at the same time it must be admitted, that a great deal has been said, which instead of illuminating, has only tended to raise a mist, to obscure and darken the horizon; and, what is worst of all, has led to false theories, which have been the foundation of very pernicious practices.

It is not my intention to bestow censure on the well meant endeavours of those who have even failed in their attempts; but whatever success they may have had in discovering the *occasional* or *remote* causes of this disease, I think it will not be contended that they have been very successful in explaining the nature of it, or in finding out the immediate or *proximate* cause,

much less have the most sanguine of them pretended to have found out a sure and infallible cure.

In the following sheets, which only constitute a First Part, I have collected a number of well authenticated facts, which, I expect, will lay the foundation for a rational theory, from which will be deduced a most safe and successful practice. At the same time I have endeavoured to point out the insufficiency of most, or all of the methods of practice that have been hitherto in use.

LETTER I.

THE accounts we have from New York, of the Yellow Fever, are truly distressing. In the Mayor's account of the 6th of August, 1803, he says " that since the 20th of July, to the 5th of August, inclusive, thirty-three cases of bilious malignant fever have occurred, sixteen of which terminated in death, eight in recovery, and nine remain still doubtful." Since then, the reports of new cases have generally been from about sixteen to twenty of a day, of which, about half have generally died. May we not then with propriety ask what is become of that boasted remedy, alkaline salts, from which we were taught to expect such great things? In the course of last year, Dr. Priestly, in a letter to one of his scientific friends, dated August 7th, 1802, at Northumberland in Pennsylvania, writes thus...." I have lately received the last number of the Medical Repository, and am much pleased with many of the articles, especially those which contain the use of *alkalies in medicine, in the purification of ships*, &c. I have no doubt of Dr. Mitchell's being fundamentally right, with respect to this business; and on this account he will be ranked among the great benefactors of mankind. Thus, adds the account, this great authority concurs in opinion with the measures which have originated in New York, and are rapidly carrying into operation. If this was the case last year, what are they about now? Is Dr. Mitchell lying dormant, or have the alkalies failed of their ef-

fect? For my own part I have not, nor have I ever had any faith in this medicine as an antidote to putrefaction.*

But there is another writer of last year, who dates his letter at Dover, August 15th, 1802, signed J. Rodney, who comes forward with a very serious charge against the faculty. He begins with observing, that "That destructive contagious fever, which has so often depopulated the fairest city in America, having returned again, and *the physicians not having yet acquired the knowledge of any certain remedy,*" &c. he goes on to give a statement of his own case for publication.

That the disease did return last year in Philadelphia is certain, but it is also certain that it soon received such a check, that it was generally thought to be extirpated, in so much that many families who had fled to the country returned to town, and though it broke out again, and made some progress for want of applying to the proper sources for assistance, yet it is very certain that the disease did not commit any thing like such ravages as it had committed in former years.

This writer, however, seems to be a humane and benevolent man; and, I make no doubt, made his commu-

* In Relf's Philadelphia Gazette of August 25th, 1803, is inserted the following paragraph: Accounts from New York represent the situation of that city in the most distressing terms. The fever is fatal in nearly all the cases of its attack; and nothing has prevented the mortality from swelling to an enormous amount, but the timely and almost universal flight of the citizens. We sincerely hope that this circumstance, added to the present salubrious air, will, ere long, stay the pestilence." It would seem, therefore, that all hope from medical assistance was vanished.

nication to the public with the very best intentions ; but as he does not appear to be a medical man, he should have been very cautious how he brought general charges against medical men ; and as some of his ideas appear to be incorrect, and therefore may have a tendency to mislead, I shall take the liberty of making a few animadversions upon them.

The writer begins with giving some slight hints about the recovery of his son, who had been ill of the Yellow Fever at Wilmington, in the year 1798 ; but before he got there to see him, “ he was mending, though the fever was still high, and his skin yellow ;” and he goes on to give us a history of his own case, which he considers as “ the extreme degree of the disorder, which may properly be deemed the plague :” But it is very plain that he seems little acquainted with the true nature of the plague ; for, with what propriety can it be considered as the plague, since it does not appear to be attended with buboes or eruptions of any kind, which generally break out and give a vent to the malignaty of that disease ? With much less propriety can his case be called the Yellow Fever, since he says that “ during my illness I had no fever ; my pulse indeed was far below the state of health, and that my skin was not the least coloured or tinged with yellow.” This case indeed seems to have been a pretty severe one of the kind of which it was ; for he says, that “ on the fourteenth day,” that is I suppose after his return from Wilmington, “ at day light in the morning I awoke with the mortal symptoms of the Yellow Fever on me, a dreadful head-ache, a violent sick stomach, and a degree of lassitude which rendered me

unable to raise my head, or move round, a violent vomiting succeeded immediately, and continued with hardly a moment's intermission for about four hours, and all the bile that came off my stomach was as black as ink. I had directed some beef tea to be prepared and made very salt, and as soon as the vomiting ceased, I drank plentifully of it all day. In the afternoon I sat up two hours and drank one dish of green tea, and eat a little toast, but still felt so bad I was obliged to go to bed again. I rested very little the following night; my sleep was only troublesome and broken slumbers. At day light the next morning vomiting returned, and continued near three hours, discharging the same kind of black bile that had been discharged the previous morning. As soon as the vomiting ceased, I drank plentifully of the beef tea again; by ten o'clock my stomach seemed settled, and my head-ache greatly abated, so that I got up and sat all the remainder of the day. At dinner I eat plentifully of turkey soup, very salt; in the evening I drank tea and eat some toast. The following night I rested well, and slept remarkably sweet and sound; next day being the third day after I was taken sick, I rose at day light, as is my custom in health. My head ache and sick stomach were gone, I felt feeble indeed all day, but eat breakfast, dinner and supper as usual when in health; I rested well the following night and next day, being the fourth day after I was taken; I felt as if I had never had the complaint." But with what propriety can this be called the Yellow Fever?

Mr. Rodney seems indeed to have been thoroughly frightened; but was this any thing more than a violent

vomiting of black bile, and does not the disorder seem to have been almost entirely lodged in the stomach, for, upon the repeated discharges of bile from that organ, is not only that, but all the other symptoms relieved? What reason is there to think, that the disease had got hold of the system, much less is there any reason to think that it was infectious? The violent head ache, and the great lassitude, are easily accounted for, from the violent sickness occasioned by the great foulness of stomach, but there was no fever. As to the remedy he made use of, it required no physician to inform him of that; for every old nurse knows, that after a violent fit of vomiting, a little weak soup or beef tea, well seasoned with salt, is as good a thing to settle the stomach as any thing that can be thought of. Sprinkling rooms with water or vinegar, and fumigating them with burning sulphur or brimstone, in order, to purify them from foul air, which he recommends, have long been practised. But a much better method has been invented, by fumigating with the vapour of nitric acid.*

* In the years 1795 or 1796, Dr. James Carmichael Smyth, physician extraordinary to his Britannic Majesty, suggested a process for determining the effect of the fumes of nitric acid in destroying contagion. The utensils and materials provided for the purpose were the following: A quantity of fine sand, about two dozen of gasot earthen pipkins, as many common red cups, some long slips of glass to be used as spatulas, or a quantity of concentrated vitriolic acid, and a quantity of pure nitre (nitrat of potash).

The process was conducted in the following manner: 1st. All the ports and scuttles of the Union Hospital ship, on board of which the experiment was made, were shut up; the sand, which had been previously heated in iron pots, was then scooped out into the pipkins, by means of an iron ladle, and in this heated sand in each pipkin, a small tea-cup was immersed, containing about half an ounce of the sulphuric acid; to which, after it had

And though Mr. Rodney says, he sent for no physician, nor took any other medicine, of any kind, but the beef tea, well seasoned with salt, yet he confessed, " he was induced to rely on this simple remedy, by the information of an eminent physician, who visited Grand Cairo, in Egypt, when the plague happened to be there,

acquired a proper degree of heat, an equal quantity of nitrat of potash, in powder, was gradually added, and the mixture stirred with a glass spatula till the vapour arose from it in considerable quantity. The pipkins were then carried through the wards by the nurses and convalescents, who kept walking about with them in their hands, occasionally putting them under the cradles of the sick, and in every crevice in which foul air was suspected to be lodged. In this manner they continued fumigating, until the whole space between decks, fore and aft, was filled with the vapours, which appeared like a thick haze.

The vapour at first excited a good deal of coughing among the patients, which gradually ceased as it became more generally diffused through the wards.

The advantage of the fumigation was not felt by the ship's company and attendants alone, whom it preserved from the baneful effects of the fever; the sick and convalescents derived almost an equal benefit from it, the symptoms of the disease were meliorated, and lost much of its malignant appearance.

It is necessary to observe, for the sake of those who may not be versant in chemical pursuits, that the ingredients ought to be pure, and that metal vessels or rods must not be employed. Any kind of metal getting among the ingredients would cause the vapours to be very noxious, instead of salutary. The fumes that rise should be white; if they are of a red colour, there is reason to suspect the purity of the ingredients.

