

**Reports inspections of national, state, and local quarantine stations : From Annual report Marine Hospital Service, 1896.**

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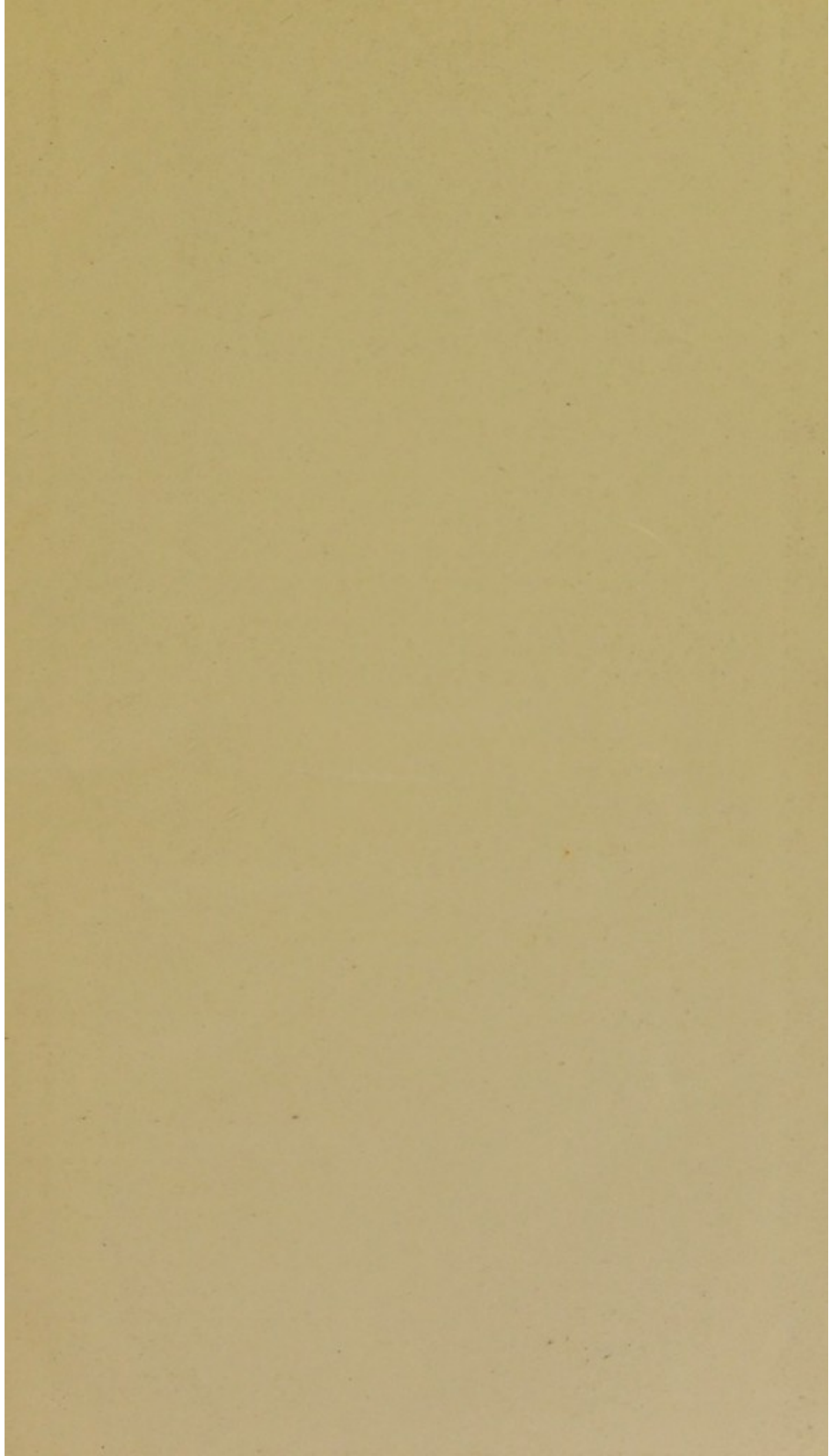






