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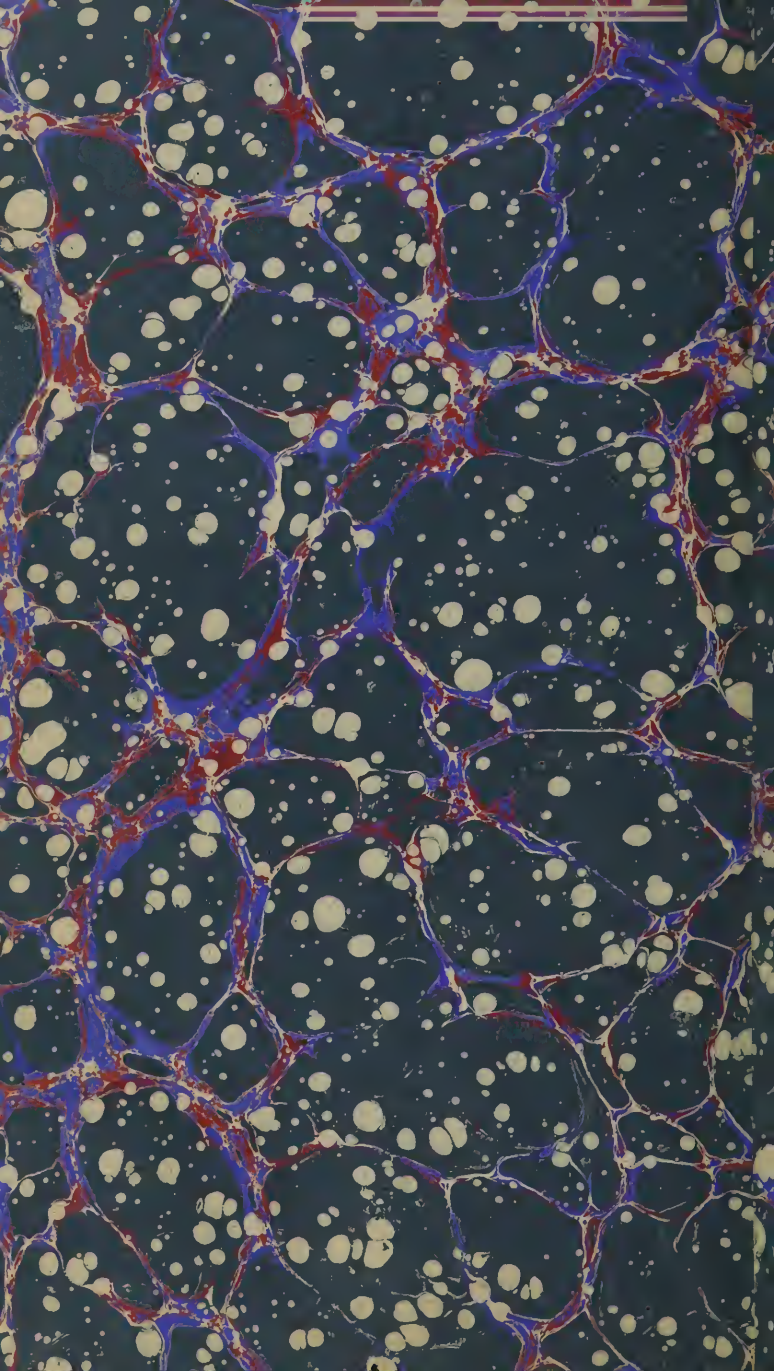
Section

New rare case

No. 113,
W. D. S. G. O.

No. *57680*

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AN
A C C O U N T
O F T H E
E P I D E M I C Y E L L O W F E V E R,
A S I T A P P E A R E D
I N T H E
C I T Y O F N E W - Y O R K I N T H E Y E A R 1 7 9 5 .

C O N T A I N I N G,
BESIDES ITS HISTORY, &c.
T H E M O S T P R O B A B L E M E A N S O F P R E V E N T I N G I T S
R E T U R N , A N D O F A V O I D I N G I T , I N C A S E I T
S H O U L D A G A I N B E C O M E E P I D E M I C .

B Y V A L E N T I N E S E A M A N , M . D .
O N E O F T H E P H Y S I C I A N S O F T H E H E A L T H C O M M I T T E E
O F N E W - Y O R K I N 1 7 9 5 .

—————“ And tho’ the putrid South
Be shut; tho’ no convulsive agony
Shake, from the deep foundations of the world,
Th’ imprisoned plagues; a secret venom oft
Corrupts the air, the water, and the land.”
“ Even Albion, girt with less malignant Gies,
Albion the poison of the Gods has drunk,
And felt the sting of monsters all her own.”

ARMSTRONG.

N E W - Y O R K :
P R I N T E D B Y H O P K I N S , W E B B & C O . N O . 4 0 , P I N E - S T R E E T .
—1796.—

[ENTERED ACCORDING TO LAW.]

THE HISTORY OF THE

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TO BENJAMIN RUSH, M. D.

PROFESSOR OF THE INSTITUTES, AND OF CLINICAL MEDICINE, IN THE UNIVERSITY OF PENNSYLVANIA.

THY general liberality of sentiment, together with the unparalleled manner in which thou durst, in the noble cause of humanity, to introduce innovations in the treatment of the Epidemic Fever of Philadelphia in 1793, amidst the persecuting shafts of thy opponents, point thee out as a most proper patron for the free thoughts advanced in the following pages.

Besides this, I should consider myself greatly deficient, was I to neglect this opportunity of acknowledging the high sense of gratitude I entertain for the benefit received, not only from thy valuable public instructions, but also from thy ever useful private conversations.

Wishing thy long continued and increasing usefulness, in thy profession and in the diffusion of Medical knowledge,

I remain,

With respect and esteem,

Thy Friend,

Valentine Scaman.

John Adams
 Thomas Jefferson
 James Madison
 Alexander Hamilton
 George Washington
 Benjamin Franklin
 Thomas Paine
 James Otis
 John Jay
 William Bradford
 John Hancock
 Samuel Adams
 Paul Revere
 John Paul Jones
 Christopher Columbus
 Amerigo Vesputi
 Vasco da Gama
 Bartolomeu Dias
 Ferdinand Magellan
 Christopher Columbus
 Amerigo Vesputi
 Vasco da Gama
 Bartolomeu Dias
 Ferdinand Magellan

APPENDIX

The following is a list of the names of the persons who were members of the Continental Congress at the time of the signing of the Declaration of Independence. The names are arranged in alphabetical order.

Continental Congress

DECLARATION

T O

JOHN BROOME, ROBERT BOWNE,
GABRIEL FURMAN, NICHOLAS CARMER,
ANDREW VAN TUYL, ISAAC STOUTENBURGH,
JOHN CAMPBELL, SAMUEL BARD,
ROBERT LENOX, GEORGE JANEWAY, and
THEOPH. BEEKMAN, NATH. HAZARD,

*Surviving Members of the Committee of Health of New-York
for 1795—*

Whose undaunted attention to the objects of their appointment, and whose persevering care for the relief of their afflicted Fellow-Citizens, must, no doubt, have been followed by the gratifying sense of well done, in their own bosoms :—Blessed be their reward.

As the following observations were drawn up partly at their solicitations, and as the ideas and opinions advanced in them, are considered as meriting their serious attention, they are most respectfully submitted by

Their Friend and Fellow-Citizen,

THE AUTHOR.

P R E F A C E.

THE utility of accurate Histories of Epidemics to the improvement of medicine, has never been doubted from the time of the early and valuable publications of Hypocrates, to the late and no less judicious observations of Dr. Rush: but as the Yellow Fever has been so accurately and fully described and treated of by several physicians in the West-Indies, in Philadelphia, &c. it may be thought entirely superfluous to give any account of it as it appeared in this city. Fully sensible of the force of this remark, I long declined attempting any thing of the kind; but as several facts have occurred to me, a general knowledge of which I consider as highly interesting to humanity and of importance to the community at large, and especially to the inhabitants of this city, I am finally induced to submit them to the consideration of the public, particularly as the Medical Society, which had made some progress in the business, have declined the prosecution of it.

THE many accounts and complete descriptions already given of this disease, seem to render it unnecessary to enter into a minute detail of its several symptoms in this place; I have therefore been very short upon that part of the subject, referring the more

nice inquirer to the beforementioned authors, particularly to Dr. Rush's account of it, as it appeared in Philadelphia, in 1793, where he will find its various appearances very particularly and accurately delineated.

As the following observations have originated almost entirely from facts and circumstances of the disease, as it appeared in this city; the reader will find himself much deceived, if he looks for references to long catalogues of eminent authors, or for an elaborate account of the diseases of the West-Indies, pestilences of Europe, or plagues of Asia: and as my conclusions are drawn chiefly from cases and occurrences, that have come within my own personal knowledge, (which favored by my local situation in the center of the Epidemic, and my providential preservation from its influence, till it was nearly extinguished, were considerably numerous) he will also find that my remarks have not been much either influenced or supported by the uncertain communication of my brother practitioners or other citizens; hence, if decided and undoubted facts, shall hereafter appear which shall disprove them, my error should be assigned only to my general scepticism respecting current medical reports, and the limited nature that I have imposed upon my sources of information.

As some thoughts which I have advanced, are decidedly opposed to the *common sense* of the faculty in

general, I wish it to be considered, that they are not the offspring of any favorite theory, or influential hypothesis; for I had heretofore been taught and believed very differently, till the stubborn obtrusion of facts upon my mind, forced me to change my opinion.

I AM well aware of the loss of reputation that I may sustain, from attempting, in the course of this essay, to support opinions which are very unpopular with the inhabitants of this city; however, the importance of the subject, has swallowed up all personal considerations, and determined me freely to communicate what I consider as highly essential to their welfare; and I shall be richly paid, if my temerity shall in the least degree, tend to the prevention of a disease, which in its *partial** operation, in less than three months, swept off upwards of seven hundred of our fellow-citizens; which should be sufficiently alarming to put us upon our guard in future, for should it again arise, in a season more favorable to its spreading, perhaps its more *universal* devastation will not be checked till it has numbered thousands in its mortal list.

B

* It being chiefly confined to a particular part of the city.

The first part of the paper is devoted to a general
 introduction of the subject. It is shown that the
 theory of the present paper is a natural extension
 of the theory of the previous paper.

In the second part of the paper, the author
 discusses the special case of the theory. It is
 shown that the theory is applicable to a wide
 range of cases. The author also discusses the
 limitations of the theory.

The author concludes the paper by stating that
 the theory is a natural extension of the theory
 of the previous paper. It is shown that the
 theory is applicable to a wide range of cases.
 The author also discusses the limitations of the
 theory.

AN
A C C O U N T
OF THE
EPIDEMIC YELLOW FEVER, &c.

Of the State of the Air, and Diseases preceding and accompanying the Epidemic, and a History of the Disease.

FROM the tables of Meteorological observations, inserted immediately before the considerations on the cause of the disease, it appears, that in the beginning of the sixth month (June) the weather was pretty warm, but became more moderate on the seventh and eighth days, and that its temperature was suddenly increased on the 9th of the month, raising the Mercury $12\frac{1}{2}$ degrees in Fahrenheit's thermometer in the space of twenty-four hours; it was warm on the tenth, then became cooler for four or five days, after which time it continued very warm and sultry for several days; on the 19th the thermometer stood at 87° , and varied between that and 69° the remainder of this month—we had rains on the 2d, 11th, 20th, 24th, 25th, and 30th. The mean temperature of this month was 73° .*

* These were the states of the thermometer at one o'clock, P. M.

It gradually became cooler for the first five days in the seventh month (July); on the 6th the mercury rose to 83° , which was 13° higher than it stood the day before; the next day it fell to 72° ; after which, in the course of six days, it rose to 89° without any material sudden change; the weather then moderated in some degree, so that in the last nine days of this month it did not rise above the 80° and in one of them it stood at 68° —the mean temperature of this month was 81° : it rained on the 3d, 10th, 18th, 23d, 24th, 27th, 30th, and 31st.

The thermometer stood near 90° most of the time during the first ten days of the eighth month (August); on one day it was upwards of 93° ; in the remainder of the month it varied between the 60th and 88th—great part of this time it was above 80° , and there were but a few days wherein it was below 72° ; the medium temperature of this month was 83° ; we had rains on the 3d, 9th, 10th, 11th, 12th, 13th, 20th, 21st, 23d, and 31st days, and several of them were very great.

The first week in the ninth month (September) the mercury remained between 70 and 75° ; in the second and third week it varied but little, one way or the other, from 80° ; but we had some cool days in the latter part of the month, the mercury being as low as 58° on the 22d and on the 30th; mean temperature about 73° ; we had five rainy days, viz. the 2d, 7th, 13th, 19th, and 20th.

In the tenth month (October) the temperature of the air was at no time above 75° , but varied between that and 49° irregularly: the mean temperature was 62° ; the latter part of this month we frequently had white frosts at night; it rained on the 10th, 20th, and 31st.

Musquitoes were never before known, by the oldest inhabitants, to have been so numerous as at this season, especially in the south-eastern part of the city; they were particularly troublesome to foreigners, many of whom, had those parts of their bodies that were exposed to them, covered with blisters from their venomous operations.

Our summer fruits in general were no ways extraordinary; water-melons particularly, from the wetness of the season, were very flashy and insipid.

It was remarked that many laborers employed at the different buildings, gave out at their work, from the excessive heat of the weather.

An unusual number of persons suffered in the warm part of the seventh and eighth months, from drinking cold water; and several fell down and died in the streets, whose deaths were assigned to that cause, when it more probably was induced by an apoplexy, brought on by the excessive heat of the sun; one case came under my particular observation which was certainly of that kind, although currently reported otherwise.

The *cholera infantum*, was very common in the early part of the *sixth month*, and increased as the weather became warmer. *Bilious cholics* and *dysenteries* became very prevalent in the *seventh* and *eighth months*. At this time also the *cholera morbus* carried off a number of grown persons.

In the beginning of the *ninth month*, the measles made their appearance, but they suddenly vanished with the above mentioned diseases, as soon as the *yellow fever* had spread itself among us: I did not

observe but a single case of it during the dominion of this powerful epidemic.

The common *remitting bilious fever*, was no ways uncommon in the summer months, but this also gave way, or rather perhaps, run into the *yellow fever*, as that gained ground in the city.

As early as the sixth of the *seventh month*, I was called upon in conjunction with Dr. Treat, then health-officer to our port, to visit Thomas Foster, a patient brought into the alms-house, whom we found affected with all the full marked and decided symptoms of an highly *malignant yellow fever*; the adnata of his eyes and his skin were of a bright yellow, the latter covered with purple spots, his mind deranged, his tongue covered with a dry black fordes, with hemorrhages from his gums and nose, and a discharge of black and very offensive matter from his stomach and bowels; he died on the ninth.

Dr. Treat was taken on the 22d of the *seventh month*, and died on the 30th. Several other undoubted cases occurred, about this time, in the neighborhood of Dover-street, but the first one that came under my particular observation, was that of James Dalton on the 12th of the *eighth month*, then in the fifth day of his illness, of which he died the day following as yellow as gold. From this time the disease became more and more frequent; yet as we find by the accurate accounts of the Health Committee, not above two a day upon an average died of it, till the 24th of the month.

The increasing prevalence of the epidemic at the upper part of Water-street and in Cherry-street, and in all the neighbouring low ground between them and Chatham and the lower part of George-streets, in

the forepart of the *ninth month*, became so alarming as to drive many of the most opulent of their inhabitants to the country, while the less prudent and the more indigent remained exposed to a disease, which, from this limited spot, in less than three months, carried as many as five hundred to their graves.

The disease was not, however, confined *entirely* to this part of the city; for in every other situation, favoring the accumulation of filth and stagnation of putrefactive materials, there it was no stranger: it raged with peculiar violence in the vicinity of a most intolerable pent up sink, to the west of Peck-slip, which is the receptacle for all the refuse kitchen articles, and yard wash of a number of lots fronting Pearl and Water-streets, that back upon it; it was likewise very prevalent in the neighborhood of the Fly-market, also in and about Skinner-street, as well as in some of the unregulated grounds on the north side of the town.

If an account of the epidemic, as it pervaded the different parts of the town, could be accurately ascertained, and depicted in colors, heightened in proportion to the combined early time of attack, and the numbers affected, blazoned by its comparative malignity, there can be no manner of doubt, but that the low ground in the southeast of the city, as above mentioned, would appear as the grand center of the calamity, diffusing its effects, like diverging rays, to the adjacent parts; aiding by its most powerful influence, different secondary centers, already smoking hot, to flame out its pestiferous operations. The many solitary cases of the disease that have occurred in distant healthy situations, appear to have been kindled up by imprudent individual exposures too near these sources of infection.

The black people appeared to be as subject to the disease as the whites, but it was not so fatal to them; of eight that I prescribed for, only one died, and with her, the complaint having stolen in under the deceitful form of a common cynanche, was permitted to run on for some days, before medical aid was called for. By report of Dr. S. L. Mitchell, in behalf of a committee of the Manumitting Society of this city, it appears that not a single scholar of the free black school, under their patronage, died with it.

Several circumstances tended to render the disease particularly fatal to the more indigent part of the community: 1st. The higher prices of house-rent in the other parts of the city, having concentrated a great proportion of them in the epidemic neighborhood, and crowded them in very small confined apartments; a number of houses contained as many families as it had rooms in it. 2d. Their poverty not permitting them to quit their place of residence when the disease came around them. 3d. The great difficulty of getting nurses, and their exorbitant prices preventing them from getting proper attendance before their situation became known to the Committee of Health, often-times a whole family being taken down about the same time, their panic struck fair-day friends quitting them in their distress, from the fear of infection. 4th. The neglect of obtaining early medical assistance, from a hope that their disease was not the prevailing one: and 5th. The refusal of many, after they were taken ill, thus miserably situated, to go to Belle Vue, "lest (to use their own expression) they should catch the Yellow-Fever and die."

Foreigners who came from a more temperate climate, as the English, Irish, Scotch, &c. and people from the country, who had not long resided in town, were particularly obnoxious to this complaint.

The French from the West-Indies, seemed proof against the influence of this epidemic, a numerous family of them continued in the midst of it, and viewed without danger the death of a great many, and the disease of nearly all their neighbors who remained in town; not one of them suffered the least indisposition: In another boarding house of them, containing at least thirty or forty persons, not far from Peck-slip, not any of them took the complaint, although numbers of the other inhabitants were dropping away with it, on every side of them.

The disease spared no age or sex, although it was most fatal to the young and those in the prime of life.

Symptoms of the disease, as exhibited in the different parts and functions of the body.

1st. *The vital functions* suffered extremely in the first attack of the disease, it generally coming on with *chillness*, an anxious and interrupted *respiration*, with a total *absence of perspiration*; this however, in some instances, came on very copiously, after the great heat that generally followed the chill, had existed for a time, but in most cases the skin continued dry and parched, except a sweat was induced by artificial means.

The *pulse* was as variable as the hues of theameleon; in most cases it was frequent, and after the chill had subsided, it became somewhat hard: yet instances occurred of a preternatural slowness. I met with one case in a black man, where it beat only forty-two strokes in a minute; and in another person there was a complete intermission of it in every twelfth or fifteenth pulsation: and in other patients,

particularly in the 3d or 4th day of their complaints, were physicians to judge from the pulse alone, they would declare them in a convalescent state, at the very time they were in the most imminent danger and sometimes within a few hours of their end. Although I firmly believe with my most eminent teacher Dr. Rush, that the pulse is our best guide in the knowledge of diseases, yet in no complaint that has ever occurred to my observation, have I found this most sure index of the state of the system, so little to be depended on. *Hemorrhages* from the nose, gums, stomach, uterus, &c. were very common at the commencement, as well as in the more advanced periods of this disease.

2d. In the ANIMAL FUNCTIONS this disease in its first attack, produced *lassitude*, and an aversion to all kind of bodily exertion with a sense of general *debility*, attended with violent pains in the head and back, sometimes shooting down the legs: these frequently preceded the chills, and in most cases accompanied it and continued afterwards, as a very distressing symptom of the disease. The mind was oftentimes very much *dejected*, with *imperfect vision and memory*, followed by *delirium, subsultus, tendinum*, &c. before death.

There was in many cases an evident, though slight, remission in the violence of these symptoms sometimes in the course of twenty-four hours from the time of the attack, as also at some other periods; but in the hurry of the raging epidemic, I was unavoidably prevented from gaining an accurate knowledge of them.

3d. No part of the body appeared to suffer more than the NATURAL FUNCTIONS, which includes the alimentary canal and secretions. The *stomach*, as in

all fevers, was affected with a degree of nausea, and sometimes vomiting at the first accession of this disease, which frequently subsided for a while, but is succeeded about the third day, if proper means are not used to prevent it, by an almost unconquerable irritability and retrograde movement of this organ, throwing up large quantities of green or yellow bile, and rejecting immediately every particle of medicine, food or drink, that was taken into it—afterwards discharging an aqueous fluid containing a number of light dun colored specks in it ; this, if not checked, was followed by a puking of a fluid exactly resembling coffee, with its grounds floating in it, which by standing, would settle to the bottom.

The vomiting which occurs about the third day, frequently, is the only distressing symptom that the patient labors under, his pulse becoming natural, skin cool and moist, with an entire freedom from pain, and a perfect clearness in the mental operations, that insuperable circumstance standing alone, as it were, to humble the pride of physic, and to warn, in cool blood, the unhappy sufferer of his precarious existence.

A *hicoughing* often was very troublesome in the different stages of this complaint. The *bowels* were very uniformly and obstinately *costive*: there were some cases it is true, that were attended with frequent evacuations, but these generally seemed rather of a partial dysentery nature, and not free discharges from the whole course of the intestines.

The *secretion of bile* was greatly increased, as appeared by its copious discharge from the stomach in vomiting, as well as from the bowels when excited by proper purgatives. The flow of saliva and excretions from the mouth and fauces were not much in-

peded ; in the beginning the *tongue* appearing moist and a little white, after a few days it became more thickly furred and assumed a deeper hue, but frequently in the latter stages it became quite dry and covered with a black crust.

The appearances on the *superficies* were various, the *skin* oftentimes retained its natural appearance, but frequently, though not uniformly, as the disease advanced, it assumed a yellow tinge. Musquetoe bites, which before had entirely disappeared, shewed themselves in all the parts that had been exposed to them, in small purpleish red spots ; these were often taken for *petechia*, which sometimes, but more rarely appeared.

Unseemly scabs, oftentimes in the latter stages, formed about the mouth, which, on being scratched off, frequently were followed by troublesome little hemorrhages. These eruptions did not in this fever as it does in others, indicate any favorable event of the complaint.

The *adnata of the eyes*, in the beginning where the attack was severe, generally were tinged and suffused with a reddish color, changing with the skin to a yellow, as the disease advanced : there were many, however, even among those who died, whose skin nor eyes shewed the least appearance of this color.

DIAGNOSIS.

If it should be established, that this fever is as highly contagious as is, perhaps, too generally believed, its diagnosis or peculiar symptoms distinguishing it from others, would become a matter of the greatest importance, both to individual safety and to the welfare of the community at large.

This part of the study of medicine has, of late, been considered of less consequence than formerly, since the fallacy and imprudence of prescribing for the name of a disease, has been so fully exposed and justly condemned by the generality of physicians;— however, in this particular complaint, as the hopes of a cure depend, almost entirely, upon the means used in the first two or three days of its attack, it certainly must be of prime necessity to know it in its early stage. We cannot be too careful in detecting the existence of this disease, for in its commencement, its evident symptoms are oftentimes no way in proportion to the danger. Hence, as Dr. Jackson observes, (in his treatise on the fevers of Jamaica) “ persons unacquainted with the nature of the disease, would be disposed to believe that the patient expressed sufferings that were not real.” And hence physicians are sometimes led to neglect them till it is too late to save their patients.

In the first stage of this fever it is oftentimes with difficulty distinguished from the common bilious remittent, its symptoms in general being exactly similar, only aggravated in degree; the pain in the head and back are more severe and constant, and the remissions, whenever they are observable, are more obscure: Those who are well acquainted with the disease, may often recognize it by a certain undefinable appearance in the countenance of the sick, the eye is often more red, and the face more flushed than the heat of the body and the general action of the sanguiferous system, would lead us to expect.

The remarkable irritability of the stomach, that generally comes on (when the disease is permitted to run an uninterrupted course) about the third or fourth day, whereby a constant nausea and retchings

to vomit, immediately brings up every thing as soon as swallowed, seems to be a pretty distinguishing mark of this disease at this stage of it.

The yellow skin, and coffee ground or black vomitings, as they sometimes occur in the more advanced stage, may be looked upon as decided and unequivocal evidences of this complaint; but they cannot be considered as *pathognomic symptoms*, for although they are to be found in this fever only, yet in the greatest proportion of cases they do not attend it.