If there are any circumstances in which its utility may be called in question, it can only be in case of inflammatory diseases; for in such cases superoxygenation has been thought hurtful.

That the fumes of the mineral acids possessed the property of stopping contagion, was proved by Morveau, as far back as the year 1773; who, by means of the fumes of muriatic acid, extricated from the muriate of soda (sea salt) by the sulphuric acid, purified the air of the cathedral of Dijon, which had been so much infected by exhalations, that they were obliged to abandon the building.

and who said that he attended patients, and found common salt, dissolved in water, or beef tea, the best, and indeed, the only remedy for the plague, and never failing when taken in time”.

Salt, as an antidote to putrefaction, has long been known: the practice of using it for preserving animal food, from putrefaction, has long been customary; and the use we make of it every day, at our meals, is a farther proof of the utility of it; the whole animal creation, but more especiall quadrupeds, cannot do without it. The hollow ways or gullies, that are worn by wild beasts, in steep banks or steep declivities, in their pursuit of salt springs, or salt licks, and their resigning even their lives, as it appears by their skeletons, which are found in those morasses, is a further proof of the eagerness with which they are sought after. Not only all animals, but the sea itself, and the fishes therein, would run into putrefaction, if it was not for the salt that it contains; there can be, therefore, no doubt of the utility of salt in all cases, where there is a tendency to putrefaction, as well as in common life; but they will be miserably disappointed who depend upon this alone: There are antidotes still more effectual than this for the disorders in question; and I cannot help thinking it rather ungenerous in Mr. Rodney, to throw a reproach upon the profession in general, by saying that “the physicians have not yet acquired the knowledge of any certain remedy for that destructive, contagious fever, which has so often depopulated the fairest city in America.”

That this remedy is not generally known, I readily admit; but that such a remedy is found out, is, I believe, pretty generally known to the faculty, and Mr. Rodney's not being a professional man, is the only excuse that I know of, for his not knowing it also.

That he may not, however, be able any longer to plead this excuse, I beg leave to refer him to a publication of mine, in the Philadelphia Gazette of the 11th of September, 1799, wherein, in a tender of my services to the Board of Health, in a letter to Edward Garrigues, esq. president of that board I make use of these expressions :

“ SIR,

“ Upon the occasion of the fever, which creates so general an alarm, I think it my duty to inform, and I conceive it will not be unacceptable to your very respectable board to know, that, from a long course of study and experience in Europe, in infectious diseases, I conceive I am possessed of means, more immediate and effectual in removing those complaints, than are generally known or practised in this country. If the board, therefore, will point out in what way I can be useful, in this line, their commands shall be cheerfully complied with.

“ From your obedient friend and servant,

“ THOMAS RUSTON.”

LETTER II.

OF PERICLES.

HOW many great men have fallen a sacrifice to this disease? Among others that died of the plague at Athens was *Pericles*. In him were united most of those qualities which constitute the great man. Such as those of the admiral, by his great skill in naval affairs, of the general by his conquests and victories, of the financier by the excellent order in which he put the finances, of the great politician and statesmen, by the extent and justness of his views, by his eloquence in public deliberation, and by the dexterity and address with which he transacted the business, of a minister of state, by the methods he employed to increase trade and promote arts; in fine, of father of his country, by the happiness he procured to every individual, and which he always had in view, as the true scope and end of his administration.

Another characteristic, which was peculiar to himself was, that he acted with so much wisdom, moderation, disinterestedness and zeal for the public good, he discovered in all things so great a superiority of talents, and gave so exalted an idea of his experience, capacity and integrity, that he acquired the confidence of all the Athenians, and fixed in his own favour, that natural fickleness and inconstancy for which they were famous during forty years that he governed them. He suppressed that jealousy, which an extreme fondness for

liberty had made them entertain of all citizens distinguished for their merit. But the most surprising circumstance is, that he gained this ascendancy merely by persuasion, without force, or without employing any mean artifices or any of those arts by which a paltry politician excuses himself upon the specious pretence, that the public affairs, and reasons of state, make them necessary.

Pericles being extremely ill and ready to breathe his last, the principal citizens, and such of his friends as had not forsaken him, discoursing together in his bed chamber, about his rare merits, they run over his victories; for, while he was generalissimo, he had erected nine trophies, in memory of so many battles he had gained for the glory of his country. Many did not imagine that Pericles heard them, because he seemed to have lost his senses, but they were mistaken, for not a single word of what they said escaped him; and breaking suddenly from his silence, "I am surprised, said he, that you should treasure up so well in your memories, and extol so highly a series of actions in which fortune had so great a share, and which are common to me, with so many other generals, while at the same time you seem to forget that which I esteem the most glorious circumstance of my life, which is, that during forty years that I have governed Athens, I have never caused a single Athenian citizen to put on mourning." How different this from some modern governors we have heard of.

THOMAS RUSTON.

LETTER III.

OF HIPPOCRATES.

IN the second year of the Peloponnesian war, the plague made a greater devastation at Athens than had ever before been heard of. It is related that it began in Ethiopia, whence it descended into Egypt, and from thence spread into Libia to the west, and a greater part of Persia, to the east, and at last broke in at once, like a flood on Athens. Thucydides, who was himself seized with that deadly disease, has described, very minutely, the several symptoms and circumstances of it; in order, says he, that a faithful and exact relation of this calamity may serve as an instruction to posterity, in case the like should happen again at any future period. Hippocrates, who was employed to visit the sick has also given a medical description of it; Lucretius has a poetical one.

This pestilence, notwithstanding the skill of Hippocrates, baffled the utmost efforts of his art. The most robust constitutions were unable to withstand its attacks, and were most liable to fall victims to it, and the greatest care and skill of the physicians were a feeble help to those that were infected with it.

The instant a person was seized he was struck with despair, which quite disabled him from attempting any cure. The assistance that was given them was totally ineffectual; and the disease proved mortal to all such of their relations as had courage to approach them. The

prodigious quantity of baggage which had been removed out of the country into the city, proved very noxious. Most of the inhabitants, for want of lodging, lived in little cottages in which they could scarce breathe, during the raging heat of the summer, so that they were seen either piled, one upon the other, (the dead, as well as those that were dying) or else crawling through the streets, or lying along by the side of fountains, to which they had dragged themselves, to quench the raging thirst that consumed them. The very temples were filled with dead bodies, and every part of the city exhibited a dreadful picture of death, *plurima mortis imago*, without the least remedy, for the present, or the least hopes from a future prospect.

This plague, before it spread into Attica, had made wild havoc in Persia, and king Artaxerxes, who had heard of the mighty reputation of Hippocrates of Cos, and who was the greatest physician of that, or any former age, caused his governors of provinces to write to him, and to invite him into his dominions, in order that he might prescribe to the unfortunuate subjects that were infected with it.

The king made him the most advantageous offers, setting no bounds to his generosity, on the score of interest; and, with regard to honours, he promised to make him equal with the first persons in his court. But Hippocrates sent him no other answer, than that he was free from either wants, or desires, and that he owed all his cares to his countrymen and fellow citizens.

Kings are not used to such answers: Artaxerxes, therefore, in the highest transport of rage, sent to the city of Cos, the native place of Hippocrates, and where he was at that time, commanding those to deliver him up, for his supposed insolence, in order that he might be brought to condign punishment, and threatening to lay waste, in case they refused, both their city and country, in such a manner, that not the least vestige of it should remain. However the inhabitants of Cos were not under the least apprehension, and made answer, that the menaces of Darius and Xerxes, had not been able to prevail with them, to give them *earth* and *water*, (a phrase made use of to denote subjection) and that Artaxerxes's threats would be equally impotent, and that, whatever might be the consequence, they never would give up their fellow citizen.

Hippocrates said in one of his letters, that he owed himself entirely to his country. Accordingly, the instant he was sent for, he went to Athens, and did not stir out of the city till the plague had ceased. He devoted himself entirely to the service of the sick; and to multiply himself as much as possible, he sent his disciples into all parts of the country, having instructed them in the manner in which he treated his patients. Feeble however, as his art was, as we may see from the description that has been given of the ravages that were committed by the disease; yet the Athenians were so much struck with a sense of gratitude for his generous care, that they ordered, by a public decree, that he should be initiated into the most exalted mysteries, in the same manner as Hercules the son of Jupiter; that a crown of

gold should be presented to him, worth a thousand stateras, amounting to five hundred pistoles; and that the decree should be read aloud, by a herald, at one of the public games, on the solemn festival of Panathenœa; that the freedom of the city should be given him, and that himself should be maintained at the public charge in the Prytaneum, all his life time, if he thought proper; in fine, that the children of all the people of Cos, whose city had given birth to so great a man, might be maintained, and brought up in Athens, in the same manner as if they were natives.

LETTER IV.

OF THE PLAGUE OF LONDON.

