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R. Brown

The Yellow Fever Germ
ON COAST AND INLAND.

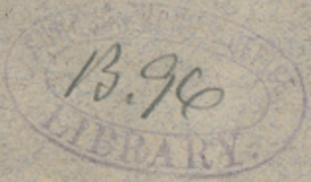
A DISCUSSION OF
SHIP AND RAILROAD QUARANTINE.

BEFORE THE MEDICAL ASSOCIATION OF GEORGIA,
ROME, APRIL 18, 1879.



By HENRY FRASER CAMPBELL, M. D., AUGUSTA, GA.,
*Chairman of the Committee on Endemic, Epidemic and Contagious Diseases, in the
Board of Health of the State of Georgia.*

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ERRATA.

Page 15, 8th line, "Dr. W. H. Doster should read W. H. Foster ; page 17, line 16, 1839 for 1879.



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THE YELLOW FEVER "GERM," ON COAST AND
INLAND—SHIP AND RAILROAD
QUARANTINE.

BY HENRY F. CAMPBELL. M. D., AUGUSTA.

Mr. President: I have listened with close attention, and not without much interest, to the reading of the two able and elaborate essays just concluded.* It is needless for me to state that expression has been given in both of them to views in regard to yellow fever, which are, in many important particulars, totally at variance with my own.

I must say, I had scarcely expected, at this enlightened period in the history of sanitation, to be called upon to argue the portability of the yellow fever germ, or to advocate before the Medical Association of Georgia, the importance of quarantine measures as the means of preventing the entrance of the disease into our ports, and of limiting its advance and spread into our interior towns, or to urge sequestration as a rational measure for protecting the people of our State from epidemic incursions, and for saving them from the desolation which has so often followed in their wake.

The arguments we have just heard advocating the doctrine of "the local origin of yellow fever" as opposed sometimes

*Yellow Fever—Its Cause and Relation to Other Malarial Fevers. By J. G. Westmoreland, M.D., Atlanta. Quarantine—Its Sanitary and Political Aspect in Relation to the Spread of Epidemic Diseases—By J. C. LeHardy, M.D., Savannah.

to the theory of "contagion," and at other times to that of "foreign importation," certainly must be recognized by every one present as oft repeated and familiar. They are over one hundred years old, if not coeval with the existence of yellow fever itself upon this continent. They are as often repeated (and with a vigor which age has never impaired) as the incursions of the disease have offered occasions for their revival. They are ever ready-made to our hand, and lie broad-cast, challenging acceptance. "The filth-production of disease" has been the key-note which has first struck upon the ear in the beginning of every epidemic of yellow fever since 1766. Before that time no one had ever doubted invariable importation. I do not believe there was ever an epidemic of yellow fever anywhere in the country since then in which some one did not attribute its origin to a local cause, and claim that some greater degree of cleanliness, or stricter attention to "the laws of sanitation," would have prevented the occurrence of the first case and saved the community from devastation.

FILTH—CONTAGION—GERM-PROPAGATION.

There are some principles which, though we ourselves do not attach the same specific importance to them that some few others may, yet against them we find it difficult to bring an unconditional argument. The principle inculcating cleanliness is certainly one of them. No sanitarian, whatever may be his belief in regard to the true origin of any form of disease, is ever found willing to lessen the importance of strict cleanliness, or to question the advantage of the most scrupulous removal of all impurities from the earth, the water, and the air, as, on general grounds, one of

the very first principles of preventive medicine. No one can go beyond me, for instance, in the importance I am willing to accord to this fundamental measure of sanitation. Freedom from filth, I am now particularly careful to state, is the first, the last, the most indispensable condition for the maintenance of the public health.

And yet, the general and unquestioning acceptance we all give to this universally acknowledged principle, has, I do not hesitate to say, sometimes led us widely astray, and blinded our minds to the recognition, in particular instances, of other factors, which are in some cases equally, and in a few others incomparably more important and influential in the origination of diseases. Let me for illustration mention a few forms of disease which, in the opinion of the entire profession, could not be originated *per se* by any amount, or by any intensity of filth independent of another factor:—these are small-pox, measles, whooping-cough, scarlatina.* The other factor in these several cases is the well recognized *specific poison*, known by its propagation by contagion, and by the uniformity of its effects.