The prevailing epidemic should always have a great influence in fixing our judgment with respect to this, as well as other diseases. Whenever it is found, from decided cases, that it really exists in any particular situation, I should consider every fever, in that neighborhood, attended with aggravated symptoms of a common bilious remittent, to be of this kind; for I should suppose the powerful operation of its cause, would certainly predominate over the milder causes of more moderate maladies.

PROGNOSIS.

The prognosis is to be drawn from the disposition and constitution of the persons affected, as well as from the particular symptoms. Those who had been much debilitated by previous disease, great anxiety of mind, drunkenness, &c. most generally admitted of but an unfavorable prospect as to the event of this disease, as likewise did the resolute and hardy, who would not early submit to their complaints, but endeavored to shake them off as they would a common catarrh. I used to warn such ones at my first visits, that I feared from their dispositions, that they would undertake to wrestle with their disease, and that if they did they would surely fall under it, and unfor-

tunately their conduct too often verified my fears and justified my prognostic.

In the early stages of the complaint, if it came on very moderately, without much affection of the head, if the eyes and countenance were not much affected, and the bowels were easily moved by the medicines hereafter to be mentioned, we, in general, were warranted in pronouncing a favorable termination. But when the face and eyes were suffused with a reddish tinge, or great distress and anxiety were expressed in the countenance, with severe pain in the head and back, we had great cause to fear the consequences, particularly if the bowels were obstinately constipated; this last circumstance, in every instance, portended the greatest danger; indeed, it seemed to me that the degree of danger was, very generally, in proportion to the stubbornness of the constriction of these viscera and their insensibility to the impression of purgative medicines.

In the latter stages of the complaint, when the constant vomiting came on, there was always great danger to be apprehended; yet some have recovered after discharging the coffee ground like matter before-mentioned, but these cases were confessedly very rare.

The other symptoms of putrescency, as a black tongue, petichiae, &c. were generally unfavorable, although I did not find hemorrhages such terrible occurrences as they are, by the generality of authors, stated to be. In the ninth month (September) 24th, in a communication to the Committee of Health, among other things, I observed, that "in taking a
"retrospective view of my different patients with
"the prevailing complaint, I found among them five
"who had had hemorrhages, either from the nose,

“gums, stomach or uterus, and one who had lost
 “some blood from an accidental wound in his head;
 “these were all the patients that I had attended,
 “who had been affected with any hemorrhage what-
 “ever, neither of them had died, three had recover-
 “ed, and the other three were much better than they
 “had been.”—These three also afterwards recovered;
 nevertheless, some patients afterwards died, whose
 complaints were attended with hemorrhages; still
 these facts prove that they do not indicate so much
 danger as is commonly believed.

Having given a cursory account of the season immediately preceding and during the continuance of the disease, and also a history of its most material symptoms, together with the most essential circumstances respecting its diagnosis and prognosis, I proceed to state some facts and free thoughts relative to a question, in my opinion highly interesting to the cause of humanity, and greatly important to the community, for on it depends the welfare of the afflicted individual, as well as the method of preventing or eradicating the disease in general, viz.

Is the yellow fever communicated by contagion or not?*

Unshackled from all prejudice, I shall venture to mention several facts that oppose the idea of the contagious nature of this disease, which, if they have not determined me to quit the beaten path of that old established opinion, in which I have been educated, they certainly have staggered me very much.

* By contagion I mean a matter or “effluvia arising directly
 “or originally from the body of a man under a particular disease,
 “and exciting the same kind of disease in the body of the person
 “to whom they are applied.” Cullen’s first lines.

I therefore submit them to public consideration, conceiving that they merit the most serious and candid attention.

1st. In several instances, persons have been taken with this disease, who had avoided, with the utmost care, any communication with the sick, and some that came to my knowledge, who had not been out of their houses for several weeks, nor had any affected person been within eighty feet of them, were attacked and severely handled by it; hence if it was induced by contagion, this complaint must be the most highly contagious of any other; the contagion of the plague itself, as appears by the report of physicians most conversant with it, does not extend at fartherst above ten paces from the infected body. (Howard on Lacerettos.)

2d. Although many of the nurses and attendants on the sick, in the part of the city where it raged, took the complaint, yet others, who lived in the same neighborhood and cautiously avoided such employments, did not more generally escape it. And notwithstanding many from New-York died with this disease in different parts of the country, on Long-Island, in Jersey, Albany, &c. yet I have not heard of a single well authenticated case of any nurse or attendant of the sick, or any other persons taking it except they had lately been in the city. It is true, popular reports have oftentimes spread the disease about the country, yet upon close inquiry that I have made in several instances, to ascertain their validity, I have found them to have originated from diseases of an entire different nature, and sometimes from deaths that occurred about the same time, and which would have happened, had the yellow fever never existed: even should it appear that some persons were taken

with a fever in consequence of the anxious fatigue of nursing, and the distress from the loss of near and dear relatives, which finally proved fatal to them, we are no way justified in supposing that it was this complaint; for had like attention been paid to persons with a pleurisy or rheumatism, like consequences might have followed: further, should an instance be produced wherein a person who had had an intercourse with one in the country affected by this disease, should afterwards be taken with a like complaint, it would not be a conclusive proof of its contagious nature, since sporadic cases have occurred at many places where there was not the least suspicion, or possibility of its having been produced by effluvia arising from a person under a like disease;* the communication with the sick, might in such an instance, be merely an accidental and no ways an essential concurrence.

Dr. Lining in a letter to Dr. Whytt, (*Essays and Observations Physical and Literary*, vol. 2d) mentions that, when this disease raged in Charleston (South-Carolina) “If any from the country received it in town and sickened in their return home, the infection spread no further, not even to one in the same house.”

In the year 1793, during the prevalence of this disease in Philadelphia, several persons who had lately come from that place, sickened with it and died in this city, yet in no instance did they communicate it to others, although, they were carefully and constantly attended.

* “Few years pass, says Dr. Rush (account of the bilious remittent yellow fever, as it appeared in Philadelphia, in 1793, page 159) without producing them in Philadelphia.” Dr. Lird, (diseases incident to Europeans in hot climates) says “sporadic cases of yellow fever have even occurred in England.”

3d. At Bell-vue, the hospital appropriated for the reception of the poor, sick with this complaint, there was not a single attendant who took the complaint excepting such as had been but a few days from town; notwithstanding they were constantly involved in the midst of the effluvia arising from the numerous sick and dead surrounding them.

There was not a single instance of the complaint being communicated to any of the physicians at the hospital at Bush-hill at the time it raged in Philadelphia in 1793, and "among the nurses for the sick two only died, and they (as is observed by the chief physician of that institution) probably had the seeds of the disease, previous to their going to the hospital"; and which appeared the more likely, as many of the other nurses were not at all indisposed, although they eat and slept in the chambers of the sick. ("Deveze Inquiries on the epidemic disease of Philadelphia in 1793.")

At our city alms-house, two persons died of this disease, which they must have taken from going into that part of the town where it prevailed, as they both frequented that neighborhood, yet in neither case did they communicate the complaint to a single one either of their attendants, or of their numerous companions that were crowded in the same room.

4th. There were many patients sent to Bush-hill laboring under other complaints, and were put in the same apartments with the patients afflicted with this fever, and where they saw persons dying with it on all sides of them, and were surrounded by an atmosphere, as highly impregnated as it was possible to be, with every infectious discharge that could be emitted from the bodies of those under that complaint, and breathing the same air, still warm, from

the lungs of their dying room mates : and “ what is
 “ very remarkable, there was not seen one example
 “ of these patients having the epidemic, and never
 “ notwithstanding these circumstances so favorable to
 “ contagion, did their disease change its character,
 “ since they were all restored.” (Deveze’s Inquiries, &c.) How different was this from what happened in the city ; there it obliged all diseases to partake of its nature, and to pay obeisance to the ruling power : (Rush’s account of the yellow fever) it seems as if those patients had been protected for a time, by their diseases, from the influence of the cause of the destructive epidemic, till they had gained a happy retreat from the contaminated boundaries of the town.

5th. Some contagions are communicated by contact only, as syphilis, itch, &c. others may operate at a certain distance through the medium of the air, as the small-pox, measles, &c. yet all, that we have accurate knowledge of, are the most certainly effective *ceteris paribus* in an inverse proportion to the distance of the body from whence they arise, and *vice versa*. From this consideration, we cannot conceive any thing more certain of producing the disease in question, than the handling the bodies of those who have died with it, that is, if we suppose it to be caused by effluvia arising from persons already affected ; yet we find dissections of such ones have been performed, by Dr. Mitchel in Virginia, Dr. Mackrittrick in the West-Indies, Drs. Fleming and Jackson in Jamaica, Dr. Lining in Charleston, &c. and they all have lived afterwards to publish an account of them : in Philadelphia, Drs. Physick and Cathrall did the same, and Dr. Annan attended the dissection of others, and although it is very probable, that they, from living in the atmosphere of that city,

may have had the disease, yet we do not find that their hardy exposures have augmented its violence so much in them, as to enroll their names in the register of deaths. Dr. Baily dissected a person dead with this disease in this city, and suffered no inconvenience from it: but what would seem still more extraordinary, Dr. Deveze and all his surgical assistants entirely escaped the disease, notwithstanding he opened a great number of bodies, and consequently was under the necessity of dipping his hands in their black and corrupted blood, and of breathing the infected vapor that exhaled from them. Who could suppose it possible for any one who never had had the small-pox, to have such close connection with persons in every stage of that complaint, and even to handle their bodies after death, and escape being affected with it?

6th. Specific and acknowledged contagions, all seem to arise from themselves only: hence it would be almost as hard for me to believe that the syphilis, small-pox, or measles, could be produced from any other cause, than from their proper virus, obtained from persons affected with the like disease, as it would be for me to conceive of the formation of a plant, without having received its seed or radical from one of the same nature. Contagions seem to fix in the soil of our bodies, and there seed, and from thence spread themselves as naturally and regularly as vegetables do on the earth. But the yellow fever has been produced from other causes than contagion.* Does it not then admit of a doubt whether it can possess a power of propagating itself? I confess I am almost

* Lind's essay on diseases incident to Europeans in hot climates, has many facts in proof of this disease being produced by other causes, and without the aid of contagion. Also note p. 16.

ready to believe, that it either is always produced by contagion, or never. It is very difficult to conceive, that two such different causes, should produce exactly similar effects.

7th. It is an acknowledged fact with respect to contagions in general, that they are no respectors of persons, but that all of every clime and color, under like circumstances, are equally susceptible of their operations. But this is not the case with the cause of the disease under our present consideration: I have already observed, in the history of the complaint, that the French people from the West-Indies, although involved in the midst of the epidemic, universally escaped it. The same remark was made with respect to them in Philadelphia in 1793, (Rush's account of the yellow fever). Dr. Jackson (Treatise on the fevers of Jamaica) observes, "that this disease seldom discovers itself among those people who have lived any length of time in a tropical country," and that "it has never been observed, that a negro immediately from the coast of Affrica, has been attacked with this disease; neither have creoles who have lived constantly in their native country, ever been known to suffer from it." These circumstances certainly should tend to make us hesitate in pronouncing this fever contagious.

8th: It is generally observed of contagious diseases, that they have a determinate period of invasion after an exposure to their cause: thus, if a thousand persons under similar circumstances, should be exposed to and receive the infection of the small-pox or the measles, at the same time, they would generally be taken with the complaint within a few hours one of another; but in this disease, this would be pinning the matter too close; the supporters of its con-

tagious nature, find their doctrine requires that it must be permitted to act at any time, between that of the exposure and the sixteenth day, otherwise it would not embrace cases enough to give it a currency. This seems to be allowing themselves great latitude, as there are but few persons during the prevalence of an epidemic in their neighborhood, that avoid every kind of connection or near approach to the diseased for as much as sixteen days together. Might not intermittents, when they occur generally in the vicinity of mill-ponds and marshes, as well be considered contagious, since few, I apprehend, could be found among such patients, but that had some time or other, and generally within two or three weeks, been near them that had that complaint, or to something that might have imbibed some effluvia from them? It may be said, that although there are but *few* cases, still there are *some* who have agues and fevers that never have been within the reach of febrile effluvia from an affected person: I answer, so are there of the present complaint; few physicians who have had an extensive practice in this city, can be strangers to the occurrence of single instances of it without any other cases existing, that could be suspected of having communicated it to them. (See page 19, note 16.)

9th. Contagions act more or less at all places and seasons, simply of themselves without the aid of any particular circumstance of air or climate; but the supporters of the yellow fever being contagious, are obliged by the force of the foregoing observations to acknowledge their imaginary fondling, at best, but a half formed monster, and perfectly inactive without being assisted by "the concurrence of a predisposing constitution of the air." (Rush on yellow fever) This fever exists only in warm weather; hence its cause in

this city was perfectly extinguished by the frosty nights in the 10th month. It is confined mostly to low situations, in thick settled places; otherwise our alms-house and the surrounding country would have sadly experienced its deleterious effects.

Let us examine a few cases which are supposed decidedly to have been caused by contagion. Dr. Malachi Treat, is said to have taken the fever from a person in a vessel that he was on board of the day before his indisposition; his complaints might as well have been assigned to having visited a patient in the Alms-house seventeen days before. But I cannot conceive why he should be singled out as a fatal victim of the effluvia of this man's body, merely from a moment's visit, while all his room-mates and continued attendants, universally escaped any inconvenience: nor do I know any reason why Dr. Treat might not have taken his complaints from the same cause as this patient did; and he was sick and died several days before the arrival of any of the vessels, supposed to have brought the seeds of the disorder to this city. Daniel Phoenix, the city treasurer, is supposed without doubt, to have taken his complaints from contagion: the corporation, some time past, having issued into circulation, for the accommodation of the inhabitants, a great number of paper penny bills, it has been concluded that he must have received contagion, through the medium of some bundles of these bills, which he opened, that had been brought to him, after having been soiled and nearly worn out, to be exchanged, and which he opened and examined to ascertain their amount some days after he had received them: the probability of those having conveyed contagion, * cannot be very striking, when we reflect,

* Although it is very possible, that he might have taken his complaint from the effluvia, that arose from these bills, highly

that he was one among the first of those that were taken. Whence then could the bills have gathered the infection to give to him? we cannot suppose them to have come from the West-India islands; but even if his indisposition and like circumstances should have occurred at a more advanced period of the epidemic, it would not to me, appear to be a very likely method of communicating contagion; for persons in that stage of the disease, which is believed to be the most infectious, seldom have much to do with handling money, or even of wearing such clothes as have pockets in them, that might possibly have contained some. It may be observed, he lived in a part of the town that soon after suffered much by this complaint.

Dr. William M. Johnson's case, is published in proof of the fever being communicated by contagion; (*Daily Advertiser*, Vol. 2, No. 3343) but I cannot conceive whence the author derives his authority for asserting that his complaints "have actually happened in consequence of intercourse with the sick." It is true, he had previously been in company with persons that had the disease, but he also resided in New-York before he was stationed at Bellevue, he consequently must have been exposed to the same general cause of the epidemic, as his suffering neighbours were; and from inquiry, I find he had

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loaded with putrefactive materials that they had collected from the hands through which they had circulated, rendered active by their being packed up together in great numbers and confined for a time in a close chest before they were opened, still it puts them only upon a par with (and in my opinion corroborates the idea of the diseases being caused by) putrefactive effluvia in general, and is far from proving them to have conveyed contagious particles from persons laboring under such a particular disease.— (See definition of contagion, p. 28.)

not left town but a few days previous to his being taken ill.

Frederick Steymets, one of the Committee of Health, supposed his complaint to be the effects of contagion, received by examining some papers that had belonged to a patient that died at Belle-Vue hospital. Is it probable, that these papers, which perhaps had not been within ten feet of the patient after his disease had put on such a serious aspect, should imbibe and convey the cause of his complaint three or four miles, while the effluvia arising directly from his body, had no effect upon those who were constantly about him, and performing the most menial and loathsome services for him? This valuable citizen's activity and perseverance in the noble cause of humanity, often led him in the most sickly parts of the city; whence, more probably, his complaints must have originated.

The "*positive facts*" insisted on by Dr. Lind, (*Diseases incident to Europeans in hot climates*, page 195) I consider as very exceptionable proofs of the contagious nature of this fever, for although an infected person came on board one of the floops of war which lay in the river Gambia, two or three days before the sickness began in them, yet it is very likely they would have been sick at the same time had he not come on board, as they had not been but eight or ten days in that river, for the same author observes that symptoms of indisposition in some instances, do not occur till twelve days after having received a taint from the land air. Robertson's case (p. 195) is by no means conclusive; the little spasmodic shock that he sustained, being, no doubt, an accidental occurrence; which, had it happened at any other time, perhaps never would have been noticed; his being taken

with a fever soon after, proves nothing but that the feeling the pulse of a person dying, did not prevent him from getting a like complaint from the operation of causes that had been previously applied. Nor is what occurred on board the Merlin sloop (page 196) more satisfactory: all the conclusion that I can draw from them, is, that different classes of the men, were taken earlier or later with their complaints, according as they had been more or less exposed to the noxious land air.

To these remarks may be added the observation of the experienced Dr. Hunter, (Diseases of the army in Jamaica) when speaking of the yellow fever, that "It is a matter of some consolation in the history of so grievous a disease, to be able to say with certainty, that it is not contagious."

It has been said, and I suspect with too much truth, that were all the physicians in this city to assert, that our late autumnal epidemic was not contagious, they would not be able to make the people in general believe them, since so many think they are well acquainted with decided proofs of its being so. This, however, will not carry a full conviction to the minds of the more considerate and reasonable part of the community, since the most popular opinions are not always the most just. I suppose were all the faculty in America to unite, and declare their disbelief in the power of the imagination to mark the *fætus in utero*, that they could not persuade the generality of women, but that, crossed appetites, unsatisfied cravings, and frightful sights, will patch their offspring with roast pig, plumb cakes, strawberries, &c. or give them hare lips, stain them with bloody spots or something of the kind; for most of them fancy they have facts enough within their own knowledge, fully to sup-

port the opinion of that most influential operation of the mind.

Should it be asked, whence could the general idea of this disease being contagious, have originated? I answer, perhaps from no better foundation than the popular belief in witchcraft arose, in a part of Massachusetts about one hundred years ago, as well as in different parts of Europe sometime before, i. e. from the credulous fears of the people, worked upon by the erroneous opinions and publications of influential personages*. Nineteen persons were executed in and about Salem in 1692 from this demoniacal delusion, and no doubt, but ten times that number have been shamefully permitted to die of the yellow fever in Philadelphia† and New-York, in consequence of neglect from the fear of contagion, when perhaps the unhappy sufferers, were as free from the power of afflicting their friends, as the New England witches were.

* Hutchenfon's Essay concerning Witchcraft.

† See Carey's Account of the Malignant Fever in Philadelphia, 1793.

METEOROLOGICAL OBSERVATIONS,

MADE BY GARDINER BAKER, AT THE EXCHANGE IN

THE CITY OF NEW-YORK, IN 1795.

Sixth Month (June)

Days of the Month.	Thermometer observed at			Prevailing winds.			Observations on the weather.	
	8 A. M. deg. hun.	1 P. M. deg. hun.	6 P. M. deg. hun.	2.	1.	6.	A. M.	P. M.
1	57	69	65	N W			clear	
2	65	70 50	62	W	S W	N W	rain	
3	58 50	73	74	N W			clear	
4	67 50	73	67	N	S		do.	
5	63	76 50	76 50	S W			do.	
6	71 50	79	75	W	S		do.	
7	74	72 50	67	N	SE		do.	
8	64	67	65	N E			do.	cloudy
9	66	78 50	77	S W			do.	
10	71 50	79	74	S W			do.	
11	65	65	62	N E	SE	E	rain	do.
12	62	65	60 50	E			clear	
13	61	66 50	60	SE			do.	
14	58	60 50	59	N E	SE		cloudy	clear
15	63 50	71	69	N W			clear	
16	72	78 50	76	N W	SE		cloudy	clear
17	59	65	61	N W	SE		do.	
18	67	79	77 50	S			clear	
19	75	87	79 50	S			do.	
20	66	74 50	68	S			rain	
21	71	76	76	S W			clear	
22	70	75	73	S W	S	W	cloudy	
23	72	76 50	73 50	W	S	SE	clear	
24	69	74 50	70	N E			do.	rain
25	65	69	68	N	N W	N	cloudy	do.
26	63	73	72	N W			do.	clear
27	66	76	76	N W		W	clear	
28	70	80 50	77	N W		E	do.	
29	73	74	73	SE	S		do.	
30	72	73 50	69	S			do.	rain

METEOROLOGICAL OBSERVATIONS,

MADE IN THE CITY OF NEW-YORK, IN 1795.

Seventh Month (July)

Days of the Month.	Thermometer observed at			Prevailing winds.			Observations on the weather.	
	8 A. M. deg. hun.	1 P. M. deg. hun.	6 P. M. deg. hun.	8.	1.	6.	A. M.	P. M.
1	71 50	75	72	S S E			cloudy	lt. wind
2	68	70	66 50	S E	E	N E	do.	do.
3	66	71 50	68	E	N E		rain	
4	65	69	67 50	N E	E		cloudy	
5	67	69 50	68	S E	S		clear	lt. wind
6	68	83	82	S	S W		do.	
7	65	71 69	50	N			thund.	& light.
8	68 50	79	77	N		N W	clear	hi. wind
9	71 50	84	80	S W		W	do.	
10	76	86	78 50	W		N W	light.	and rain
11	75	82 50	76	W		S	clear	lt. wind
12	77 50	89	87	S			do.	
13	70 50	85	87	N E		S W	do.	
14	71	82	81 50	N		N E	do.	lt. wind
15	72 50	77	73	N	S E		do.	
16	73 50	77	72	S E	W	S W	do.	
17	74	78 50	76	S W		S	do.	
18	74	82	76 50	S W	S	S W	cloudy	th. rain
19	79	84	87	S W			clear	lt. wind
20	77	87 50	82	W		S	do.	
21	77	81	76	N E	S		do.	lt. wind
22	76	85	88	S		W	cloudy	
23	74 50	78	74	S	N E	S E	do.	th. & lig.
24	73	75 50	74	N E			rain	cloudy
25	78	80	74	N		E	cloudy	lt. wind
26	71	76 50	73	E		S E	do.	clear
27	70 50	73 50	69 50	S E		N	do.	rain
28	69 75	79 50	78 50	N	N W		clear	lt. wind
29	73	78	74	N E	S W		do.	
30	69 50	67 50	66	E	N		do.	rain
31	72 50	73	73	E	N		gt. rain	

METEOROLOGICAL OBSERVATIONS,

MADE IN THE CITY OF NEW-YORK, IN 1795.

Eighth Month (August)

Days of the Month.	Thermometer observed at			Prevailing winds.			Observations on the weather.	
	8 A. M. deg. hun.	1 P. M. deg. hun.	6 P. M. deg. hun.	8.	1.	6.	8.	1.
1	73 25	80	77 50	W	SE	S W	cloudy	
2	79 50	86	78	SW	S		clear	
3	73	71 50	74	E	SE		ftorm	& rain
4	77	82	80	W	NW		cloudy	lt. wind
5	80	88 50	83	W		S W	clear	
6	80	89 50	86	W			do.	
7	82	93 50	84	W			do.	
8	82 75	87	78	W	SE	W	do.	
9	79	87	82 50	S	S W		gt.rain	
10	80 50	87	78	W	S W		clear	rain
11	75	79	76	N E	SE	S	cloudy	lt. wind
12	74	80	75	NW		SE	rain	
13	69	75 50	75	N			do.	
14	69	71 75	72 50	N E	S W		cloudy	
15	71	73 50	73	N E	S W		clear	
16	69	78	77	S W		W	do.	
17	75	85 50	76	NW		W	do.	
18	79 50	88 50	82 50	S W	NW	W	do.	lt. wind
19	77	86	82	W			do.	
20	79 50	88	63	W		N	do.	rain
21	57 50	60 50	59	N	N E		rain	lt. wind
22	61 50	66	67 50	N E			cloudy	do.
23	66 50	68 50	68	N E	SE	E	do.	rain
24	69	71	70	E	SE		do.	
25	73	81	77	SE		S W	clear	lt. wind
26	76	84	77	N	S	SE	do.	calm
27	75	81	74	SE	S	SE	do.	
28	72	79	76	S			do.	
29	73 75	82	80 50	S			cloudy	
30	76	85	79	S			do.	clear
31	78 75	74	72	S			clear	rain

METEOROLOGICAL OBSERVATIONS,

MADE IN THE CITY OF NEW-YORK, IN 1795.

