

Report of the committee on the utility of wet docks in connection with quarantines, and the propriety of placing the entire establishment under the jurisdiction of the United States government / Jno. W. Sterling, Alex. H. Stevens, Jno. McNulty, committee.

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National Library of Medicine (U.S.)

Publication/Creation

Boston : Rand & Avery, city printers, 1860.

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REPORT OF THE COMMITTEE

ON THE

UTILITY OF WET DOCKS

IN CONNECTION WITH

QUARANTINES,

AND THE

PROPRIETY OF PLACING THE ENTIRE ESTABLISHMENT
UNDER THE JURISDICTION OF THE UNITED
STATES GOVERNMENT.

JNO. W. STERLING, M. D. }
ALEX. H. STEVENS, M. D. } *Committee.*
JNO. McNULTY, M. D. }

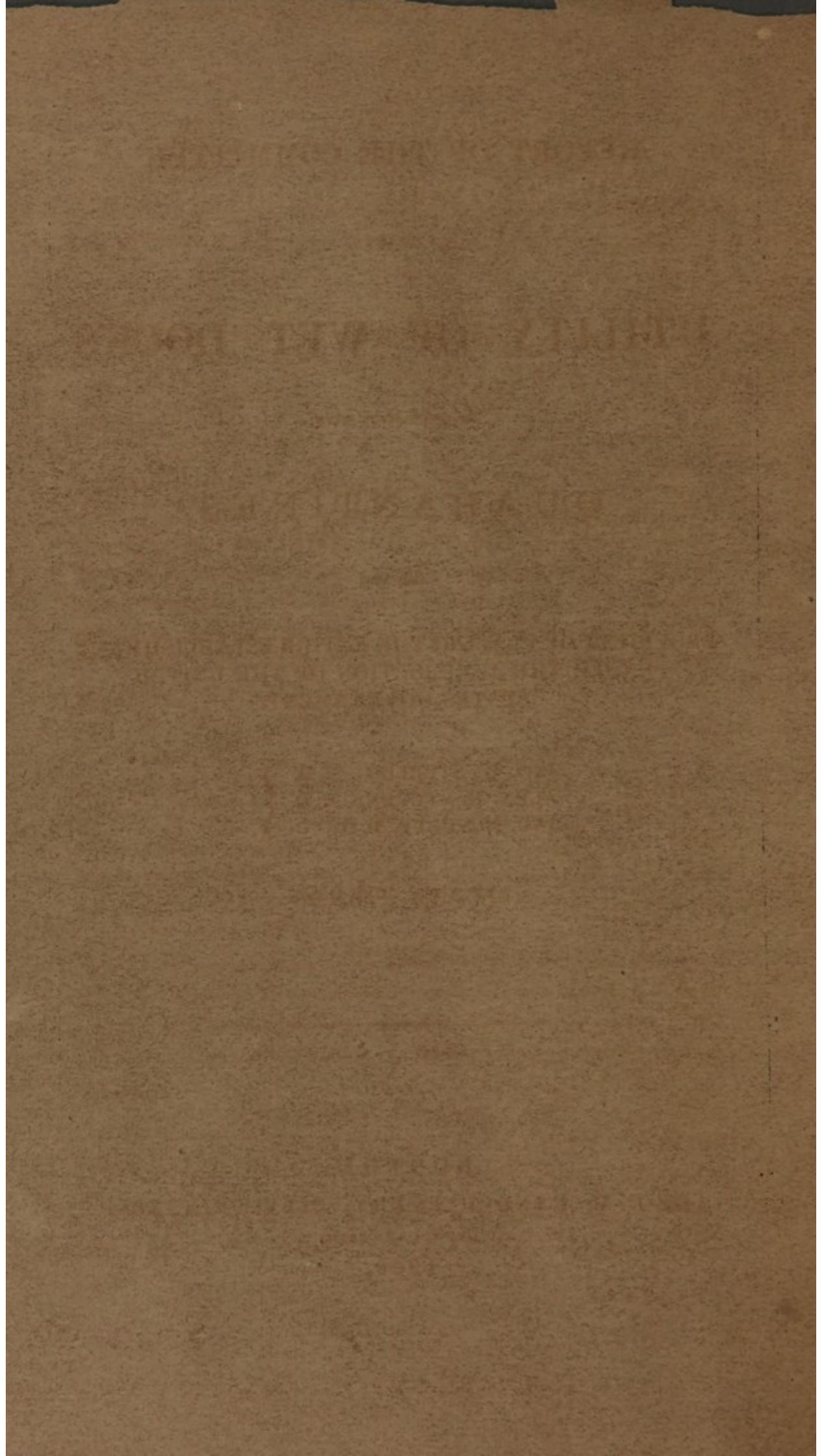
NEW YORK, JUNE 1, 1860

BOSTON:

GEO. C. RAND & AVERY, CITY PRINTERS.

No. 3 CORNHILL.

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R E P O R T .

THE Committee, to whom at the Third National Quarantine and Sanitary Convention, the Resolution that a Committee be appointed to inquire into the propriety and usefulness of enclosed wet docks on the Atlantic coast and Gulf of Mexico, together with the requisite Lazaretto for the protection of vessels and merchandise, and the care of the sick subject to Quarantine, the same to be placed under the charge and jurisdiction of the United States, was referred, in presenting their Report, beg leave to premise that —

WHEREAS, The statements which will appear in the sequel, have been in a great measure derived from personal observation, it will be necessary to allude very frequently to the Quarantine at New York, as it is not improbable that many of the defects in that establishment have existed in others of a similar kind, and may, should no appropriate measures be adopted to obviate them, appear again.