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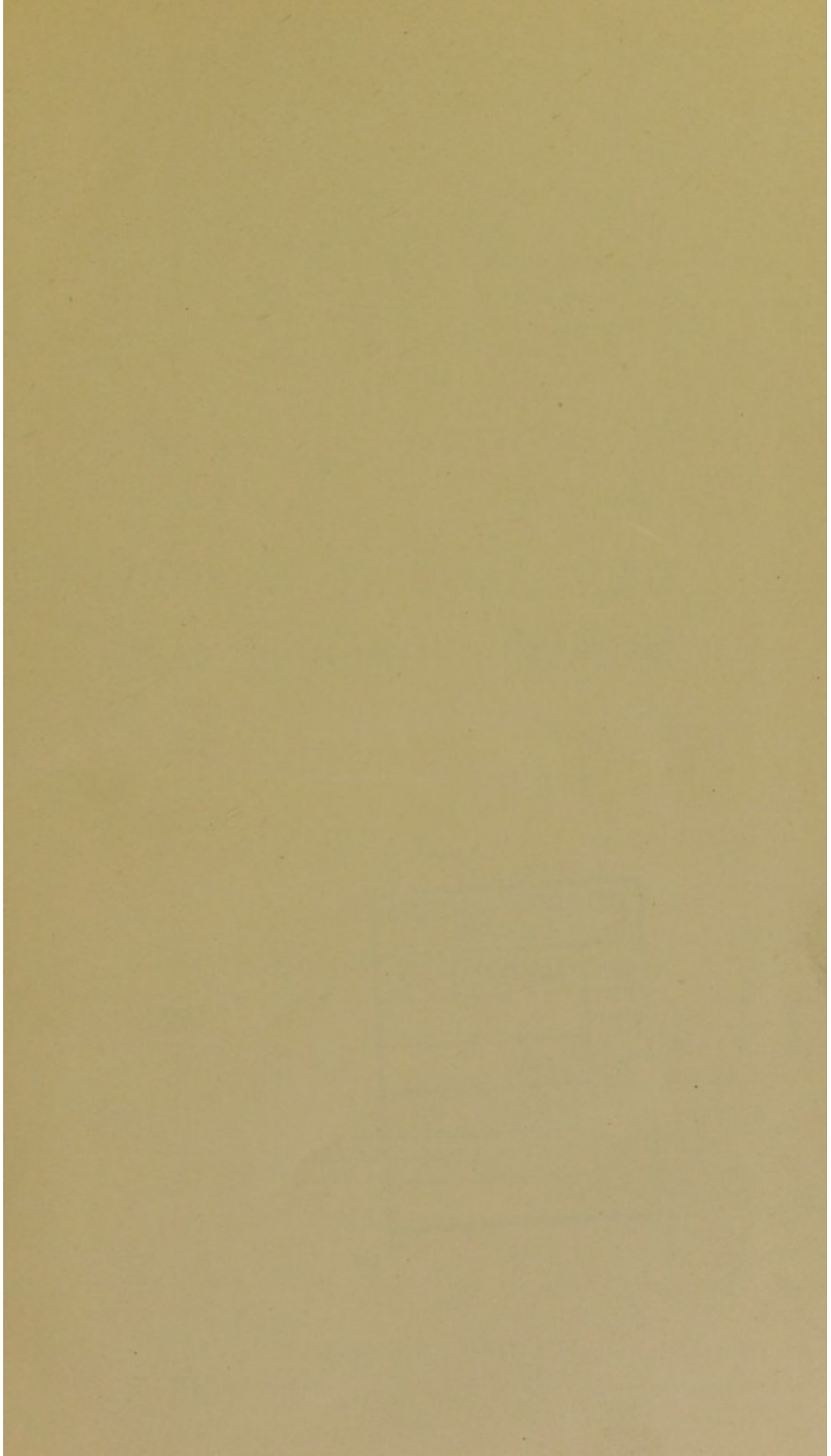






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TREASURY DEPARTMENT.