The conditioning factor, then, as I have just stated in these several diseases, is *contagion*. Though most of us would admit that a more virulent form and more active propagation of these contagia would probably be promoted by bad sanitary conditions, few would predicate their origin without a *focus* of contagion. Some few—and the number so holding may be on the increase—attribute to yellow fever a true contagion. It is known, at least among those with whom I have had occasion to express myself, that I am not of the num-

* I am aware, that, in the opinion of some few, scarlatina has been attributed to some peculiar emanation of slaughter-pens. The hypothesis is scarcely as yet entertained as worthy of credit.

ber who admit, in the ordinary significance of the term, the contagiousness of yellow fever. Its general prevalence in communities, its onward progress from street to street, from ward to ward, and from house to house, of the towns and cities where it is raging; and again, its progress along rivers and railroads, and its advent with ships—all, to the minds of some, invite to the interpretation of *contagion*. When to these that very strong characteristic of contagious diseases is added—one generally admitted to be an attribute too of yellow fever, I mean the almost uniform immunity conveyed to the subject by having suffered in one genuine attack—those who believe least in the contagion of yellow fever, admit with candor the *plausibility*, of the reasons of those who believe in it most. But, for all this, I here distinctly deny any belief in the personal contagion of yellow fever. But the question now is not one of contagion, but one of "unsanitary conditions," as local filth and other objectionable states have been called. I have stated what I believe to be the opinion of the profession generally in regard to such conditions, as being incompetent to originate small-pox, or measles, or scarlatina, independent of their peculiar contagion. Indeed, the negative of this question is so strongly and so universally held, that on the occurrence of cases of these affections, *contagion is predicated and assumed*, even where contact or infectious communication, cannot be traced. It would be an endless labor, and one of most certain failure, to develop out of any amount of filth, or any kind of filth, a single case of small-pox or measles independent of their respective contagia.

Though, as I have stated, I am no believer in yellow fever

contagion, I have discussed some of the ordinary phenomena of contagion so as pertinently to illustrate its less familiar, more recently studied, and as yet mysterious analogue and simulacrum, *the germ-propagation of disease*.

As there is a specificity in contagion producing specific results, so it is incontestable that each form of fever, or of disease depending upon the inception of germs, must have its own specific germ, to which is due the peculiar type of its manifestations as notably and as distinctly as the toxic effect of one poison will differ from another—as atropia from strychnia, or opium from arsenic.

Under the present circumstances I can give no authority, I can bring forward no corroboration of my statements from the records of medicine, which, so far as I know, may or may not be full of them. I can only relate my belief—give you what have been the results of my own observation and reflections. To formulate them, would be to present you with several propositions relating to yellow fever, which will probably be found to differ but little from the creed of many others of the profession on the subject.

My own views may be thus generally expressed :

1st. That the origin and propagation of yellow fever is dependant upon what may be recognized by its effects as a specific germ—at present hypothetical, but not more so than other forms of atmospheric poisons, malaria, etc.

2d. That this germ is an exotic wherever it may be found in any of the localities of this country—probably domesticated in certain localities, as New Orleans, so as to have become feebly naturalized, or *quasi* indigenous, at times.

3d. That the assemblage of phenomena recognized and called by us "yellow fever," and which are of a spe-

Yellow Fever "Germ."

cific and uniform character, owe their specificity and uniformity to the specific nature and unvarying form of this atmospheric germ, in the same manner as do small-pox, measles and scarlatina owe their specificity of form to the peculiar contagion which had originated each one of them. In the same manner, to be more familiar, as do the narcotism of opium and the tetanus of strychnia owe the specificity of their manifestations to the varying physiological effects of these two toxic agents in the blood of the subject.