Ninth Month (September)

Days	Thermometer observed at			Prevailing winds			Observations on the weather.	
	A. M. deg. Fan.	P. M. deg. Fan.	C. P. M. deg. Fan.	E.	N.	W.	A. M.	P. M.
1	72	75	77	W	N		cloudy	lt. wind
2	66	70	70	NE			rain	high dc.
3	65	71	71	W			clear	
4	64	75	73	NW			do.	
5	67	74 50	72	NW			cloudy	
6	70	75	73	NW			clear	
7	68 50	74		N			rain	
8	71 50	78	77	S	SV		cloudy	lt. wind
9	75	83 50	77	NW			clear	
10	75	82	76	NW			do.	
11	74	84 50	79	SE	W	W	do.	
12	63	70	67	N	N	E	do.	
13	68	66	70	SE			cloudy	rain
14	72 50	81	80	S			do.	
15	75 50	85 50	82 50	SV	S		do.	clear
16	76	87	82	SE			do.	do.
17	68 50	79 75	72 50	NE			do.	do.
18	77	78	76	S			clear	lt. wind
19	60	65 50	64	S	SV		rain	
20	60	68 50	68	S	W		clear	rain
21	53 50	61	67	NE			do.	lt. wind
22	43	52	67	S	NV		do.	do.
23	53	63	66	W			do.	lt. wind.
24	57	66 50	64	W	W		do.	high dc.
25	58	73	72	W			do.	
26	62 50	72	75	NW	SE	SE	cloudy	
27	66	63 75	67	W			do.	
28	66	73 25	70 50	W			clear	lt. wind
29	63 50	62 25	62	W			cloudy	
30	50	60 75	60	N			clear	lt. wind

METEOROLOGICAL OBSERVATIONS,

MADE IN THE CITY OF NEW-YORK, IN 1795.

Tenth Month (October)

Days of the Month.	Thermometer observed at			Prevailing winds.			Observations on the weather	
	8 A. M. deg.	1 P. M. deg.	6 P. M. deg.	8.	I	6.	A. M.	P. M.
1	56	70	66	NW	NE	S	clear	lt. wind
2	57	61 50	60	N	E	E	cloudy	
3	55 50	63 50	62	E	SE		clear	
4	65 50	72 50	67 75	S		SE	do.	
5	65	75	69	S		SE	cloudy	
6	62	67 50	66	W	S	W	clear	
7	57 50	67	65	W		S	cloudy	rain
8	54	54	55	NW			do.	
9	51	62 50	61	NW	W		clear	
10	48 50	63	61	W		S	cloudy	rain
11	60	69	65	NW	W		do.	
12	55 50	66	66	W			do.	lt. wind
13	60	71	66	S	SW		do.	do.
14	61	68	68	S	W		do.	
15	65	66	71	S			do.	diff. thur.
16	52 50	62	60	W			clear	lt. wind
17	58	49	52	SW	W		cloudy	high do
18	42	54	50	W	S	W	clear	
19	38 50	49 50	49 50	W		S	do.	
20	55	62 50	55 50	S		NW	rain	
21	46	52 50	53 25	N		NE	clear	
22	44 50	53 50	55	NE	S	E	cloudy	c. wind
23	55	61	59 50	N	E		rain	
24	52 50	63 50	58 50	NW		W	clear	
25	47	57	57	W			do.	
26	47	54 50	55	W	N		do.	lt. wind
27	43	58 50	54	N	S	W	do.	do.
28	49	60 50	60	S	W	W	do.	
29	52	70	66	W			do.	
30	55	69	61	W		S	do.	
31	52 50	55	54 50	S	W		foggy	rain

The Cause of the Fever, and the most probable method of preventing its return: likewise, the Precautions to be used to avoid an Attack, if it should again become Epidemic.

On the sixth of August, 1795, I received a note from John Broome, Chairman of the Committee of Health, “earnestly soliciting me to give them every aid in my power, by my prudent advice, &c. for the accomplishment of the important end of their institution.” In consequence of which, a few days after, I made him the following communication.

‘ That a malignant fever exists among us, is a melancholy certainty, well-known to the Committee of Health; that this fever, in itself, is of a dangerous nature, there can be no doubt; but whether it is contagious or not, is a question yet undetermined. I have not known or heard of a single well attested proof, of any person taking the complaint from another that was affected with it.

‘ My *advice* is, that the Committee, while they continue their unremitting and benevolent exertions, in preventing the introduction of infectious diseases from abroad, settle not in a false security, and neglect the causes of diseases that may exist in the city. It is from the unguarded operations of these inwalled enemies, that I conceive we have to apprehend the greatest danger.

‘ If I have been rightly informed, a great proportion of the persons, that have at this season been affected with fevers of a suspicious nature, has been

‘ confined to those whose residence or occupation
 ‘ has obliged them to pass a considerable part of their
 ‘ time between Peck-slip and the New-slip. If so, it
 ‘ certainly is a matter of consequence, to know, whe-
 ‘ ther in this part of the city, there is not some local
 ‘ cause that may induce so fatal a malady.

‘ That putrifying substances, after a continuation
 ‘ of very warm weather, will give rise to such com-
 ‘ plaints; the fatal operation of the dock mud de-
 ‘ posited at Peck-slip in 1791, the putrid coffee in
 ‘ Philadelphia in 1793, and the noxious exhalations
 ‘ from the creek in New-Haven in 1794, sufficiently
 ‘ prove, without the aid of many other equally cer-
 ‘ tain, though more remote facts, that might be ad-
 ‘ duced in its support if necessary.

‘ On these principles I have been led to search into
 ‘ this part of the town, for the cause of the present
 ‘ complaint, and I believe my inquiries have not been
 ‘ in vain: I suspect that I have discovered a fruitful
 ‘ matrix generating the seeds of this complaint, and
 ‘ which if not properly cared for, may possibly spread
 ‘ mortality in its vicinity.

‘ A few years ago the Corporation have had Wa-
 ‘ ter-street, between the two beforementioned slips,
 ‘ filled up, without obliging the proprietors of the
 ‘ property on the north side of the street and in
 ‘ Cherry-street, to fill up their yards even to a level
 ‘ with it. Hence, the refuse water and offal sub-
 ‘ stances, from the families occupying these places,
 ‘ are left to stagnate and putrify; and what renders
 ‘ it particularly distressing, is, that the healthful show-
 ‘ ers, that in general wash away all such matters from
 ‘ other places, here only tend to render them more
 ‘ active; for by the water not running off, it dissolves

‘ and prepares them, thus pent up, for entering into
 ‘ their pestilential fermentation. Our regular and
 ‘ heavy rains, perhaps have been one great remote
 ‘ cause of the frequency of these distressing diseases,
 ‘ in this neighborhood at this season.

‘ It may be worthy of remark, that many of these
 ‘ tenements contain several families; hence an addi-
 ‘ tional cause for putrefactive materials.

‘ I make no apology for giving these hints to the
 ‘ Committee; the impression of their importance on
 ‘ my mind, rendering it a duty: the hurry of an ear-
 ‘ ly communication, amidst frequent professional in-
 ‘ teruptions, must answer for their incorrectness.”

‘ With a sense of respect and esteem,

‘ I remain thy friend and fellow-citizen,

‘ VALENTINE SEAMAN.”

New-York, 8th month }
 (August) 17th, 1795. }

The cause of the disease as above suggested, not being removed, its effects, in full support of my apprehensions, truly “spread great mortality in the vicinity,” as is seen by its history in the foregoing observations.

This early idea of the origin of the epidemic, constantly gained confirmation from the manner in which it increased: it appeared to be almost entirely confined to the level south-eastern part of the town, and there it was the most general and fatal, in the particular situations that mostly abounded with these

pools of putrefactive exhalations. Thus it first became the most general in and about the lower end of Dover-street: this is what might reasonably be looked for when we consider that besides all the lots fronting this street being sunk beneath the common level of it, there are also on the docks at its lower end several store-houses and granaries, built partly over the water on piles, without having the space under them filled up; the foundation of some of them, on the sides fronting the water are partitioned up so as to prevent the free circulation of the tide from washing away any thing from under them; however, these partitions were not so tight but that they let in water sufficient to favor the fermentation of the putrefactive materials that such a common receptacle will always collect, not only from exterior sources, but also from the showers of grain that frequently would pour down through holes that the rats sometimes would gnaw in the floor. Hence there can be no wonder, that the seeds of this disease should ripen in such a hot bed of putrefaction, aided by the effluvia emitted from the great flats of mud in the several surrounding impaired docks, left bare during the recess of every tide. It is remarkable that several persons employed in a large grain store-house, thus situated over such a source of noxious miasmata, were among the first victims of this disease.

The disease soon increased; numbers were taken in every part of that quarter of the town, lying between the upper part of Water, Pearl and Chatham-streets, and across to the lower part of George-street. From an attention to the subject not only during the hurry of the epidemic, but also since its extinction, I am led to believe according to my best judgment, that four fifths of all the lots in this affected part of the city, were situated below the level

of the streets they fronted, whence from our regular rains, they very generally became stagnant, putrid mud puddles. I can hardly think it possible, was it not for the obstruction of the houses preventing a free observation of these grounds, that any candid person acquainted with the common causes of fevers, could harbor the least doubt after walking through this part of the town, but that the epidemic originated from this source, rendered active by the continued excessive heat of the sun during the last summer. It raged with peculiar violence in the parts that were near the docks; this is what might be expected from the additional vapor of the dock mud as above-mentioned. It also was very fatal in a part of George-street, "not less than sixty persons were buried out of it within the small compass of twenty houses." This was probably owing to the poisonous steams discharged from large quantities of street dirt and manure, collected during the summer and deposited near the head of it, subjoined to the common causes above-mentioned. Its fatality to the West of Peck-slip was induced, no doubt, by the noxious vapors from the putrid sink there. The reason of its prevalence about the Fly-market, can seem no ways strange to any one acquainted with the situation of that place, the market being built over an offensive sewer, whose exhalations were confined only by an imperfect board floor, to which may be added, the effluvia constantly arising from the putrefying animal and vegetable matter all around, as well as from the slip that puts in at it. Skinner-street is lowly situated, unpaved and very imperfectly drained.

That putrefactive effluvia will give rise to, and are the common cause of such diseases, is clearly proved by the accurate observations of the most judicious wri-

ters on the diseases of hot climates. Lind's valuable book of interesting facts (Essay on the Diseases of hot climates) abounds with proofs of this disease being caused by the air from the low lands in the West Indies; he particularly mentions, that it often raged in the Greenwich Hospital at Jamaica; which, as he observes, was unfortunately built near a marsh, and that it could not proceed from any source of infection in the hospital. Dr. Hunter says (Diseases of the army in Jamaica) ships lying at Port Royal in Jamaica, on moving and taking their station higher up the harbor, have in a few days become sickly. "The men, says he, have been seized with fevers owing to the low swampy lands along shore, and at the head of the harbor, from which last the exhalations are carried every morning towards the ships, when the regular sea breeze sets in, as is perceived by the bad smell which accompanies it." He says that there are examples, where out of sixty or seventy men, employed in filling the water casks, not one has escaped a fever, from the watering place being wet and swampy. The same author observes, that Fort Augusta, which was at other times a salubrious situation, became sickly in 1783, the sea that year having risen higher than usual, so that it overflowed the whole of the ground on which the fort stands, near a foot above the surface in some places, and on ebbing left much slime and ouze. "A few days after this, many of the men were taken with fevers." Dr. Jackson (Treatise on the Diseases of Jamaica) as well as a host of other authors, might be brought if necessary, to prove that putrid exhalations are the common causes of epidemics. The above facts, together with the many others adduced by Dr. Rush (Account of the Yellow Fever &c.) in their support, appear to me to be sufficient

to establish that opinion with every unprejudiced person—which if allowed, no one acquainted with the situation of the part of this city where the yellow fever raged as above stated, can have the least doubt but that it was owing to like causes, without the necessity of ransacking West India vessels or innocent bags of cotton, for that which is within ourselves, and whose very essence perhaps, is such as proves it not to be of a transportable nature*.

Many of the strenuous supporters of the contagious nature of this disease, compelled by the force of the foregoing circumstances, acknowledge, that the disease may be caused by other means, however they cannot *entirely*, give up this favorite opinion, but persist in asserting that contagion often does induce the disease, when the foregoing state of the air favors its operations; and they defy any one to prove that it does not. To prove a negative is always difficult, such a one, perhaps impossible. But since the only proof we can have of the existence of a cause, is the necessity of it for producing known effects, and since we are to admit, (according to Newton's first philosophic precept) no more causes than are sufficient to explain the appearances, and, as has been observed, (Pemberton's view of Newton's philosophy) "When one cause is sufficient, if there
 " really should in nature, be two, which is in the
 " last degree improbable, we can have no possible
 " means of knowing it, and consequently ought not
 " to take the liberty of imagining, that there are

* It has been observed by Dr. Rush, in Vol. I. of his Med. Observations, as well as by Dr. Lind, that musquitos generally attend a sickly season—the same was observed here during the last summer: the cause is very clear, for circumstances favoring the rise of putrid miasmata, equally favor the generation of these insects.

“ more than one.” Now, therefore, as the above suggested cause of our epidemic seems fully sufficient of itself to produce it, nothing can be more unphilosophic or imprudent than to suppose, that contagion ever had any thing to do with it.

The most probable means of preventing a like calamity in future will be—1st, To have all the lots, particularly in the low parts of the town, filled up, so as to afford a sufficient descent to carry off the water into the streets, and not permit any of it to stagnate in them. 2d, To have the dirt and filth in the streets and yards more carefully and frequently cleared away. 3d, To have the docks repaired and regulated in such a manner, as not to permit the mud to gather and be exposed to the sun at the ebb of the tide. 4th, To have the spaces under the granaries and storehouses on the docks, properly filled up or walled in. 5th, To prevent great quantities of street-dirt and manure from being collected in heaps, and left for any time on the vacant lots, in and about the city. 6th, To have the streets properly paved with a sufficient descent to prevent any water from standing in them; and 7th, To have the common sewers, in good order and well covered. An attention to these circumstances, no doubt, will prevent the return of a like epidemic in this city; for, as I suggested some time since to the corporation, “ whether the disease “ is contagious, or whether it was imported or “ not; this one fact seems to be pretty firmly established, that it never has *spread*, but by the influence “ of putrefactive effluvia.”

If, either from a neglect of the foregoing precautions or from any other causes, the yellow fever should again become prevalent in any part of this

city, it certainly would be most prudent for such as have it in their power, to remove from it; or if unavoidable circumstances, or the calls of humanity should render it necessary for some to continue there for a part of the time, let them if possible, shun the night air, as the harbinger of death, and especially to avoid sleeping in that neighborhood, as they value their lives; for perhaps in the relaxed hours of rest, the epidemic miasmata may act with redoubled force. Dr. Lind's instances clearly shews the particular danger of sleeping within the limits of the contaminated air; many persons having been taken with the complaint, after having slept a night on shore in the low ground, while others, who had passed a considerable time there during the day, and always returned to the vessels at night, generally escaped it.

Besides, keeping from the night air of the epidemic neighborhood, and the sleeping in a healthy part of the town: all persons who are forced to pass some of their time in the contaminated atmosphere, should avoid with the most scrupulous attention, excesses of every kind; not only of eating and drinking, but also of heat, exercise and watching. But I wish to be understood, not to mean a rigid abstinence from, or a restriction with respect to these things; but only to advise moderation and regularity in the use of them, because it is likely that a very low diet and the entire neglect of wine, with them who have been accustomed to it, as well as cold, inactivity, too much sleep, fear, &c. may as effectually predispose to this complaint, as their opposite extremes: I believe the more regularly we support the natural healthy tone of our bodies, the more powerful they will resist the causes of diseases applied to them.

The observation of Dr. Lining must be a great satisfaction to those who have once suffered with this disease. He says (Essays and Observations, Physical and Literary, vol. 2.) “ It is a great happiness that “ our constitutions undergo such alterations in it, as “ forever afterwards secures us from a second attack.” He certainly had a good opportunity of knowing whether it did or not, as it raged four times in Charlestown, South-Carolina (the place of his residence) within sixteen years. In the West-India Islands an attack of this disease, which seems almost entirely confined to persons from more northern climates, is called a *seasoning*, and after which, if the patient recovers, he is supposed to be pretty secure. I never have known of any person having had it twice decidedly ; perhaps some instances supposed to have been that fever, were only common remittents. Dr. Rush says, (Medical Observations, Vol. 2.) that “ during the prevalence of the measles, he as well “ as Dr. Quier, observed several persons (who had “ had that disease, and who were closely confined to “ the rooms of persons ill with it) to be affected with “ a slight cough, sore throat, and even sores in the “ mouth.” And what are called nurse pocks, are no rare things with persons (who have previously had the small pox) that have much to do with patients in that disease : so also is it possible that some people may suffer a slight indisposition from the cause of this disease, after having had it once, which perhaps ought not to be considered as a full attack of it. It may be that the great debility, remaining after a complete removal of this disease, may predispose to an attack of some other, perhaps of a fever of a different nature, that might even prove fatal, so like consequences might follow a severe attack of the small pox and no one would consider this as a return of the disease. Notwithstanding these remarks are not en-

tirely conclusive with me, yet they have so much influenced me, in the opinion of the impossibility of taking this disease more than once, that should it again become epidemic here, although I could not again venture among it with less hesitation than heretofore, I certainly should with much less apprehension.

METHOD OF CURE.

In the treatment of this, as of all other diseases, the first object should be to remove their cause; for although in some instances, the human body by habit may be enabled to resist the effects of injurious impressions, and even by proper means to recover itself after morbid effects are inducted, while the cause still continues; yet that physician would be considered very deficient, who would undertake to cure an *ophthalmia* caused by residing in a smoky apartment, or the *cholera infantum*, originating from the impurity and heat of the city air, without first advising his patients to remove from such an obnoxious situation, for although he might sometimes succeed in his attempts, yet it certainly would be attended with more difficulty and uncertainty; so also is it in the yellow fever; hence in this disease it is of the highest importance to have the patient removed, as soon as possible, out of the reach of the original cause of his complaints, into a more salubrious atmosphere; a neglect of this perhaps was one main reason of the great fatality of this epidemic; therefore, should it again prevail, it would be of the utmost consequence, for those whose circumstances would admit of it, to secure a proper asylum in case of an attack, and the poor ought to be industriously sought after and earnestly advised, early in their complaints, to remove to such places as the police may prepare for their reception. It may be remarked, that but a small pro-

portion died at Belle-vue who went there in the early stages of their diseases.

Whether the original cause be removed or not, the next indications are,

1. To obviate the restricted state of the bowels, and clear the alimentary canal of the super abundant bile that seems to attend the disease.
2. To use all means in our power to obtain a remission of the fever; and
3. During the remission, to restore the tone of the system so as to prevent a return.

Whether the *seat and throne* of this disease is in the stomach and bowels, according to Dr. Warren, or not, it must be acknowledged that it is in a great degree upon a particular attention to them, that the hopes of a cure depend, as it is upon a particular morbid affection of them that the greatest danger is to be apprehended. To fulfil the first indication, a sufficient dose, viz. ten or twelve grains of calomel, with as much jalap or rhubarb, should be exhibited immediately and repeated every six or eight hours, till it purges freely; its operations should be favored by the plentiful drinking of warm chicken or barley water or gruel, and keeping warm in bed; by these means oftentimes a free perspiration is brought on, and the second indication is accomplished at the same time; an almost complete remission being the consequence.

Let no one fear the largeness of the dose of the purgative, or its early repetition as above recommended, for in no disease perhaps is it of more consequence to obtain the speedy operation of medicine

than in this; it is probable many lives have been lost from the cautious timidity of Physicians, in giving but small and repeated doses of cathartics, till the disease stole on to that stage wherein the great irritability of the stomach utterly refused to retain any more of it, before they have given a sufficiency effectually to evacuate the intestines.

If a remission does not succeed to the operation of this medicine, but symptoms of great excitement, with violent pain in the head, &c. particularly in persons of a full habit of body, with a plenitude in the vascular system, bleeding undoubtedly promised and proved of the most essential service, and ought by no means to be neglected; but I do not wish to be understood to recommend the indiscriminate use of the lancet by any means, for there are innumerable circumstances, both as they relate to the previous state of the patient, as well as to the existing symptoms, that should always govern the judicious physician in the use of this most powerful remedy.

After the operation of the purgative, if the degree of excitement or tone in the vascular system, should not justify the losing of blood, or if as much has been drawn as the state of the patient may render adviseable, and still there remain a degree of tension in the pulse, a dryness on the surface, &c. a sudorific draught of half an ounce of *spt. minderer*, with twenty drops of *tinct. thebaic* has often been exhibited with the happiest effects; a sweat generally succeeding with a considerable remission of all the symptoms; in conjunction with the sudorific portion, the patient should have his feet and legs fomented with flannels wrung out of warm water, for as long as half an hour at least; he should also favor its operation by a plentiful dilution with the beforementioned drinks.

The use of antimonial medicines have been greatly recommended in this state of the disease, to bring on a remission; but I confess, in the few instances wherein I made trial of them, they did not answer my expectations, the state of the stomach generally being such as would not bear even the smallest doses of them.

For the violent pain in the head attending this first stage, nothing seemed more effectual than the constant application of linen cloths, wetted with cold vinegar and water to the forehead and temples, and changed as soon as they became warm.

I know not whether Dr. Jackson's method of using the *warm* and *cold bath* alternately, has been practised by any physicians of this city; but the dashing of *cold water* over the body, and afterwards drinking plentifully of a strong infusion of *rad. serpentar.* has been much cried up by some; I used it in but a single case, and although the patient was particularly attended to, yet the looked for sweat and remission did not succeed; this was nevertheless, accomplished afterwards by the partial application of cold vinegar and water to his forehead.

After the bowels were properly evacuated and a remission obtained, I lost not a moment's time, but immediately applied to the use of the *bark*, in doses appportioned to the state of the stomach, half a drachm, if it would retain so much, was given every two hours, otherwise half that quantity was given and increased as the stomach would bear it; it was exhibited in milk and water or some of the drinks before-mentioned, which ever was most agreeable; a few drops of the acid *elix. vitriol* with each dose of the bark, sometimes would make it more agreeable to

the stomach; it seems hardly necessary to mention that in this case it must not be given in milk. When the bark in substance could not be retained, the cold infusion was substituted in doses from half an ounce to an ounce, according to circumstances, and repeated every two hours or oftener if it sat well on the stomach. At the exacerbations of the fever, the use of these remedies was often suspended, and the means beforementioned were applied to, till a degree of remission was again obtained, when the use of the bark, &c. was again resumed. When the patient was costive, he had a few grains of rhubarb united with each dose of his bark, till that state was obviated.

The acid *clix. vitr.* was used with advantage during the remission of this disease, particularly if hemorrhages attended it. I have already mentioned it, as useful in making the bark sit easy on the stomach; but in case the bark should be retained well without it, it then would perhaps be better to administer it between the times of taking that medicine; it may be that this acid, while it covers the bitter taste, may likewise tend to lessen the tonic effects of the bark.

Generally, if the abovementioned means were not used, and frequently notwithstanding our greatest attention, about the third or fourth day, the second stage of the disease would be ushered in with pain and constant sickness at stomach, particularly upon swallowing any thing; an epispastic was often applied to the scrobiculis cordis in this situation, and sometimes with advantage; some others received benefit from using warm fomentations to the part. Laudanum was rejected; but in some instances I thought a grain of solid opium was administered

with good effects, and small bleedings seemed sometimes useful; this, however, as well as all other means, often failed, the stomach throwing up every thing that was taken into it. In this desperate state, our last refuge was to the bowels, and our only dependence appeared to be upon the plentiful exhibition of our remedies *per anum*, half an ounce of powdered bark, with a gill of milk, chicken soup or beef tea, and twenty-five or thirty drops of laudanum, make a proper injection for this purpose; it should be repeated at least twice a day. This means no doubt has preserved the lives of many; should the bark be retained in the bowels till the period of administering the third dose, it would be adviseable to bring it away by a common injection of warm water, before that is given.

From observing that none died who were affected with a salivation, I attempted in several instances to induce that affection, by rubbing the gums with calomel and using mercurial frictions; but as these attempts were made only in the latter stages of desperate cases, I never succeeded. May not mercurial frictions be advantageously used from the commencement of the disease to produce this affection?

The diet of the patient in this disease, should be of the mildest nature; panado, chicken soup, beef tea, roast apples and milk, tapioca, &c. appeared to agree best with the delicate situation of the stomach, and perhaps were the most proper food that could be taken.

In the convalescence, a continuance of the bark and elixir of vitriol, a more nourishing diet of roasted oysters, beef-steakes, porter, &c. together with

moderate exercise in the country air, were the most effectual means of restoring the lost tone to the debilitated systems of those who happily survived the effects of this most dreadful disease.

FINIS.

L E T T E R S

TO

W I L L I A M B U E L, P H Y S I C I A N,

ON THE

F E V E R W H I C H P R E V A I L E D I N N E W -
Y O R K, I N 1795.