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REPORTS

INSPECTIONS OF NATIONAL, STATE, AND  
LOCAL QUARANTINE STATIONS.

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(FROM ANNUAL REPORT MARINE-HOSPITAL SERVICE, 1896.)



WASHINGTON:  
GOVERNMENT PRINTING OFFICE.

1897.

REPORTS OF INSPECTIONS OF ALL NATIONAL, STATE, AND LOCAL  
QUARANTINE STATIONS AND PORTS OF ENTRY.

[Arranged in geographical order.]

By the provisions of the act of February 15, 1893, it is the duty of the Surgeon-General of the Marine-Hospital Service to perform all the duties in respect to quarantine and quarantine regulations which are provided for by the act, and he is also directed to examine the quarantine regulations of all State and municipal boards of health, and cooperate with and aid said boards in the execution and enforcement of their rules and regulations, and in the execution and enforcement of the rules and regulations made by the Secretary of the Treasury. To carry out the spirit and letter of this law the following regulation was promulgated by the Secretary of the Treasury:

TREASURY REGULATION.

\* \* \* \* \*

In the performance of the duties imposed upon him by the act of February 15, 1893, the Supervising Surgeon-General of the Marine-Hospital Service shall from time to time, personally or through a duly detailed officer of the Marine-Hospital Service, inspect the maritime quarantines of the United States, State and local as well as national, for the purpose of ascertaining whether the quarantine regulations prescribed by the Secretary of the Treasury have been or are being complied with. The Supervising Surgeon-General, or the officer detailed by him as inspector, shall, at his discretion, visit any incoming vessel, or any vessel detained in quarantine, and all portions of the quarantine establishment for the above-named purpose and with a view to certifying, if need be, that the regulations have been or are being enforced.

J. G. CARLISLE, *Secretary.*

In accordance with the above regulation, regular inspections of all quarantine stations of the United States have been made in each of the past three years by officers of the Marine-Hospital Service, and reports have been received upon blank forms furnished by the Bureau. These inspections have been of undoubted value, because of the precise information they have conveyed, and because, too, the careful and systematic review of the work of the local quarantines has had a bracing effect upon their administration. Heretofore the reports have not been published, but it is deemed proper now to publish those received during this the third year in which the inspections have been made.



A great deal of valuable information is made available for reference by this publication, which, moreover, graphically displays the care exercised by the Service in maintaining a guard against pestilential disease around the coast from Maine to Washington.

In many of the reports which follow, to avoid repetition, the questions to which answers are made are omitted and referred to only by number. They may be read in full in the copy of special instructions inserted here for ready reference.

A list of the ports inspected and maps showing the location of all quarantine and inspection stations precede the inspection reports.

SPECIAL INSTRUCTIONS TO MEDICAL OFFICERS OF THE MARINE-HOSPITAL SERVICE  
DETAILED TO MAKE INSPECTIONS OF STATE AND LOCAL QUARANTINES.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

NOTE.—There are sometimes slight, but possibly important, variations from the letter of the local regulations in the administration of quarantine. Also, local regulations generally allow a wide latitude to the quarantine officer, and how this latitude is used, i. e., how the quarantine officer interprets the spirit of the regulations, is very important.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department.

It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

5. State whether the inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.

NOTE.—Many ports on the South Atlantic coast (e. g., Charleston, Savannah, and Fernandina) require certain ballasts to be discharged in quarantine without regard to season.

6. Are vessels from other United States ports inspected?

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

NOTE.—Quick or slow handling of a vessel is of more importance commercially than the question of fees. The time lost is the vessel's heaviest expense generally.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.) and how regulated? Is there any intercommunication allowed among vessels in quarantine?

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.