4th. As without the specific virus, we could never originate a case of small pox, so do I believe, without the specific germ, no condition however unsanitary—even did we accumulate filth, piling it up from the pavement to the sills of the second story windows—would enable us to manufacture a single case of genuine yellow fever. We might poison and kill the entire community with indigenous germs, some forms of which are even more promptly and surely fatal than the terrible and mysterious exotic itself; but without the yellow fever germ, hibernated or recently imported, we can have no yellow fever in its genuine and indubitable individuality.

5th. Comparing, then, that which is minute, intangible, and as yet hypothetical, with that which is gross, common and cognizable to the senses, I would as hopefully look for spontaneous origin to be given to a banana, a pineapple, or a plantain, by some particular preparation of our soil, as I would expect a case of yellow fever to originate in any of our ports or inland towns without the previously imported germ as the source of its inception. The exotic germ is no more naturalizable than the exotic fruits—even less so.

6th. Though I regard the germ as indispensable to the origination of the disease, I would, by no means, be under-

stood as abating, in the slightest degree, the imperative necessity for the strictest purity, otherwise, of air and water. I can conceive of such purity in the surroundings of a locality into which these germs might be introduced as would fail in giving them the support necessary to their propagation, and it is true that propagation is less active and their decline more rapid in localities where sanitation has been untiringly enforced than in neglected and unwholesome places.

No single induction of modern and advanced science has been more established or more constantly and effectually acted upon than that which affirms the existence of morbid atmospheric germs. The entire complement of antiseptic surgery, with its reliable results and brilliant achievements, depends upon this rational assumption, and upon the devising of methods for preventing germ ingress and for securing germ destruction. From this direction it is clear the "germ theory" of yellow fever receives a remarkable corroboration.

When I speak then of a specific imported germ, I profess no more and no less accuracy of statement than those do who speak of the "malaria" and of the "foul airs" by which they account for the local origin of yellow fever, and of intermittent fever. The very term they use to designate these latter fevers refers to a cause as hypothetical as the "germ." But little has been done as yet for defining the essential elements of either malarial or yellow fever, as we all know. Dr. Salisbury,* and more recently, Dr. Eklund,† of Stockholm,

* American Journal of Medical Sciences, vol. LI., p. 51, 1866.

† Note on Marsh Miasm—(*Limnophysalis Hyalina*). By ABR. FREDRIK EKLUND, M. D., Stockholm, Sweden, Physician of the First Class in the Swedish Royal Navy. Translated from the *Archives de la Médecine Navale*, vol. xxx, No. 7, July, 1878. By A. SIBLEY CAMPBELL, M. D., Augusta, Ga., President of the Augusta Medical Society.—*Richmond and Louisville Medical Journal*, vol. xxvi., No. 4, October, 1878.

have each had some success with the vegetable poison of malarial fever. Dr. Joseph Jones, Dr. Richardson, Dr. White and others, have given attention to yellow fever germs and the ultimate elements of its poison. It has not, as yet, been satisfactorily demonstrated, though some of these researches have been highly encouraging and enlightening. Like all other atmospheric blood poisons, we know it, as yet, principally, by the phenomena attendant upon it and resultant from its inception within the system.

It has, for a long time, appeared to me that a study of the physical characters of the yellow fever poison, whether it be germ or some other kind of particle, should be conducted, not in the blood of the yellow fever subject nor in his secretions nor in his tissues. The atmosphere itself is the true and most hopeful field to hunt for the intimate and ultimate nature of the morbid cause of yellow fever. Until our means and appliances for atmospheric analysis and investigation become more perfect, it is not probable that the physical characteristics of the cause of yellow fever will be demonstrated. We have every reason to believe that after any portion of this atmospheric poison has once entered the system and produced its results, its physical characters and capabilities are changed, that it becomes innocuous, and is not capable of producing a second time the phenomena characteristic of its manifestation—even did the healthy individual drink the blood, or were he inoculated with the secretions of a fatal case. Should this surmise prove to be correct, it will account for the absence of personal contagion in the yellow fever subject at present so largely believed.