Since the first establishment of Quarantines, we will venture to say that in no part of the globe, in an equal space of time, have so many sick persons been admitted into a Quarantine Hospital, or Lazaretto, as there have been into the Marine Hospital at New York.

According to the report of Dr. Bissell, ex-physician-in-chief to the Legislature for the year 1857, there were admitted into said Hospital, from the year 1798 to 1857, inclusively, a period of sixty years, 72,595 patients, of which number 10,493, a seventh part, died. During the period embraced

by the years 1848 and 1853, at which time the Reporter was one of the physicians of this hospital, 35,690 of the above aggregate were admitted,—nearly one half of the whole number in one tenth part of the time. Hence he has had an unusual opportunity of witnessing much of the inconvenience and suffering, as well as many of the defects of a Quarantine establishment, some of which will be presented in the sequel.

In order fully to appreciate the wants of a Quarantine establishment, it is necessary to have been a spectator of some of its woes. In reading the history of Quarantines as they have existed in various parts of the world, as well as legislative and other reports and communications relating thereunto, the paramount and almost exclusive subjects of inquiry have been, How shall we protect our citizens against the invasion of pestilential disease? How can we lighten the burthens which Quarantines impose upon commerce? The speeding of the weary voyager and the care of the sick being regarded as of minor importance, too often is the poor squalid immigrant, as he is frequently called, shunned, loathed, and, if sick, even viewed as a culprit. We are not apt to appreciate their miseries, destitute, homeless as they are; fleeing from famine and oppression abroad; long pent up in the hold of an ill-ventilated vessel; their sickness their misfortune, not their fault.

The following incident, related by the General Board of Health, in their Report to the British Parliament in 1849, presents but a faint idea of the feelings of many, who, when almost touching their desired haven, are arrested at Quarantine.

A young unmarried lady, who arrived in a steamer from Hamburg, and was stopped at Quarantine in the Thames, thus writes:—

“It is all very well to say, ‘Don’t be afraid of the Cholera,’ but those who have seen what I have in the last few days, will feel differently. On arriving at Gravesend, a custom-house officer came along-

side, and told the captain that the ship must be kept at Quarantine, and that if he allowed any of the passengers or crew to land he might be shot. They then took away our letters without coming on board, and said they would send every day for our letters. You can imagine our consternation and alarm; and then the horrid yellow flag! and we were told if any one were taken ill or died, we should be detained, I know not how long! Another ship was near us, also in Quarantine, and with a sailor in it who had died. Soon we saw this ship moving slowly down the river to the Nore, that the body might be committed to the deep. Although it rained in torrents, we saw all the passengers standing on the deck, as they were afraid to go below, for fear of the Cholera. If you could have seen that melancholy sight! I shall never forget it. Need I endeavor to paint to you our feelings, not knowing how soon we might be in the same sad predicament. How we counted the hours, and how we rejoiced when the welcome news reached us, that we might land once more in England!"

If such be the feelings of a passenger while in health, how sad must be the condition of the friendless, destitute stranger when struck down by a formidable malady! Having left his home with most sanguine hopes of reaching a happy land, where he expects to enjoy that liberty and the facility for acquiring property which are less liberally granted in his native country; just as he is on the point of reaching his destined haven, he is seized with a contagious disease, the Quarantine arrests his further progress, and his fond hopes are well-nigh blasted! Does not such a forlorn stranger demand our commiseration, solicitude, and our best services? Health and life are as precious to him as they are to us, and in his desolate, helpless state, far from the solace and sympathy of near and dear friends, surrounded by strange faces, his heart sinks, and he requires our kindest and best efforts to rouse his drooping spirits and cheer him up to health. But what is the first step towards the alleviation of his sufferings? The ship has dropped anchor at Quarantine. The Health Officer is on board. The vessel may be a mile

or more from the landing-place. Are there any sick passengers on board? If so, a signal from one of the boatmen communicates the intelligence to the shore, and immediately one or more boats put off to the ship to bring the sick to land. Now it is the method of landing the sick, which was generally adopted while the writer was stationed at Quarantine, together with the examination of the philanthropic Dr. Howard's plate of the Lazaretto San Leopoldo at Leghorn, that suggested to his mind the great benefits which would accrue were WET DOCKS constructed, if only for the purpose of alleviating the sufferings which attended the method of landing the sick at the S. I. Quarantine. According to the plan of the Lazaretto San Leopoldo, there is a dock almost entirely enclosed, but without any lock, into which vessels detained at Quarantine enter, and are safely moored. The vessel in the first place proceeds to the remote extremity of the dock, where the sick and other passengers are landed directly from the vessel, from which they are conducted or conveyed, and we presume as gently as possible, by an ambulance, sedan, or rail-car, when too ill or feeble to walk, to their appropriate ward or tenement. The passengers being landed, the vessel is hauled alongside the wharf, on which piazzas or warehouses are erected for the reception of cargo, and its expurgation.

It very often happens, — indeed, it is most frequently the case, — that emigrant packet-ships arrive in our port during the prevalence of easterly winds, and in stormy weather. Masters of vessels are generally impatient of delay, and anxious to get rid of their sick that they may proceed to the pier in the city as quickly as possible. While, then, the Health Officer is on board inspecting the passengers, or soon after he leaves the vessel, the sick are brought up from between decks, lifted over the side, and carried down a vibrating ladder some twenty feet long, into the boat below. (We judge the distance to be at least twenty feet, many of

these ships being from twelve to fifteen hundred tons' burthen, and rising very high above the surface of the water.) The sick are then rowed to land, sometimes thinly clad, oftentimes through rain, or sleet, or snow, at the risk of extinguishing the lingering spark of life, which by greater care might have been fostered and revived. Frequently are they landed wet to the skin and chilled to the bone, and even in a hopeless moribund condition.