ABOUT the beginning of May, 1665, one of the most terrible plagues that ever infested any city or kingdom, broke out in the city of London, by whose dreadful ravages 68,596 persons were swept away. This contagion happening just forty years after the horrid pestilence of 1625, occasioned some to impute a fatality to that number, as if the land was to have rest only forty years *. But in truth the city had not been quite free

* In 1625, (the accession of Charles I.) the plague carried off 35,417, besides those which died of other distempers, which in the whole amounted to 44,265, which by a genuine account appears to have been the greatest year of mortality that had happened in that city, till that time, above one-third of the inhabitants being swept away.

from the plague for twenty-five years before, and it had been free from contagion for only three years, in about seventy : And it is no wonder, when we consider the narrow, crooked, and incommodious streets (fitter for a wheelbarrow than for larger carriages) the dark, irregular, and ill contrived wooden houses, with their several stories jutting out or hanging over each other, whereby the circulation of the air was obstructed, noisome vapours were harboured, and venomous pestilential atoms nourished.

The week wherein the hideous distemper was first discovered, it carried off nine persons, by which the citizens were so much alarmed, that a universal panic diffused itself among the people of all ranks ; but the week after, that number, according to the bill of mortality, being reduced to three, their fears were greatly alleviated. The next week, however, the number increasing to fourteen, and so progressively to forty-three ; the people were struck with great consternation, and it made many think of leaving the city. But, in the month of June, the number having gradually increased to four hundred and seventy per week, it put the nobility, gentry, and principal citizens upon the wing, all being instantly in a hurry, the city emptying itself into the country, the streets and roads thronged with passengers. In the month of July, the bill increasing to 2010, all houses were shut up, the streets deserted, and scarce any thing was to be seen there, but grass growing in the streets, innumerable fires for purifying the infected air, coffins, pest carts, red crosses upon doors, with the inscription of, *Lord have mercy upon us*, and poor women

in tears, with dismal aspects, and with woful lamentations, carrying their infants to the grave. Scarce any other sounds were to be heard than those of, *pray for us*, incessantly emitted from the windows, and the dreadful call of, *bring out your dead*, together with the piteous groans of departing souls, and the melancholy knells for bodies ready for the grave!

Under these deplorable circumstances, the citizens, in the great want of spiritual guides, were forsaken by their stated ministers; but the people crowding into eternity, and bewailing the want of spiritual assistance, the non-conformist ministers were induced, though contrary to law, to repair to the deserted pulpits. Hither the people, without distinction of church and dissenter, joyfully resorted. The concourse on those occasions was so exceeding great, that the ministers were frequently obliged to clamber over the pews to get at the pulpits. If ever preaching had a better effect than ordinary, it was at this time; for the people caught at every word, as eargely, as a drowning man would at a twig, and with as much greediness as if their eternal happiness depended upon it.

In the month of September death rode triumphant, having borrowed time's fatal scythe, (if I may be allowed the expression) he mowed down the people like grass, for the burials then amounted to 6,588, but the week after the bill falling to 6,544, gave glimmering hopes that the distemper was past its crisis. But the great increase the week following to 7,165, plunged the people again into an abyss of horror and despair. They

were now struck with the dreadful apprehensions that in a few days the living would not suffice to bury the dead. They were, however, happily mistaken; for after this the contagion gradually decreased, till at length it pleased the Almighty to restore that miserable city to its pristine state of health.

As to the natural causes of this plague, physicians were of different opinions. Some ascribed the origin of it to an inveterate and most envenomed pox; others to infected goods imported from Holland, where the plague had committed great ravages the preceding year.

During the dreadful havoc that was made by this pestilence, it was observed by Dr. Baynard, an ingenious and learned physician of that time, that there was such a general calm and serenity of weather, it seemed as if both wind and rain had been expelled the kingdom, and that he could not discover the least breath of wind, not even so much as to move a vane, for several weeks together; it was with the greatest difficulty that the fires in the streets were made to burn, as they imagined, through the great scarcity of nitre in the air. The birds panted for breath, through the extreme rarefaction of it, especially such as were of the larger sort, who were likewise observed to fly more heavily than usual.

The means that were made use of, at this time, to put a stop to it, were surely the worst that could be devised; for, by shutting up the houses wherein the contagion happened, the healthy were offered a sacrifice to the unmerciful devourer. Had the distempered persons,

or those in health been removed out of each house, as soon as infected; the former to a Lazaretto, and the latter to a place for the performance of quarantine, it may reasonably be supposed that one-tenth of the above mentioned number would not have died. And as heat is a great promoter of putrefaction, it was highly improper to make fires, in every street, with a view to purify the air and to destroy the plague.

LETTER V.

MEDICAL philosophy, says a late writer, in its late wide ranges, has effected a revolution in the habits of men, and in the nature and treatment of their diseases, which has eminently contributed to the lessening of human misery. The plague, pestilential fevers, putrid scurvies, and dysenteries, have much abated in the 18th century. This is true in the great scale of enlightened nations, though the general prevalence of the yellow fever in the sea port towns of the United States, for the last seven years, seems to form a local exception.

Platerus, a physician at Basil, who lived in the 17th century, gives an account of seven different pestilential fevers, or plagues which afflicted that city within seven-

ty years. Bartholine mentions five that raged in Denmark, in the same period. There were in the city of London, in the 11th century, five; in the 15th two; in the 16th seven; and in the 17th there were four. The first of these began in 1603, and continued more or less every year till 1611; the second in 1625; the third in 1636, and continued for 13 years; and the fourth in 1665. In these four visitations of the plague, in the 17th century, the city of London lost 133,985 persons. In York 11,000 died of an epidemic fever in 1691. In the 18th century nothing of this kind has taken place in any part of England, and only one (and that 80 years ago) in Marseilles, which in former centuries used to be the general rendezvous of the plague.

That this abatement of the plague has, at least in part, been effected by the smiles of Providence, on the modern improvements in medicine, may be inferred from this circumstance, that Constantinople, Aleppo, Grand Cairo, and other places in the Levant, on which the sun of medical philosophy has never shone, do now, and throughout the 18th century, have suffered as much from the ravages of the disease, as they had ever done before.

In the medical history of South Carolina, the yellow fever, and the small pox, have been the most injurious epidemics. My information relative to these two diseases, prior to the year 1763 has been chiefly furnished by Mr. Prioleau, as collected from the manuscripts of his accurate and observing grand-father,

the venerable Samuel Prioleau, esq. who died in the year 1792, at the age of 74. From this it appears, that in the year 1699 a disease prevailed in Amsterdam which swept off a great part of the inhabitants, and some whole families. This was then called the plague, though afterwards supposed to have been the yellow fever.

In the year 1732, the yellow fever began to rage in May, and continued till September or October. In the height of the disorder there were from eight to twelve whites buried of a day, besides people of colour. The ringing of bells was forbidden, and little or no business was done. In the year 1739, the yellow fever raged nearly as bad as in the year 1732. It was observed to fall most severely on Europeans. In the year 1745 and 1749, it returned, with less violence; however, many young persons mostly Europeans, died of it. It appeared again in a few cases in 1753, and 1755, but did not spread. In all these visitations, it was generally supposed that the yellow fever was imported, and it was remarked that it never spread in the country, though often carried there by infected persons, who died out of Charleston, after having caught the disease in it.

For forty-two years after 1749, there was no epidemical attack of this disease, though there were occasionally, in different summers, a few sporadic cases of it. In the year 1792, a new era of the yellow fever commenced. It raged in Charleston in that year, and

also in 1794, 95, 96, 97, 99, and 1800. In these last seven visitations of this disease, it extended from July to November, but was most rife in August and September. With a very few exceptions (chiefly children) it exclusively fell on strangers, to the air of Charleston, and was in no instance contagious. In the year 1796 and 1797, it raged with its greatest violence. In the two last years it was considerably abated. In the year 1799, the whole number of deaths from it was 232, and in 1800 no more the 131; but this decreased mortality was partly owing to the decreased number of strangers, for such were cautious of visiting Charleston in the warm months.

In Philadelphia it began with great violence in the year 1793, and from that time till the present it has been more or less epidemic almost every year, in nearly all the sea ports of the United States, except Philadelphia, which escaped it entirely in the year 1800.

LETTER VI.

OF THE FEVER IN SPAIN.

Madrid, Nov. 4, 1800.

SOME particulars are at present reported here respecting the sickness which has depopulated Andalusia.

At Cadiz, it blew a strong easterly wind, which passing over a burning part of the country, augmented the excessive heat of the summer, whereby the atmosphere was well predisposed to receive the sickness, but by no means was the cause of it. The physicians in Cadiz were wrongfully impressed with this opinion, and therefore applied the wrong remedies, which augmented the mortality.