B Y E. H. S M I T H

TO WHICH IS PREFIXED,

A N A C C O U N T O F T H E F E B R I L E D I S E A S E S O F S H E F F I E L D,
(M A S S A C H U S E T T S) I N T H E Y E A R S 1793, 1794 A N D 1795.

B Y W. B U E L.

ACCOUNT OF THE STATE OF NEW YORK

FOR THE YEAR 1841

ALBANY: PUBLISHED BY VAN NORDEN, BROS. & CO. 1841.

THE STATE OF NEW YORK,
IN SENATE,
JANUARY 1842.

REPORT OF THE COMMISSIONERS OF THE LAND OFFICE,
IN ANSWER TO A RESOLUTION PASSED BY THE SENATE,
MAY 18, 1841.

ALBANY: PUBLISHED BY VAN NORDEN, BROS. & CO. 1842.

ACCOUNT OF THE FEBRILE DISORDERS
WHICH PREVAILED IN SHEFFIELD, IN THE STATE
OF MASSACHUSETTS, IN THE YEARS
1793, 1794 AND 1795.

EXTRACTED FROM A LETTER OF WILLIAM BUEL,
PHYSICIAN AT SHEFFIELD, TO E. H. SMITH,
PHYSICIAN, OF NEW-YORK.

BEFORE entering directly on the subject of the disorders, which prevailed here in 1793, 1794 and 1795, I shall mention some circumstances relative to the face of the country in the Town of Sheffield.

The river Houfatonak runs in a serpentine course through this town, from North to South. Upon the banks of the river, on each side, is an extent of intervale, or meadow land, averaging on both sides at about a mile in breadth. The greatest part of this intervale is overflowed at the time of the thawing away of the snow, in the spring; and sometimes, by large and sudden freshets, at other seasons. The nature of the soil, in general, is such, that, very soon after the water is off, the land is dry and fit for tillage. It is, however, much interspersed with coves and marshes; in the former of which the water remains stagnant a considerable part of the summer, and in many of them perpetually; of the latter there are not many upon this river, but there are some which remain such through the season.

Beside the Houfatonak, there are two other considerable streams, running through part of this town, which unite and empty into that river. Upon each of these streams are large tracts of low, marshy lands; great part of which is overflowed by freshets, and is never perfectly dry.—There is (which is very material) a mill-dam, on each of these streams; and the two dams occasion the overflowing of several hundred acres of the low lands. As summer advances, and the ponds fall, considerable parts of these lands are left uncovered by the water; more or less, according to the drought of the summer. In both of these ponds are large quantities of timber and other vegetable matters, which, in hot weather, are always in a state of putrefaction. This state exists in an increased degree as the substances become more exposed to the action of the sun. The fœtor occasioned by this putrifying mass is such, in hot weather and when the water is low, as to be extremely offensive to the smell, at the distance of many rods.

The inhabitants of this town, who live in the vicinity of these marshy and drowned lands, have, as would naturally be expected, been always subject to remittent and intermittent fevers, from its first settlement. It is, however, generally remarked by the old people, that these disorders have of late years—until the three last—decreased: owing, probably, to the clearing, or partial draining, of the lands.

Although the disorders which have prevailed in this town, for two or three years past, are owing undoubtedly, principally to these local causes; yet it is not improbable that some predisposition to them was occasioned by a general constitution of the air. To ascertain this point, with any degree of precision, we ought to have before us an accurate history of the

weather, for several years past. Even then it would, perhaps, be impossible; as it has ever been found a difficult matter to trace any connection between the manifest qualities of the air, and the effects of a general constitution of it, favorable to disease. As I am unable, either from minutes, or memory, to give any account of the weather, I shall leave the matter unattempted.

In the year 1793, during the season in which such complaints usually appear, intermittents and their concomitants were more frequent than they had been for many years before. In September and October, there were a few scattering instances of bilious fevers.

Early in the spring of 1794, inflammatory complaints, chiefly of the pneumonic kind, were unusually prevalent. They were soon succeeded by intermittents; which were more frequent than they had been the year before. Nothing peculiar attended them; and they continued to occur pretty often through the summer.

Towards the last of July, the bilious, or, as it is called here, the pond-fever, began to make its appearance; principally about the South Pond, one of the mill-ponds beforementioned, and near the Canaan line. There were some scattered instances about the North Pond: and a few, which were at such a distance from both, that they were, probably, occasioned by the stagnant water about the great river, the Houfatonak. But the disorder was chiefly confined to the vicinity of the South Pond. The influence of this pond appeared to extend about one mile and a half from its borders. Within this place there are about 150 inhabitants; and about 80 of this number

were affected with the fever: part of them inhabitants of Sheffield, and a part of Canaan. Among those who were sick, there were five or six instances of mortality. There were not more than ten or twelve persons who had the disorder in other parts of this town. From these there was but one death; and that in a case complicated with pregnancy, and eventually with phthisis pulmonalis. People continued to be attacked with this fever through the months of August, September and a part of October.

The disorder was, probably, in all respects, what is termed a bilious remitting fever. It began with an ague fit; intense pains in the back, head and limbs, soon succeeded by thirst, dryness of the skin, &c. continuing without much variation 18 or 20 hours: a slight moisture then broke out upon the skin—seldom a profuse sweat; a degree of remission of the fever, and abatement of the pains, then ensued, and continued till about the time of day of the first attack, when another exacerbation of fever commenced, with symptoms similar to the first. If the disease was left to itself, the remissions would sometimes become shorter and more imperfect, as the paroxysms were repeated, until it grew to be nearly or quite a continued fever. A diarrhea, and sometimes dysenteric symptoms were added to the rest. Most of those who died were attended with a preternaturally lax state of the bowels; which, in several instances, might properly be called dysenteric. The tongue was, from the first, covered with a white fur. After three or four days, a black stripe began to appear; extending from the root, towards the extremity; and gradually spreading, as the disorder advanced, till the whole tongue assumed a black appearance. Even the teeth and gums were sometimes covered by this black fur; and in some patients who afterwards recovered.

In the treatment of this disorder, evacuation of some kind, is undoubtedly necessary in the early stage of it. Venesection generally produced a temporary relief from the violence of the pain, and was, probably, when the constitution was firm and robust, and the habit plethoric, frequently useful; but it did not appear to me to be important as a curative remedy. Emetics sometimes did well; and where there was a great degree of nausea, I thought them useful. But purging, with calomel and jalap, was the mode of evacuation I preferred, and generally practised; and the remedy which of all others appeared to me most advantageous in the early stage of the disease.

It is unnecessary for me to say any thing more, in this place, than that assiduous purging, in the beginning, and a plentiful use of the Bark, after the remissions had become such as to make it admissible, were the essential parts of the management of this disorder.

So strong was the tendency to disorders of this kind, that people continued in some instances to be affected with intermittents, or fever and ague, thro' the winter. These were very frequent in the spring, but with no peculiarities, and yielding to the common remedy with the usual facility.

During the month of August 1795, I was in the county of Ontario, in the western part of the state of New-York. There was, at that time, a disorder prevalent there, of the same nature with that which I found rise in Sheffield, on my return, and which I am about to describe. It was chiefly existent in the neighborhood of stagnant waters, and in situations similar to those places, in this town, to which the disease was mostly confined. The treatment required was, of course, the same.

On my return to Sheffield, which was the 5th of September, I found a number of the inhabitants, about the North Pond, afflicted with a fever, which began to appear about three weeks before. The people first attacked were those who lived nearest to the pond; whole families of whom were down at once. Numbers continued to be taken, daily, chiefly within the vicinity of this Pond, or within three quarters of a mile of its borders, till about the middle of October; after which time there were few instances of new attacks. In this time, i. e. from the 10th of August to the 20th of October, of about 200 (which is not far from the number of persons living within three quarters of a mile of some of the borders of this pond) not less than 150 were affected with more or less of this disease; out of which number, but one person died, and that an aged man, previously debilitated and disordered.—The number affected with this fever, in all other parts of this town, did not, I believe, exceed thirty. Of these, three died: one, an aged woman: the other two, pregnant women; of whom, one died in the fever, the other suffered an abortion, and died some months after, dropsical.

The disease, this year, put on a different form to what it did the last. It might, with more propriety be called an intermittent, than a remittent fever; though it was very different from a common fever and ague. It began, like other fevers, with an ague fit, attended with pains in the head, back and limbs. The duration of this part of the paroxysm was uncertain. It was succeeded by a hot fit, whose duration was, in different persons, from six to forty-eight hours. A remission, and, sometimes, nearly or quite, a perfect intermission, then came on; but whose duration was as irregular and uncertain as was that of the paroxysm before. After the first, the paroxysms

were not generally ushered in by a regular ague fit; only some slight chills were felt; and these were irregular, both in degree and continuance. The length of the next succeeding paroxysms and intervals could, by no means, be calculated for, from the preceding: so completely irregular was this disorder. The fever evidently tended to an intermittent form; but it could neither be called quotidian, tertian, quartan, nor by any other name used by authors to distinguish the different species of intermitting fevers. The pains in the head, limbs and back, were very severe, particularly in the latter, which were so universally intense, that the symptom might almost be considered as characteristic of the disorder. In the primæ viæ, flatulency was nearly a constantly-attendant and very troublesome symptom. Evidences of an increased secretion and excretion of bile, were generally present through the disease, but were particularly observable in the convalescence. Some degree of yellowness of the skin, which was almost universal, indicated a reabsorption of this fluid, and a deposition of it upon the skin. This yellowness was in two instances, which I saw, very intense. A slight degree of delirium was very common, during the height of the fever. The appearance of the tongue was much the same that it was last year.

My method of treating the fever of this year, was similar to that which I employed the last year.—Purging, in the beginning, and afterwards a plentiful use of the Bark, appeared to me to be the most successful way of managing it. In extreme cases, particularly, a free and full exhibition of bark, wine and laudanum, seemed the only means of salvation. It was absolutely necessary that the patient should be thoroughly purged, previous to the use of stimulants, otherwise the bark, wine or laudanum, would have

very pernicious effects. I saw several instances, at the westward, where, by too early a use of these medicines, the fever was changed into a continued form, attended with a constantly dry and yellow skin, comatose symptoms, &c. One of the instances of extreme yellowness, which I have mentioned, was of this kind, and at the westward. I removed this symptom, and recovered the patient, by giving repeated doses of calomel and jalap, some perspirative medicines, and afterwards the bark, wine, &c. Each purge, in this case, lessened the degree of yellowness, very apparently. The other instance of intense yellowness, which I saw, was in this town, in the case of the pregnant woman, whom I have mentioned to have died in the fever. This woman's fever never had distinct intermissions. Several slight attempts were made to administer the bark; but it would not do. Perhaps my timidity in the use of evacuants, on account of her situation, was injurious to her.

The Bark did not suspend the paroxysms, in this disorder, in as short a time as it does in common intermittents; but, if the patient was properly prepared, and the use of it was persevered in, it never failed to have the effect.

Purging was probably useful in a twofold way: First, by carrying off the superfluous bile; which was, evidently, secreted and excreted in a preternatural quantity: Secondly, by reducing the sthenic diathesis, which was, perhaps, always present, in the early stage of the disorder.

It is true, that those whose fever was suspended by the bark, were subject to frequent relapses, and to a long and lingering state of convalescence. This drew an odium upon that medicine; and many were

induced to believe that it was owing to the use of it that people were so long in recovering, and, of course, that it was improper. I am convinced, however, from very attentive observation, that those who did not take the bark, but suffered the fever gradually to wear away, as it sometimes would, were equally subject to those inconveniences. Indeed, this seems to be the nature of the disease. The old people in this town, who recollect the times when disorders of this kind have prevailed here before, and when the bark was not at all used, inform me that those who were afflicted with them, were a long time in recovering.

It seems that, in all cases, when patients have got rid of the fever, either by means of the bark, or otherwise, there remains an increased disposition to the formation and excretion of bile, and that this humor accumulates in the primæ viæ, till it first destroys the appetite and occasions nausea, and then excites a spontaneous discharge by stool or vomiting, or a relapse of fever, or both. A continuance in the use of some laxative medicine, after a recovery, has a tendency to prevent these effects; and, if strictly attended to, would probably prevent them, and perhaps obviate the disposition to relapse entirely.

In reflecting on phenomena of this kind, the human mind is anxious to fix on something satisfactory as their causes. Specific contagion, I am convinced, was in no instance, which came under my observation, either here or at the westward, the cause of the propagation of the disorder. That marsh effluvia, to whose action the inhabitants of some parts of this town are subject, is the exciting cause, and is necessary to the production of the disorders in question, is beyond any manner of doubt. This is evident from

their existing only where this influence extends. But something more is wanting; otherwise we cannot account for their prevailing in some years, and not in others. Every circumstance relative to the ponds* and marshes in this town has, apparently, been the same, for many years past; and yet very little of this form of disease has appeared, for ten or twelve years back, until the two last. We must either suppose a peculiar constitution of the atmosphere, occasioning a predisposition to these disorders, and coinciding with the local cause, or marsh effluvia; or that the marsh effluvia itself is, by some peculiarity of the atmosphere, wrought up to a higher pitch of virulence, and thus produces a higher degree of disease. I am inclined to admit the latter supposition, as I am convinced that the fevers which have prevailed here, for two or three years past, and the common intermittent fever, are the same, only differing in degree. I have seen all degrees, from the mildest form of intermittents, to the most extreme of bilious remitting fever. It is impossible to say where the line of division shall be drawn. The disease this year seems to have formed a connecting link between intermittent and bilious fever; and, were I to name it, I would call it a bilious intermittent. Should the intermittent fever, in its usual form, prevail next year, the disorder may be said, in the three years, to have been in regular gradations run through.

SHEFFIELD, NOV. 30, 1795.

* I have endeavored to discover the cause why the sickness in 1794, was confined almost entirely to the South, and in 1795, to the North-Pond; but I can find no local circumstances to have existed which should produce sickness about one, and not about the other, in either of these years.

L E T T E R S

TO

W I L L I A M B U E L, P H Y S I C I A N,
S H E F F I E L D, M A S S A C H U S E T T S,

ON THE

F E V E R W H I C H P R E V A I L E D I N N E W -
Y O R K, I N 1795.

B Y E. H. SMITH.

Advertisement.

THE following letters were written at the request, and for the information, of a medical friend, with whom the writer has long been accustomed to correspond, both on professional and general topics. Being composed originally without any view to the press, and nearly finished before the idea of publication was suggested, they will need much indulgence for many defects of expression and method, which the writer has not leisure to correct. Much, too, must be pardoned to that pruriency of style, and positiveness of decision, into which persons in habits of fraternal intimacy are apt to fall, and which the laws of epistolary intercourse do not forbid. A careful revision, would, doubtless, have rendered these letters more acceptable, in these respects, and have chastised them of those repetitions of sentiment and expression, which, though partially avoided in transcribing for the press, still occur too frequently. But this was impossible. A further, and more satisfactory, apology may be expected, for the opinions which they contain;—considering the youth, and supposed inexperience, of the writer. It is not improbable that hasty and unfounded opinions have crept into the following pages; opinions unsupported by fact, and which informed reason would disclaim. If such there are, no person can be more desirous, than he who has delivered, to discover them, or more ready to relinquish them. But a conclusion against an opinion should rest on some better foundation than the age of him who maintains it. To those who think otherwise, the words of the learned Van Swieten may not impertinently be addressed,

“ Honor and respect are due to physicians, eminent from their long and extensive practice of this salutary art ; but they, on their side, ought not to be supercilious, nor despise the advice of younger professors. If even a gardener may sometimes speak to the purpose, how much more may not this be expected from physicians, though young, when regularly educated and diligent in their profession : they have an opportunity of observing the whole course of a disease and its successive changes, while the others, overwhelmed with business, view in haste some of those circumstances only which happen in the time of the disease, and are obliged to collect the rest from ignorant nurses, who do not always tell the truth. The public good will be most promoted, if the fire of the young physician be moderated by the mature discretion and experience of the old practitioner ; nor let these, while they instruct, be ashamed to learn.”*

* Comment : on the 1413 aphorism of Boerhaave.

NEW-YORK, MAY, 1796.

LETTERS ON THE FEVER OF 1795.

LETTER FIRST.

INTRODUCTORY.

IN compliance with your wishes, and in return for the communication with which you lately favored me, relative to the diseases which prevailed in the neighborhood where you reside, for the last three years, I have put together all the scanty information I possess, respecting the fever which was the occasion of so much distress to this City, in the last summer and autumn.—I regret my inability to communicate a more minute and ~~specific~~ statement of facts; and the more, as there seems little probability, at present, that any person, qualified for the task, will undertake it. Various circumstances conspired to narrow the sphere of my observation; and this may have led me into erroneous conclusions, which more extensive practice and wider observation would have corrected in me, and may have corrected in others. But, how faulty soever my reasonings may be thought, I must demand absolute and entire credit for my facts. In these, I cannot well have been deceived: for the very circumstances which rendered them few, made me more attentive, and gave me leisure to be accurate. There is but one possible way in which any falsity can be chargeable on them; and this might be, were I to pretend to decide that the course of the disease was always such, as when it came beneath my notice. But you will understand me strictly. I

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describe what I saw ; and mean only *then* to make a remark general, *when* I so express it, and when I find a concurrent opinion on the part of many. In my reasonings on facts, you will not blame me for taking a range somewhat wider ; for, should I, in my way, light on some truth, interesting and important, it will well repay you for the fatigue of accompanying me ; and, should I not, your friendship will excuse me, in this instance, as it has often done before. Of one thing further you ought to be forwarned : That, concerning every thing connected with the fever of 1795, where opinion may be exercised, there is a variety of opinion. And as, in this contest of jarring and hostile opinions, but one can have justice on its side, I would have you follow mine, with diffidence, into the field of controversy. Victory does not always incline the balance on the side of right ; but even should mine deserve defeat, it will suffer in the company of myriads.

LETTER SECOND.

An account of the situation and peculiarities of that part of the City in which the Fever most prevailed, in 1795.

THOUGH the fever continued to extend itself, to the last, yet it never became general over the city ; and, for a long time, it was mostly confined to a particular district. As the season advanced, the peculiarities of this district may be supposed to have become common to a larger portion of the city ; and their extension to the whole only prevented by the setting in of winter. To the district alluded to, the East river, from Long-Island ferry to Mr. Rutgers's,

forms the eastern boundary ; the northern reaches from thence to Division-street ; thence westerly, down Division-street, Chatham-street, the extremity of Pearl-street, into William-street, to Franckfort-street, down this last to Gold-street, through that to Beekman-street, along which the line proceeds to Pearl-street, as far as the Market, down which it should be continued to the river.—The space included in these bounds, is *all* over which the fever, according to the best of my remembrance, exerted any power, till after it had reached its height ; when it extended down Water-street, a little below Wall-street, and proved very mortal. It is true that there were a few persons affected in various other parts of the town ; but, during the greater part of the prevalence of the fever, it was principally active in the north-eastern and middle parts of the district comprehended as above : and, as a thorough knowledge of the peculiarities of this portion of our city is, in my opinion, indispensable to the history of the disease which afflicted it, I cannot doubt your patience with the minute description I think it necessary to give.

The first and most obvious remark, on the greater part of the district, just pointed out, is, that it is the lowest, flattest, and most funken part of the whole city. Some places are much more funken than others ; but the whole space is evidently so, compared with the adjacent ground ; and appears to have an inclination, more or less observable, in different streets, to the East river. This inclination is very considerable in Dover-street ; a street which is said always to have suffered from fevers of this kind, during the hot season. From the division of Pearl and Cherry-streets, down the latter, the descent is rapid, to some where near James's-street ; about which is the lowest part of the street, and from whence it is nearly level

to the northern boundary. Beyond this bound, the ground rises again; and the made ground, by the river side, is also somewhat elevated: so likewise, is the whole of the ground over which the westerly line passes through Division, Chatham, &c. streets. Thus you will perceive, that the part of the city where the fever was most active, for the longest period, forms, as it were, a basin, having its side, nearest the water, a little inclined. Within this basin, there are several smaller cavities; one of which, in particular, will require a further description. Those streets, also, which are not included in this hollow, but which lie along the river, will require some attention; which shall be given them.

The extreme irregularity in the disposition of the streets, and the narrowness of the greater number of them, are great obstacles to a free ventilation of this city. This misfortune, common to every part of it, falls with peculiar heaviness on that district which has just been spoken of. The comparatively high and neighboring lands of Morriffania and Long-Island, receive almost solely the benefit of breezes from the north-east and east: The Sound, which divides them from the city, being too narrow to add much force and freshness to a breeze nearly spent on their heights. North, the island rises into little hills, from which the wind passes on to the high parts of the city; rarely visiting the low and intervening space; unless it may be the topmost rooms of the houses: and, as the houses are generally low, the effects of a wind from this quarter must be inconsiderable.—North-westerly, there is somewhat more of an opening; but even this is small. West, south west, and south, the other parts of the town, which are higher, and thickly settled, break the force of the gales from these points. So that, thus situated, this quarter of

the city, though it were perfectly well laid out, would have but little chance for a free ventilation: irregularly disposed and narrow as the streets are, we must be convinced of the impossibility of its receiving the necessary supply of fresh air. You will understand me as speaking of a thorough ventilation, and in the sultry season, when it is most necessary: a partial supply of air, equal to the support of a feverish existence, it undoubtedly obtains.

Much of the ground, in the northern part of this district, is swampy, and abounds with little pools and puddles of stagnant water. This was especially true last summer and autumn; there being great rains, and no adequate means for conducting off the water. Indeed, so flat are some of the *paved* streets, in this quarter, that the rains did not run down the gutters, but continued in little puddles, and were evaporated from the places whereon they fell. In the new streets, which are unpaved, and without any gutters, numerous imperfect ditches assisted the disposition of the water to stagnate. These places were often muddy, when the southern part of the town was dry; and the steams from them very offensive, when the dry streets, towards the North river, were perfectly sweet.

Several of the paved streets, and indeed the greater number, in the district of which I am speaking, are narrow and crooked; some with neither side walks nor gutters, and by far the largest portion of them, miserably built. Most of those which are unpaved, are, in all respects, still worse; the buildings chiefly wooden, and placed on the ground; the old ones falling to decay; the new, but imperfectly finished. Of them all, it may be remarked, that they are much exposed, some of them more than others, to the full

influence of the docks, whatever that may be, and it cannot be salutary; or to that of a broiling sun, from early in the morning, till the middle of the afternoon; and some of them, to both.

So much for the streets, generally: a few particulars, concerning some of them, are necessary to the formation of a perfect idea of this district.

A line, drawn from the corner of Ferry and Pearl-streets, up the latter, to where William street enters it; then down William to Franckfort, and through that, a part of Gold and Ferry-streets, to Pearl-street again, will form the ridge of a new cavity (included in the principal boundaries above mentioned) which seems contrived, by art, for the dwelling place of fever. This court-yard of the palace of death, is divided by several dismal lanes, courteously denominated streets; such as Vandewater, Rose and Jacob-streets, &c. which form the borders to innumerable tan-vats. The whole is one vast tan-yard, the firm parts of which seem to have been constructed by art in the midst of an extensive quagmire. To this place, as far as I can discover, there is no outlet. Think what must be the condition of it, in the months of August and September!—Yet human beings live here; and habit renders its noxious exhalations, in some sort, harmless to them. It is remarkable that few persons, regularly inhabiting this hollow, died of the fever last year. To those, whose evil destiny led them to seek a new dwelling place there, it proved highly pestilential.

Dover-street is a short, narrow street, running from the beginning of Cherry-street, down to the East river; and contains near twenty buildings.—The descent, from Cherry into Water-street, is very

rapid. As the exposure is nearly to the east, it receives the whole effect of the sun, from 6 A. M. to 3 P. M. in the summer. The descent makes it easy to keep the surface of the street clean; though it prevents a free ventilation. But it has been raised, several feet, since the buildings, which are mostly low, were erected; so that the road is, in many instances, up to the middle of the lower story windows; leaving the cellars to the houses, and cellar kitchens, without a communication with the street. The yards remaining as before, are, of consequence, much lower than the street; without vent; and, of necessity, all the water, and filth of every kind, which gathers in them, must there stagnate, ferment and putrify. Add to this, some of these yards are capacious, and contain little, decayed, wooden huts; sometimes built directly on the ground; and containing, oftentimes, several families.

Water-street, above Dover-street, is chiefly composed of low, decayed and dirty wooden buildings. This street being either made-ground entirely, or raised like Dover-street, the same is true of the situation of the houses and yards. And, lest any of the filth, or water, should drain off, from any of the yards, the western side of Water-street has been kindly converted, by the enlightened zeal of the directors of these affairs, into a perfect dyke; which answers its design, most completely, by preventing even the slightest leakage. Beside, as this street lies directly on the water, it has the benefit of the whole force of the sun, the greater part of the day; and of the exhalations from the docks; which are here in great number, and in the highest state of their perfection. There is, however, a better opportunity for fresh air, in this, than in some other streets. Yet even this is an advantage which the rage for im-

provement threatens to transfer to a new street, still further out in the river; which, if completed, may form another dyke, to the increased pleasantness and health of this quarter of the town.