10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

17. What disposition is made of the consular bills of health?

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

WALTER WYMAN,

*Supervising Surgeon-General, M. H. S.*

*List of national, State, and local quarantine stations and ports of entry included in the following reports, arranged in geographical order.*

Maine:

- Eastport (see page 562).
- Ellsworth (see page 562).
- Bangor (see page 563).
- Waldoboro (see page 565).
- Belfast (see page 566).
- Rockland (see page 567).
- Wiscasset (see page 568).
- Bath (see page 569).
- Portland (see page 571).
- Kennebunkport (see page 573).
- York (see page 574).
- Castine (see page 575).

New Hampshire:

- Portsmouth (see page 576).

Massachusetts:

- Newburyport (see page 577).
- Gloucester (see page 579).
- Salem (see page 582).
- Marblehead (see page 584).
- Boston (see page 586).
- Plymouth (see page 591).
- Barnstable (see page 592).
- Provincetown (see page 593).
- Hyannisport (see page 596).

Massachusetts—Continued.

- Nantucket (see page 597).
- Edgartown (see page 598).
- Vineyard Haven (see page 598).
- New Bedford (see page 600).
- Fall River (see page 603).

Rhode Island:

- Newport (see page 604).
- Bristol (see page 606).
- Providence (see page 607).

Connecticut:

- Stonington (see page 611).
- New London (see page 612).
- Saybrook (see page 613).
- Hartford (see page 613).
- New Haven (see page 614).
- Bridgeport (see page 617).

New York:

- Sag Harbor (see page 618).
- New York City (see page 618).

New Jersey:

- Perth Amboy (see page 632.)
- Camp Low (see page 634).
- Tuckerton (see page 635).
- Somers Point (see page 635.)



## New Jersey—Continued.

Bridgeton (see page 636).

## Pennsylvania:

Marcus Hook (see page 637).

## Delaware:

Wilmington (see page 637).

Reedy Island (see page 638).

Delaware Breakwater (see page 643).

## Maryland:

Baltimore (see page 646).

District of Columbia (see page 658).

## Virginia:

Cape Charles (see page 661).

Alexandria (see page 666).

West Point (see page 667).

Rappahannock (see page 667).

Petersburg (see page 668).

City Point (see page 668).

Newport News (see page 669).

Richmond (see page 672).

Norfolk (see page 673).

## North Carolina

Elizabeth City (see page 688).

Edenton (see page 680).

Washington (see page 682).

Newbern (see page 684).

Beaufort (see page 686).

Southport (see page 690).

## South Carolina:

Georgetown (see page 695).

Charleston (see page 704).

St. Helena Entrance (see page 710).

Port Royal (see page 714).

## Georgia:

Savannah (see page 718).

South Atlantic Quarantine Station  
(see pages 723 and 725).

Darien (see page 731).

Sapelo and Doboy sounds (see page 733).

Brunswick (see page 734).

St. Marys (see page 743).

## Florida:

Fernandina (see page 745).

Mayport (see page 750).

St. Augustine (see page 753).

New Smyrna (Port of Mosquito In-  
let) (see page 755).

Jensen (Port of Santa Lucia Inlet,  
on Indian River) (see page 756).

Palm Beach (see page 757).

Key West (see page 759).

## Florida—Continued.

Tortugas (see pages 768 and 770).

Punta Rassa (see page 774).

Charlotte Harbor (see page 775).

Mullet Key Quarantine Station (see  
page 779).

Anclote Key (see page 794).

Cedar Keys (see page 797).

St. Marks and Carrabelle (see  
page 799).

Apalachicola (see page 799).

Pensacola (see page 807).

## Alabama:

Mobile Bay Quarantine (see  
page 825).

## Mississippi:

Gulf Quarantine, Ship Island (see  
pages 845 and 852).

Pascagoula (Round Island) (see  
page 861).

## Louisiana:

Rigolets Quarantine Station (see  
page 867).

Mississippi River (see page 872).

Atchafalaya River Quarantine Sta-  
tion (see page 879).