Dr. F. Campbell Stewart, ex-physician of the Marine Hospital, S. I., in his Report to the Legislature of New York, March 25, 1860, says: "The condition of the sick sent on shore from on board of ships, is sometimes deplorable. They often die in a few hours after admission, and occasionally in the boats in which they are landed, or as they leave the vessel."

Besides, the sick are frequently landed in a hurry, and consequently more or less roughly. We have known as many as one hundred and fifteen sick persons, in various stages of disease, landed in the space of twelve or fourteen hours, and as many as two hundred and fifty-nine patients, most of whom had Ship Fever, brought from on board of one vessel. (The latter were from the *Penelope* in 1801, when a great many cases of this disease were admitted from several vessels into Marine Hospital.)

The packet-ship *Great Western*, from Liverpool, of 1,443 tons' burthen, anchored at Quarantine on the 14th of January, 1852. It was very stormy weather. Her complement of passengers was 791, sixty of whom were brought on shore with Ship Fever, and fifty-five doubtful cases, in whom it was apprehended this disease would soon be developed. Dr. Doane, the Health Officer, labored hard all day in assisting the sick on shore, and without sufficient nourishment, until ten o'clock at night. Wet and weary he went home. On the next day he was taken ill, and died from Petechial Typhus on the 27th of January. So sure as effect follows

adequate cause, doubtless had a plan similar to that of landing sick passengers at the San Lorenzo Hospital been established, the life of this humane, learned, faithful, and indefatigable physician would not have been sacrificed on this occasion.

We shall recur to the sick under the second part of the Resolution.

In the construction and equipment of a Quarantine establishment, in addition to precautionary measures against the introduction of contagious diseases of a malignant character by the seaboard, not only every needless impediment to commerce should be avoided so far as is compatible with the prime object in view, but every facility should be afforded for the speedy release of vessels from quarantial restraint, as well as for the protection of property detained at Quarantine.

"There is not on the Thames," says Mr. McCullough in his Dictionary on Commerce, "a Lazaretto where a ship from a suspected place may discharge cargo and refit, so that it is detained frequently at an enormous expense during the whole period of Quarantine, while, if she had perishable goods on board, they may be materially injured. The complaints of Quarantine grievances and oppressions are almost wholly occasioned by the want of proper facilities for its performance. Were these afforded, the burdens it imposes would be comparatively light, and we do not know that any more important service could be rendered the country than by constructing a proper Quarantine establishment."

On examining again the plan of the Lazaretto San Leopoldo, as represented by Dr. John Howard, in his "*Account of the Principal Lazarettos in Europe*," 2d ed., 4°. London, 1791, we were forcibly impressed with the superior advantages which would be derived from suitable Wet Docks, in which vessels might be securely moored during their Quarantine ordeal. Such docks should be water-tight, closed by locks, which would readily admit the ingress and egress of vessels in compliance with the orders of the Health Officer.

Judging from what we have observed in New York Bay, the lower bay especially, of the uneasy manner in which vessels ride at anchor, rolling and tossed to and fro by the turbulent billows, even under a moderate breeze, and the danger to which such vessels are exposed during tempestuous weather, the difficulty and risk of transshipping their cargoes into lighters alongside, we have thought that such docks would afford adequate protection to vessels against the violence of storms; secure their merchandise from plunder and accidental loss; expedite the introduction of goods into the market; and even allow foul vessels to receive their return cargoes and clear out to sea should the difficulty of expurgating them deter their approach to the city. These vessels, having entered the dock, might proceed immediately to the place appointed for landing the sick and other detained passengers, which being done, they might be hauled alongside the wharf, on which piazzas and warehouses have been erected for the reception and purification of the cargo. When merely ventilation, drying, and cleansing the interior of packages are deemed necessary, inasmuch as this would require only a brief detention, piazzas should be preferred; but when the cargo requires a protracted detention, warehouses, on account of the security they afford, would be most suitable. The ballast of the vessel, as well as its cargo, being discharged, the vessel should be cast off and anchored in the centre of the basin, there to be expurgated, after which she might be permitted to proceed to the city, or place of destination, or to an export dock adjacent, for the reception of goods brought down in lighters, obtain her Custom-House clearance, and put off to sea with her return cargo.

If everything were removed from the vessel, it would occupy but a few days to purify and cleanse her, unless she should be *very foul*, in which case she should be floated into a *dry dock* in proximity with the wet dock, for more thorough

expurgation. We venture to suggest such a structure as a dry dock for raising vessels completely out of the water, in order that they may be thoroughly overhauled and everything pernicious ejected; but blacks only, or those who have had the Yellow Fever, should be employed in cleansing them.

On this topic we beg leave to digress, as we consider a dry dock to be a very important appendage to a Quarantine establishment.