On the 8th of August, an American vessel entered the harbour of Cadiz: the log book of the captain mentions, that during the passage three men on board died of the yellow fever. The crew coming on shore, went into the neighbouring streets and taverns; the sailors soon spread more and more through the whole city; all died of the sickness except the mate, which soon after shewed itself among the inhabitants of the city; and there was not a house into which the infection did not penetrate. The terror spread on all sides. Many of the inhabitants, not knowing that they had the yellow fever in their bodies, fled to Real Isle de Leon,

Chielera, Port Royal, and Port Santa Maria, from whence they dispersed farther to Xeris, St. Lucar, and Sevilla; not only those emigrants got the disorder, but the same manifested itself pretty soon in the aforesaid places. Since the 14th of August, until the 1st of Nov. have died of this sickness, to wit.

At Cadiz, which contains	68,000 souls,	16,000 died,
Isle Real de Leon	32,000	8,000
Port Royal and Chielera	} 20,000	6,000
each 10,000		
Port Santa Maria	2,000	6,000
St. Lucar	18,000	4,000
Rote,	6,000	1,500
Sevilla	80,000	30,003

So that those nine cities, containing 279,000, have lost 79,500 souls. It is here published by authority, that the sickness has not extended to the borders of Estramadura.”

TO THOMAS RUSTON.

If I understand you aright in your first number, it would seem as if you were possessed of the secret of curing the malignant fever which has for several years afflicted one or other of the great towns on this continent; and I accordingly expected to see it openly promulged in your second letter, especially as you seemed to scoff at the theories advanced by your cotemporaries, men of considerable literary acquirements; instead of which the public have been tantalized with extracts from ancient history concerning pestilences and plagues, which per-

haps had no affinity to the disease commonly called *yellow fever*. When our cities are afflicted with so dreadful a calamity, it is too severe a trial of our patience to force us to listen to the history of a disease which men of moderate reading are as well acquainted with as yourself, when all we want is *the remedy*.

When we shall be relieved from this scourge, we shall *then* have leisure to bend our attention to narratives of past events; and, if you are really acquainted with the cure, possessed of any philanthropy, you will scorn to keep the secret within your breast, or even to confine it to the faculty, unless a cure is to be performed in the last stage of the disorder.

But the probability is, that if there be an agent in nature that could neutralize or expel the subtile poison, it must be resorted to on the first attack. But who is there except a few hypochondriacs, that apply to the faculty until the second day of the disorder? After the enemy, by the violence and rapidity of his movements, has made such havock on the constitution, that the most powerful agent, perhaps in nature would fail, or be defeated.

The cure, then, to be effectual, must be put into the hands of every rational being, in as public a manner as possible; and if you are possessed of the secret, what satisfaction can you feel in your mind, when you see your fellow-citizen, falling around you on all sides, and at the same time conscious that you have the power to prevent it, even if it were only in part? The stale ex-

cuse urged so often by the faculty, of the danger of trusting powerful agents into unskilful hands, ought to lose its force in this country, where *common* mechanics are as well acquainted with the operations of nature as the gentlemen of the *learned* professions. Quit then your histories of its former depredations, and your metaphysical inquiries, into the origin of an invisible agent, known only by its effects, and come to the point at once, namely, *the cure*.

It is a folly, in my opinion, to waste our time in unprofitable inquiries; such as, why the Almighty hath suffered us to be pestered with bugs and musquetoës, while we neglect to improve the faculties and power which he has given to us to subdue them; and that man is a more useful member of society, who could exterminate the Hessian fly, than the metaphysician who explains the design of nature in permitting those depredators to exist, or the natural philosopher who recounts his generation and subsequent transformation, or the historian who gives an account of the voyages and travels of that insect, from the land of his nativity till his arrival on the shore of America. Not that these inquiries are altogether to be despised, or useless: by no means; yet in point of utility, rational beings will determine which ought to have the preference.

At this moment, when I see my friends hurried to another world without having time to settle their accounts, I care not whether the unwelcome messenger comes from the east or the west; the north or the south;]

whether he rises out of the bowels of the earth, or descends from the clouds; I only wish to know how his arm may be arrested before the fatal blow is given; and if you can inform us on that head, your lucubrations will be read with avidity by yours,

C.

TO THE EDITOR OF THE AURORA.

I HAVE seen in your paper of Sept. 14, some strictures on my observations respecting the yellow fever. The author, like a high spirited steed, impatient of the rein, is for plunging forward, or by a short cut is for reaching the goal before he has half performed his circuit or course. I can account for, if not excuse his impatience; the subject is interesting, and as it is interesting it is to be treated with caution, not only as it is pregnant with the greatest consequences, but as I am aware that in the prosecution of my subject, I shall have occasion to differ in opinion with some of my brethren, men for whom, in other respects, I have the highest respect; yet I mean to do it with candour and circumspection: I do not mean to attack any man personally, but only opinions and doctrines as far as I have occasion to differ from them; but in doing this I am aware that I shall draw upon myself some censure, and perhaps abuse; for in all controversies there is a spirit of party:

I do not mean with respect to politics, but with respect to dogmas or doctrines, and in nothing does this spirit of party shew itself more than in physic ; for instance, one party may be for a system of repletion, another for that of depletion. I do not mean to range myself under either of these parties. On the other hand, there are some who range themselves under the authority of particular names, and if I should happen to differ from these, I have a right to expect abuse from them or their disciples ; if I do experience it, I cannot help it, because truth and sound practice is my object, and from these I do not mean to swerve on account of any abuse*.

With regard to my friend (who has honoured me with his strictures in your paper) as I have put my name to my publications, it does not exactly quadrate with my notions of propriety of conduct to enter into a correspondence with an anonymous writer in a public newspaper ; but if he will please to call upon me, I shall be glad to speak with him.

* “ Est modus in rebus,
Sunt ceræ denique fines
Quos ultra citraque
Nequit consistere rectum.”

LETTER VIII.

THE deplorable state of the disease, and the incompetence of the practice then in use to relieve it, may be learnt from the following extracts from the "HISTORY of the PESTILENCE, commonly called *yellow fever*, which almost desolated PHILADELPHIA, in the months of August, September, and October, 1798 : Published by Thomas Condie and Richard Folwell."

The board of health, impressed with a sense of the consequences of delaying to apply for medical aid, on the 13th of August, published the following recommendation.

" Health-Office.

" The board of managers of the marine and city hospitals have observed with deep regret, the fatal consequences of delay in the application for medical aid to persons afflicted with the prevailing malignant fever, and that the removal of patients to the city hospital, in many cases, is procrastinated until they are literally sent there to die.

" They recommend, in the most earnest manner the removal of patients to the city hospital, where the public may be assured, that every possible comfort and accommodation will be afforded, &c.

" The board consider this recommendation as of the highest importance, and intreat the attention of their fellow citizens, &c."

Notwithstanding this recommendation, the fatal effects of delay in calling in the aid of medicine daily became more numerous: in consequence, the board on the 18th of August, repeated their admonition in the following publication.

“The malignity of the prevailing fever and its insidious approaches, are such as to *resist the power of medicine*, unless application is made in the first instance of complaint. The board lament that their recommendation has not been attended to; as in most instances the patients have been ill three or four days previous to application for medical aid, to which, in a great degree, is to be attributed the deaths of so many valuable members of society. The board reiterate their call to their fellow citizens, and earnestly request that not a moment may be delayed in obtaining medical assistance.”

The unparalleled mortality which occurred in the city hospital the five first days after it was opened, alarmed the resident physicians. Thirty-one patients had been admitted, of which ten died, and none had as yet recovered; in consequence of which they addressed the following letter to a physician in this city:

City-Hospital, August 12th, 1798.

DEAR DOCTOR,

Our want of success in treating the prevailing disease, makes us anxious to hear from you, in hopes you may have added some new and useful remedy to those heretofore in use. It is true, all our patients have been

at least two, and some of them nine days ill previously to their admission. Is there any mode of relieving these unfortunate people which you can suppose we are unacquainted with? We recollect your observing, that an emetic had been useful, after the disease appeared to be mitigated by bleeding. If you can spare a few minutes to write to us on these subjects, you will much oblige your sincere friends, &c."

THE ANSWER.

My dear and worthy friends,

I am sorry to discover by your letter, your want of success in the treatment of our malignant fever, at the city hospital. I do not wonder at it; you seldom see the disease in its first stage; and when you do, you meet it in an aggravated state, by the motion your patients undergo in being conveyed to the hospital.

In answer to your request, I have sat down to inform you of the practice which I have adopted in our present epidemic. In the treatment of the yellow fever of the last year, I have occasionally lamented the loss of patients after reducing the pulse by bleeding, and by the liberal use of purging medicines. I have suspected that death occurred in those cases, from the stagnation of acrid bile in the gall bladder, or its close adherence to the upper bowels, in the manner described by Dr. Mitchell, in his account of the yellow fever in Virginia, in the year 1741. The slow pulse which occurs about

the fourth day, I suspect further to be the effect of this bile. Its effect in a much less morbid state in the jaundice, in reducing the pulse is well known. Mr. John Hunter says, he once met with an instance in which it fell to thirty-two strokes in a minute in that disease. Revolving these facts in my mind, I resolved to try to remove this bile, by exciting an *artificial cholera morbus* about the fourth day of the fever. I was the more disposed to attempt this method of cure, from believing as I have done for several years, that a cholera morbus is nothing but the first grade of a bilious fever, thrown in upon the bowels, just as the dysentery and diarrhæa are the internal form of a common bilious or intermitting fever.