## Texas:

Sabine Pass (see page 882).

Galveston (see page 885).

Quintana (see page 889).

Pass Cavallo (see page 891).

Aransas Pass (see page 894).

Brazos de Santiago (see page 896).

## California:

San Diego (see page 900).

Los Angeles (see page 905).

San Francisco (see page 907).

Eureka (see page 912).

## Oregon:

Coos Bay (see page 914).

Gardiner (see page 915).

Yaquina City (see page 916).

Astoria (see page 917).

Portland (see page 921).

## Washington:

Port Townsend (see page 923).

Port Angeles (see page 927).

Seattle (see page 927).

Tacoma (see page 928).

Gray's Harbor, Aberdeen, Hoquiam  
(see page 928).

Blaine (see page 929).

Whatcom (see page 930).

South Bend (see page 930).



## MAINE.

## REPORT OF INSPECTION OF LOCAL QUARANTINE STATIONS.

By Surg. H. W. AUSTIN, M. H. S.

## EASTPORT.

There is no quarantine station at this port, nor apparatus for disinfection of vessels and of baggage.

The collector of the port, George M. Hanson, acts as quarantine officer.

City board of health act as local quarantine officers, under State law.

State authorities have not had occasion to act in recent years.

Vessels from United States ports are not inspected.

Number of vessels arriving from foreign ports during the year ending June 30, 1896, 758, almost entirely from Canadian ports. Number arriving from domestic ports, 208. Vessels arriving from Canadian ports come generally with cargo consisting principally of the products of Canada.

OCTOBER 7, 1896.

## ELLSWORTH.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

Ellsworth is provided with no quarantine ground, buildings, or disinfecting plant. There is good anchorage for vessels, but no designated quarantine anchorage. Inspection of vessels could be made in a small boat.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Board of health: Dr. W. M. Haines, chairman; Dr. A. C. Haggerty; George A. Parcher, esq., secretary. Post-office address, Ellsworth, Me.

3. There are no local quarantine laws or regulations, and no quarantine customs.

4. There are no quarantine procedures, either under printed regulations or by custom.

5. No inspections of vessels made.

6. No vessels from other United States ports are inspected.

7. No inspections made. No vessels in quarantine for several years.

8. Communication with vessels in quarantine would not be allowed.

9. There being no facilities for the care of quarantinable diseases or the disinfection of vessels, infected vessels arriving at the port should be sent to the Portland or Boston quarantine.