The great mortality which has been produced by Yellow Fever on board of foul ships, whether this disease has originated spontaneously or from some external source, has given rise to numerous inventions for their expurgation. Hundreds of persons, especially on board of men-of-war, have been attacked with Yellow Fever, attended with great mortality, in consequence of inhaling the morbid exhalations from a ship's hold; hence, no pecuniary consideration should be permitted to operate against the employment of any plausible means, calculated to prevent their elimination, to expel or destroy them. Fumigants, disinfectants, and deodorants have disappointed the expectations of those who have confided in them. The pumping out of bilge-water and drenching the hold with salt water have often proved inefficient; and even freezing mixtures only lock up the miasm for the time being, without altering its nature, and afterwards leave the vessel in an unhealthy state of humidity, with increase of filthiness. They are evanescent. The most offensive smells are by no means the most pernicious. They warn us of danger, and compel us to resort to ventilation for their expulsion. The most deadly miasms are imperceptible by the senses, and undetectable by chemical tests, (unless it be the *air test* of Dr. Angus Smith, spoken of by Miss Florence Nightingale, which we have not seen,) and are produced by the action of moisture gradually, but persistently decomposing the planks and timber of the vessel. We can get rid of bilge-water by pumping it out, and its smell by flooding

the vessel; but the moisture remains, though pumped ever so dry, causing mustiness and mouldiness, and the development from the fabric of the vessel of a pernicious febrile miasm, similar to that evolved from external vegetable decomposition, but rendered more virulent by concentration in the close, ill-ventilated hold of the vessel. Cleanse and ventilate as much as you may; while humidity exists, the morbid exhalations will persist. Dryness, therefore, is essential to thorough expurgation. While the hold of the vessel is sunk below the surface of the water, this can scarcely be accomplished; but elevated on a dry dock, it would be, completely and expeditiously.

To show the importance of dryness in overcoming pernicious exhalations, the ship *Regalia*, which sailed from the coast of Africa in 1815, with black recruits, affords evidence. This vessel, while on the coast, took on board a large quantity of green wood; her ballast was what is called *shingle ballast*, composed of small stones, with a considerable mixture of mud and other impurities; besides which, the ship was leaky, and the water-casks leaked. After she got to sea the Yellow Fever broke out, and all hands on board except the blacks were attacked therewith. After the ship arrived at Barbadoes she was cleansed and ventilated, notwithstanding which the disease continued until the hold had been exposed for a time to the concentrated heat of many stoves, after which it ceased, the moisture having evaporated.

But on this topic we cannot dwell, and must therefore beg leave to refer to Dr. R. La Roche's elaborate and valuable Treatise on Yellow Fever, vol. ii., chap. xxii., where the causes of Yellow Fever on shipboard, and the different methods adopted for expurgation, are fully detailed.

In our opinion, the principal, if not the sole means upon which we can rely for the thorough expurgation of a foul ship, are ventilation, cleansing, and the drying process, all of which can be most effectually performed while the vessel is

exposed on a dry dock to the heat of the sun, at the same time that she is undergoing the necessary repairs, after which the timber, planks, and other wood work of the vessel *should be coated internally with a composition impervious to water, and incombustible.*

With regard to vessels of war with ordnance on board, the difficulty and expense of raising them upon a dry dock would be too great for a Quarantine establishment. Such vessels, after landing their sick, should steer for the frigid zone and clean up there.

To resume: The protection which Wet Docks afford to vessels in Quarantine is not limited to the dangers which may accrue from stormy weather while riding at anchor in an open bay or roadstead. Such docks being, as it were, insulated, are more easily guarded against depredations of every kind, whether the cargo still remains in bulk, or is in process of unloading. Previous to the construction of Wet Docks on the Thames, the property annually pillaged from vessels was estimated to amount to £500,000 sterling, though Mr. McCullough, from whom we quote, thinks this estimate to be somewhat exaggerated. Dr. Bissell, ex-physician-in-chief of Marine Hospital, in his Report for 1857, to the New York Legislature, states: "For years past, and until the organization of the metropolitan police, there was no protection to the property of importers and ship-owners arriving in the city of New York. Burglary and larceny were perpetrated by thieves and robbers at pleasure, and with almost perfect impunity; and if the losses of our commercial men in this respect could be named, the amount would be startling. These depredations were committed by emigrant runners and boatmen at large, who are constantly on the alert to prey upon vessels, cargoes, and passengers, by day as well as by night, while these vessels are lying at anchor, requiring a large and vigilant police force to prevent such depredations."

That the construction of Wet Docks has done much to attract and facilitate commerce, is an historical fact. "The first Wet Dock in Great Britain was constructed in Liverpool about the year 1708, at which time Liverpool was but an inconsiderable town. This, however, was the commencement of her commercial importance; and the accommodation afforded by her Wet Docks is one of the circumstances that has most strongly conduced to her extraordinary increase in population, commerce, and wealth." The Liverpool Docks now enclose an area of ninety acres of water.

The West India Docks were the first constructed on the Thames. They were commenced in February, 1800, and partially opened in 1802. The Export Dock is eight hundred and seventy yards long by one hundred and thirty-five wide. Its area about twenty-five acres. The Import Dock is of equal length, and one hundred and sixty-six yards wide. The South Dock, which is appropriated to both import and export vessels, is one thousand one hundred and eighty-three yards long; the locks at each end are forty-five feet wide, large enough to admit vessels of one thousand two hundred tons. At the highest tides the depth of water in the docks is twenty-four feet, and the whole will contain with ease six hundred vessels of from two hundred and fifty to five hundred tons. There are other docks pertaining to this department, which, together with the above and the warehouses, comprise an area of two hundred and ninety-five acres.

This spacious and magnificent structure was formed by subscription, and vested in the West India Dock Company, their capital being £1,380,000 sterling, and has proved a profitable as well as beneficial investment. In addition, there are on the Thames, the East India, London, and St. Catharine's Docks. For further information on this subject, we refer to McCullough's Commercial Dictionary. But these docks are on a much more extensive scale than is needed for Quarantine purposes. Being intended chiefly for Yellow-fever vessels, a dock capable of accommodating thirty or forty vessels at a time would be sufficiently capa-

cious, for, after discharging cargo, they would haul off to the middle of the basin for expurgation.