Of Roosevelt, Catharine, James, Oliver, &c. streets, nearly the same remarks are true as of Dover and the upper part of Water-street: for though they are somewhat wider, straighter, and have more good and new buildings in them, yet they are raised in the same manner, have sunken yards, and under-ground apartments; and Roosevelt street has an open sink, where the drippings of the tea-water pump, after having gently collected all the filth in their way, are received; and being just enough to keep up a constant dropping, and not enough to wash the gutter, or the sewer, the stench is most intolerable, during the sultry months.

To many other of these streets the same remarks will apply; and to some with aggravated force: but what has been said, will, perhaps, be sufficient to aid your imagination in the conception of a just idea of their condition: I mean of their necessary and unavoidable condition.

Of the Docks, it may be enough to mention, generally, that they are badly contrived in every part of the town; and worst of all, in this part; being broken up into numerous little wharves, thus forming narrow slips, where the ground is left bare at ebb tide; and where vegetable, animal, and excrementitious matters, being thrown in, at all times, instead of being cast into the stream, ferment, putrify, and render the stench truly pestiferous. Indeed, this is so much the case, with all of them, in the summer, that, except to persons habituated to their exhala-

tions, they are absolutely intolerable; exciting, in persons of a delicate make, immediate vomiting; and in others nausea, indigestion, head-ach, or some temporary illness, when exposed to them but a short time.

In addition to the above-related facts, concerning the condition of the streets, in that part of the city where care was most needed, it may be remarked that, at no time, was there ever so great an apparent inattention to preserving them clean. Besides the impediments which the level nature of the streets, in many parts of the town, presented to the draining off of the filth which is constantly accumulating in large towns like this, artificial impediments were permitted; as if death were not sufficiently active, and needed the aid of the magistrate. In all the streets where buildings were going forward, the workmen were allowed to restrain the course of the water, in the gutters, by forming little dams, for their convenience in making their morter. The effect of this stoppage of water was so great, that even in Broadway, one of the streets the best calculated of any in the city for free ventilation, in that part of it where the new Tontine Tavern was building, the stench was exceedingly offensive. And in this condition was it allowed to remain for near two months; though it was almost under the windows of the principal magistrate of the city. If this were true of the widest, and one of the best aired and cleanest streets, of New-York, what think you was the state of those narrow, crooked, flat, unpaved, muddy alleys, mentioned above? No, one can form even a faint idea who has not walked through them, in the middle of some one of those deadly, suffocative days, which we experienced in September last.

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But this is not all: beside those masses of semi-putrid vegetable and animal matters—cabbage, turnips, the heads and entrails of fish, &c. which, at all times of the year, out of compassion to men who might be usefully employed as scavengers to the city, are allowed to complete the putrefactive process, undisturbed, in the middle of the streets,—the sight and the smell were shocked, at every turn, by dead rats, fowls, cats, dogs and pigs. So remarkably was this the case, that I question whether there could have been found a single street, alley, or even bye-lane, of any tolerable length, which did not lend its aid to render this exhibition full and frequent.

The preceding statement, melancholy as it may appear, will convey a very inadequate idea of our misfortune, in respect to situation, without special information concerning the season, as it appeared here, during the reign of the fever; and a knowledge of the people who mostly inhabited these parts of the city, and on whom the severity of the disorder was inflicted. With this knowledge I shall endeavor to furnish you; but the length which this letter has already acquired will excuse me, to you, for postponing the attempt, to a future opportunity.

LETTER THIRD.

Some Account of the Season of 1795.

PHYSICIANS, from the earliest ages of medical record, have remarked that great peculiarities and irregularities of season, have exercised an unfriendly influence on human health: And Hippocrates, himself, takes

notice of the difficulty, which hence arises, of forming a proper judgment, and adopting a suitable method of cure, in those diseases which occur under such circumstances. The importance of this division of my subject, makes me regret that it is in my power to furnish you with no other than general information. You will be the more ready to overlook this defect, when you recollect that I do not pretend to deliver a history of the fever, and are informed that there is some probability that this particular defect will be supplied by another hand.

Generally, then—every one knows that the summer and autumn of 1795 were excessively sultry and excessively wet. Every article of household furniture, or in use about a house, susceptible of mould, was speedily and deeply covered with it. It seemed to penetrate places where we should have deemed its appearance impossible. A friend of mine found a pocket-book of Morocco leather quite mouldy; though it was in the drawer of a private desk, inclosed within a large desk—both of which were usually locked—and covered by papers. Boots and shoes hung up by a wall, near a fire-place, heated every day, contracted mould within twenty-four hours.

Meats spoiled in the market-place uncommonly quick; and those which were brought home, apparently fresh and good, in the morning, were often found unfit to be eaten, when cooked and brought upon table.

Esculent vegetables, in general, and especially fruits, were unusually poor, tough and tasteless. The peach, particularly that called the cling-stone, was scarcely digestible; and often occasioned temporary

illnesses, quite severe, while it doubtless aided in the production, or aggravation, of the fever.*

Flies were very numerous and troublesome, in every part of the city, in the beginning of summer; but they suddenly disappeared, about the middle of July, from the more airy parts of the town, collecting in swarms, in the less healthy parts, and succeeded, every where, by clouds of musketoës, incredibly large and distressing: and these continued to afflict us, long after the time when they commonly depart. Almost every person suffered exceedingly from the bites of these insects; and foreigners especially. In some they occasioned universal swellings, and eruptions, somewhat like Pemphigus; and in others numerous little ulcers. These last, a physician of my acquaintance, saw even in a native American. The irritation, restlessness, and consequent watchfulness and fatigue, occasioned by these animals, no doubt predisposed the well to be affected by the fever; while they extremely harassed the sick, and retarded their recovery.

During the whole of this season, I remember but one thunder-storm; and this was very gentle. There was but a single *hard* clap of thunder, for more than four months, that I remember; and very little thunder and lightning, at any time.

* Vegetable growth was uncommonly rapid and abundant, in the summer of 1795. I mention this that no mistake may arise from the above remark concerning esculent vegetables. The more rank they grow, beyond a certain degree, the more tasteless they are; and the influence of a wet season, in rendering roots and fruits tough, as well as insipid, is well known.

It is worthy of remark, that many fruit-trees, plumb-trees in particular, blossomed a second time, last year, and produced an imperfect and second crop of fruit.

Our rains, excessive in quantity and frequency as they were, seemed to have lost their wonted power of cooling the air. In those streets, most unhealthy, and least ventilated, this effect was, in a degree, observable ; but, in the airy and healthy parts of the town, on the contrary, they never failed to render the heat more intolerable ; and the steams from the hot pavement were like those of a vapor bath. The clouds, too, seemed to shut out every kind of breeze.—One of these heavy rains, which continued two or three days, seemed to possess all the qualities of steam. It pervaded every recess of the houses, and dissolved the best glue—so that furniture, in many instances, which had been long standing, fell in pieces.

Fogs, which Dr. Lind enumerates among the signs of an unhealthy climate, and causes of diseases—page 134 of his Essay on hot climates, &c.—prevailed in the city, and spread over all the most unhealthy parts, in particular, in a remarkable manner,—in the evenings—for a considerable part of September and October. The oppression, thickness, stench, and uncomfortableness in every respect, of these fogs, was very uncommon. In a physician, who, in the performance of his professional duty, was exposed to their influence several hours, one night, they produced bleeding from the gums and fauces, and black and fetid stools.—On the city watchmen, however, they had no such effects. About the first of October but one person had died out of their number ; and he was a man who returned to the city, a little before, and resumed this occupation, after having been some time absent in the country.—Whether this security of the watchmen is to be attributed—as it is by Dr. Rush, to the influence of the cool night-

air*, or to that of habit, I leave others to decide. It is not impossible but that both may concur in producing this insensibility to the cause of disease in others.

To this imperfect account of the season, which, defective as it is, appeared to me too important to be omitted, I have one fact to add, on the authority of a gentleman distinguished for his attention to meteorological phenomena. He informs me, that no Aurora Borealis has been seen, of any magnitude, in our country, north of Pennsylvania (as far as he can learn) for near four years, till the latter end of September 1795; and adds, that his father, a respectable clergyman, now about 70 years of age, who noticed the same absence of these appearances, remarks, that, according to his uniform observation, some uncommon sickness has never failed to follow a long continued disappearance of these phenomena. How far the experience of other observers will tend to confirm this statement, I have had neither time nor opportunity to inquire. And, if it be admitted as indisputable, it may still be questionable, whether this is to be regarded as a cause of disease, or whether this disappearance and disease, be not co-ordinate effects of a common cause.

* Page 35 of his account of the Fever of Philadelphia: "I ascribe it to the *habitual* impression of the cool night air upon the bodies of the city watchmen," &c. By habit, as used above, is meant that condition of the body which is produced by customary exposure to any particular impression; and I design only to suggest a probability that the watchmen escaped the fever, as much from their having been rendered by habit insensible to the influence of the effluvia, &c. of the unhealthy parts of the city, as from the influence of cold.

LETTER FOURTH.

Some circumstances relative to the principal sufferers by the Fever of 1795.

IT is a fact, generally admitted, I believe, that, of those who were sick and who died of the Fever of 1795, the greater number were foreigners: persons, either just arrived from other States, from the West-Indies, and from Europe; or who had not been many months, or years, settled in this city. It is probable that the proportion of citizens, who died, to strangers, did not exceed one to seven. Of these strangers, it is thought, a large number were Irish; and there are some reasons why this should be true; but I cannot pretend to know it to be so, from my own observation. The causes productive of disease in foreigners, in those of this nation in particular, are numerous, and some of them deserve particular attention. This I design to bestow upon them, after remarking, that, both among natives and foreigners, the severity of the disease was experienced by the poor.

I. Dr. Blane, in his observations on the diseases of seamen, remarks, “that it sometimes happens, that a ship, with a long established crew, shall be very healthy; yet, if strangers are introduced among them, who are also healthy, sickness will be mutually produced;” and Dr. Rush, in the first volume of his “Medical Observations and Inquiries” takes notice of this remark of Dr. Blane’s, and confirms it, by a reference to the experience of our country, during the late war. These are his words—“The history of diseases furnishes many proofs of the truth of this assertion.—It was very remarkable, that, while the American army at Cambridge, in

“ the year 1775, consisted only of New-England
 “ men (whose habits and manners were the same)
 “ there was scarcely any sickness among them. It
 “ was not till the troops of the eastern, middle and
 “ southern states, met at New-York and Ticonderoga,
 “ in the year 1776, that the Typhus became univer-
 “ sal, and spread with such peculiar mortality in the
 “ armies of the United States.”

It is unnecessary to enlarge, in this place, on the oppressions and distresses of what are called the lower order of the people in Europe. War, which doubles the burthens upon every rank in society, exercises an aggravated violence upon the poor. This violence, severely felt by all, in England, chiefly falls upon the manufacturing poor; who are, at the same time, the most ignorant, abject and depraved: in Ireland, its effects are more general, including in its circle of wretchedness, the cultivator, as well as the mechanic. The present war in Europe, unparallelled as it is for the number of men involved in it, has given birth to oppressions and calamities equally new and destructive. Under these circumstances, and when men of fortune and respectability, disgusted and disheartened at the enormous mass of misery which every day and every hour presented to their view, turned their thoughts towards another hemisphere, it is not to be wondered at, that the wretched and depressed poor should pant for a settlement in a country, where liberty is the portion of every man, and independence the sure crown of all his honest labors; and which had been, *fallaciouſly*, represented as courting their acceptance, and loading their untoiling hands with every gift of fortune.—The real blessings of our government and country are precious and inestimable; but they are of a nature not to be felt and enjoyed by minds depraved by ignorance and debased by slavery.

That temperate enjoyment of the goods of life, and moderate exercise of the blessings of independence, which, alone, enlightened liberty sanctions, can neither be conceived of, nor relished, by those who have been accustomed to crouch beneath the iron rod of despotism. Liberty, according to their ideas, was the reverse of all they felt; and independence, the unlimited gratification of all their appetites. The misrepresentations, too, of speculating and unprincipled men, who were interested in the sale of large tracts of unsettled territory, had fostered and extended these erroneous conceptions. Hence, when the poor and miserable emigrants, on their arrival here, found that neither gold, nor farms, solicited their acceptance; that, in America, as well as in Europe, their life was alike destined to be a life of toil; when they perceived that licentiousness, the only liberty of which they had any notion, brought punishment along with it; the disappointment, new and unexpected, became a powerful aggravation to every other cause of disease. You will not understand me as extending these last remarks to all emigrants to this country, nor suppose that deceived hope was present, or active, in every case. On some, even of the better sort, it undoubtedly had a very pernicious influence; on the poor and friendless, effects still more melancholy.—But to return:—Two motives, then, poverty and oppression at home, and the hope of independence and wealth abroad, concurred to draw to the United States, an astonishing number of the inhabitants of Europe; and as these motives were mostly active among the very poor and very wretched, people of this description emigrated in the greatest number. Of these, the largest portions fell to the share of the States of Pennsylvania and New-York; and the most worthless and profligate, probably, rested in the capitals of those States.

The distresses in the West-Indies, especially those occasioned by the destruction of Cape Francaise, obliged numbers of the islanders, white, mulatto and black, to take refuge here. This circumstance, harmless, in great measure, to the people themselves, can scarcely be considered as so, in relation to the whole. Whatever effect it may have had, all things considered, it seems irrational to suppose it to have been good.

This collection of strangers, from various parts of Europe and America, which had been rapidly forming for two or three years, was greatly increased by repeated arrivals of large importations from Great-Britain and Ireland, during the fall of 1794, and the spring and summer of 1795. One or two ships came into this port, after the commencement of the fever, filled with emigrants.

If, then, the opinion of Dr. Blane, corroborated by the testimony of Dr. Rush, be founded in truth; that the sudden intermingling of people of various and discordant habits, climates and nations, be a circumstance favoring the production of disease; this cause of fever was certainly present, in New-York, in the year 1795.

II. "Men who exchange their native, for a distant climate, may be considered"—says Dr. Lind, page 2d, of his Essay on the diseases incidental to Europeans in hot climates—"as affected in a manner somewhat analogous to plants removed into a foreign soil; where the utmost care and attention are required to keep them in health, and to inure them to their new situation; since, thus transplanted, some change must happen in the constitutions of both.

“Some climates”—he continues—“are healthy and favorable to European constitutions, as some soils are favorable to the production of European plants. But most of the countries beyond the limits of Europe, which are frequented by Europeans, unfortunately, prove very unhealthy to them.”

The healthiness and unhealthiness of a climate, or the effect wrought on the human constitution by a change of climate, must be more or less considerable, according to the extent of its connection with other circumstances. How far such a connection was observable in this city, in respect to the Fever of 1795, will appear by and by.

Two remarks may be made, concerning the emigrants from the West-Indies. The first is, that they generally bear the first winter, after their arrival in the middle and northern states, better than the natives, while they are less incommoded by the summer heats. The second is, that they suffer less from Fevers, during the sultry season, than Emigrants from Europe. It seems difficult to explain the first mentioned fact; the second I shall attempt to account for, hereafter.

The climate of this part of America differs from that of Great-Britain and Ireland in the intenser cold of its winters; more extreme and longer continued heat of its summers; and the greater variableness of its temperature.

The great body of emigrants come over to America in large companies, crowded together in one ship, and ill-accommodated in every respect. After a long voyage, under such circumstances, they must be sensible, in an uncommon degree, to the influence of a new climate, and to every sudden variation of

temperature. If they arrive, as is often the case, in the sultry season, the effects of a change of climate must be felt in all their force. The heats of the summer must render them less able to cope with the ruggedness of the following winter; as the severity of the winter makes them more unfit to endure the scorching sun of the succeeding summer. This will account for the suffering of many who had passed a season in the country before.

To this it may be added, that, in 1795, the climate must have been particularly bad; since it may be supposed to have preternaturally affected the natives of the country. This being admitted, it is not difficult to conceive of its having had a pernicious influence on strangers; and being, therefore, fairly enumerable among the causes predisposing to the fever of this season.

III. An animal diet, or a great use of animal food, especially in summer, and when there is general disposition to fevers, is thought by many physicians, of our own and other countries, to favor their production; and a vegetable diet, on the contrary, to be a preventative, or preservative, against them. This, also, was the opinion of the humane and celebrated Howard, who is known to have abstained from the use of flesh, for many years previous to his death.—Both theory and fact seem to concur in establishing the truth of this doctrine; for a satisfactory illustration of which I may safely refer you to the publications of Drs. Rush and Mitchill.

The proportion of animal, to vegetable food, eaten at the best provided tables in America, is so great as to astonish a European. This may be said of the country generally—but is especially true

of the cities of New-York and Philadelphia. An objection, too, has been made by Europeans, particularly by the French, to our mode of cooking meats. They complain, and with apparent justice, of the imperfect action which fire is allowed to exert upon them; and represent us as little better than the Abyssinians, who devour a part of the ox, while he is yet expiring.—It is certain that a great change is observable in the appearance and kind of diseases, in the United States, since our citizens have substituted fresh meats, for salted, in summer.—Some reasons may be assigned for this effect, which would countenance the opinion of the French; but they will suggest themselves to your own mind, and would require more room than I can allow them, in this place.—But, surely, if meats be prejudicial to health, in our hot seasons; if they expose us, by their use, to diseases of the kind, which prevailed here, last year; how peculiarly must this evil have been felt by us, when they were in a condition so uncommonly bad as the year 1795.—If the wealthy often had meats brought upon their tables, in a state of incipient putrescency, what must have been the state of those which were consumed by the poor?—Add to this, that the vegetables principally used among us, are not distinguished for their ascendency.—These remarks apply to all ranks of our inhabitants; and plainly shew that the situation of our city, the last year, was unusually bad, in this respect, for natives, as well as foreigners. Other circumstances assisted to heighten the evil, in relation to these last.

The poor of Europe, and especially of Ireland, are but sparingly accustomed to the use of meat. In that island, it is not uncommon for people to pass through life, without ever having tasted it, except by stealth, accident, or on holydays.—In this country, the great

use of meat produces a comparative scantiness in the supply of vegetables; and a proportionate poorness and dearness of them. This is sufficient to determine the choice of the poor towards the use of meat; and produce, in the emigrant poor, an almost total and sudden change, in their aliment. When, too, we recollect that animal food is more gratifying to a depraved taste; that it provokes to greater repletion, than vegetable food; that it is more necessary to hard laborers; and that it is most craved by those who indulge in the habitual use of ardent spirits; we are alive, at once, to the full perception of the mischievous effects arising from such a substitute, to their former bland and scanty meals. In those, with whom this change of diet took place the last year, for the first, the consequences must have been still more pernicious. For we ought to consider that if the poor always consume the worst provisions, those who were strangers, as well as poor, were least likely to procure those which were good; and the slightest observation is sufficient to convince us, that their bad qualities could not have been much obviated by the preparation common among the consumers.

May we not, then, conclude—that the aliment used by the citizens, generally, was favorable to the production of disease—and that the great and sudden change of diet, among the emigrants, considering the nature of their food in 1795, must have disposed them, in a particular manner, to be affected by the fever of the country?

IV. If unwholesome aliment assisted in the production, or aggravation, of the fever of 1795, improper drinks were scarcely less active, to the same end.—The use of ardent spirits, among all classes of citizens, and especially among the laboring classes, is as-

tonifhingly great and general, throughout the United States. No country in the world, in all probability, consumes an equal quantity, in proportion to its population. In vain has the eloquence of the most enlightened physicians and moralists been exerted against them, for centuries: governments constitute it the interest of individuals to prepare and circulate them; they withhold from men that knowledge which would teach them to shun, or elevate them above the use of, intoxicating liquors; and prejudices are excited and fostered in their favor, that the ignorant and depraved, to whom they form a congenial gratification, may continue to consume them; to the destruction of morals, the emolument of distillers, and the augmentation of the revenue. As they are more easily and cheaply obtained in America, than in Europe; as the wages of laborers are more considerable here, than there, and therefore permit them greater indulgences; as there is every encouragement from example; and as a fiercer sun, according to common notions, justifies a more prodigal use of them; it is naturally supposeable that the emigrants of the laboring class indulged in them, to an unusual degree. Unquestionably, the use of intoxicating liquors was highly pernicious to those most accustomed to them; to those not so habituated, it was, as unquestionably, still more pernicious. In Philadelphia in 1793, when the fever was prevalent, Dr. Rush remarks that—"a plentiful meal, and a few extra glasses of wine, seldom failed of exciting the fever." With us the disease was less ferocious and less active; but, as if no means of causing it to become more so were to be neglected, an idea was, most unhappily circulated—and, it should seem, was countenanced by persons bearing the title of physicians,—that free living, the plentiful use of vinous and ardent liquors, was a pow-

erful preventative of the fever. The dreadful consequences which a belief of this sort produced, were numerous, and shocking to the last degree. The fear of death, so active in ignorant minds, when once aroused; idleness, the parent of every vice, and listlessness, the consequence of want of employment; all conspired, with this pernicious doctrine, to effect the ruin of numbers. Never, I believe, was drunkenness so common. Not a day passed that I did not meet persons reeling through the streets, or stretched on the pavement—sometimes in the noon-day sun, unsheltered, and sometimes exposed to the heaviest rains. I have seen three men, lying in this condition, in one little street. These were all, as you may suppose, among the most depraved of our poor; and most of them were foreigners.

Is it possible that conduct such as this should fail of giving new activity to every other cause of disease?

V. I have, in a former letter, given you some account of the condition of that part of the town, where the Fever most prevailed; it is now to be noticed that it is in that district that the greatest number of the poor, especially the emigrant poor, reside. In those numerous miserable dwellings, were these wretched people crowded together; many families in one house; and not infrequently many families of different nations. In some instances, a single room in one of those half-under-ground huts, served as bedroom, kitchen and shop, to a whole family; while underneath them, a cellar, half filled with mud and water, sent up its pestilential steams; and under their window, a yard in the same condition, was rendered still more noxious, by receiving the offals cast out from every part of the house.

VI. But, if the fordid and almost unavoidable filthiness of their dwellings were promotive of the disease, under which the wretched inhabitants languished or suffered, still more so, in some instances, must have been their inattention to personal cleanliness.

It was well remarked, *formerly*, by a foreigner, of the English ladies, and is applicable, with but little deduction to our own fair country-women,—That they were *whited sepulchres*; beauteous and clean, without; but within——You know the rest.——

Were our country-women disciples of Zoroaster, they could not more studiously hold sacred the element of water.—How many of those house-wives, how many of those maidens, the cleanliness of whose houses, and the neatness of whose apparel, we often have occasion to admire and commend, think you, have applied to any other parts of their persons, than their hands and faces, this purifying element?—The infrequency of bathing among both sexes and all conditions, especially among females and the poor, in America, is surprizing.—In this respect, the emigrant poor are in no wise more commendable; and, in every other kind of cleanliness, still more backward. The French, alone, exhibit a laudable conduct, in every grade of life, as *personal ablution* is regarded.

* “ Who can come in, and say, that I mean her:
 “ When such a one as she, such is her neighbor?
 “ - - - - - Let me see wherein
 “ My tongue hath wrong'd her; if it do her right,
 “ Then she hath wrong'd herself; if she be free,
 “ Why then, my taxing, like a wild-goose, flies
 “ Unclaim'd of any one.”

AS YOU LIKE IT.

To every physician, who knows the importance of cleanliness to health, and how rigid an attention to it is necessary, in Fevers, especially in those which are called malignant, it is useless to insist on the consequences of negligence in this particular.

I shall conclude this letter with a few remarks, which the subject naturally inspires.

The preceding statement is strictly applicable, in all its extent, to great numbers of those who were sick of the Fever of 1795. Your own mind will suggest to you that there must have been many exceptions; and, likewise, among whom those exceptions were to be found.

You will learn, from it, that circumstances unfriendly to foreigners were more numerous and forcible, in more instances, than to natives; and will perceive, at the same time, what is appropriate to each, and what common to all.

It will, further, be evident, that, though some of these causes may have been sufficient, singly, to create a predisposition to disease,—and probably did, in some instances, create it; yet, that predisposition must have been more considerable, and the disease which followed more severe, in proportion to the combination of two, or more, of them.

It now remains to take a comprehensive view of the results furnished to us by this letter, in connection with the two immediately preceding it; but this I shall defer to another opportunity.

LETTER FIFTH.