10. No records are kept.

11. There are no prescribed fees.

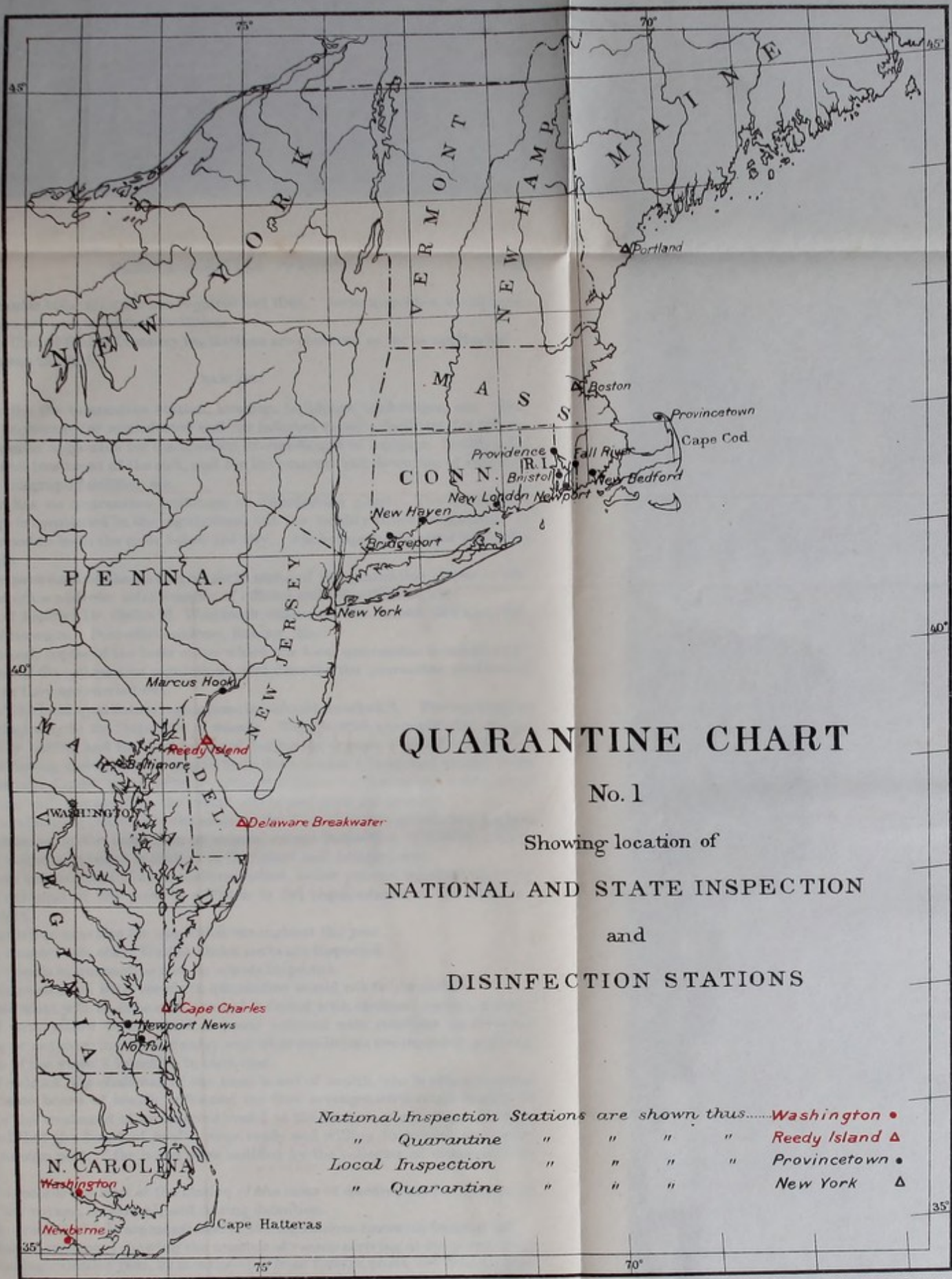
12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports, (b) from foreign ports in yellow-fever latitudes via domestic ports, (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

*From foreign ports.*

January .....	3	August .....	0
February .....	1	September .....	2
March .....	1	October .....	6
April .....	6	November .....	6
May .....	2	December .....	4
June .....	0		
July .....	1	Total .....	32

All the above vessels were from Canadian ports.