That docks of such moderate dimensions would answer every needful purpose, we judge from the number of vessels which arrive from ports where Yellow Fever prevails during the Quarantine season. Dr. Whiting, ex-Health Officer, in his testimony before a Committee of the Legislature, stated that the number of sickly vessels, with Yellow Fever on board, from the 13th March, 1848, until January 1, 1849, a period of nine and a half months, was 44. According to the Report of Dr. R. H. Thompson, late Health Officer, 47 infected vessels from twelve ports, from the 1st of April to the 1st of August, 1856, sent into Marine Hospital fifty-eight cases of Yellow Fever; and from the 16th of April to the 1st of August, 1858, forty-three vessels, from nine ports, sent to the Hospital ninety-eight cases of the same disease; and Dr. Elisha Harris, ex-physician-in-chief of Marine Hospital, reports seventy-nine infected vessels from April 10 until October 4, 1856, of which number forty-one arrived in July, twenty in August, and ten in September. Now, when we take into consideration that all such vessels are not detained at Quarantine at the same time, and that as many sickly vessels arrive at New York as at any other port of the United States, the dimensions of the dock need not be larger than above mentioned.

The advantages which Wet Docks possess over a breakwater consist, not merely in accommodation and economy, but also in affording greater protection to the shipping. Major Delafield, of the U. S. Engineers, testified before a Committee of the N. Y. Legislature, "that a breakwater has no tendency to protect a vessel from the force of the winds; their fury and power, in driving vessels from their moorings, is the same with as without a breakwater. It is only in resisting the force of the waves and heavy seas that such a structure is of any service."

Inasmuch as a bill has been introduced into the Senate of the United States, by the Hon. Charles Sumner, to abolish all appropriations to Marine Hospitals, and the tax on Seamen,—which tax, so far as it goes, has hitherto been applied towards defraying the expenses attendant upon the care of sick sailors,—it might be deemed of little utility to discuss the second part of the Resolution under consideration—which relates to placing Quarantine Hospitals and their appurtenances under the jurisdiction and charge of the General Government—until the fate of this bill is decided. Nevertheless, as there are, in our opinion, cogent reasons why the United States should possess the control and charge, as well as the appointments of a Quarantine establishment, we will notice some of the grounds on which this latter part of the Resolution was based.

In the first place, we consider that a Quarantine, from its close connection with the U. S. Revenue Department, and the important bearing which it has upon commerce, (which Congress alone can regulate,) and upon travellers soon to be dispersed throughout different and distant States of the Union, is a national, rather than a State concern, and we cannot conceive that a uniform system of Quarantine can be established throughout the Union unless it be organized, almost exclusively, as a national institution.

The following extract from the able Report of Dr. William T. Wragg, presented to the Third National Quarantine and Sanitary Convention, respecting the feasibility of an Uniform System of Quarantine, coincides in a measure with this view of the subject.

We find, says Dr. Wragg, in Brightley's Digest, p. 810, under the head of Quarantine and Health Laws, an act of Congress, passed February 25, 1779, the third section of which reads thus:—

There shall be purchased or erected, under the order of the President of the United States, suitable warehouses, wharves, and enclosures, where goods and merchandise may be unladen and deposited

from any vessel subject to Quarantial or other restraint, pursuant to the Health Laws of any State as aforesaid, at such convenient place or places therein as the safety of the Public Revenue and the observance of such laws require.

We will now refer to an almost unanimous decision of the last Convention,—that *Fomites*, in the form of foul merchandise, clothing, and baggage of various kinds, is a more public medium for the conveyance of Yellow Fever than the body of the sick afflicted therewith. That the sick, when divested of *Fomites*, may be permitted to enter a city with impunity, whilst vessels, merchandise, baggage, and clothing, in certain conditions, brought from the same place, with or appertaining to the sick, must be detained until thoroughly expurgated. Such seems to be the interpretation of the resolution alluded to, and consequently ships, merchandise, clothing, bedding, and other kinds of baggage, are the principal things and materials for Quarantial restrictions, so far as Yellow Fever is concerned.

Forasmuch, then, as it appears from the preceding extract from Dr. Wragg's Report, that foreign merchandise, while detained at Quarantine, is in charge of the General Government, or under its protection, and as it is customary for Revenue Officers to inspect cargoes, examine the trunks, boxes, and baggage of immigrants, with the view of detecting contraband articles, or smuggled goods, these officers must unavoidably, in the discharge of their duty, come in contact with *Fomites*, and consequently would incur but little additional risk in supervizing the purification of articles deemed foul, or capable of inducing and propagating disease, the manipulations being performed either by negroes, or by persons who have had the Yellow Fever, under their direction and control. And furthermore, as *Fomites* enclosed in baggage, and *possibly* in merchandise, may be conveyed to parts remote from the port of entry, and even to distant States, the entire Union may be considered as interested in

the faithful discharge of Quarantine duties, no matter where the Quarantine is located ; hence one individual State should not be burthened with the expense of sustaining a precautionary system which is calculated to benefit the whole. It is evidently a national concern, or should be. We consider that goods, while in the public stores at Quarantine, are under the supervision and protection of the General Government. Such goods, however, should not be permitted to enter the market without the permission of the Health Officer, a circumstance which would connect this officer, more or less intimately, with the Revenue Department, a cogent reason why he should derive his appointment from the Government of the United States.