I began this mode of treating the fever eight days ago. My solicitude for the issue of it was very great. Thank God it has succeeded to my wishes, and thereby lessened, in a great degree, the anxiety and distress which accompany our attendance upon this ferocious disease. The medicines I use for *shaking* the gall bladder and bowels, and *discharging* the contents, are tartar emetic, gamboge, jalop and calomel, combined, or given separately, and in small or large doses, according to circumstances. Perhaps turpeth mineral might be added to this list of vomiting and purging medicines, to advantage. In one case I gave *four grains of tartar emetic*, with *twenty of calomel*. It operated freely upwards and downwards, and brought away a large quantity of green and black bile, but without exciting the least cramp or pain in the stomach or bowels. I have

not as yet lost a single patient to whom I have given this powerful remedy. In one instance I fear it will fail. It is in a boy of sixteen years of age, to whom I have given thirty grains of tartar emetic in a few hours, without producing the least evacuation from his stomach or bowels.

Vomits are old remedies in the yellow fever of the West Indies. I gave them on the first day of the disease in the year 1793, and always without success. They uniformly did harm when given in the beginning of the fever in its worst grade in 1797.

The cure of the fever should not rest upon a single dose of the medicine ; I have given two doses in a day in several cases, and have given it in one case, every day for three successive days.

I have communicated an account of the *time* and *manner* of discharging the contents of the gall bladder and bowels to several of your brethren; I ardently hope it may be universally successful in their hands, &c.

August 13, 1798.

The following remarks, attempting to prove that the disease was contagious, are taken from the Philadelphia Gazette.

“ The present alarming situation of our city, is, alas, truly deplorable ; almost in a general state of infection with a disease, to whose virulence medical skill is la-

mentably compelled to acknowledge its inferiority ! Former experience is rendered in a great measure useless, by the very material difference in the nature of the disease. The most copious bleedings, and the most violent purgatives have been found ineffectual ; and the success that will attend the new system of emptying the gall bladder, is at least problematical. With regard to the non-contagion of the disorder, I have very great reason to doubt it. It is at least doubtful whether it is or is not contagious, and there being a doubt, I think the wisest course to be pursued is obvious," &c.

The increased malignity of the disease, together with the extreme distresses of the poor, induced the Board of Health to present the following pathetic address to the public.

Health-office, Sept. 1, 1798.

Fellow Citizens,

Impelled by the awful progress and unparalleled malignity of the prevailing fever, we are constrained to address your feelings as well as your reason, in order to avert the fatal destruction which, with rapid strides, is pervading our ill fated city and suburbs.

The best skill of our physicians, and all the powers of medicine, it must be acknowledged, have proved unequal in the contest with this devouring poison.

With the most affecting sympathy and anxious solicitude, we have, to the best of our judgments, endeavoured to employ, as circumstances seemed to require,

the power and the means entrusted to us, in arresting its progress and alleviating its concomitant miseries. We shall continue to employ them with unremitting zeal; but we have neither the power nor the means of accomplishing *all the measures* necessary to check its extension, or provide for the pressing exigencies of the moment. Powers delegated, and appropriations made by law to the institutions under our direction, are impotent indeed, when compared to the magnitude of the occasion. It remains for our fellow citizens to attain, by their energy, the ends which alone can stop its progress and diminish its horrors.

We have, in conjunction with the guardians of the poor, caused tents to be erected on the east branch of the Schuylkill, for the accommodation of the indigent; where near twelve hundred are already provided for, out of a fund appropriated for the ordinary relief of the poor. This is but a partial mitigation of the evils which environ thousands who have a claim upon the philanthropy of those who are in more fortunate circumstances.

It is at least an unequal, perhaps an unjust mode of raising money, by an appeal to the humanity of generous individuals; but if, on any occasion, it may be justified, the present may be assumed without hesitation.

We will give attention to the actual and undisguised state of our city. Consider the mortality and rapid increase of your sick at so early a period. View the list of your physicians, and mark how *few are at their posts,*

and we believe that you will think with us that the preservation is only to be attained by flight. Do not flatter yourselves, fellow citizens, that the picture is too highly coloured; we speak from conviction, and a knowledge of facts, and doubt not but that the lives of hundreds, perhaps of thousands, may be preserved by the adoption of these or similar measures.

The prospect which the city now afforded was truly deplorable. Accounts from every quarter east of Seventh-street, furnished the most gloomy picture of disease and death. The city hospital contained about 1000 sick persons, and the daily admission amounted to 22. One hundred and seven new cases, and 67 deaths per day had been reported; and to add, if possible, to the general distress, the sons of rapine and robbery were availing themselves of the unguarded state of the city, to enrich themselves by their ignominious plunder. On the night of the 2d of September, the bank of Pennsylvania was opened, and robbed to the amount of one hundred and sixty-two thousand, eight hundred and twenty-one dollars, and sixty-one cents, in cash and notes.

On the 3d of September, 1798, the following directions were given for the prevention and treatment of the prevailing fever:

1st. Ten or twelve ounces of blood were ordered to be taken away two or three times a day, while the pulse continues to be full and tense, and if the pulse should

happen to be slower and weaker than natural, it was said to call for bleeding as much as when it discovered preternatural fullness and tension.

2d. The bowels were to be purged at the same time with calomel and jalop, or rheubarb in powder or pills, to be added by clysters composed of glauber salts, oil, molasses and common salt.

3d. A vomit of ipecacuanha or tartar emetic, was to be given on the third or fourth day, provided the pulse had been reduced by bleeding and purging. If the vomit operated too violently, it was to be composed by laudanum.

4th. Calomel was to be given, from the beginning, in doses of from two to five grains every two hours, to excite salivation. If the calomel should purge more than two or three times a day, four or five drops of laudanum were to be given two or three times a day, to confine the calomel to the bowels, and thereby to determine it to the mouth and throat. Sweating, blistering, poultices, &c. were ordered. This was called the system of depletion. At the hospital the patients were smeared all over with mercurial ointment.

LETTER IX.

THERE is nothing that can place the extreme incompetence or want of skill, of mankind in general, with regard to the nature and cure of pestilential diseases, in a stronger point of light, than the following extract from a pamphlet, lately published in the Italian language, by count Berchtold, at Vienna, in the year 1797.

This pamphlet was thought to be of so much value and importance, that one copy of it was put into the possession of the Royal Academy of Sciences at Lisbon, to whom it was presented by his Excellency Mr. Pinto, her Majesty's Secretary of State, &c.

The Academy ordered translations of it to be made into Arabic, French and Portuguese, and there was an extract made of it in English, which was intended for the use of the numerous bodies of British subjects employed in their countries service, in Europe, in Gibraltar, the fleet at sea, the troops on shore, in Portugal, and on board merchant ships, and in the East and West Indies.

Count Berchtold tells us, with great ceremony, that the method was first proposed by George Baldwin, Esq. his Britannic Majesty's Agent and Consul General at Alexandria, in Egypt, who, during a long residence in that contry, after much thought and observa-

tion, was induced to believe that the use of sweet oil, applied to the skin, might prove beneficial in the treatment of this dreadful, and hitherto incurable malady.

Mr. Baldwin communicated his ideas to the Rev. Lewis de Pavia, Chaplain and Agent to the Hospital (called St. Anthony's) at Smyrna, who, after five year's experience, pronounced it to be the most efficacious remedy, *hitherto made use of*, for the space of twenty-seven years, that the Hospital had been under his care. He acquainted Count Berchtold with the success, and the mode of application, and from his communications the pamphlet in question seems principally to have been composed.

The directions he gives are simply these :.....As soon as a person is perceived to be infected with the plague, he must be immediately taken into a close room, and over a brazier of hot coals, he must be very briskly rubbed all over with a clean sponge, dipped in warm olive oil, for the purpose of procuring a profuse sweat ; sugar and juniper berries must be burnt on the coals during the friction, thereby raising a dense and hot smoke, as supposed to contribute towards effecting a cure. A pint of oil was enough to be used at one time, and the friction was not to be continued above four minutes.

The first rubbing was frequently followed by a very copious perspiration, which was the object held in view, and if it succeeded it was fortunate for the patient ; but

if it failed of this effect, the operation was to be repeated, first wiping the body with a warm dry cloth, and in order still farther to promote perspiration, the patient was to take some warm sudorific drink. Thus we see that this external unction was insufficient of itself, without the aid of some internal remedy to propel the morbid matter throughout the pores of the skin, and indeed this is the first time that I have heard of oil, used externally, recommended as a sudorific. What is this potent remedy that was to produce this desirable effect? Alas, nothing more than a little elder flower tea.

Every possible precaution was very properly taken to prevent the patient from taking cold, such as keeping those parts of the body covered, which were not directly under the operation, nor was the linen to be changed till the perspiration had entirely subsided. The operation was to be repeated once a day till evident symptoms of recovery began to appear. Tumours arising were gently rubbed in the same manner, and when suppurated were only dressed with the common dressing.