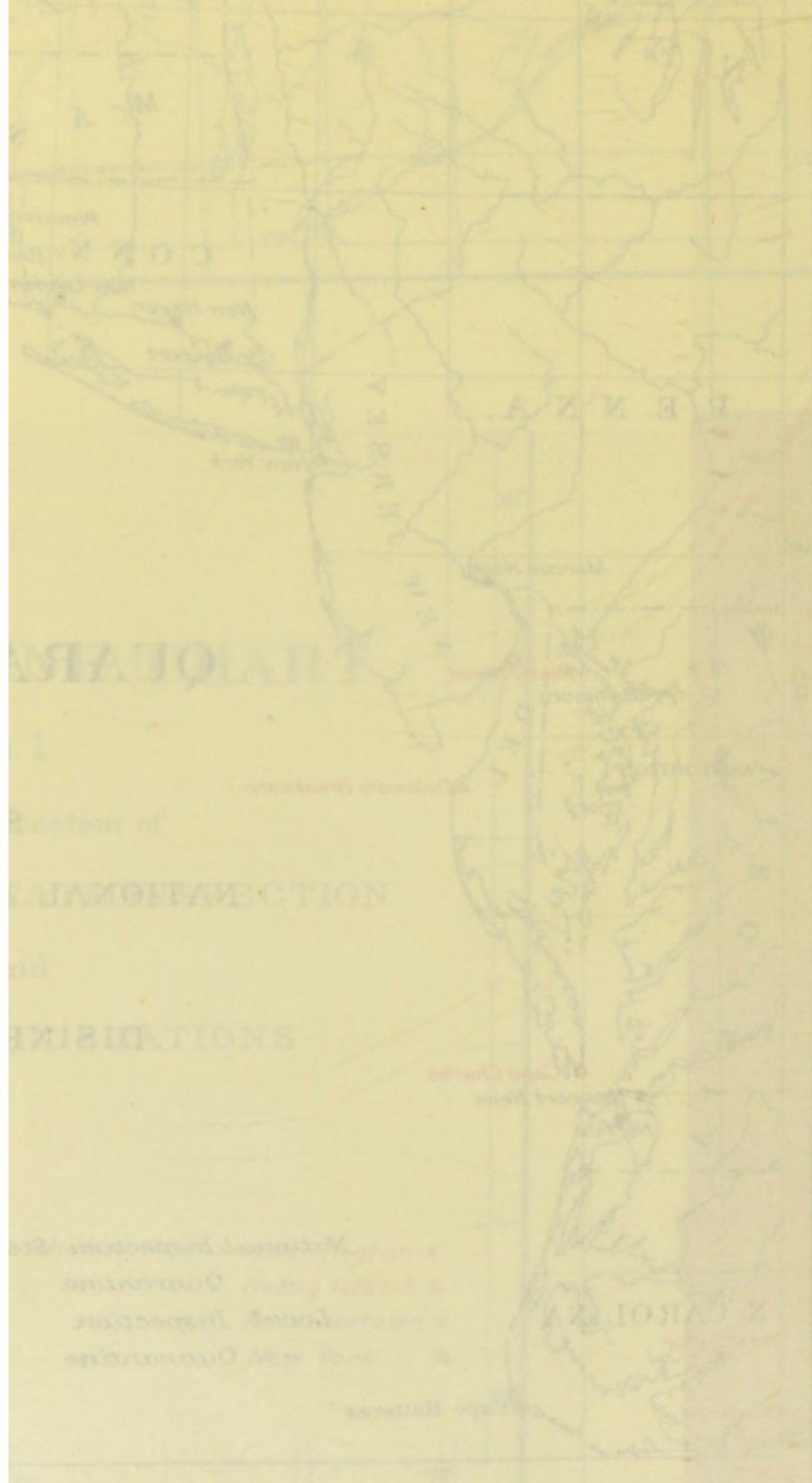
# QUARANTINE CHART

No. 1

Showing location of  
 NATIONAL AND STATE INSPECTION  
 and  
 DISINFECTION STATIONS

National Inspection Stations are shown thus.....

Washington	•
Reedy Island	▲
Provincetown	•
New York	▲



CON...

VIRGINIA

NORTH CAROLINA

SOUTH CAROLINA

... National ...  
... ...  
... ...  
... ...



13. Consular bills of health are required and filed. No immigration to this port.
  14. There are no quarantine facilities.
  15. The United States Treasury regulations are observed so far as applicable.
- SEPTEMBER 29, 1896.

## BANGOR.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

Bangor has no quarantine buildings or disinfecting plant. The quarantine anchorage is mentioned in the regulations, but the locality is not designated. It is understood to be in the river below the city. Anchorage in the river below the city is safe.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Board of health: Dr. Galen M. Woodcock, chairman; Dr. Daniel McCann; Mr. John Goldthwaite. Post-office address, Bangor, Me.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

Copy of the local quarantine regulations is inclosed, marked A. The regulations relate principally to the inspection of vessels. Vessels with quarantinable disease on board or having had the same on board during the voyage, vessels from foreign ports not having a clean bill of health from the consular officer, and vessels from European and Asiatic ports, with or without sickness on board, must anchor at quarantine until inspected by the health officer and pratique granted.