Besides, the Health Officer should not be subject to the control of municipal Boards of Health. The Health Officer is in fact the responsible head, so far as precautionary measures at the Port of Entry are concerned. By his appointment it is presumed that he is competent to discharge his duties. In him, therefore, full confidence should be placed, for his decisions must be according to the law and the testimony. It is evident that a corporate body remote from Quarantine, being unacquainted with all the facts which are revealed to personal inspection,—conviction being more vividly impressed upon the mind by what we see than by oral communication,—is not so well qualified to decide upon the merits of the case as an officer who is constantly on the spot, and who scrutinizes whatever is presented to his observation. Masters of vessels have repeatedly appealed to the Board of Health to release their ships from Quarantine, which Board has, on sundry occasions, set aside the decision of the Health Officer, and, having obtained his reluctant assent, has permitted their vessels to approach the city, contrary to his better judgment. The Health Officer should therefore act independently of a Board of Health, and in

order to secure such independence, should receive his commission from the General Government.

Furthermore, the appointment of Health Officers, as well as of Physicians of Lazarettos, is seldom permanent when conferred by States, judging from the custom adopted by that of New York. The policy of this State, of late years, has been to confer such appointment on some influential political partisan, who has scarcely had time to become familiar with the duties of his office ere he is superseded by some other partisan, more powerful, in a political point of view, than himself. Should, however, the appointment be conferred by the U. S. Government, it would be more stable, permanent, and continued so long as the officer discharges his duty aright; for it would be a difficult matter to remove a meritorious officer when the dismissal shall depend upon the voice of many Senators from different States of the Union.

Again, we are under the conviction that the welfare of the sick would be greatly promoted if Quarantine Hospitals were completely separated from their connection with Municipal Boards of Health.

In a letter addressed, by the late Dr. Vaché, to a Special Committee of the Legislature, on the Modification of the Quarantine Laws, N. Y., Nov. 5, 1845, p. 51 of edition 1854, we read as follows:—

..... "In conclusion, I present for the reflection of the gentlemen representing the Legislature, the expediency of extending the Marine Hospital to the reception of immigrants during the two years for which they are bonded after their arrival in this country," (The term was afterwards extended to five years.) "At present they are only entitled to its benefits, if ill, on reaching this port, and not if taken sick in the city subsequent to that event." "By this proposition, I do not mean that the Quarantine establishment is to be converted into a *poorhouse*," &c. A result

which almost occurred; for we find in a note appended by Dr. Vaché to a subsequent edition, the following remarks:—

If not converted *precisely* into a *poorhouse*, it was assuredly into a general immigrant hospital, which as effectually destroyed the original intention of the establishment. Crowded to excess, without the means of preventing the well from coming in contact with the sick, and compelled for want of room to intermingle in the same building, fatal diseases of a contagious character with those of a mild and inoffensive nature, it may well be said that the unfortunate victims “were doomed to lie down with the plague and shake hands with pestilence.”

The vast increase of immigration subsequent to the proposition so cautiously presented by Dr. Vaché, and the immense number of cases of Ship Fever brought into the Marine Hospital, induced him to reconsider this suggestion, and in a letter addressed to Senator C. D. Robinson, dated New York, 1850, we find a note in which he revokes it. Thus he writes:—

I now advise the repeal of any section authorizing the transfer of immigrants to the Marine Hospital *after* their arrival in this city, for the privilege had no other effect than to prevent the object of Quarantine, and to devote the beds in the hospitals to persons whose lives became endangered by admission into the institution. According to the statistics of 1849 from April 23 to December 31, inclusive, upwards of one thousand one hundred in two thousand five hundred and twenty cases were recorded on the books with maladies that did not come within the usually accepted designation of “malignant, contagious, and pestilential maladies.” Aside from the cruelty of forcing scores of defenceless human beings into a position where even a majority of physicians sicken and die, *humanity revolts* at diminishing the chances of recovery by excess of numbers of those who are compelled to submit to the exactions of the law of the State. That they were all taken from vessels by the Health Officer, no medical man can believe, and therefore a large proportion must have been sent from elsewhere, *without much regard to their ultimate fate.*

Hereafter the establishment should be limited to the reception of individuals from shipboard and to those who become ill at the Sanitary Refuge, proposed in a note at page 68.*

We have seen much misery resulting from the overcrowding produced by the great number of immigrants sent down to the Marine Hospital by Agents of the Board of Health. Our experience at this hospital embraced a period of six years, from 1848 to 1853, inclusive, during which time thousands of persons were exposed to pestilential and highly malignant diseases, and doubtless hundreds of lives unnecessarily sacrificed, and that among immigrants sent down by Agents of the Board of Health to the Quarantine Hospital, a large majority of whom had neither infectious nor contagious disease until domiciled there, and who, by overcrowding, contaminated the air to an intense degree of malignancy, highly aggravating the type of disease, rendering it less controllable by medical skill, and consequently much more fatal than otherwise it would have been.

During the six years specified, according to the Report of Dr. Bissell, already cited, 35,690 patients were admitted into the Marine Hospital, of which number 9,957 were received directly from shipboard, 24,201 from the city of New York, and 1,532 from other sources, principally Staten Island. Of this number 5,681 died, as the following table, extracted from Dr. Bissell's Report, will more particularly display.

*"The protection of the city and county of New York from the introduction of this highly *contagious* malady, (Ship Fever,) immediately demands the erection of buildings in the vicinity of the Quarantine ground, adapted to the reception of steerage passengers apparently in health, and imperatively requires the enactment of a law prohibiting them from leaving the premises until ample time has elapsed to enable them to recover from the effects of the privations and fatigues of the voyage, to cleanse and purify their persons, to wash and ventilate their clothing and baggage, and to mature and develop concealed symptoms of the disease. Besides, it would, under proper management, not only disembarass the Commissioners of Emigration, but be of incalculable benefit to immigrants, by enabling them to insure arrangements for a direct embarkation to their ultimate destination, and thereby avoid the piracies daily practised on them in New York."