The operation, as has already been observed, was to commence on the first appearance of the symptoms of the disease; but so little dependance was to be placed upon it, that if it was neglected till the nerves and the mass of blood were affected, or till a diarrhæa had come on, little hopes were entertained of a cure, but still they thought that the patient should not be despaired of, for, though nothing better could by them be thought of, yet by an assiduous application of the means proposed,

some few have been known to recover, even after diarrhæa had commenced. These cures, in fact, were effected by the perspiration that was excited, not by the oil, but by the rubbing, by the brazier of hot coals, and by the close rooms, to which the fumes excited by burnt sugar and juniper berries may have also contributed.

During the first four or five days, the patient was ordered, very properly, to observe a very abstemious diet. The author allows only a very small quantity of vermicelli, simply boiled in water; this, at least, is not so bad as soup, or any kind of animal food. His system of abstinence indeed is carried so far, that nothing was to be taken for thirty or forty days, except very light food, as he says an indigestion in any stage of the disorder, might be extremely dangerous. The use of wine he absolutely forbids till the expiration of forty days.

This method of anointing with oil may be very beneficial, by way of prevention, as far as the infection is liable to be absorbed by the pores of the skin, however little it may be depended on for effecting a cure; for he says, there is no instance of a person rubbing a patient having taken the infection, and he advises him carefully to avoid receiving the breath of the infected person into his own mouth, or his nostrils. In short, the method of prevention he recommends to be used, in all circumstances, is that of carefully anointing the body, and living upon light and easily digested food. What is to be understood by light and easily digested food, is a question hereafter to be discussed.

Mr. Baldwin observes, that among upwards of a million of inhabitants that were carried off by the plague in Upper and Lower Egypt, during the space of four years, he could not discover a single instance of an oilman, or of a dealer in oil, being seized with the disease..... Happy would it have been for mankind, if this method of practice had been introduced instead of anointing the body of the patient all over with mercurial ointment; for by this means the world would have been spared from the deadly scourge of that poisonous mineral.

By royal permission, Lisbon, July, 1797.

LETTER X.

OF THE TRANSMISSION OF PESTILENTIAL CONTAGION.

M. DESGENETTES, physician in chief to the army of the East under General Bonaparte, observes, that it has been long ascertained; that the only method of stopping the propagation of this dreadful distemper, is to keep the infected in a strict seclusion, and not to touch either their bodies, or their clothes, to which the pestilential virus adheres with the greater obstinacy and facility, the more woolly their texture is.

Solicitous to prevent the alarm and terror which seizes the bravest men at the mere name of the disease,

and favours the contagion, M. Desgenettes called the pestilential fever an epidemic fever, and, in concert with the generals who directed the expedition, concealed from the army the real name of its most formidable enemy, the disclosure of which would have struck them with a panic.

In the expedition which was directed against Syria, fifteen thousand men crossed the desert, which separates Africa from Asia. The verdant summits of Palestine's mountains relieved the soldier's eye, fatigued with the sterility of the desert, and the monotonous appearance of Egyptian prospects, where the soil, alternately parched and inundated, produced a vigorous vegetation only in those parts contiguous to the Nile, or its innumerable canals. Meanwhile many individuals were attacked by the pestilential disease, the symptoms of which were too decisive to be mistaken. It might at first, says he, be imagined, that men accustomed to brave death in the field of battle, would view the ravages of the plague with cool indifference; experience, however, proves the contrary, as M. Desgenettes very philosophically observes. He continued to employ the most prudent precautions he was master of, and to pay the most unremitting attention to the sick, in spite of all which great numbers of victims were swept away by the disease.

As the violence of the symptoms increased before Jaffa, and carried off the patients on the fifth or sixth day, he could no longer disguise the danger of their situation. However, as he placed great hopes on the ef-

fects of the healthy season into which they were advancing, in the diversion of marches, better quarters, and the abundance and better quality of the food ; as, besides, he was by no means convinced that the disease was very easily communicated, on which all the exaggerations of alarm were accredited, he took the following resolution. Aware of the frequently pernicious influence on the human mind, of imaginary prejudices, he determined never to pronounce the word *plague*. Under these circumstances, he considered it as his duty to treat the whole army, like a patient in a critical disease, to whom it can never be of service, and it is frequently very dangerous to reveal his real situation. He communicated this resolution to the chief of the Etat-major-general, whose situation, independent of the private friendship with which he was honoured, appeared to demand an avowal of the political motives that regulated his conduct.

The army arrived before Acre, where all the valour and the good fortune of a great general were ineffectually opposed to a handfull of Britons. Scarcely was the encampment completed, and scarcely were the trenches opened, when the plague made its appearance among the corps of artillery. M. Desgenettes, in an instruction, indicated to the army his method of preventing and treating the disease, the name of which he was always cautious to disguise. The means he recommended for keeping up the strength were a vomit, in the first instance, and afterwards a very strong decoction of coffee and quinquina, acidulated with lemon, means very

inadequate to the aid that was to be obtained. He directed the buboes to be covered with emollient cataplasms, without endeavouring to reduce them; for, as he very judiciously observes, these buboes are the crisis of the disease; and as it appears that the dreadful virus in which the cause of it resides, exhausts its influence on the lymphatic glands, they should be opened by incision when the inflammation has terminated by suppuration. With regard to ulcers that quickly turn to a gangrene or mortification, he thinks it best to apply a caustery the moment the mortification appears, to prevent it from extending farther; but I have an application that is infinitely preferable to this, which is to dip the rags made use of for dressing, in water acidulated with a few drops of sulphuric acid, and to apply them immediately to the part affected.

The same disease raged at Gaza, but it was much more fatal to the inhabitants of that town, than it was to the garrison that was left there. Children, in particular, fell victims to it; and it is worthy of remark, that with them the buboes appeared on the parotid glands, as if this most obstinate of all diseases was subject to the influence of age, and as if the fluxionary movements of the plague conformed to the organic tendency of the humours towards the head during the time of infancy.

Meanwhile the malady did not spare those who courageously opposed its ravages, and endeavoured to stop its progress. Almost all the officers of health of the hospital at Gaza perished; the young Bruant and Dew-

evre, the first physician, and the latter chief surgeon of that establishment, died within a few days of each other, equals in age and talents, and indefatigable in their professional duties ; both were cut off in their prime. How tender and affecting is the regret expressed by M. Desgenettes for their premature loss !

The medical chest was exhausted of every thing, for blisters, for poultices, of quinquina, rhubarb, acids, and even vinegar. The healing art was destitute, at the same time, both of remedies and of ministers to administer them. The plague continued to make the most rapid progress.

Notwithstanding this almost total privation, the sick thronged in as great numbers as ever to the hospitals, where every thing was wanting except the unwearied attention of the physicians, that were still spared by the pestilence. M. Desgenettes, multiplied himself, as it were, to give attendance wherever it was necessary ; he braved, undaunted, a contagion so justly dreaded, and performing every duty, as well those that were imposed upon him by the honorable station that he held, as those prescribed by his uncommon philanthropy, he found resources in situations, which other men, with less intelligence and zeal, would have considered as desperate. Convalescents^a employed in waiting on the sick, for want of other attendants, caught the infection a second time ; which refutes the assertion of some authors, that a person cannot be attacked twice successively by the plague the same season.

But we now come to a trait that deserves particular notice.....In order to raise the drooping spirits of the army, and to persuade them that the danger was not so great as they imagined, he dipped a lancet, in the midst of the hospital, into the matter of a buboe, on a person in the first stage of recovery, and made a slight incision in his wrist, and another near his elbow, without taking any other precaution than washing himself with some soap and water which was brought him. For above three weeks he had two small inflamed spots, corresponding to the two incisions, and which were still very perceptible, when, upon his return to Acre, in the presence of the army, he bathed in the bay of Cæsarea.

This imperfect experiment, of which he conceived himself obliged to give some details, on account of the noise which it has made, proves nothing of any great importance to the art; it does not refute the transmission of the contagion, demonstrated by a thousand examples; it simply shews, that the conditions necessary for it to take place are not yet sufficiently demonstrated. He thinks he ran a much greater risk, for the sake of an object of infinitely less utility, when, at the request of the quarter-master of the 75th demi-brigade, about an hour before his death, he drank a portion of his beverage, out of his own glass, merely to afford him that gratification. This circumstance, which occurred in the presence of numerous witnesses, made M. Durand in particular, who happened to be in the tent, shudder with horror.

Within the walls of that same city of Acre, at the time of the crusades, the consort of a British prince, sucked the wounds of her husband, reputed to be poisoned, from the ill conditioned state of them, but which was most probably pestilential, and by this means gave the world a most notable example of conjugal affection.

Amidst the grateful testimonies of affection with which he was daily greeted by the army, he was frequently asked by what means he became proof against the contagion.