Filthy local conditions are admitted on all hands to exaggerate the effects of yellow fever poison, and to promote its

spread and propagation in communities after the importation of the specific germ. But there are too many instances on record—too many in my own observation and experience, (and to these last, only, I can now appeal,) in which *simple importation* without any concomitant local impurity, in the cleanest and healthiest pine land situations, was fully competent to produce, in the most healthy and robust, the best marked cases of yellow fever ending in "the hæmigastric death."

THE RAILROAD TRANSPORTATION OF DISEASE-GERMS.

Mr. President, it is but too recently that I have had to argue this question for me to forget all the horrors I then fell upon, and which plainly placed beyond all doubt, the transportation of disease-germs. My theme was not then the question of the trans-oceanic importation of this dreaded exotic—this I had long ago regarded as a question settled by all good observers and all logical thinkers. My duty was to consider a problem in which coast-importation was held as one of the assured *predicates*. I do not know that any one before had made the railroad transportation of disease-germs, as accounting for the spread of yellow fever from the coast to the interior towns of the South, the subject of special and distinct research. Taking the history of epidemics in Augusta as an illustration, "we would call attention to the fact," as I state in that paper, "that though from 1768 to 1838 there had been about twenty-seven visitations of yellow fever in Charleston, (136 miles distant); and seven visitations in Savannah (135 miles distant), from 1807 to 1854 (J. M. Toner) the disease had never found its way to

* Report No. 2 State Board of Health 1876. The Railroad Transportation of Disease-germs—Yellow fever and dengue fever in Augusta in the years 1839-1850-1854 and 1876.

Augusta till 1839," after establishment in 1836 of railroad communication with Charleston, "and that its more widespread outbreak (of initial cases) was in 1854, after the establishment of discharging depots on both sides of the city, communicating also with Savannah, at which place in that year raged a most desolating epidemic for some month or more before its appearance in Augusta.

The several apparitions of the ghastly visitant in Macon, I have no doubt, could the facts be considered in the same connection, would present a like suspicious history in regard to railroad transportation of yellow fever germs. Indeed, who can estimate the terrible agency that the railroads, not less than the rivers, have exercised in the stricken west during 1878!

Though the origin of epidemics in a city, or in many cities, might furnish evidence on a grander scale, yet there are among my records individual instances which well illustrate the railroad transportation of yellow fever germs, and the genuineness of the resultant disease—under circumstances, too, which *positively contradict* the influence of any reasonable local cause adequate to its production.

To adduce one specific case will sometimes testify more pointedly than to appeal to a multitude. I read from the paper referred to above: "These 'germs,' or hypothetical elements of disease, many observations have convinced us, are transported in the cars arriving from infected ports, retaining their virulence through hundreds of miles of pure country air." In substantiation of this, I now give the cases, by many still well remembered, of Mr. and Mrs. Lampkin, at Union Point. Mr. Lampkin, in 1854, was transportation agent at this station, and went daily into the freight car

arriving from Augusta, where a devastating epidemic was prevailing. Mrs. Lampkin also went daily for several weeks into the passenger cars to superintend refreshments. Both became infected and both died of yellow fever with black vomit within a short period of each other. At Union Point, quite elevated and in the pine region, seventy-six miles from Augusta, no one would pretend to say there was any local cause adequate to account for these deaths by yellow fever.

I ask to read one more striking instance: "The following statement was given us by Dr. A. B. Lanier, of Oliver, at the time I was preparing my report in 1876: 'This place is located on the Central Railroad, forty-five miles (station No. 4 $\frac{1}{2}$) from Savannah. All the railroad employes at Oliver who slept in the cars had yellow fever. Those who did not sleep about the cars, though all other circumstances pertaining to the two classes were identical, did not take the disease. A young man named Lufborough, a farmer of the neighborhood, twenty-one years of age, perfectly healthy, had not been near Savannah during the entire season. On the night of the 13th of September (1876), Mr. Lufborough went on board the accommodation passenger car that remained over night at Oliver. He slept on the car that night. He was taken with yellow fever on the night of the 16th, and died with black vomit on the night of the 21st. What greater proof could we have of the portability of yellow fever infection, and of its virulence, independent of all conditions, sanitary and unsanitary, than we find in these cases.