The latter part of this recommendation has been admirably and fully accomplished by the establishment of Castle Garden as an Immigrant Depot, by and under the supervision and care of the Commissioners of Emigration.

YEAR.	Admitted from vessels.	Admitted from City.	Admitted from other sources.	Total.	Deaths.
1848	3,587	4,167	357	8,111	1,181
1849	1,215	4,281	58	5,554	923
1850	622	2,241	205	3,068	391
1851	1,487	4,329	293	6,109	894
1852	1,240	6,751	379	8,370	1,561
1853	1,806	2,432	240	4,478	731
	9,957	24,201	1,532	35,690	5,681

By a Legislative enactment, April 11, 1849, the Marine Hospital at Staten Island was specially restricted to the reception of contagious and infectious diseases, (Itch and Syphilis excepted,) and a physician-in-chief appointed by the Governor to carry out its provisions. Yet, notwithstanding, according to the Report of the Physician to the Legislature, March 26, 1850, it appears that of 2,520 cases admitted into this Hospital from April 23 to December 31, 1849, there were of Variola and Varioloid, 256 cases; of Cholera, 303; Typhus Fever, 813; Dysentery, 210; Pneumonia Typhoides, 21; Rubeola, 7; and Scarlatina, 7; the balance, 803, comprised 143 different forms of disease, many of which were of a slight or trivial character.

The following table, also derived from Dr. Bissell's Report, specifies the different titles of disease, so far as they have been specially registered, which were admitted into the New York Hospital from 1849 to 1853, inclusive. The first part of the table embraces diseases of a contagious or infectious nature, or such as are supposed to be controllable by Quarantine laws: the second part those of a non-contagious or non-infectious character.

TABLE OF ADMISSIONS INTO THE MARINE HOSPITAL.

YEAR.	PART FIRST.											PART SECOND.								
	Simple Fever.	Typhus Fever.	Yellow Fever.	Remittent Fever.	Scarlet Fever.	Measles.	Smallpox.	Erysipelas.	Dysentery.	Cholera.	Typh: Pneumon:	Moribund.	Total.	Intermittent Fever.	Diarrhea.	Pneumonia.	Phthisis Pulmon.	Other Diseases.	Total.	Aggregate.
1848	42	4,413	24	165	5	22	640	28	347	73	.....	.....	5,759	130	218	17	26	1,961	2,352	8,111
1849	290	2,201	.....	24	21	17	305	32	414	352	39	.....	3,695	45	105	65	20	1,624	1,859	5,554
1850	260	1,408	.....	4	13	18	171	26	146	25	70	.....	2,141	55	62	55	19	736	927	3,068
1851	680	2,857	.....	4	9	34	507	209	198	8	192	.....	4,698	50	215	89	38	1,019	1,411	6,109
1852	1,203	3,237	1	10	24	62	678	50	220	175	118	.....	5,778	122	319	67	82	2,002	2,592	8,370
1853	358	1,284	44	28	33	63	400	44	57	384	70	36	2,801	436	206	38	43	954	1,677	4,478
	2,833	15,400	69	235	105	216	2,701	389	1,382	1,017	489	36	24,872	838	1,125	331	228	8,296	10,818	35,690

From the above table we perceive that it is possible to divert a Quarantine Hospital from its legitimate object and convert it into a hot-bed of pestilence, dangerous to all who come within the sweep of its contaminated atmosphere. How other Quarantine Hospitals are managed we presume not to say. We have introduced that with which we were long acquainted, and have given such information as has been in a great measure derived from personal observation.

Quarantine Hospitals and Lazarettos were organized for the purpose of arresting contagious disease at the Port of Entry when introduced from a foreign source, not for the purpose of admitting those individuals who are taken sick at a remote inland place weeks, months, and even years after they have landed in the country. During the last thirteen years, from the date of the organization of the Board of Commissioners of Emigration, upwards of two and a half millions of emigrants have entered the Port of New York,* and in that space of time more sick persons were admitted into the Marine Hospital, S. I., than into any other Quarantine in Christendom, and the Board of Health of the city of New York exercised the privilege of sending any of the above number, (cases of Itch and Syphilis excepted,) to this Hospital, provided they had not been longer than five years in the

*Immigrants (aliens) landed in the Port of New York since the organization of the Board of Commissioners of Emigration, May 8, 1847. (From the Reports of the Commissioners.)

From May 5 to December 31, 1847	129,062
During the year 1848	189,176
“ “ 1849	220,603
“ “ 1850	212,796
“ “ 1851	289,601
“ “ 1852	300,992
“ “ 1853	284,945
“ “ 1854	319,223
“ “ 1855	136,233
“ “ 1856	142,342
“ “ 1857	183,773
“ “ 1858	78,589
“ “ 1859	79,322
	2,566,657

country. Hence, on several occasions, it constituted a pestilential *foyer* in which many died from diseases engendered, propagated, and aggravated by the poisoned condition of the atmosphere, superinduced by the emanations from the bodies of multitudes crowded together in inadequate spaces.

Hence, we are of opinion that after a person has once passed the ordeal of Quarantine he should not be sent back to it again, but suitable hospitals should be provided by the State or municipal authorities for the reception of those who may be taken sick after landing, in the city or town in which they reside. By this means many valuable lives might be saved, without endangering the health of the community any more than if they were sent to a remote hospital. It is rare, indeed, that contagious diseases spread beyond the walls of the hospital in which the sick are immured, unless through carelessness or the neglect of proper sanitary regulations. Besides, the delay attendant upon transferring the sick to a Quarantine, which generally occupies several hours, often places the patient, when his case is urgent, beyond the reach of human skill.