It may not be amiss to observe, that the South East wind elevated Reaumur's thermometer to 33° . This wind raised a cloud of blackish dust, which chapped the lips and parched the skin; the west wind, which succeeded it, caused the thermometer to descend to 18° . These meteorological observations, which were made by M. Cortaz, are valuable with regard to the reigning disease. M. Desgenettes remarks, contrary to the idea of most physicians, that intermittent, or sporadic affections, do not always assume the character of the reigning diseases, of which the celebrated Monge furnished him with an example.

I must not omit mentioning the opinion of the no less illustrious Berthollet, on the transmission of the pestilential contagion, by means of the saliva, which he considers as its vehicle.

Mi'lady Montague, in a letter from Adrianople, observes, " That those dreadful stories you have heard of the plague, have little foundation in truth. I own I have much ado to reconcile myself to the sound of a word, which has always given me such terrible ideas, though I am convinced there is little more in it than in a fever. As a proof of this, let me tell you, that we passed through two or three towns most violently infected. In the very next house where we lay (in one of those places) two persons died of it. Luckily for me, I was so well deceived, that I knew nothing of the matter, and I was made to believe that our second cook had only a great cold. However, we left our doctor to take care of him, and yesterday they both arrived here in good health, and I am let into the secret that he has had the plague. There are many that escape it; neither is the air ever infected. I am persuaded that it would be as easy a matter to root it out here, as out of Italy and France; but they are not very solicitous about it, and are contented to suffer this distemper, instead of our variety, which they are utterly unacquainted with.

LETTER XI.

OF THE METHOD OF CURE HERETOFORE IN USE.

THE following method of cure, of malignant fevers, is extracted from a late publication, and consists of such a compound of medical jargon, and medical empiricism, as is not often to be met with : And yet may be considered as containing the sum and substance of all that has been hitherto known or practised, and the insufficiency of which, for curing the yellow fever, is lamented, not only by the faculty themselves, but by mankind in general. I shall transcribe it, in the author's own words, for the edification of the public.

“ Malignant fever, says he, like most others, is a disease of increased excitement, varying in different persons, according to the remote, pre-disposing and exciting causes ; for the proximate cause I hold to be the same in all.” This is granted ; but wherein does the proximate cause consist ? “ The proximate cause, he says, consists in morbid excitement, irregular and wrong action in the sanguiferous system.” Here the author is certainly mistaken ; for these are the effects and not the causes. This morbid excitement, this irregular and wrong action in the sanguiferous system, are produced by a cause which I shall hereafter have occasion to point out ; but they are by no means themselves the cause of the yellow fever. “ It is therefore evident, he says, that the indications for cure, are, in the first place, to abstract stimuli ; if morbid excitement

is the proximate cause, one would suppose, that the first indication would be to lessen the excitability; but for the present let us suppose it to be stimulus, then let us ask, what kind of stimuli are to be abstracted? not the kind of stimuli of which he speaks. What he says of "diminishing the excitement, and accumulating the excitability, until the equilibrium is restored," is downright contradiction. What! accumulate excitability, while he is endeavoring to diminish the excitement. Ridiculous!

Secondly. "As in consequence, he says, of the debility which will necessarily follow from the depletion requisite to cure the disease, the excitability will be accumulated above the healthy standard, it will be necessary to give tonics and stimulants, so as to depress it to the requisite point, and therefore increase the strength of the patient." If it was necessary to make use of that depletion he speaks of, in order to cure the disease, there is no doubt but great debility must ensue; but I deny any such necessity; tonics and stimulants therefore, in order to depress the excitability and to increase the strength of the patient are wholly unnecessary. But to proceed:

"The first indication, he says, is to be answered by abstracting the stimulus of food by fasting, of heat by cool air and cold drink, of noise by silence, of action by rest and a recumbent posture, of blood by venesection, cupping, of acrid bile by gentle emetics and purgatives, of fœces by cathartics and enemata." If food,

heat, noise, action, phlathora, acrid bile, fœces, &c. were the immediate or proximate cause of the disease, there would be some sense in our authors method of reasoning ; these no doubt are sometimes remote or occasional causes. But before we proceed any further let me ask, are these that kind of stimulus which constitute the immediate or proximate cause of the disease ? I say they are not, as I shall have an opportunity of shewing on a future occasion, and till our author is able to prove it, all he says afterwards about bleeding, blistering, purging, &c. fall to the ground. But let us proceed to take notice of the remedies he recommends.

“ The first thing to be used and best, he thinks, is blood letting. This, he says, should always be used in the first stage of the disease ;” no matter whether the patient is in a state of repletion or a state of depletion ; and he says “ it should be taken away in such quantities as the state of the patient may indicate.” If the patient is not in a plethoric state it is never indicated ; and yet he says “ it may be drawn with a liberal hand, not confined to ounces but to pounds.” What ! whether there is plethora or not. “ Yet, he says, I must here caution the inexperienced of the healing art, to beware that this remedy is used in the proper time, for it is as fatal in the second or third stage of the disease, as it is successful in the first.” The time, therefore, and not the state of the patient, is the thing that is to be attended to ; for according to this author’s account, you may take away pounds of blood in the first twelve hours of the disease, but it is fatal if you do it in the second

or third twelve hours, for such is often the rapidity of the stages.

Not content, however, with this method of blood letting, the author goes on to observe: "That, where local pains exist, when the pulse will not authorize the drawing of blood, by opening a vein, cupping, he says, has been used with advantage." I have very great doubts of this. "If the head is much affected, he says, it should never be dispensed with." Alas, is there no other remedy for this complaint but shedding of blood? "Cantharides, he says, have been used in the first stage of the disease with great advantage." Is this by way of abstracting stimulus?

"Calomel and jalap, in the proportion of ten grains of each, and repeated every two hours, have generally produced the desired effect." What effect! is it of relieving the head or opening the bowels? ten grains of jalap, and ten grains of calomel, repeated every two hours, to be sure is something. "Sometimes I have used, he says, the sulphate of soda with the addition of a little tartar emetic, with the happiest effects." What, is this still by the way of abstracting stimulus? "Some, he says, have supposed that the antimonial tartaric ought not to be administered in this disease, for, say they, it will induce emesis, which ought by all means to be avoided; but I beg leave, says he, to differ from them in opinion, for in a number of cases, where puking was brought on, and the contents of the stomach evacuated, a diaphoresis was induced which entirely annihi-

lated the disease, and left the patient in a convalescent state." It was the diaphoresis which relieved the patient, which is much better induced by other means.

Our author then goes on to advise the use of tartrite of potash, soda phosphorata, olium ricini, cremor tartari, enemata, aloes, blisters, sinapisms, rubbing the body all over with lemon juice, the *Eupatorium perfoliatum* of Linnæus.

Such is the collection of remedies that have been used for the cure of malignant fevers, according to what is called the system of depletion; and though they have succeeded effectually in undermining and destroying the strength of the patient, they are, after all, to be considered but as mere palliatives of symptoms; and I will be bold to say, that there is not one, nor all of them put together, capable of reaching the proximate cause of the disease which is called yellow fever, much less are they capable of curing that most aggravated state of malignant fever, the plague.

After these remedies had succeeded in producing that debility, which, according to this system, was thought necessary to cure the disease, but which in fact had generally the effect of destroying the patient, in order to remedy the evils that had been produced, if the patient was still alive, which was seldom the case. "To relieve the debility, to remove the excitability, which had been occasioned above the healthy standard, and to increase the strength of the patient," which had been

completely annihilated, "tonics and stimulants were thought necessary;" in other words, after they had done all the mischief they could, they found it necessary to set about repairing it; for this purpose, our author tells us, that "the tonics most commonly used, are bark, columbo, gentian, century, camomile, &c. and the liberal use of the mineral acids." "These remedies, he says, were very necessary to answer the second indication; indeed, he says, it was absolutely necessary to exhibit them in large quantities to the patient, when convalescent," (alas! how few ever lived to convalesce) "otherwise, he says, that they would have sunk with mere debility," (which I have no doubt of.) "In general I have found, says he, cold camomile tea, or an infusion of columbo, acidulated with elixir of vitriol," (a vile adulteration of a valuable drug) "to answer best; although I have sometimes seen the patients prefer a tea made of the serpentaria; but it will be requisite for a physician to exercise his own judgment in these cases, when in fact little or nothing could be done." A sad time for a physician to begin to exercise his judgment. "Hence, says he, sometimes more powerful incitants were requisite, in which case tincture of cantharides, alkohol, brandy, ammoniac, &c. have been used." How desperate, and at the same time how fruitless! This I suppose is what is meant, by curing, with main force, or in other words, "by transcending the diseased excitement."

*The following is a tolerably picturesque poetical description of
the horrors of the year 1798.*

HOW shall the muse those dreadful scenes explore ?

Or how unfold the mis'ry of disease ?

Untaught on wings of poetry to soar,

She sinks unequal to the pow'rs to please.