That this infection, whether we call it "germs" or give some other name to the poison, will lurk about in houses and remain virulent long after the subsidence of an epidemic

we had in 1854 some striking instances ; "after this epidemic there were numerous cases which occurred after several 'black frosts.'" These originated in persons who, on their return to the city—generally ladies—set about overhauling and "putting to rights" their wardrobes and trunks, book cases and bureaux, that had been closed on leaving the city at the time of the outbreak of fever. One such case, most marked in the circumstances of its origin, occurred under my own observation."

INCUBATION OF YELLOW FEVER GERMS.

Facts illustrative of incubation, whether of "germs" or of "contagious principle," are more advantageously studied in localities far removed from that of a prevailing epidemic. I am aware that the facts I am about to relate will be interpreted as incubation of germs, or as the incubation of contagion, entirely in accordance with the tenets of those who may discuss them.

In the year 1877, yellow fever prevailed as an epidemic at Fernandina, Florida. A gentleman having relatives in Augusta, Ga., moved with a portion of his family to that city to escape the disease. The situation of the house of his relatives was at the upper end of Greene street, the house being somewhat isolated and the locality being considered generally healthy. The man himself was in a few days attacked with yellow fever, contracted in Fernandina, and died shortly after with black vomit. Two large Saratoga trunks, containing the clothing of the father and daughter, were opened in the house shortly after his arrival and just before the death of the former. Neither the daughter nor any member of the resident family were

attacked with any disease for six weeks. At the end of this time the daughter, who opened the trunks, was attacked violently with yellow fever, and in rapid succession all the other members of the family developed well marked but mild cases of the disease—which did not extend beyond the household of this family.

The cases just referred to were under the care of Dr. W. H. Doster, Drs. H. H. Steiner and John S. Coleman being in consultation. It is from these latter gentlemen that I have obtained information relating to the circumstances.

These, in my opinion, bear most plainly not only upon the transportation of yellow fever germs in the trunks and ordinary apparel of refugees, but also give us some valuable enlightenment on the subject of incubation, a subject of deep interest and most difficult of determination.

RAILROAD QUARANTINE.

Mr. President, I must still further tax your patience, that you may know by my record that my disbelief in the "local origin of yellow fever" is not a thing of to-day, and that the lessons of my observation and experience have not been unheeded, but have left their *precept*. Please allow me here to read: "From the above series of facts relating to the initial cases of the three visitations of yellow fever in Augusta, though without further investigation, we perhaps, should not venture to *affirm* their origin to be *solely* the result of railroad communication with infected ports; we would still strongly urge that particular and more careful investigation be directed to such connections as the most probable means of transportation of infected air, or of air conveying "disease-germs," from infected ports to inland towns and

cities. And further, that a strict *quarantine*—as strict as that which could possibly be applied to boats, ships and other means of water transportation in ports—be made to control the incoming of trains from infected ports and cities during the prevalence of yellow fever. Never let a single car come to a healthy town that is freighted or takes passengers in an infected port—let them be met at least twenty miles from the city by fresh cars for both the passengers and the freight."

My non-belief, as I have heretofore stated in personal contagion, is here also vindicated, and, as far as I can do it, explained. "In these recommendations we here distinctly state that by 'quarantine we do not refer to the exclusion of persons,' either well or sick, arriving from the infected regions. This element of quarantine would comprehend that which we do not hold as a tenet of our faith in regard to yellow fever—the doctrine of contagion. Give hospitable refuge to all those who are well; to those who have been infected and are about to be attacked; to those already overtaken in their flight from the dread pestilence; but exclude the cars which have borne them away from their infected homes, and ventilate and purify the trunks that contain their infected clothing. * * The yellow fever subject is laboring under the dire effects of a poison, and thousands of observations and centuries of experience have demonstrated that he can no more communicate his disease by any emanation from his own body or secretions than can the subject poisoned with strychnine communicate his frightful tetanus to his friend or to his nurse. As in the one instance, the strychnine itself is required to produce another case; so in yellow fever a fresh supply of atmospheric disease-germs is required to produce the phenomena."