*Recapitulation of Facts, and an Opinion concerning the
Origin of the Fever of 1795.*

FROM the statements contained in the preceding letters it appears, that the Fever of 1795 was most active in

SITUATIONS——where——

There was the least chance for free ventilation ;

Where the sun exerted the greatest and longest influence ;

there was the least drain for water and filth ;
the rains which fell stagnated ;

there were, constantly, stagnant pools ;

the streets narrow, crooked, unpaved ;

the houses partly under-ground, wooden, decayed or slight ;

there were considerable collections of vegetable and animal matters suffered to remain and putrify ; and

where the exhalations from the sewers and docks extended :—

The fever first appeared and continued to be mortal in a

SEASON——

which was unusually sultry and wet ;

throughout which esculent vegetables were scanty and poor ;

meats tended rapidly to putrefaction, and were often consumed in a state of incipient putrescency ;—

During which—

Insects were very numerous and noxious ;

there was scarcely any thunder and lightning ;

there were several violent and sudden alternations of heat and cold ; and

the city was, in the evening, often immersed in a very peculiar and pernicious fog :—

The Fever proved most fatal—

to the poor ;

to emigrants more than natives ;

to the emigrant poor most of all ;—and they—lived in situations, mostly, such as above-mentioned ;

were, often, crowded together, in such houses ; mingled, without distinction of nation, climate and habits ;

changed a mild vegetable, for an animal diet ;—perhaps a semi-putrid animal diet ;

were chiefly laborers in the open sun ;

were unusually intemperate ; and

were inexcusably inattentive to the cleanliness of their houses and persons.

Such are the facts :—what inferences would reason, unperverted by prejudice, interestedness, or ignorance, deduce from them ? How would she decide

on the so-much-agitated question of *domestic*, or *foreign*, origin?—Were a rational being to see hundreds of men, women and children, removed from a temperate and equable climate, to a climate subject to the extremes of heat and cold, and to sudden and excessive alternations of temperature; were he to observe this removal to take place in crowded, ill-provided, ships, which were a long time at sea, and whose arrival was at such a time as to subject them to the rigors of a winter, severe beyond their knowledge, and under all the inconveniences attendant on poverty, ignorance, and vice in a strange land—or to the terrors of a summer equally intolerable to them, from its inexperienced fultriness; were he to view them, after sustaining, one, or more, such seasons, or immediately, exposed to the influence of a season sultry and moist beyond the common course, in this new climate; should he learn that they exchanged oppression for licentiousness, and, in some cases, found all their hopes illusory; that they substituted a scanty supply of wretched vegetables and a gluttonous use of semi-putrid, ill-cooked, meats, for a sparing consumption of mild and healthy vegetable food; that they were often persecuted by swarms of insects, whose bites raised swellings or caused ulcers, when, till now, they had been unaccustomed to any; should he see them indulging, habitually, in the use of intoxicating liquors, to which many of them had hitherto been strangers; were he to find them dwelling in narrow, unpaved, funken, and illy-ventilated streets, in which large collections of putrid matter were allowed to remain, where there were puddles of stagnant water, or open sewers, and in the neighborhoods of pools or docks, whose noxious qualities were heightened by the admixture of putrefying vegetable and animal substances;—were he to discover the houses in which they dwelt, to be decayed or slight, and

sometimes pervious to sun and rain,—in part, below the surface of the earth, and with yards equally low, and in the condition of the pools and docks above-mentioned; should he, on entering these habitations, find them mingled with emigrants from various other climates, or with natives of that to which they had removed, equally debased, and perhaps still more so, than themselves—with people of discordant habits, colours, languages and countries,—and all, alike, inattentive to personal and household cleanliness;—I say, were a rational being to observe all this, and perceive all the circumstances, just enumerated, to be concurrent, in respect to time, would he, think you, find it necessary to recur to the East or to the West-Indies, for causes of disease? Would he deem it of much importance whether a single man died on board this, or that, vessel? Or whether contagion might, or might not, be imported?—Would not these circumstances, of themselves, when viewed in connection with each other, and compared with the known and established laws of health and disease, impress on his mind, with all the force of intuition, a conviction of the domestic origin of the Fever of 1795? Is it possible that he should have any other opinion than that the causes, cure, and prevention, are equally local, and disconnected with the prevalence or absence of similar diseases in other countries? But, certain as I feel that this must be the inevitable conclusion from a candid attention to the facts above-displayed, I am pleased to be able to declare that it is unnecessary to trust to their testimony, alone, for support to the opinion derived from their consideration.—*No direct, no clear, evidence, ever has been, or can be, produced, in favor of the opinion that the Fever was imported.*—I shall defer the attempt to substantiate this assertion, to a future opportunity; in the mean time, permit me once more to remark.—That,

though *all* the circumstances, enumerated in this letter, as concurring to produce the Fever, did, oftentimes, in reality concur, it is not to be supposed that they did so uniformly. So much is true, beyond dispute—A concurrence of the greater number of some, or other, of them, was observable in a vast majority of the cases of sickness. More than this was not necessary:—for, expose the most temperate and cleanly native, to the full influence of all the causes predisposing to this fever, beside those which his birth, cleanliness, and temperance, would disarm, and his chance for continued health must have been small; especially, after the additional aid which they, unquestionably, derived from great numbers of sick and dead, and from the reign of terror. The number of natives, of this description, who died, was very inconsiderable; and, of those few, perhaps there was not an individual whose situation, constitution, or office, did not peculiarly expose him to the attacks of the Fever. To which may be added, the chance of his falling a sacrifice to an inert, or destructive practice.

LETTER SIXTH.

On the Evidence of the Importation of the Fever of 1795.

“No direct, no clear evidence ever has been, or
 “can be produced, in favor of the opinion that the
 “Fever was imported.”

The authority on which the advocates of importation chiefly rest, for the support of their doctrine, is, as far as I can discover, the letter of the Health Committee to the Governor, of the 8th of September

1795; or, more properly, on what is there reported to be the fact.—I shall quote, from this letter, the passage referred to.

“ On the 20th day of July, Doctor Malachi Treat,
 “ the late Health-Officer of this port, visited the brig
 “ Zephyr, from Port-au-Prince; on board of which
 “ he found three persons ill of fever, and the corpse
 “ of one who died that morning. The Doctor calls
 “ the Fever, in his report, a Bilious-remitting Fever.
 “ The brig was ordered to ride quarantine. On the
 “ 22d day of July, Dr. Treat was taken ill, and died
 “ on the 30th, of a fever marked by a yellow skin,
 “ hemorrhages, vomiting of black matter, resembling
 “ coffee-grounds, and all such symptoms as charac-
 “ terize bilious fevers of the malignant kind.—On
 “ the 25th day of July, four persons, from on board
 “ the ship William, from Liverpool, which arrived
 “ here several weeks before (all the crew having,
 “ previous to that day, and during the voyage, been
 “ perfectly healthy) were taken ill of Fever, attended
 “ with similar symptoms; and all died within seven
 “ days.

“ This ship lay at a wharf at the foot of Dover-
 “ street, in the *south-easterly** part of this city, which
 “ lies exceedingly low, is much of it made-ground,
 “ has an eastern exposure, and (from the streets hav-
 “ ing been raised, about three years ago, which threw
 “ the lots and yards into hollows of considerable
 “ depth) is almost unavoidably liable to great collec-
 “ tions of offal, and filth of all kinds; is a part of the
 “ town very much crowded by poor inhabitants, and
 “ contains a great number of lodging-houses, in
 “ which seamen and strangers of the poorer class, com-

* A mistake of the Press for—*north-easterly*.

“ monly reside ; and ever has suffered most from the
 “ regular autumnal diseases, as well as from any new
 “ and uncommon complaint. From all which cir-
 “ cumstances, we entertain no doubt but that the
 “ seamen of the ship William contracted the disease,
 “ of which they died, here, and did not introduce it
 “ into the city.

“ A little before, and immediately after, the attack
 “ of the seamen of the ship William, which first
 “ called the attention of this Committee, several other
 “ persons, in Water and Front-streets, and in the
 “ neighborhood of Dover-street, were seized with
 “ fever, which, especially in those cases which proved
 “ mortal, was marked by severe vomitings, a yellow
 “ skin, hemorrhagy, and, in some cases, a vomiting a
 “ black matter, resembling coffee-grounds,—and
 “ which generally terminated within seven days, and
 “ proved fatal to more, in proportion to the number
 “ seized, than is usual in the ordinary complaints of
 “ the season, in this city.”

Two remarks of considerable importance are natu-
 rally suggested by a careful examination of the above
 quotation : First, that the Committee appear to have
 supposed Dr. Treat, alone, to have received the dis-
 ease of which he died, from the Zephyr ; and, se-
 condly, that they have, in some sort, admitted the
 possibility of such a disease as the Fever of 1795,
 originating here, in their statement of the circum-
 stances relative to the ship William. It is true that
 they are inexplicit, in both instances ; and the only
 absolute conclusion which we are justified in deduc-
 ing from what they say is, that the disease was not
 introduced into this city by the ship William. This,
 however, narrows the ground of controversy, consi-
 derably ; for no vessels beside the William and the

Zephyr, as far as I can learn, have ever been suspected of introducing any disease, of this kind, into this city. It is necessary, therefore, only to disprove the assertion, in respect to the Zephyr, and the whole foundation of the doctrine of importation is destroyed.— But, even were we to admit that Dr. Treat did actually derive the fever of which he died, from the Zephyr, as no other person is known to have been infected by that vessel, and as the doctor communicated it to no person, the advocates for importation would not be greatly benefited by our concession. But, no such concession is necessary. The following papers, copies of which I am kindly permitted to transmit to you, appear to me, to establish it, beyond contradiction, that neither Dr. Treat, nor any other person, contracted a Fever, such as prevailed in New-York, in 1795, from any sick, or dead, man, or any thing else, connected with the vessel in question.

NO I.

Letter from the Captain of the brig Zephyr, to Dr. Dingley.

New-York, Sept. 8, 1795.

SIR,

Having been informed that many people have reported that the late Health-Officer, of this port, caught the disease with which he died, on board the brig Zephyr, I have thought it a duty which I owed to the public, to contradict the report.. This, I trust, will be satisfactorily done, to the minds of all reasonable men, by my deposition, taken before C. Dunn,

jun. one of the justices for the city and county of New-York; which I desire you to publish, for the information of the citizens, as soon as you may think proper.—My departure from this city is the occasion of giving you this trouble.

I am, sir, your friend &
humble servant,

COMFORT BIRD,

Dr. Dingley.

NO II.

Captain Bird's Deposition.

Captain Comfort Bird, commander of the brig Zephyr, of Boston, sailed from Port-au-Prince on the 1st of July, and arrived at New-York on the 20th of the same month. The mate and one mariner had the Fever and Ague seventeen days on shore, and came on board with the same disease; and the captain himself had a Dysentery on his arrival in New-York;—and John Wheeler, aged 16 years, died on the day of the arrival of the brig at New-York, by worms crawling up into his throat and choaking him. He was sewed up in a piece of canvass, and ready to be committed to the deep, when the late Health-Officer came on board, who desired the captain to have the canvass opened, that he might inspect the body—and he only cut the canvass open over the face, and viewed the countenance, but did not make any other examination of the body,—which was, soon after, carried to Governor's Island, and there interred.—The young

man who died as above-mentioned, had suffered chronic complaints, but no fever of a dangerous nature.—Eighteen passengers came in the above brig, all in good health,—who have continued in this state to the present day.—Three days after the above event, the Health-Officer visited the same brig, in as good health as usual.

Signed

COMFORT BIRD.

Sworn before me, this seventh day of September, one thousand seven hundred and ninety-five, in the City of New-York.

C. DUNN, JUN.

OF the undoubted veracity of Captain Bird I am assured by Dr. Dingley, who is personally acquainted with him, and attended him, at the time, for the dysentery mentioned in the deposition. The opinion, therefore, that the Yellow Fever, or a contagious disease, was brought into the city, last year, by the brig Zephyr, seems wholly unsupported by evidence. Neither is it necessary that any imputation should rest on the memory of Dr. Treat: He saw the mariners after they had been long affected by the Fever and ague, and perhaps with some fever upon them at the time; and from the yellowness of the skin, common to the advanced state of that disease, especially in hot climates, might be easily induced to suppose it a remittent. This, however, is mere conjecture, and not necessary to be admitted, since the fact of the men having been sick seventeen days, previous to their embarking for our coast, is ample proof that they could not have been affected by the fever which prevailed and was

so mortal, here.—Indeed, the whole testimony in favor of the idea of importation, is too loose and slight to build any rational opinion upon. The very words of the Committee are calculated to strengthen a contrary opinion, if rightly considered; for they not only countenance the idea that the people of the ship William became sick from the unhealthiness of the place where they dwelt, but, also, that the Fever had made its appearance, in various other of the neighboring houses and streets, previous to their being seized with it. And what confirms the truth of this opinion is, that persons were taken with the distemper, about this time, in other parts of the city, who had no connection with the brig Zephyr, nor with any other vessel, and whose illness may be satisfactorily accounted for from their situation, in other respects. An instance of this kind fell under my own observation, the last of July; several similar cases have been related to me; and one, if I am not misinformed, occurred in the New-York Alms-house, where the disease was distinctly marked, before Dr. Treat's illness.—The following statement of facts, too, will convince every candid mind, that we ought to look at home, for the cause of this Fever.

The ship Connecticut came to Fitch's wharf, about the 20th of July—I think it was on the 21st: she had just arrived from some part of England, and the people were perfectly healthy. No vessel suspected of being infected, came to this wharf, during the season; though the ship William lay at the next wharf, at the distance of about two hundred feet,—and Mr. Fitch gives the most positive assurances that all the articles in his store, at this time, were in good condition. At this wharf the ship Connecticut continued till after the middle of August. The owner was employed about the ship, great part of

the day ; but ate and slept in an airy part of the town. The people of the ship either stayed on board, or at public houses near by.—On the evening of the 25th of July, the owner was seized with the fever ; I saw him the 27th ; he had good accommodations, was in a favorable part of the town, in the third story of the house, and recovered after an illness of about ten days, which was never very dangerous, though the attack was severe.—About this time, one of the mates, the steward, and two of the mariners, of the ship Connecticut, were seized in the same way, and with the same symptoms, as the owner. They continued in the ship, or its neighborhood, and all died. I did not see them, but was informed, by the owner, that the mate, in particular, *vomited large quantities of blood, and expired delirious.*

Three persons, who were in Mr. Fitch's store, were taken sick, and two died, of the Fever. One sickened on the 26th of July, one on the 6th, and the other on the 9th of August. It was common for all these persons to sit "several hours, in the morning, in the store, with empty stomachs,—inhaling "the effluvia of the night."

One of the first persons, who died of the Fever, was one "who lived at the head of the wharf, and "had been confined for several months with a rheumatic complaint."

For the facts contained in the two last paragraphs, I am indebted to a communication from Mr. Fitch to Dr. Dingley, which that gentleman has allowed me to make use of on this occasion. The account which it contains of the condition of the wharves in his neighborhood, adds new force to the other testimony in favor of the opinion that the Fever originated here ; and is too much to the purpose to be omitted. These are his words :—

“ I am positive that the disorder has originated
 “ from local causes—because, it has appeared in this
 “ quarter, at the same season, for several years past :
 “ the cause why it has is, to me, mysterious ; but
 “ what appears to me most probable is, the central
 “ situation, and the motion of the tides. The
 “ tide of flood sets directly into these wharves ; col-
 “ lecting all the vapors and effluvia of the city.—
 “ The situation of the ground, between Water and
 “ Cherry-streets, is rendered noxious by raising
 “ Water-street, and confining the stagnant waters.—
 “ The emptying of tubs into the head of the docks,
 “ instead of the end of the wharves, although not
 “ peculiar to this part of the city, is a horrible nei-
 “ tance ; particularly in time of sickness.—The pon-
 “ ding of water, by running a bulk-head athwart a
 “ dock, and leaving the vacancy for years, to be
 “ filled up with every species of filth and putridity, is
 “ an object worth your attention.”

A confirmation of the facts, and some of the opi-
 nions, contained in this extract, may be found in a
 very singular epistle from the late Dr. W^m. Pitt Smith,
 to Dr. Duffield sen. of Philadelphia, dated Septem-
 ber 1st, 1795 ; which I presume you have seen and
 are possessed of.

On the whole, though I am not prepared to main-
 tain that infectious diseases, and the Yellow Fever
 among others, may not be, and have not been, im-
 ported, and thus spread over parts of our country,
 yet this is the most that can be allowed to the coun-
 tenancers of the doctrine. For, after all, the testi-
 mony of numerous facts furnishes clear, indubitable,
 and decisive evidence, that other and peculiar cir-
 cumstances must concur with such importation, to

effect any general distribution, circulation, or influence of the disease. Frequent instances have occurred, nay do occur every year, of persons returning, from the West-Indies, sick with the Yellow Fever; languishing, for some time, in the houses of their parents, or friends; recovering, or dying; attended by numbers, during their illness; their very clothes, where they have died, afterwards worn by their relations; and yet no ill effects following therefrom.—While I resided at Wethersfield, in Connecticut, I had opportunity of obtaining precise information of several such cases; and it is a well-established fact, in many instances during our Fever, and especially during that of Philadelphia, in 1793.

The whole, therefore, that can be granted, or ought to be assumed by those who maintain the disease which prevailed in New-York in 1795, to have been imported is,—That infection may be brought into any place (and therefore into this city) from abroad; that, under certain circumstances of the place, where it is introduced, it becomes very active and destructive; but that, when these circumstances do not exist, however the person immediately affected,—if it be introduced by a sick person—may suffer, it is harmless, so far as the general health of that place is concerned.—If the subject were viewed in this light, as most assuredly it ought to be, the question of importation, or non-importation, would sink into it's merited insignificance; the efficient cause, the *causa sine qua non*, of such Fevers, would be clearly discerned as depending on local circumstances, capable of being wholly changed; the absolute madness of further delay, in effecting such a change, would be distinctly and deeply felt; a becoming spirit would animate the citizens; and suitable exertions speedily place us beyond the possibility of

being subjected to a misfortune, similar to that which has been already sustained. For it is inconceivable that the nature and extent of the evil should be understood, and the remedy not be applied: and a comparatively slight and temporary sacrifice of property, would render this city, in reality, what the mistaken policy, or pride, of some of its inhabitants now falsely represent it,—as healthy as any in the world; and leave nothing to fear, either from the Fevers of the Indies, or the Plague of the Levant.—But, while people continue to foster a ridiculous vanity, concerning the city in which they reside; while they fear that its reputation will be wounded, by permitting an idea to get abroad, that it is unhealthy; while those engaged in commerce cherish the error, from an apprehension that their interests would suffer from a disclosure of the truth; while men, invested with the sacred character of physicians, countenance false opinions, either through ignorance, a reprehensible timidity, or that they may gather undeserved popularity and wealth; and while the magistracy are more actuated by a mean regard for offices dependent on popular opinion, and maintained by a compliance with it, at all hazards, than by a just and enlightened zeal for the safety and happiness of their fellow-citizens; Truth may be spoken, but there is no hope that it will be attended to. Considerations of *supposed* interest, so various and so forcible, take deep root in the minds of men who look only to the present moment, and are either incapable of comprehending the whole of a subject, or unwilling to bestow on it the necessary consideration. Thus circumstanced, they strive to banish from others, and to smother in their own breasts, those convictions which irresistible evidence forces upon them; as if it were possible that truth could be noxious.—Nothing can be more melancholy than to observe this wilful blindness, this obstinate persistency in error, the consequences of which

have been so dreadful already, and threaten to be still more so hereafter.—Were it possible to impress the truth vividly on the minds of the great body of citizens; to rouse men into action; to excite a generous disregard for temporary advantages, and a lively interest for the future welfare of themselves and their posterity; a few weeks might enable us to bid defiance to death, in many of the forms in which he now assails us.

LETTER SEVENTH.

Was the Fever of 1795 an Epidemic? Was it Contagious?

HAVING determined, to my own satisfaction at least, what were the remote or predisposing causes of the Fever of 1795, I might now proceed to a description of the disease itself, were it not proper to take some notice of two questions, which have been considerably agitated, viz. Whether the Fever was, as the Health Committee term it, an Epidemic?—And, as some suppose, Contagious?—On both these questions, I shall deliver my opinion, in as succinct a manner as the subject will permit.

Was the Fever epidemic?—A principal difficulty occurs in the very outset of this enquiry; for different writers have made use of the term Epidemic, differently; some giving it a *general*, others a more *particular* and *precise* signification. Thus Van Swieten, in his Commentary on the 1380th Aphorism of Boerhaave, places *epidemic* in contradistinction to *endemic*; while Cleghorn, a writer of deserved authority, in the Introduction to his Observations on the Diseases, &c.

of Minorca, p. 74. constitutes a class of *endemic* diseases, which he divides into *epidemic* and *sporadic*.—Examples of like dissimilarities, in the use of these words, are frequently to be met with, in authors of equal credit. And thus it may possibly happen, in the present instance, as on many former occasions, that the whole contention arises from different conceptions of the import of a particular word.—But our business is rather with facts, than with definitions; I shall state to you, therefore, what appears to me to have been the truth; and, perhaps, in the conclusion of my statement, a definition will be found.

In the first place, every person conversant with the practice of physic in New-York, knows that a Fever, generally of the remittent or continued kind, and variously denominated by medical writers, prevails in this city, to a greater or less degree, every year; perhaps I may say throughout the year—but, certainly, in every part of it, except the winter, and particularly from July to December: its greatest height being in the months of August, September and October. The violence of this disease is increased or diminished by constitutional peculiarities, and by the particular situation of the patient in respect to air, temperature, &c. &c. Its universality, likewise, may be considered as dependent, in a degree, on the same causes.—Circumstances, peculiar to some situations or individuals, occasion it to prove mortal, with high marks of malignity, in certain instances, almost every year. That an extension of these peculiarities, so as to make them common to the citizens generally, would produce the same effects on the many, as on the few, seems hardly controvertible. Now, this appears, to me, to have been the case, the last year; and I have no doubt of the identity of the Fever which then raged here, with that which has prevailed here in

former years ; and consider it only as a higher grade of the same disease.—Compare the history of Fevers, in Sheffield, with that of Fevers in New-York.—We have a Fever, every year, at a particular season, usually called the bilious-remitting Fever : in Sheffield, at the same season, a Fever prevails, called the intermitting Fever. This last evidently depends on the peculiarities of Sheffield—such as its ponds, marshes, &c.—So, in my opinion, does the former arise from the peculiarities of New-York.—The season of 1795 was a remarkable one : Was there any apparent change in the Fever of Sheffield? Yes : the symptoms were remarkably heightened ; some new appearances were observable ; and the disease astonishingly obstinate. And was not this, also, true of New-York? Who will venture to deny it?—Were either of these Fevers propagated to other, or neighboring, places? No. You have certified this of the Fever in Sheffield ; and I have heard of no instance of the kind, in relation to that of New-York. Both Fevers, then, were *proper* to the places in which they prevailed ; and the inference which it would be natural to deduce from this is, that both were *endemic*, and not *epidemic* : for the term epidemic seems to include in it the capability of diffusion or propagation, without respect to the situation and constitution of the patient ; which the term endemic certainly does not. But, whichever of these titles may be regarded as most appropriate, the fact will not be varied by the use of either ; and that you will understand to be, according to my belief, as above-stated : That the Fever of 1795 was no other than a higher grade of that which prevails here, in the same season, every year ; deriving its severity entirely from the peculiarities of the season, &c. as related, at large, in the preceding letters.

Was the Fever contagious? Concerning the answer to be made to this, as well as to the former question, there has been some dispute; but, in this case, as in that, as much difficulty has arisen in settling the import of the phraseology, as in determining the fact.

If by the question it is meant to inquire, whether the well became affected with the Fever, in consequence of the contact of a sick person, or the cloathing of a sick person, or from the performance of the offices of friendship, charity, and meniality, to those who were sick,—I answer that no such cases have come to my knowledge; whereas numerous instances of such contact fell under my observation, and have been related to me, to which no ill effects succeeded.

A number of persons, not less than ten or twelve, removed, with the Fever on them, from New-York to Stamford, 40 miles; but no person in Stamford, beside them, ever had the disorder.

Mr. Fitch, the gentleman mentioned in the preceding letter, attended the young men who had the disease with him, and to use his own words, “lodged in the bed, warm with the effluvia of the body of the young man who died at his house”—and nevertheless, he had no Fever.

Dr. Treat, according to the account of the Health-Committee, and of his physicians, died of the very worst degree of the Fever; yet he communicated it to nobody.

A patient of Dr. Dingley’s, in Ferry-street, who was seized with the disease, without any previous communication with any sick person, and as early as the 17th of August, and who died with it, communicated it to none of his attendants. And the same is true of several other patients of the same gentleman.