She seeks, alas ! no listening ear to charm,

Nor plaudits wishes for herself to gain ;

Depicting horrors that the brave disarm,

Where death, wide wasting, multiplies his train

Ah, Philadelphians ! doom'd distress to feel ;

The iron hand of pestilence severe,

Again revisits, and imprints its seal,

On numbers, drowned in thoughtfulness and care.

Ah, Philadelphia ! now no longer gay,

Assemblies, routs, nor midnight rev'lers roam ;

Their votaries sink beneath the burning day,

Or, exiled, wander from their dreaded home.

Those dear delights, how chang'd ! Now stalk secure,

Arm'd with ten thousand terrors in their train,

Death ! Pain ! and Phrenzy ! in their works mature,

Now boast a *cheerless, solitary reign*.

Such scenes, though past, still press the aching view,

In retrospective, still the gloom appears,

And my pain'd eyes have seen the last adieu,

Of Parents, Orphans, Brothers, drown'd in tears.

Of Parents, Orphans, Brothers, did I say ?

Alas ! those tender names how oft I've seen,
Lose all their pow'r, to pestilence a prey,
"Leaving this world as tho' they ne'er had been."

How oft have Brothers sped their swiftest wing,
And from a dying sister urg'd their flight ;
While cruel death, with deep remorseless sting,
"Smil'd ghastly, ruin round, and wild affright.

The social ties of nature bind no more,
And all the pity of the parent dies ;
He leaves his wretched offspring, to deplore
His absence, and on swiftest pinions flies.

And often, too, has fierce disease forbid
Th' affrighted offspring to approach their sires ;
When racking pains death that led,
Embrac'd the suff'rer, that in pangs expires.

Without a pitying friend, the generous soul
In agony resigns his scorching breath ;
With burning fever torn his eye-balls roll,
Or fix'd, wide staring, frightful unto death.

But hark ! methinks the piercing cries of woe,
From my next neighbours, still assails my ears ;
Death with rude havoc well matur'd the blow,
Secur'd his claim, regardless of their tears.

Full measur'd woe they bore, 'tis mine to tell,
The fearful rage of pestilential ire ;
Death and disease in close connexion dwell,
And their lov'd offspring straight in pangs expire.

Two girls beloved, and an only son,
 The promis'd stay of their declining years,
 Are gone forever, never to return,
 To aid their parents in their vale of tears.

But ah ! what anguish keen, and deep distress,
 From yon frame dwelling claim a friend to save :
 No friend appears the Orphans to caress,
 Or smooth the rugged passage to the grave.

And first, grim death, with fever-pointed spear,
 The hapless mother pierc'd, his certain prey :
 Nor glutted ! but with wild voracious tear,
 From his fond children forc'd the sire away.

Still, still, new scenes of horror crowd my sight,
 While yon sad widow, mangled with disease,
 In doleful black, and screams of wild affright,
 Refuses comfort and neglects her ease.

Slowly and sad she moves along the way.
 While cruel mem'ry, lavish to review,
 Her better days, when all was blythe and gay,
 When all was gladness, all was pleasure too.

When all the joy that virtuous love could give,
 Was hers to enjoy, and no intruding fear,
 Oppos'd those pleasures, but to love and live,
 For her fond husband was her constant care.

Alas, he's dead ! and all their little loves,
 In yonder grave-yard lie, beneath the tomb...
 Frantic with sorrow and despair, she roves
 Till her own death shall dissipate the gloom.

But ah ! why dwell so long on partial woe,
 When one wide wasting, ruin hovers round ;
Death's shafts fly thick, and all confusedly go,
 Promiscuous, darkening all the gloom profound.

But who am I, that Heaven thus deigns to spare,
 Amidst the havoc of surrounding death ?
 That Heaven should make my family its care,
 And fix the bounds of pestilential breath.

For fierce disease approach'd on poisoned wing,
 And pain and woe did sure admission find ;
 Of fierce disease was pluck'd its deathful sting,
 And Heaven has spared....in mercy ever kind.

Thou great Supreme ! who bade the poison rage,
 Hast fix'd its bounds, and bade contagion cease ;
 Ah fix our hearts, and all our powers engage,
 In works of love, of piety and peace.

A COMPARATIVE STATEMENT

OF THE

NUMBER OF DEATHS

Which occurred each day in the City of Philadelphia, from the first of August to the first of November, in the years 1793, 1797, 1798, and 1799, during the prevalence of the CONTAGIOUS and MALIGNANT FEVER.

<i>Days</i>	AUGUST.				SEPTEMBER.			
	1793	1797	1798	1799	1793	1797	1798	1799
1	9	5	5	9	19	16	48	10
2	8	4	4	10	19	11	41	9
3	9	7	6	10	18	17	28	23
4	10	10	5	8	24	19	65	12
5	10	6	7	9	25	15	67	20
6	9	11	9	7	26	9	50	14
7	12	9	7	11	22	13	52	31
8	8	7	10	9	43	16	63	9
9	11	9	12	8	36	32	73	30
10	9	10	7	10	31	27	74	14
11	8	9	16	10	27	30	73	19
12	6	8	20	9	35	27	71	17
13	11	8	17	8	38	18	57	17
14	6	11	20	9	49	17	61	9
15	9	7	27	10	56	23	60	3
16	7	10	17	9	69	15	62	16
17	7	12	15	8	89	16	68	9
18	8	9	19	19	72	15	57	14
19	10	8	24	12	64	16	58	11
20	8	10	16	11	68	20	69	11
21	9	9	20	10	61	6	78	18
22	13	11	31	19	77	17	68	16
23	14	13	20	18	70	28	71	20
24	17	11	25	21	97	23	63	15
25	16	12	40	20	88	33	80	21
26	17	14	48	23	58	24	77	24
27	18	16	34	13	62	14	86	15
28	22	14	36	10	55	17	106	16
29	23	10	33	12	59	21	75	9
30	20	14	45	14	64	34	85	13
31	17	9	31	19				
					1514	379	2004	465
T	361	303	626	375				

OCTOBER.				
Days	1793	1797	1798	1799
1	76	22	85	8
2	69	17	83	10
3	79	24	49	5
4	60	27	46	12
5	72	14	36	15
6	77	17	38	4
7	83	21	25	16
8	91	8	29	13
9	103	13	20	12
10	97	20	14	10
11	119	14	43	10
12	111	16	41	5
13	105	19	27	8
14	83	13	40	7
15	82	7	34	9
16	71	11	32	8
17	81	15	25	5
18	61	19	25	6
19	66	11	34	7
20	58	5	19	5
21	60	11	24	†
22	83	7	20	
23	56	5	12	
24	42	5	17	
25	36	5	16	
26	25	10	20	
27	17	8	20	
28	25	5	16	
29	19	5	22	
30	17	9	15	
31	21	5	16	
T	2045	386	943	175

RECAPITULATION.

1793.	
August	361
September	1514
October	2042
November	82
Total	4002
<hr/>	
1797.	
August	303
September	579
October	386
November	24
Total	1292
<hr/>	
1798.	
August	626
September	2004
October	943
November	64
Total	§ 3637
<hr/>	
1799.	
August	375
September	465
October	175
Total	1015

† On the 21st of October, the Board of Health informed Mr. Latimer, the then collector of the port of Philadelphia, "that no pestilential or contagious fever prevails in the city or liberties at present;" in consequence of which the deaths were no longer reported.

§ It is stated, that the total mortality in 1798, including those who died in the country, exceeds four thousand; we may, there-

COMPARATIVE STATEMENT

Of the deaths in this city in the two first weeks of August 1798,
and August 1802.

	Adults.	Chil.		Adults.	Chil.
1st 8 days in Aug. 98	23	30	8 do. Aug. 1802,	19	23
9th	7	5	9th	4	4
10th	4	3	10th	10	5
11th	11	5	11th	4	5
12th and 13th	29	8	12th	0	4
14th	13	7	13th	2	2
15th	20	7	14th	3	2
16th	13	4	15th and 16th	7	12
Aggregate for 15 days	120	69	Aggregate for 15 days	49	62
Decrease of the present year,				71	7

Note. From a review of the bills of mortality, published before the year 1793, it appears, that the deaths in the city of Philadelphia, during the preceding months (which is the most unhealthy period of the year) would not average more than six a day, if the city were not afflicted with this FEVER, notwithstanding its increased population.

In 1799, there were some cases of malignant fever, in the southern parts of this city, as early as the first of July, which excited some uneasiness for several days. The alarm (created by the occurrence of other cases) revived and subsisted several times from that period to the 22d of August, when the college of physicians informed the Board of Health, that "a contagious and malignant fever did, at that time, exist in the city, and raged to an alarming degree." The publication of the information by the Board of Health, induced a considerable portion of the inhabitants to abandon the city, which greatly checked the effects of this direful disease.

fore, fairly infer, that the FEVER this year yielded less to the power of medicine, and the skill of the physician, than it did in 1793; for, during the time of its existence in that year, the city contained at least twice as many inhabitants as it did in 1798.

Med. Hist.

WZ

270

R971c

1804

c.1