I am glad to say, that a quarantine upon the very principles I have just read has been, year by year, more fully organized in the city of Augusta. I regret that the feature of personal quarantine and exclusion is still a part of it, though in every other particular, on the first note of warning that yellow fever has appeared on the coast, the most careful surveillance is established over the trains, and none allowed to come to the city that have, from any direction, come out of an infected atmosphere.

PERSONAL CONTAGION IMPROBABLE.

In years past the most hospitable refuge and tender care were ever given to those flying from yellow fever, and to those affected with it, and in no single instance do we remember the infection spreading from personal infection. Within the record of my own experience, I could relate many striking instances pertaining to the epidemic of 1879 3 as well as of 1854, apparently illustrative of the non-contagiousness of yellow fever I shall give but one:

On the 16th of September, 1854, yellow fever was announced as epidemic in Augusta, Georgia, by the Board of Health. Among those who, with almost the entire white population, fled to the sand-hills, and other safe vicinities, was the family of Mrs. C. S. This lady, on her arrival, complained of extreme lassitude and headache. These symptoms were attributed to fatigue, and not regarded with suspicion. She went to bed, and her young daughter, a girl of some eight years, slept with her in the same bed, the accommodations being scant. The case rapidly developed undoubted symptoms of yellow fever, with black vomit at the proper stage. This lady passed regularly through the disease, had

a retarded convalescence but complete recovery. During the entire period of her attack, and throughout all the stages of access, culmination and decline, the child slept in the same bed each night with her mother, enjoying unexceptionable health, both mother and daughter returning to the city after frost perfectly well.

The question may be asked, why this cruel exposure of a healthy child? "The tyranny of circumstances" must be the answer. If yellow fever were contagious, by the time it was fully recognized in the mother, the child was already infected, and what other member of the family should she sleep with in availing herself of the little chance she might have of non-inception after two days contact. Then again, the entire family, crowded in the same small house, and in constant attendance on the mother, had been little less exposed to "contagion" than had been this child. No second case occurred.

I have thus hastily—certainly without time for research, and surely not enough for that careful consideration the important subject is entitled to—presented the views I have held for years on the question of the local origin of yellow fever in most of the localities in which it has occasionally appeared within the borders of the United States. In the West India Islands, in the Gulf of Mexico, we may consider that the disease has been at least for a long time *quasi* indigenous. While in New Orleans "specific yellow fever germs," as we have chosen to call the hypothetical but undoubted specific poison, though originally exotic, have become, perhaps, to a certain extent, domesticated, so as to produce sporadic cases, but never an epidemic without fresh importation. That partial outbreaks may occur at New

Orleans wherein recent importation cannot be traced, can throw no doubt upon the specificity of the germ or poison necessary to the production of the disease, nor from these outbreaks, in this locality, can any one argue the identity of the yellow fever germ or poison, if you please, with that which produces any of the multitudinous varieties of malarial fever.

THE HIBERNATION OF GERMS.

A few moments ago I referred to cases in which the poison seemed to be taken in by certain individuals returning to the city after a killing frost, when the general freedom of the locality from yellow fever infection was undoubted. In these instances, the atmosphere of closed apartments, wardrobes, closets and book-cases, retained the infection and gave rise to cases of yellow fever after the close of the epidemic. A sort of hot-house protection had been afforded to the exotic, which secured its vitality and preserved its virulence.

There is a potentiality claimed by some as one of the attributes of the yellow fever germ, in which is recognized a much more prolonged retention of its vitality and capacity to produce yellow fever phenomena. This is when it is supposed that in mild climates, as New Orleans and perhaps even in Charleston, the germs of a previous season's importation may "lay over" and retain their vitality for the succeeding season. This has been termed by some the "laying over," by others the "hibernation of the germs." There can be little doubt that many of the claims of "spontaneous local origin" are based upon sporadic cases which have been due to hibernated germs. My own belief accords with that of

several experienced observers, that such germs are not capable of vigorous multiplication, and of such general infection of the atmosphere, as to give rise to an extended epidemic. In the case of an epidemic of yellow fever, whether it can be traced or not, it is more philosophical to *predicate* the fresh importation of germs than to lay stress upon the negative testimony and claim of spontaneous origin, or that paludal poison has given rise to the incursion.