The writer of some ingenious strictures on Dr. Mitchill's Pamphlet, remarks, in a note subjoined to his first paper, that he has, "in common with many of his fellow-practitioners, indulged, *without the smallest ill effect*, a much more frequent intercourse with his patients, in this disease, than usual," &c. And the Doctor himself, though he admits the possibility of such fevers becoming contagious, or being propagated by contact, &c. expressly denies the Fever of 1795 to have been so.

But there would be no end to an enumeration of similar facts; I shall only add, therefore, that I made use of no precaution whatever, in respect to such communication with patients; that I have been, for more than two hours, shut up in a small room, with a person laboring under the worst symptoms of the Fever; have watched several nights, and performed the most servile offices, with a near friend, who was sick with it; and never sustained the least inconvenience from such exposures*.

But, perhaps the advocates for the Contagious, or Infectious, nature of the disease under consideration, do not intend to confine the meaning of the term Contagion to that substance, whatever it is, which is generated in an unhealthy body, and by application to a sound body, excites in it a similar unhealthiness. They may mean to describe, or designate, by it, that structure, constitution, or vice, of the atmosphere, which disposes to, or excites disease. If so, they are in fault—for they employ the same term to designate two different facts.—But let us not dispute

* I might superadd to all this, the *ambiguous* testimony of another Physician, who, in proof of the uninfected nature of the Fever, affirmed that he had "had thirty patients with it, and had taken the breath of all of them."

about words. Perhaps, the following statement of my opinions, will lead us to the formation or attainment of some more accurate notions on this point.

Owing to a variety of causes, which have been enumerated in the course of these letters, I suppose the atmosphere of New-York to have become vitiated, in 1795, to an uncommon degree: that there was either an unusual absence of that principle necessary to support healthy life, or an extraordinary concentration, diffusion, or quantity, of some other, unfriendly to healthy life. From the operation of one, or other, of these states of the atmosphere, and of the causes above-mentioned, on the bodies of the residents in this city, I suppose a predispotion, greater or less, according to the situation and other circumstances of individuals, was formed, in the citizens, generally, to the Fever which prevailed here that year. With some persons, this condition of the atmosphere, of itself, might be sufficient to produce in them disease. But, ordinarily, I believe, the aid of some cause, which should disturb the regularity of the distributions, or functions, of the body, was required to bring the system into a state of febrile action. Such, for instance, as intemperance in eating or drinking, sudden fright, fatigue, or indeed, any considerable irregularity in what Systematics call the Non-Naturals.

This condition of the atmosphere, I suppose, acquired strength, daily, as the season advanced; or, in other words, the power of the atmosphere, &c. to predispose to the Fever, was increased, as the season progressed. I say to predispose,—for I suspect it seldom, of itself, produced the disease, after that had attained its height, in those who remained here con-

stantly. Though, on persons coming into the city, from abroad, it doubtless operated with much greater force, in many cases, than on the citizens, at any time. This is easily accounted for, from the known effects of custom. For

“ The monster Custom, who doth, &c.

“ is angel yet in this.”

The systems of those who continued here became habituated to the atmosphere; and while those who came here from the country, with ruddy faces, sunk down in death, the pale and yellow beings who stalked through our streets, derided disease, and pursued their customary occupations.—But, to return from this digression.

Not only am I convinced of the accuracy of the preceding ideas, but I have no doubt that this vice of the atmosphere was rendered still greater by exhalations from the bodies of the sick.—It is a point well-established in medicine, that the air of a room is rendered unfuitable for respiration, if a number of healthy persons are obliged to breathe it over several times, without the admission of fresh air from abroad. So injurious is such a confinement, in respect to air, to the human body, that it has, in numerous instances, produced terrible febrile diseases. And if such effects arise from the repeated breathing over the same, or nearly the same, air, by healthy persons, we should naturally conclude, as is the fact, that such repeated respiration (especially when united with the constant exhalation from their bodies) by the sick, must be still more pernicious to health.—You will pardon me for the introduction of remarks so trite and familiar, for the sake of the use I wish to make of them; which is no other than this—I have mention-

ed it as my belief that the state of the atmosphere was such, in this city, the last year, as, in conjunction with the general influence of the causes producing that state, to predispose to, and, in some instances, produce, the Fever; and that this ill-conditioned atmosphere was rendered still more noxious by means of the numbers who became sick, in the course of the season; and to this I would add, for the reasons contained in the remarks above, that I think it not improbable that some were affected with the Fever, in consequence of the further vitiation of the atmosphere by the sick, who, without that circumstance, would have remained free from disease. So, likewise, there may be persons, the balance of whose health is so tremulously sensible to every external influence, as to preponderate to the side of disease, on the slightest impulse of its causes. With such, the mere contact of a sick person, or a transitory exposure to the effluvia arising from a sick body, may be sufficient to produce Fever; and instances of this kind may have happened, in the course of the Fever in question. Such cases, however, must have been extremely rare, if there were any; and no one has ever come to my knowledge.—But, with regard to Fevers produced by such a state of the air, as above-described, even when aided by the mixture of human effluvia, arising from sick bodies,—if these are to be called Contagious diseases, and the cause which excited them Contagion, so, likewise, may all other Fevers on the same principle, continued, remitting, intermitting, Fevers,—be called Contagious, and their causes, as marsh miasmata, &c, Contagion.—Now, to such a use of terms I have not the least objection, provided the person who employs them, be uniform and explicit in his application of them.

To conclude,—If, in speaking of the Fever of 1795, the epithet Contagious is meant to express that it was communicated by contact, &c. like the Small-pox, Meazles and Plague, I must repeat it, I find no good reason for admitting this to have been the fact; but, for the reasons before alledged, I think there is just ground for a belief that the Fever was never excited in this way. But if, on the other hand, the term Contagion be meant to convey an idea of the influence of the atmosphere to predispose to, or produce, disease,—whether that influence arise from the abstraction, or addition, of a principle. or be distinct from human effluvia, or combined with them—there appears no reason for denying the Fever of 1795 to have been Contagious.—Still, as the term Contagion is not generally used in a sense so restricted, as in this second instance, but is often employed by the same writer, to express both the cause of the disease communicated by contact, &c. and of that produced by the influence of the atmosphere, there seems to be a propriety in rejecting it altogether, in the present instance, or at least in confining the use of it, to designate a single mode of producing disease; and, according as it is applied in the former or latter instance, the Fever of 1795 may be denominated Contagious, or the reverse.

I have now gone through with the consideration of all the subjects, preliminary to an account of the disease itself. In my next letter, I shall lay before you, the result of those scanty observations which I had opportunity to make.—Knowing the causes of their imperfections, you will not fail of extending your charitable indulgence to their author.

LETTER EIGHTH.

Some Account of the Symptoms of the Fever of 1795.

AFTER the frequent confessions, which occur in the preceding letters, of the circumscribed sphere of my observation, it were presumptuous in me to pretend to deliver a regular history of the symptoms of the Fever of 1795. You will observe, from the account which I shall transmit to you, that the appearances it exhibited were too various to authorize such an attempt in any one who had not opportunity to examine them, in relation to numbers of the sick. It is proper, therefore, that I warn you, once more, to consider what is here delivered as the result of my own observation only—except where it is expressly mentioned to be otherwise.

The Fever of 1795 was, generally, sudden in its access; so much so, in some instances, as to resemble convulsions. In a less number of cases, it came on gradually, and after a slowly-increasing illness of several days. It began with great pain of the head, heat and redness of the face, and fullness and redness of the eyes, accompanied by a strong, full, tense, pulse, and an almost universal costiveness. Pains in the back and limbs were common; but not as much so as of the head. A great inquietude, or anxiety, of the stomach and breast, was common; approaching, sometimes, to syncope, and sometimes a vomiting, which soon ceased, or continued, at intervals, through the disorder.—The Fever which now commenced was rarely ushered in by a chill, and con-

tinued for a greater or lesser period, according to circumstances, with so many varieties and combinations of symptoms, as to render it impossible to pursue a regular description. I shall, therefore, dispose my remarks under several heads; preserving as much connection as circumstances will permit.

I. Though the *pulse* was generally full, strong, and tense, in the beginning of the Fever, it was not always so. It was sometimes weak and low, but still tense—if it be proper to use this term, to point out a condition of the pulse, as it appears to me, wholly peculiar to this Fever. I well remember that, in a youth of 12, or 13, years of age, the pulse became much fuller after a plentiful bleeding; though he was of a feeble constitution, and had been slightly affected with the Fever once before.—In two gentlemen, who were considerably affected by the Fever, for several weeks, but not to such a degree as to be confined to their beds, this peculiar pulse was very distinguishable; as much so, I think, as in any other persons whose pulse I examined.

Hemorrhages, from various parts of the body, were frequent, especially in the advanced stage of the disease, and where it had been violent from the first. These were from the nose, fauces, especially the gums, from punctures made in bloodletting, and from the stomach: I saw no other. Bleeding from the nose and fauces often occurred in the beginning of the disease, and was removable by the general remedies. Bleedings from the punctures made in bloodletting, were seen in the close of the disease, and were restrained with the greatest difficulty. I recollect to have been constantly engaged in an attempt to restrain such a hemorrhage, in company with another physician, two of the most melancholy hours I ever

experienced. Hemorrhagy from the stomach I shall mention more particularly hereafter.

II. Symptoms of pulmonic affection were not uncommon; though I do not recollect to have observed them till the last of September, or beginning of October. They sometimes rose nearly to the height of pneumonia.

Hiccough was a troublesome symptom, and often accompanied vomiting; and there was sometimes, as it appeared to me, a mingled hiccoughing and belching.

III. The marks of congestion in the brain were too numerous and unequivocal to be mistaken.—A violent pain in the head was one of the earliest, most constant, and most distressing, symptoms of this disease.—Coma was a very frequent symptom; and, as I thought, in proportion to the severity of the disorder. Towards the close, it amounted almost to total stupefaction; it being scarcely possible to rouse the patient. Some degree of delirium was common; particularly at the commencement of an exacerbation of the Fever; manifesting itself in the hurried manner in which the patient performed any action, and in the rambling manner in which he conversed. That kind of delirium which some have called *light-headedness*, was remarkably present, in one person, at the close of his disorder. He often started up, wildly, without any apparent object, then lay down, and commenced singing, in an interrupted, incoherent manner; but without any violence. And the day before his death, he continued to sing, with slight intervals, more than an hour.—At other times, he would fix on some particular words, and repeat them over and over; sometimes, with no appearance of emotion; at others,

with some glimmering of consciousness.—In another person, a patient of a physician of my acquaintance, the affection of the brain was like that in Phrenitis. A blistering-plaster applied, if I remember accurately, for 24 hours, to the head, which had been shaven, excited no vesication, and scarcely any redness, though twice the usual quantity of cantharides was incorporated, and the patient was of a delicate habit. In this case the affection of the brain took place on the third day, and the patient died on the fifth or sixth.—On examination and dissection of the contents of the cranium, all the membranes, and the very substance of the brain, were discovered to be in a remarkable and uncommon state of inflammation.—I have been the more particular in relating this case, as it seems to contradict, in a degree, the ideas of Dr. Rush, p. 50, of his History of the Philadelphia Fever: our season having been unusually *wet*.

As connected with the state of the brain, it may be proper to mention here, that the *eyes* were often suffused, the whites of them tinged with yellow, and the small vessels turgid with blood. In some patients they had an expression of singular wildness; while, in others, there was a remarkable vacuity, or absence of expression.—I saw no instance of squinting; nor observed any uncommon state of the pupil: but I ought to acknowledge that my attention was not particularly directed to the condition of the eyes, in this respect.

The state of the mind was very variable. Some were exceedingly impatient and irascible; others, astonishingly obstinate; and this particularly, when, as was often the case, there was a loss of memory, or some degree of mania. A strong appeal to their good-sense, calling them by name, seemed to effect a temporary restoration of their docility and recollection.—

which were soon lost.—Many were very confident, at first, supposing their illness not be the Fever; but gave themselves up to despair, immediately on being convinced that it was the Fever. Many were full of dreadful apprehensions, from the first; and oftentimes, exceedingly aggravated what would have been, otherwise, a slight disease. A few, were calm, collected, undaunted, throughout their sickness. And here it may not be unseasonable to remark, that these same varieties were, in a degree, observable in those who continued well. Some physicians thought they could discern a tendency, among the citizens, generally, to mania. It is certain that fear was a terrible evil, and frequently proved the exciting cause of the Fever.

IV. I have remarked that a great anxiety at the *stomach* was sometimes felt, on the patient's being first seized with the Fever. This anxiety, it may now be added, in some cases, extended through the complaint; but was most distressing when the Fever was most violent. A great sense of foreness was often complained of, when any thing was taken into the stomach, *as if it were raw*;—to use the words of one in whom it was observed. In some, the sensibility of this organ was so excessive, as to make it almost impossible to administer, either food or medicine, by the mouth.

Patients were often afflicted with extreme pain in the bowels; but more resembling that in dysentery, than in cholera. A discharge, generally, afforded a present relief.

Flatulency, both of the stomach and bowels, was almost universal, and to an extraordinary degree.—The abdomen was sometimes distended with wind;

but the distension subsided after a considerable discharge of wind, downwards. This was often the case in one of my patients.

Several dissections, as I am informed by the gentleman principally concerned in them, shew the stomach to have been in a remarkable state of inflammation and excoriation. It appears to me that this disease of the stomach, or inflammation—(if it be proper to call it so) extended through the whole length of the Alimentary Canal; as it is known to do in Aphæ and some other disorders; for one case of excoriation and partial mortification of the Rectum came within my knowledge, and I have heard of several others.

I have mentioned, above, that Costiveness was almost universal at the commencement of the Fever; but it was not always present. For though it was observable in the greater number of patients, so much so as to deserve to be ranked among the characteristic signs of the disease; and though a constant tendency to a costive state, was general in those sick with the disorder; yet, in some, the Fever was attended from the first, or for a while, by a Diarrhea; and in one instance, the whole of the Disease appeared to me to be turned upon the bowels, and to be converted into, or assume the form of a Diarrhea.

Some were seized with vomiting at the first, which was soon stopped, or ceased spontaneously, and never returned. One case of this kind, proved favorable—the patient recovering; another unfavorable, the patient dying.—In others, vomiting commenced the disease, and continued through it: while in others, again, it came on in the course, or at the

close of the disorder ; and this both in successful and unsuccessful cases.

V. The matters vomited up varied in colour and consistence, in different persons, and in different periods of the disease. The most common was of a yellowish, greenish, or a muddy green and yellow, appearance, and very fluid. Vomitings of this kind, were seen both in those who recovered, and who died ; and were both temporary and continued.—Next, in frequency, was that of a blackish appearance, commonly described as resembling coffee-grounds, but bearing a nearer resemblance to blood partly burnt, and diluted with muddy water. Several who had this vomiting recovered.—I never saw an instance of that tar-like vomit, which has been noticed by some writers. But, of all others, that which struck me as evidential of the greatest derangement of the stomach, was the vomiting up of, what appeared to be, thin blood, in which floated a flaky, filmy substance, which I suppose to have been the villous coat of the stomach.—This I saw but in a single instance, a few hours before death. This discharge was frequent, though small ; and accompanied by a large worm.

I cannot help thinking that the matters vomited up, except it be those of the yellowish or greenish cast, have all a portion of blood mingled with them ; and that their various appearances depend—aside from their mixture with the contents of the stomach—in great measure, on the quantity of blood mingled with them. It appears to me that, in this disease, the secretion of the Bile is greatly affected ; and that, in many instances, the blood itself passes into the biliary vessels, charged with the Bile, designed to have been separated, and being poured in-

to the duodenum, and discharged by stool or vomiting, communicates the blackness observed in those evacuations. Beside this, as appears from dissection, and from the case just mentioned, the coats of the stomach itself are destroyed; and the numerous little vessels, which, in a healthy state, distill into it a limpid and colourless fluid, now are preternaturally distended, receive the blood, instead of lymph, and pour it, by their numerous orifices, into this organ. This effusion of blood may be supposed to increase, as the disease increases in violence, till, at length, the tender coats of the stomach are separated, and thrown up, mingled with pure blood.—If these ideas be just, it is clear that no vomiting can be more evidential of a fatal termination of the disease, than this; none can afford a more unequivocal sign to the physician, that his attention is no longer useful*.

The discharges from the bowels were very dark, in general, even where no preparation of mercury was used. They were, likewise, in most cases, remarkably fluid, where the bowels had been once.

* If the ideas contained in the above paragraph are accurate, they will tend to confirm both the general notions of the disease, and of the proper mode of cure, advanced in these letters. For—

1st. The effect of Blood-letting, in stopping the *black-vomit*, may be explained on the same principle as in Hemoptoe—by weakening the circulation, and allowing time for coagulation.

2d. The reason why all stimulating substances increase the particular discharges from the stomach, is evident; and, also, why cold drinks, ice, &c. restrain them.

3d. The astonishing fluidity, or dissolution, as it is called, of the blood is accounted for, and seen fairly to correspond with the preceding circumstances: all of which—

4th. Demonstrate the nature of this disease; that it is not a disease of vascular debility:—and establish the propriety of employing evacuations, and whatever may lessen the activity of the circulations, to effect a cure.

thoroughly, opened; and, where the purgatives were brisk, and in all severe cases, excessively offensive.—They were, sometimes, of a dark, shining appearance, somewhat like molasses, melted pitch, or black-lead. But I have seen stools of this colour, in other diseases—particularly once in the Croup—where calomel was frequently used as a purge.—I mention this, as it may sometimes happen, that physicians deceive themselves, in such cases, ascribing that to the disorder, which depends on medicines.

Some were troubled, with a retention of urine; but, more generally, with an unusual flow; and this in one instance, I distinctly recollect, where the quantity of fluids taken into the body, was very small.

In respect to sweating, I discovered nothing uniform. In one case, the patient always had a profuse, clammy, sweat, when he fell into a restless sleep, with a rise of fever. This was often observable, likewise, in that state of remarkable anxiety which frequently preceded an evacuation by stool.

Blood drawn in this Fever, was remarkably wanting in floridity; and this was especially true of that which was evacuated in the close of the disease—whether by art, or spontaneous effusion. In one instance it seemed endowed with a caustic quality, and affected a lancet so as to leave a permanent inequality and discoloration of its surface.

VI. Sleep, for the most part, appeared unnatural and unrefreshing; attended by great restlessness; and sometimes by great mobility of the muscles, twitching of the tendons, and frequent starting up. One of my patients often raised himself up, suddenly, out of bed, with every appearance of extraordinary ter-

ror ; but with no evident or clear conscioufness of the act. In one person, I saw remarkable *subfultus tendinum*.

There was great variety in muscular power, in different persons. A man who died with the very worst symptoms of the Fever, the evening before his death, rose from his bed, ran down two flights of stairs, returned, and was only prevented from going down a second time by his nurse's having locked him in his chamber.—In another case, where the disease was mild, the patient felt perfectly easy and composed, and in full possession of mental and corporeal strength, while he lay on his bed ; but, when he rose, and attempted to walk, a sense of universal anxiety was felt, his ideas became confused, his strength seemed to desert him, a sudden faintness came over him, and twice he sunk down, unable to proceed.

An evacuation, by stool, often suddenly restored the patient, who was lifted from bed, to such a degree of strength, that he continued for some time after, to walk about the room, or sit up.

VII. I noticed no uncommon sensibility to light but in a single case ; and that was not of long duration.

Hearing, in one instance, I observed to be unusually acute ; but generally, it was much impaired ; and, sometimes, seemed to be entirely lost. Perhaps this may account for the apparent loss of memory in some persons.

The taste was either exceedingly impaired, or very fickle. The same may be said of the appetite. When the appetite began to return, and food to be relished,

the sick were very voracious, but not easily suited. They discovered no partiality for animal food. Thirst was moderate, in a few instances; but oftener excessive. I have seen Porter desired; but it was not often relished, when allowed. The same is true of coffee. Water was, universally, the most agreeable drink; and I allowed its free use. One of my patients frequently drank, in one night, when very feverish and restless, three quarts of water. The appearance of the *tongue* varied, according to the violence and duration of the disease, from white, to yellow, darkish, and black, like burnt blood; and the gums often assumed this last appearance, when there had been bleeding from them.

An astonishing insensibility to cold was nearly universal.—I remember, in one of those cold turns which we had in September, a remarkable instance of this. One of my patients occupied a chamber in the second story: the room was very large, extending the whole width of the house, and having a chimney, a large door, and two windows at either end. The bed was hard, in the middle of the room, the door and all the windows open, and he covered with a single sheet, frequently thrown off in his restlessness, yet he complained of no cold, while I was chilled through, though sheltered from the draught of air, with my usual cloaths on, and the addition of a furtout and double cloak.

VIII. Yellowness of the skin was not constantly present in this disease; at least, not in any remarkable degree. A tinge of it was common in the eyes and on the skin; but not stronger, in numerous instances, than in ordinary Fevers. Some were exceedingly yellow, even to being tawny—so that the bed and body linen were stained, both by the sweat and urine.

I saw eruptions but in a single instance. They resembled musketo bites so nearly, that, had I not been forewarned of this similarity by Dr. Rush, in his account of the Philadelphia Fever, I should have mistaken them, especially considering the numbers of these *animals*.—In this instance, the eruptions were on every part of the body; which had not been exposed to *their* ravages.

I have sometimes observed a coldness of the skin, on the body, generally, but especially of the feet, of which the patient was unconscious, while the face and breast were red and communicated a burning sensation to the touch.

IX. I have, hitherto, said nothing of the *type* of the Fever of 1795; and, in truth, it is a point on which I could wish to be silent, as, of all others, connected with the Fever, it is the one where my observation is the least satisfactory. In its mildest form, the Fever or pyrexia, appeared to me to be moderate and constant; without any evident or strongly-marked exacerbation: when severe, it fell in with Dr. Cullen's idea of a Continued Fever, as stated in his *First Lines* § 27, more than with any other: but, in both cases, I could not determine that there was any regularity in the rise, or diminution of pyrexia; on the contrary, the remission (if it be proper to term it so) was more or less protracted, and the exacerbation sooner or later, moderate or severe, in proportion as the patient preserved a regular state of body and mind, or was irregular in these respects. For example—any sudden agitation of mind, as anger, perturbation, &c. and any irregularity of body, such as eating improper food or too much food, drinking any stimulating drink, restlessness, too long detention of the faces, &c. appeared to hurry on a return of all

the violent symptoms ; while, on the other hand, the sick never failed to get through the day with more ease to themselves, when no such excess, or irregularity, happened.

In one case which came under my care, and which various causes contributed to render the most interesting of any I attended, there were complete intermissions, during a part of the disorder ; but there was no kind of regularity, either in their commencement, or duration ; and a slight excess, in any of the particulars mentioned in the preceding paragraph, was sufficient to bring on a speedy and violent turn of Fever.

X. The period of convalescence, as well as of Fever, was variable. In the former part of the time, and before the weather began to grow cool, patients seldom died after the tenth day—as far as I can learn ; but their deaths took place on the 3d, 4th, 5th, 6th, 7th, rarely on the 8th, and still more rarely on the 9th day. After the cold weather appeared, they sometimes dropped off suddenly, and after having exhibited all the marks of convalescence, three weeks from the time of their seizure.—So, of those who recovered, some regained their health with an elastic quickness ; while others, were very slow in the acquisition of strength ; were a long time troubled with great weakness in some of their joints, and oftenest the knees ; and were afflicted by œdematous swellings of the feet, ancles, and legs.

You have now before you the result of my observations, on the appearances of the Fever of 1795 ; and I shall conclude this letter by the simple men-

tion of two facts, which will serve to confirm the doctrine of the great Sydenham, concerning the despotic nature of the reigning sickness.

The Meazles had begun to appear, when the Fever came, and they disappeared; but no sooner was the Fever vanquished, than they returned more generally than ever, and have continued in this city ever since.*

I cannot learn that any febrile disease was observed in the city, while the Yellow-Fever was present. I saw only one instance of Intermitting-Fever in a lady, who contracted it in the country. It was slight, and was soon cured on her coming to town, by the usual remedies. Her residence in town, likewise, was in a part to which the Yellow Fever never came. Beside this, I heard of one other instance, of a gentleman coming hither, from some other place, with the Fever and Ague; which was, also, cured by the usual means.

I shall proceed, in my next letter, to bring you acquainted with those means which were most successful in the removal of that disease which I have just described.

LETTER NINTH.

Method of Cure, in the Fever of 1795.