Let the United States Government then provide Lazarettos for the admission of contagious diseases from ship-board at or near the Port of Entry, and local Boards of Health adopt suitable sanitary measures to guard their cities against the origin and spread of epidemic disease ; then, and not till then will security be obtained, and the welfare of the sick be properly regarded.

Another consideration : United States naval vessels are, of all the vessels which enter our ports, the most severely visited with Yellow Fever, and from their foul condition the mortality among their crew when the sick are not landed, is great. (See Dr. R. LaRoche's Treatise on Yellow Fever, vol. ii., chap. xxii.) Out of forty-three vessels which from the 16th of April to the 1st of August, 1858, sent into the Marine Hospital ninety-three patients with Yellow Fever,

the U. S. ship *Susquehanna* sent in forty-four of this number. Yet, notwithstanding, on the 2d of September following, a captain of the U. S. Marines, with his corps, looked upon the conflagration of this hospital with the utmost *sang-froid*, without making the slightest effort to arrest this act of incendiarism. It seems, however, that he strictly obeyed the orders of his superiors.

The next reason we shall assign for placing Quarantines under the patronage and control of the General Government is, that thereby their number might be greatly lessened. One Quarantine, for instance, might answer for two or more States. We therefore suggest, as a matter not undeserving of consideration, the selection of suitable sites for Quarantines at or near the entrance of our large rivers, estuaries, bays, or harbors, where vessels having sick on board, or arriving from sickly ports, should be obliged to heave to for examination, and, if need be, detention by the Health Officer or Port Physician. One located at Block Island or some more eligible site, would serve to check disease on its route to Rhode Island and Connecticut; one at Sandy Hook would arrest contagious disease proceeding towards the States of New York and New Jersey; one within the Capes May and Henlopen would prevent its proceeding to the States of Pennsylvania and Delaware; another within Capes Charles and Henry, from passing to Virginia and Maryland; one near the mouths of the Mississippi would protect the States of Louisiana, Mississippi, Arkansas, and towns and cities bordering on this river,—the selection of the site being made by those better qualified to judge of these matters than we presume to be. All internal Quarantines where States require them, as they have no connection with the Revenue Department, should be sustained by the States in which they may be located, but sanitary laws and regulations might with much more propriety and benefit be substituted. The above suggestion we make rather as a matter for consideration

than of expediency at the present time, waiting until the time arrives when the eyes of the masses who govern are opened to see the vast importance and complete efficiency of a wise code of sanitary laws in preventing the origin and spread of epidemic diseases, but we fear that nothing short of pestilence will thus open them. Be this as it may, we fully coincide with the opinion expressed by a celebrated physician of Boston, "That there is no cause for detaining, on account of Yellow Fever, a ship which is in itself in a pure and healthful state, from whatever port she may have sailed, nor however sickly that port may have been. On the contrary, no ship that is foul and offensive, or that has a cargo in a putrid state, although the place from which she sailed, or the persons on board be ever so free from sickness, ought to be permitted to approach the city until she is thoroughly cleansed."

The last reason we shall assign for placing Quarantines under the care and jurisdiction of the Government of the United States is, that thereby they would be more secure against lawless violence and incendiarism.

The destruction of the Marine Hospital, at Staten Island, on the 1st and 2d of September, by an act of Vandalism, is well known wherever civilization exists. The following extract from the Report of Captain E. Crabtree, Vice-President of the Board of Commissioners of Emigration, will serve to confirm this opinion. In his communication to the Board he says:—

. It is reported that the rioters again assembled about eight o'clock on the night of the 2d of September, near the Quarantine walls, but intimidated by the presence of the Marines, were quietly dispersing, when information was spread among them that the United States force would only protect the Federal buildings, and not interfere to protect the State property.

Emboldened by this assurance, asserted to have been communicated by Richard A. Locke, one of the United States Government

officers stationed at Quarantine, "*that Captain Richard and the Marines would protect the United States property only!*" and finding that no police force had come down, and for which they waited until after the arrival of the seven o'clock boat, (the last from the city to Staten Island,) the mob, in a few moments, was again within the walls, repeating the acts and violence of the preceding night.

The remaining Hospital was fired, the dwelling-houses burned, as also the wash and boat-houses. The sick, who were rudely dragged from the hospital,—men, women, and children; some afflicted with Typhus, and others with Smallpox,—were thrown indiscriminately on the earth; not a few placed between two of the burning buildings, not widely distant from each other. The officers of the Institution, as on the preceding night, exerted themselves in every way to shelter and provide for the sick.

. Not a roof was left upon a State building at Quarantine. . . . The surmise that the assurance conveyed to the rioters, previous to this second attack, by persons holding positions under the General Government, was countenanced by Captain Richard, was subsequently justified by his extraordinary conduct when requested and solicited to prevent with his force this outrage, in repeatedly declining to do so, and his heartless reply to Dr. Walser, who implored him, in the name of humanity, to protect and save the Hospital building containing the sick,—"*I have been sent down for the protection of the United States property alone.*"

Hence we infer that, if the Marine Hospital and its appurtenances had belonged to the United States Government, they would have been protected against riotous violence and incendiarism.

We here conclude this lengthy Report, with the hope that it may, in some measure, conduce to the placing of Quarantine establishments under better construction and government than they have hitherto enjoyed; and especially to the amelioration of the condition of the sick and destitute immigrant, as well as the diminution of that great mortality, of which, in repeated instances, they have been the prolific cause, without affording that protection to cities and commu-

nities against the invasion and propagation of Epidemic and Pestilential diseases, which Sanitary Regulations, properly enacted and faithfully executed, would more economically and thoroughly perform, though the Quarantine system were entirely abolished.

Respectfully submitted,

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