QUARANTINE.

The natural and inevitable result of a faith in the local origin of yellow fever—whether, as stated by one of our distinguished essayists—Dr. Westmoreland—on the ground that ordinary marsh miasm, modified or intensified, furnishes the morbid agent; or, as by the other—Dr LeHardy—that the indigenous production of germs may give rise to epidemics—the inevitable result of such etiological principles, I repeat, is at least an indifference, if not a decided opposition, to all quarantine measures for the exclusion of the disease. On the other hand, those who recognize the cause of yellow fever incursions, in the several localities in which it has appeared in this country, as due to the importation of an exotic germ, must ever consistently advocate, notwithstanding all its imperfections and its repeated failures, persistent efforts at improving, perfecting and rendering finally efficient, some system of quarantine, or quarantine with disinfection, as the only rational hope of our protection. To this latter class, it is scarcely necessary for me to state, I most conscientiously belong. I can give out no uncertain sound on coast quarantine after advocating for years the principles I have just rehearsed, and have long

since published, in regard to railroad and inland quarantine. No one can estimate more seriously than I do the inconvenience and the disastrous interruptions attending all kinds and degrees of quarantine. The more extended and the more prolonged, certainly the more injurious do they become to our financial and commercial interests and to the prosperity of the region in which they are maintained. But when we estimate the calamities that quarantine measures are intended to prevent; what utter desolation a single epidemic will produce; how, once gaining entrance, the devastation is not confined to the coast nor to cities of the coast, but spreading inland it goes up the rivers, along the railroads and common highways of travel to our interior towns and cities—to our very health-resorts and places of refuge, to the villages, the hamlets, the plantations and the isolated dwellings, till everywhere the groans of the dying and the wail of the disconsolate living are stifled and smothered with putridity and pestilence,—who thinks now of business or of commerce! What is there worth considering but the saving of human life! I repeat, when we estimate all these horrors for which the quarantine offers a hope, say even a theoretical hope of evading, I cannot allow the history of its many acknowledged failures in the past, nor yet the discouraging predictions of its failures in the future, to deter me from giving what support I can to continued efforts, under the enlightenment of a more advanced science than has ever guided us heretofore, in excluding, *by quarantine*, the dreaded pestilence.

As to the desirableness of the national quarantine proposed to Congress, and the enactment of laws to the end of its establishment, I cannot at this time attempt a discussion so deeply involving political considerations. The decision

by the government, whether for or against such an establishment, cannot be otherwise than of the most momentous import. The constitutionality and the authority admitting of such legislation seem obvious, as seen by the argument of Hon. Mr. McGowan, of Michigan. As I have said, neither time nor my familiarity with the bearing of such questions, will allow me to enter upon such a discussion. Many, if not the majority, of our citizens will candidly admit that there is much force in the arguments against submitting the control of our coast-trade and shipping to any other than the municipal government of the ports, or, at most, to our own State government. Our representatives, with those of other southern States in Congress, will certainly look carefully into the bearing of this question, and to them we must delegate the responsibility of guarding our interests in the important matter.

THE STATE BOARD OF HEALTH.

By the inexplicable indifference—nay, actual opposition—of a controlling majority in our Legislature, the proud old State of Georgia, glorying in the distinction and honorable title of Empire State of the South, has been placed in a position the most mortifying and degrading as regards her relations to public health. From being, more than thirty years ago, one of the foremost States in the Union—almost abreast with Massachusetts herself—in devising and in advocating measures of public sanitation and preventive medicine*—she has, through the deficient statesmanship and ig-

*At the first meeting of the American Medical Association at Baltimore, May, 1848, Massachusetts and New York were the only States having Boards of Registration. Of the other States, Georgia and New Jersey were the earliest to distinguish themselves as "having taken steps to give effect to the recommendation of the Association to establish State Boards of Registration." See Transactions of American Medical Association—Volume I. 1848.