IT was obvious, to the slightest observation, that the mildness, or severity, of the Fever of 1795, depended, in no small degree, on the situation of the

* April.

patient. That those who lived in the higher, drier, cleaner, and more airy parts of the town, were more lightly affected; and that a removal, from the other quarters, into such as were so circumstanced, was always followed by beneficial effects to the person removed. In consequence, a milder treatment, in every respect, especially a more sparing use of evacuations, was warrantable in some cases, than in others; and as some practitioners were chiefly employed among those whose favorable situations protected them from the most malignant attacks of the disease, you will readily conceive why there should prevail, in the minds of some, an opinion that very active remedies were unnecessary, and a recurrence to the lancet inexpedient, at least, if not pernicious. It is true that I did not always use it myself; but it is also true, that I never failed to regret the omission. And though I lost no patient by the neglect, yet I am convinced that, in every such case, however slight the disease might appear, the cure was protracted. But, if the remedies were not always the same, the principle on which they were administered, was uniform; and their operation the same in kind, if not in degree.—And, after the Fever became more general, and the season considerably advanced, there was but little choice left in the use of means. Positive and speedy relief was required; for to temporize, was to kill.—You will sufficiently comprehend, from these remarks, how far the practice recommended below admitted of variety in the application; and I shall detain you no longer from the consideration of the particular remedies, which are meant to be arranged nearly in the order of their comparative importance.

I. BLOOD-LETTING.—This was indicated by the severe pain, heat, and redness, of the head and countenance; by the redness, turgescence,

and heaviness, of the eyes; by the oppression, pain, and anxiety, often observable at the breast; by the fullness, hardness, tensity, or oppressedness of the pulse—and equally by that slender, wiry, vermicular feeling which it sometimes had—communicating an idea of approaching numbness to the finger which felt it.*

The effects of bleeding were, in every instance where I had an opportunity of observing them, most salutary. The sick seldom failed of finding immediate relief from it, and of perceiving that relief increased as the blood continued to flow. It diminished the pains in the head, breast, and stomach: oppression, anxiety, faintness, and heat, were moderated: the eyes rarely failed to assume a clearer and more natural appearance: and it seemed to communicate a new energy to the system.—I remember an instance where a patient was so unable to assist himself, on the second day of the disease, that, when I wanted to bleed him, it required two persons to support him, in passing a few steps from his bed, into the open air.—There, he was seated and supported in a chair. He grew easier, in every respect, as the blood flowed.—After taking away about twenty ounces, and tying up his arm, he rose without assistance; walked several rods, to a Necessary; took care of himself; had a profuse evacuation, by which he seemed to gain additional strength; and returned to his bed, without any aid, and with a firm step.

Such were the immediate effects of bleeding early in the disease. The importance of this remedy was not diminished by the duration of the disorder, nor

* It is scarcely possible to convey an idea, by words, of minute peculiarities in the pulse. You will recollect this, and pardon me, if I have failed in this instance.

the necessity for it lessened, while the symptoms continued which made it useful in the commencement.— On the contrary, it was oftentimes as requisite, and as beneficial, the fifth and the sixth days, as on the first. But this necessity for its use, at so late a period, did not often occur, where it had been vigorously employed, in connection with other remedies, at the first.

The following case, which I state briefly, is one among numbers, in evidence of the advantage of early, free, and repeated bleeding.

A physician was called to a young man, with all the symptoms of the disease—as it generally appeared at the first—in the evening. He bled him 16 or 18 ounces; directed purges, &c. in the manner hereafter to be mentioned; and though the weather was then cool, ordered the windows to be removed, both day and night. The symptoms were relieved; but the next morning it was thought necessary to repeat the bleeding; which was done, to an equal quantity. The purges, &c. were also continued. In the evening, a third bleeding was performed, and a like quantity of blood was taken away; and the other remedies were continued. On the ninth day, from the seizure, the man was well, and able to pursue his business; though his strength was not perfectly restored.

In one instance which came to my knowledge, bleeding removed an obstinate vomiting, of many days continuance, which threatened the life of the patient, and which had resisted all other remedies.

It seems hardly necessary to add any thing more, in favor of this remedy, after its beneficial effects have

been stated, with so much eloquence and perspicuity, by Dr. Rush, in his various publications, respecting the Yellow Fever.

II. PURGING. No case occurred, in my particular practice, where, notwithstanding the vomiting, cathartics could not be administered. When this symptom was very troublesome, they were required to be given in a solid form, at more considerable intervals, and of as small a size as possible. The activity of the purge was always to be proportioned to the violence of the symptoms; and it was important that all medicines of this kind should be given in divided doses—so as to promote a gradual and continued discharge.—The operation was often very much assisted by clysters; for which water alone was necessary.

The good effects of cathartics were not less obvious than those of venæsection. They were indicated by the constipation, so generally present; by pain in the bowels, flatulency, and tumefaction of the abdomen; by pains of the head, heat and flushings of the face, and of the whole body; and finally, by the vomitings: and all these symptoms they rarely failed to obviate, or relieve. This relief, too, was oftentimes so sudden, as to seem like enchantment.—Frequently have I seen a patient, after an hour or more of severe pain, restlessness, heat, thirst, and inquietude of every kind—feeble, exhausted, and as it were, ready to expire—rise with the greatest difficulty, and with the aid of others, to the chair, and after his evacuation, feel his pains removed, his heat and restlessness vanished, his strength renewed, and himself able to sit up, or walk about, and breathe the air with freedom: and sometimes, the discharge was followed by a refreshing sleep, and gentle perspiration.

These benefits were neither so certainly, nor so frequently, obtained, where the evacuations were violent and sudden. Indeed, it appears questionable to me, whether it be ever proper to excite such discharges, in Fevers. Patients, when much reduced, are apt to sink under such immediate and abundant evacuations.

III. COOL AIR.—It was of the utmost importance to procure a constant application of cool air to the body of the patient, from the commencement of the Fever. The advantages which resulted, were universal and wonderful.—To this end, the sick were ordered to be placed on a hard bed, with very little covering, in the middle of the room; and the doors and windows were, as much as possible, kept open day and night.—The good effects of this practice were exceedingly increased, where the application of the cool air could be made to the patient in an erect posture. For, not only was it more equable, but the head was also relieved, thereby, from that sense of fullness and oppression which was invariably experienced in a recumbent posture. The sick, therefore, were directed to sit up, in the course of the day, with the assistance of their attendants, as long as their strength would permit, without their becoming exhausted. While in this situation, their feet and legs were covered more warmly than any other part of the body: and if cloths, dipped in cold water, or vinegar, were often applied to the temples, the relief obtained was still greater.

IV. COOL DRINKS.—The great thirst, which was nearly universal in this Fever, from the first, made the drinks, of necessity, an article of early attention. It was observable that they never could be *too cold*. Pa-

tients complained of the warmth of water which had been standing but a short time; and seemed to languish for a supply of fresh water, with an anxiety which became truly painful, when the usual hour of its distribution approached.*

The good effects of a plentiful use of cool, diluting drinks, were obvious. They tempered the preternatural heat and anxiety of the stomach; often restrained vomiting, and the faucial hemorrhage; served to dilute, and carry off, the offensive contents of the intestines; and disposed to a more equable and aqueous sweat.—Of all other drinks, Water was most relished—and on many accounts, was the most proper. A pleasant and suitable drink was made, by pouring warm water on fresh apples, and suffering it to cool; and likewise, by the addition of a piece of toasted bread to water. Milk, much diluted with water, was relished by some; some were fond of butter-milk; and as all these possessed bland and nutritious, qualities, they were advantageously used, where a variety of drinks was required by the capricious taste of the patient.

I had no opportunity of trying the efficacy of ICE, but the testimony of a Physician, in whose judgement and veracity I place great confidence, is strongly in its favor, and inclines me to believe that it may be used with high expectations of advantage. Under his direction, it answered, better than any thing else, in relieving heat and fever; restraining hemorrhagy;

* The water which is used for drinking, in this city, is mostly drawn from a single pump, called the Tea-Water Pump; and it is distributed, by means of large casks, which are carted to every part of the town; once a day, in winter; and every morning and afternoon, in summer.

and obviating, partially, or entirely, the vomiting—even the *black vomiting*.

V. CLEANLINESS.—This is of the utmost importance, and, in a measure, indispensable.—The bed and body linen should be often changed; the cloaths necessary about the bed, well aired, several times a day: there should be two beds, one of which may be aired, while the other is in use: all unnecessary furniture—particularly woollen, silk and cotton—every thing which may absorb and retain effluvia and moisture—should be removed: all utensils employed about the patient, frequently changed and rinsed: the room should be often sprinkled and dusted: the face, mouth, eyes whole head, hands—and, where it can be done, body of the patient, washed with *cool* water, several times in the day. The more exactly—other circumstances being regarded—these directions can be put in execution, the better for the patient; and, as my own experience convinces me, the more certain and speedy will be his recovery.—You will observe that I say *cool* water; for I cannot believe that the shock which would follow from the application of cold water to the body, would be beneficial.—It is not here, as in the use of air; for water is so much more perfect a conductor of heat, that the abstraction would be universal and sudden, were it applied cold. And, beside, as much is effected perhaps, by the ablution, as by the coldness, consequent upon bathing.

It was not in my power, in any case, to carry this practice to the extent I wished; but, *cæteris paribus*, the relief of the patient was proportioned to the degree in which it was pursued.

VI. BLISTERS.—The advantages usually derived from the use of blisters, were not evident. It was sometimes doubtful whether they were any way serviceable. Yet there were instances in which they afforded relief; though mostly temporarily.—I have seen them, applied to the breast, relieve the oppression at the lungs; and applied to the back of the neck, relieve the head: in both cases, when the disease had been of some days continuance. A physician, to whom I mentioned these remarks, informed me that his experience justified them, except when, as was often observed by him, a hemorrhage ensued from the vesication, and continued for some days. Perhaps it was necessary to the efficacy of blisters, that they should have been, always, preceded by copious blood-letting.

VII. The *Tinctura Sacra*, given in small quantities, at intervals, in water, was found by one Physician, to have the happiest effects, in relieving nausea, and obviating the tendency to vomit, in all cases where a destruction of the coats of the stomach had not taken place. The same gentleman derived much advantage over the disease, where, from long-continued vomiting and effort to vomit, the stomach appeared to have sustained considerable injury, or abrasion, from the use of *Ol. Oliv. vel amygdal. dulc.*—The oil covered the inflamed, or abraded, part, and protected it from mechanical stimulus, while it allayed the soreness and irritation produced by the action of the diseased fluids it contained.

VIII. FOOD.—I have before remarked that the sick shewed no preference for animal food; on the contrary, they very generally refused it. Some, who requested it to be prepared for them, found themselves

unable to eat it, when presented to them.—Fruits, milk, biscuit boiled in milk or water, sago, salep, hafty-pudding, and vegetable food, generally, were most relished by them, both during their illness and their convalescence.—This was peculiarly fortunate, as any indulgence in a contrary course, was sure to be followed by distressing effects. The more rigidly attentive patients were to preserving a simplicity of diet, the more certain and pleasant was their recovery. And, in all cases that I had opportunity to observe, their convalescence was always extended or shortened, tedious or satisfactory, in proportion as they returned suddenly to the use of meats and stimulating drinks, or adhered to vegetable food and water.

* * * * *

I have now, my dear friend, made you acquainted with that course which I generally pursued, in regard to those who came under my care. The number was not great, nor the success always complete—for I had not always the liberty of employing the means I wished to, as fully and freely as was necessary to complete success. But, I can truly say, that I never saw them do injury; and that they appeared to me to do good, in every case, where they were employed, and in the proportion of their trial and application.—More than this no man can truly declare; more than this ought never to be expected from any remedies. The most able practitioners are destined to see their patients frequently expire, in spite of all their care, through the obstinacy of the patients themselves, and the prejudices of their friends, the carelessness of attendants, or the intervention of unforeseen and unavoidable accidents. The consciousness of having done their duty, of having acquitted themselves, under cir-

cumstances so distressful and embarrassing, to the best of their knowledge, and with purity of intention, will prove a never-failing consolation, though the execrations of ignorance, and the calumnies of hatred, may pursue and persecute them.—Happy,—at least in this respect,—are those, “*the peaceful tenor of whose way,*” while it excites neither opposition nor malice, and neither elevates to opulence nor fame, secures them from misrepresentation and injustice.

LETTER TENTH.

Miscellaneous remarks on Medicines used as Remedies in the Fever, and general conclusions.

You wish to obtain every possible information, respecting the Fever of 1795; you are not satisfied with knowing what remedies I employed, nor which were most successful; but you would learn all that were used; the success, or failure of each. I applaud your curiosity, my friend, for I am not ignorant of the benevolent motives which excite it; but I fear that there is little with which it is in my power further to gratify it. The practice which I saw, was that which I have recommended: other remedies I know were used; but, not having had opportunity, but in few instances, to mark their effects, I ought not, from my own convictions, how well-founded soever they may appear to me, precipitately to condemn either the prescriptions, or their authors. In the variety of cases, constitutions, and circumstances, it might happen that some of those very things, which

appeared pernicious when I saw them used, were sometimes proper and salutary. It would be presumptuous, therefore, in me, to decide without more information; but I may be allowed an opinion; and that opinion need not be withheld from a friend.—I confess, then, that from the success which attended the antiphlogistic plan of cure, I am persuaded that no other can be salutary, or safe; and the few instances in which the effects of a different mode of treating the Fever were observed by me, strengthened my previous convictions of its inutility and danger.

The medicines chiefly trusted to, by those who pursued a different course from that laid down in the preceding letter, were, as I am informed, Calomel, to promote, or effect a Salivation,—Bark—Laudanum—Wine, and other stimulating drinks—with an Animal diet.

Of the effects of Salivation, not having seen it take place, by nature nor art, in the Fever of 1795, I can say nothing. Dr. Rush countenances the practice, in his Treatise on the Fever of Philadelphia, and adds the testimony of many respectable authorities to his own.—As a Cathartic, Calomel, combined with other purgative substances, was unquestionably useful. Some, I know, thought otherwise; and that other purgatives might be more safely and efficaciously employed; and, I confess, I saw some cases in which it appeared to affect the stomach very painfully. But a Physician on whose judgment I have great reliance, informs me, that he saw reason to reject a similar opinion, which he had hastily adopted; repeated observation having convinced him, that all the symptoms of gastric affection were worse in those

who had not been purged with Calomel, than in those who had been evacuated by its assistance.

I gave Bark, in no form, but in three cases. Two were in the early part of the reign of the Fever, the two first patients that I had; and I am convinced it retarded the cure in both. In the other instance, it was administered after the Fever had left the Patient, and he was convalescent. Here it was given as any other Bitter, and as much in compliance with his opinions, as from any expectation of its doing good; and, as far as I can judge, with very little effect of any kind.—In the following case, its exhibition was not so harmless.

A medical friend was called to visit the patient of another Physician, who had quitted town, on account of his health. The sick man was oppressed by the most alarming symptoms; of the number of which, were hemorrhagy and the black vomit. The stimulating system had been steadily pursued, and was continued, under the direction of a pupil of the physician first employed. In particular, large quantities of Bark were exhibited, throughout the day.—On the entrance of the second physician, the Bark and all other medicines of the kind, were laid aside; cool air was freely admitted; and the antiphlogistic plan of cure strictly adhered to. The consequence was, that all the symptoms were relieved, and a prospect opened on the patient of a recovery. The vomiting and hemorrhagy had totally ceased. In this situation, and while the Physician was attending to some persons whose condition was more alarming, the person who had the immediate charge of the sick man, began, again, to administer the Bark.—The next day—or the very same, at night—all the bad symptoms

recurred; the Bark was, nevertheless, persisted in; and the man died.

Several similar cases have been reported to me; but none so minutely as to authorize an attempt to state them to you.

The extreme restlessness of a patient, in whom I had the strongest interest, and for whose fate the deepest anxiety, induced me, in violation of my more sober judgement, to administer Laudanum.—This I did not do, till he had spent three nearly sleepless nights.—In every instance, it undoubtedly, increased the restlessness, clammy sweats, thirst and Fever. I was obliged to discontinue it.

Wine, brandy and water, and especially porter, when taken by any of my patients, had the most pernicious effects. I had occasion to see an access of Fever, repeatedly brought on by the one, and a relapse by the other; where they were used without my knowlege, and contrary to my direction.

Of the effects of Animal Diet, I have already spoken, and have nothing new to add.

On the whole, it appears incontestible to me, that what is called the antiphlogistic treatment is to be adopted in Fevers like that which prevailed in New-York, in 1795, in all its strictness, and adhered to with pertinacious resolution. Both the symptoms of the disease, and the success attendant on the practice recommended, concur in establishing the propriety of employing it.—It is also to be remembered that, in this disease, not a moment is to be lost: a day, an hour, nay almost an instant of delay, may sometimes be fatal; and the means practised must be powerful in proportion to the violence of the symptoms. Nei-

ther must we be deceived by the apparent mildness of the seizure—for a few hours may entirely change the face of things, and we may be left to lament that credulity which led us to temporize, and prevented the use of those remedies, which delay alone rendered ineffectual.

But, while the Physician strenuously directs his efforts to the removal of the symptoms of this disease, let him not overlook a passion which never fails to aggravate them. *Fear*, the exciting cause, in many instances, of the Fever; the fomentor of all its evils; and sometimes, as it were, the sole disease; is a frequent and dreadful calamity, and one of the direst adversaries with which medicine has to contend.—In numerous instances, during the continuance of the Fever of 1795, apprehension touched upon insanity; destroying all confidence in the Physician and in remedies, or exciting an absurd and enthusiastic reliance on pretenders and madmen: and utterly disqualifying the patient for a proper attention to himself.—In the well, the evil was scarcely less. The name, alone, of Yellow Fever, seemed sufficient to induce disease, to banish discretion, to sever the bonds of social connection, rend asunder the ties of parental, filial, and conjugal affection, and put reason to flight.—It was in vain to point out the folly of this terror; to declare the disease not infectious, and easy of prevention; to offer mathematical demonstration that other disorders were often more mortal, without exciting any alarm; it was still the Yellow Fever, and that was an irresistible reply to every argument.—The city of New-Haven, summer before last, lost about 50 of its inhabitants, with the Yellow Fever. Universal consternation prevailed throughout the place; all business was at an end; and most of the principal inhabitants fled.—Last summer, the Dyfentery raged there: more

than 70 persons died of it : but nobody fled ; nobody was frightened ; and the Magistrates, very gravely, put a stop to all communication with New-York, for fear of the Yellow Fever ; made vessels ride quarantine, and confined stage-coach passengers, that no contagion might be diffused, through the city, from their trunks and their garments.—But, it is time to put an end to this series of letters ; and seek, by novelty, to give new interest to our correspondence. I shall take my leave of the present subject, with an enumeration of the inferences I have drawn from having viewed it, in the light here exhibited to you.

1. The Fever of 1795 was Endemic :—i. e. generated by local causes, producing a Fever every year, in this city.

2. The peculiar ferocity of the Endemic of New-York, in 1795, is ascribable to the peculiarity of the season, together with a greater accumulation, than usual, of the ordinary causes.

3. It was not Contagious : i. e. communicated by contact of diseased persons, by cloaths, nor by visiting the sick, &c.

4. As it originated here, its prevention will depend on a change of the local and individual circumstances which promote it.

5. The Fever in 1795, exhibited such appearances as characterize what are customarily denominated Inflammatory Diseases.

6. It is cured by the remedies suited to remove Inflammatory Diseases.

7. The same causes which converted the ordinary Fever of New-York into the Yellow Fever, would change the Fever which prevails around our Western Lakes into the Yellow Fever; and, as certainly, the Intermitting Fever of Sheffield: while the establishment of a free ventilation, the filling up of all pools, yards, &c. and a scrupulous attention to cleanliness and simple diet, would reduce our Fever to a simple Remittent or Intermittent, or remove it altogether; as the filling up and cultivation of your ponds and marshes, would forever banish all Fevers of the kind—as general diseases—from Sheffield.

* * * * *

I have now, my dear friend, performed the task demanded of me, in the best manner I am able consistent with my leisure, and my duty towards others. I cannot conclude without once more soliciting your indulgence, and requesting you to recollect with what expectations and confessions I entered on the composition of these letters.—I have taken the words of Cicero for my motto—

“*Rationem, quò ea me cumque ducet sequar—*”

And if I have erred in my conceptions of what is reason, and what *was* fact, let my intentions prove my apology.

E. H. Smith.

L E T T E R

FROM

DOCTORS TAYLOR AND HANSFORD,

TO THE PUBLISHER.

L E T T E R

FROM

DOCTORS TAYLOR AND HANSFORD.

TO THE PUBLISHER.

NORFOLK, VIRGINIA, DECEMBER, 1795

SIR,

IF, in our attempts to add to your information respecting the fever, which prevailed here in August last, we should draw upon us the illiberal sarcasms, which we have observed to attend all who endeavor to serve their fellow creatures in this way; we must leave it to you to justify our intentions, at least, being ourselves unprepared to answer any thing which may be objected to what we shall advance. We mean to state facts, or what we believe to be such, and willing to admit that there are several ways of curing the same disease. It will not be understood, that we reprobate the practice of others who follow a different mode of treatment. Our observations have been drawn from thirty years experience, with the advantage of records relating to similar diseases for a much longer period. We do not know of a more regular mode of treating the subject than by answering your inquiries in the order they occur, which will perhaps comprehend every thing required at present.

The Fever we believe has its origin in the season, and exists every year in various grades, beginning generally in the month of August, and disappearing about the middle of October.

The precise time of its commencement and termination, and its degree of malignancy, depending upon contingent causes. We have been accustomed to call it a Bilious Remittent, with a tendency to putrefaction; whenever it proves uncommonly fatal, it is aggravated, according to the best of our observation, by the prevalence of some unusual weather for a long time together—Thus we have seen this disease equally malignant after a dry hot season, and after a very rainy period. The approach of frosty weather being uniformly the cure for the effects of either.—The Fever of the last autumnal season, appeared first on the river, then on the streets adjoining; was soon after diffused through the town and suburbs, and finally the neighboring country; though in this last not generally: as usual it declined on the approach of cold weather.—The month of June had been very cool, and at the change of the moon, or a little before, it began to rain in torrents, and so continued to do, with short intervals of close sultry weather, till August, when a violent hurricane, attended with a flood of rain, laid waste the whole vegetable kingdom—afterwards the weather was as before, sultry and moist, with profuse showers till the end of September.—The first appearance of the Fever was about the 10th of August; it increased in violence and in extension during all that month; it was perceived then to abate, and continued to do so till the last day of September, when a few frosty nights supervening, it disappeared almost suddenly and entirely.

There were perhaps more deaths, than for many years before ; but whether greater in number to the proportion of the sick, than is usual from autumnal diseases, which prove as universal as that in question, we cannot undertake to determine. The same mode of treatment generally succeeded—as in other seasons. Our method was plentiful depletion in the beginning, not by bleeding, but by purging with Jalap, Calomel, Scammony, Aloes, or by the milder purges, the Neutral Salts—Sennæ, Rhubarb, Manna, &c. as the age, sex and constitution of the patient pointed out,—taking care that the evacuation of the first passages was complete, by whatever means procured. As soon as we judged that to be sufficient—which we always endeavored to make so with as little delay as possible—the bark was administered in all and every form that it could be made to remain, without regard to quantity, or to the period, or height of the fever, with wine, porter, and even brandy, if wine was rejected by the inclination, habit, or stomach of the patient. We can assure you, we have no reason to alter our mode of practice in future. In a multitude of instances, some will occur in all diseases, when a change, and sometimes a material change of remedies may be necessary—such cases we found, and in those we used Blisters, Emetics, Camphor, Opium, and often ventured upon Cupping—but never upon venæsection.—This last, a long course of practice has taught us to be at least, not advantageous. In different climates, and under other circumstances—when the disease may have appeared in other grades than those we have experienced—that operation is perhaps found useful. We wish not to impose our opinion, as a rule for any person ; sensible of the fallability of all human judgment. We ever thought it our duty to give up our own theories, when contradicted by events. We only mean to recommend that plan;

which long experience has taught us to be most successful. There is no proof that this disease possessed any specific infection. It was rarely fatal to the native inhabitants or the old settlers, speaking of the town only; but we have been told that many of the traders from the Rivers and distant part of the State, died immediately after leaving the port. The terror which pervaded all parts of the country, and deprived those victims of the common attentions of humanity, will easily account for this without applying to the malignancy of the disease. All, or most of those born in, or who had been accustomed to a southern climate, escaped death, and when attacked, had the disease in its milder form.

A large number of the inhabitants enjoyed uninterrupted health; most of the deaths happened in confined streets and buildings, and in those nearest the river.—Those who were accustomed to live well, (as it is termed) did not suffer so much as the poorer class—But the intemperate of every description became victims when attacked—The small pox immediately preceded this fever. We did not observe that those who had been the subjects of it were particularly sufferers.—There had been no malignant complaint in the preceding winter.

A particular description of the fever, and its symptoms, does not seem to be here necessary, because, it differed from the ordinary Bilious Remittent, only in the rapidity with which it passed through the several stages, and in its malignancy.—This last circumstance we are of opinion was occasioned by the long continued and universal heat and moisture of the atmosphere.—The air was evidently impregnated with putrid effluvia, arising from decayed substances of every sort, brought down upon the creeks and rivers by the

Will