norance of a majority in the House, fallen to a status far below some of the youngest of the States. The State Board of Health which, under a wise and enlightened as well as benevolent policy of the Legislature, was established in 1875, has been virtually, as we all know, abolished on *account of the expense*. The meagre appropriation of fifteen hundred dollars has been withdrawn as too valuable a sum to expend upon such an object! In the eyes of all enlightened sanitarians, everywhere, we all know, Mr. President and gentlemen of this Association, that the State of Georgia and her Legislature is a by-word and a reproach! How mortifying to all—except perhaps to our *majority* in the Legislature—must be the kindly recommendation of the National Board of Health, that Congress *appropriate money out of which to pay half the expenses of a State Board for Georgia!!* Is it any wonder that our General Government finds it necessary to take charge of our coast in a national quarantine? Will they not in time have to pay half the expenses of our Geological Bureau, and probably our Agricultural Bureau too? We are very nearly ripe to be taken charge of, like the freedmen and the untutored Indians, as "the wards of the nation."

It is mortifying to look into the depths of our stultification. In a State whose mineral resources are boundless, but which require investigation and development, the office of State Geologist, established by a more statesmanly and wiser legislature, is now scarcely allowed the meagre support necessary for the crippled performance of its functions. In a State whose chief reliance for the general subsistence and wealth of her people, as well as for the productions of export, is her agricultural resources, an Agricultural Bureau

established by wise predecessors, is every day threatened with abolishment on account of the miserable pittance that is now grudgingly allowed to sustain it. And, I had almost said, *worst of all* in a State whose coast is yearly liable to devastation by destructive epidemics—epidemics that in the recent past have destroyed millions of commerce and substantial wealth; that have carried desolation into the homes of thousands of her citizens, and extorted a wide-spread wail of woe from bereaved hearts everywhere within our borders; I say, just on the retreating footsteps of such an epidemic, this "controlling majority" in our State Legislature—this majority which no argument, no effort on the part of their noble, enlightened and benevolent compeers to instruct them, can improve—which no warning, no calamity, no destruction of property or of citizens can move—to which no braying in the mortar can teach wisdom—secured the virtual abolishment of the Georgia State Board of Health in the very midst of their labors—while actually engaged in preparing the report of their investigations of the epidemics of 1876, since published in their second annual report!

Is it any wonder that thus invited, thus compelled, the National Government should deem it necessary, for the common good, to take charge of sanitary affairs in Georgia? That in the present enlightened state of public sanitation, she should see the importance of a State Board to overlook the sanitary affairs of a State so important as Georgia, and that she should fear to leave to the charge of such a State government a portion of the southern coast, in which all the States are, as by a common and inextricable destiny, so

vitaly interested? Should there be inconvenience, or evil, or calamity, to the interests of our State in the national quarantine, the course of our own Legislature has certainly been calculated to invite and to compel them all.

Mr. President, I suppose it was to be expected that I would have had much more to say in regard to the State Board of Health. I must reply, that I have already perhaps said too much on the subject. Every one in this assembly understands, as well as I do, the importance of public sanitation, and the importance, as witnessed by the action of a majority of the States, of committing such interests to an organized State Board of Health. To our Legislature appeal after appeal has been made, by noble philanthropists and wise statesmen in their own body. Our only hope is, that we, the members of this Association, as a widely ramifying influence throughout every community in our State, may be able to give our earnest efforts to the enlightenment of the people on matters of preventive medicine and public health. They are already, I believe, far in advance, in their intelligence on these subjects, of many of their representatives.

Enlighten the people then, and by so doing we will rapidly improve the character of their representatives in the halls of our Legislature. We will no longer have to hang our heads in shame and confusion at the offer, which we have thankfully to accept, "to pay half the expenses of our State Board of Health;" we will have no longer to dread "the Central Quarantine" on our coast. With wise, judicious and liberal legislation, we will again enjoy the respect and confidence, as well as the kindly good-will, of

"the more enlightened States;" we will no longer require to be taken charge of by the general government; no longer have to be cared for as the helpless and benighted "wards of the nation."