This regulation is practically the same as the United States quarantine regulation pertaining to the inspection of vessels, except inspection of foreign vessels without sickness on board is limited to European and Asiatic ports.

4. There are no quarantine procedures, either under printed regulations or by custom, enforced at the port, in addition to the requirements of the Treasury Department.

5. Regulation provides for inspection throughout the year.

6. No vessels from other United States ports are inspected.

7. No vessels in quarantine and no vessels inspected.

8. Communication with vessels in quarantine would not be permitted.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Dr. Woodcock, the chairman of the local board of health, who is also a member of the State board of health, informed me that arrangements could readily be made for the treatment of an infected vessel at the Bangor quarantine. He also indicated that the board of health were ready and willing to inspect any vessel from a foreign port, if the board were notified by the collector of customs of its arrival.

10. No records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

11. No prescribed fees are mentioned in the regulations herewith transmitted.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.



*From foreign ports.*

Month.	From—	Number.	Month.	From—	Number.
April.....	Canada .....	1	September .....	Spain .....	1
June .....	do .....	1		Turks Island ..	1
	Bermuda .....	1		France .....	1
July.....	do .....	1	October .....	Amsterdam .....	1
	Genoa, Italy .....	1	November .....	Canada .....	1
September.....	Scotland.....	1			

13. State results of your visit to (a) the custom-house; (b) to the immigration bureau.

Inspection of foreign vessels and certificate from health officer were not required prior to entry in any case. Consular bills of health are required and filed. There is practically no immigration to this port.

14. State whether, in your opinion, the quarantine facilities are sufficient to care for the shipping entering the port.

No. I think Bangor should be provided with quarantine ground and isolation buildings, as there is considerable shipping coming to this port.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

Inspection of foreign vessels prior to entry.

16. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

I would recommend that the collector of customs be instructed to enforce the regulations of the Treasury Department relating to the inspection of foreign vessels prior to their entry at the custom-house.

SEPTEMBER 26, 1896.

## A.

*Rules and regulations of the local board of health relating to quarantine inspection at Bangor, Me.*

[Adopted by the local board of health October, 1892.]

From and after this date the following rules and charges will be enforced at this port:

I. All vessels arriving at this port with plague, cholera, smallpox, yellow fever, typhus fever, or other contagious disease on board, or having had the same during the voyage, must be directed by the pilot or harbor master to anchor on quarantine ground and remain there until released by written order of the board.

II. Any vessel arriving from a foreign port with or without sickness on board, and not having a clean bill of health from consular officer at port of clearance, will be directed by the pilot or harbor master to anchor at quarantine and remain until released by written order of the board.

III. All vessels or steamships arriving from European or Asiatic ports will be compelled to anchor at quarantine and remain until inspected under the direction of and released by written order of the board, unless special permission shall be given in writing to allow any such vessel to come to its wharf for inspection there, in which case no person shall enter or leave the vessel until permitted by written order of the board.

IV. Inspection will be made promptly as soon as notice of arrival shall be received, but only during the hours of daylight, or from 8 a. m. to 6 p. m., and the charges shall be as follows, to wit:

For each sailing vessel.....	\$5
For each steamship carrying freights only .....	10
For each steamship carrying passengers.....	15



In all cases the quarantine officers making the inspection shall collect the charges made against any vessel either in currency or captain's draft on consignee, and account for the same to the board.

The foregoing rules and regulations are hereby passed and ordained by us as the rules and regulations of the local board of health of Bangor.

GALEN M. WOODCOCK, M. D.,  
DANIEL McCANN, M. D.,  
JOHN GOLDTHWAIT,  
*Local Board of Health.*

Approved April 15, 1893.

THOMAS H. HASKELL,  
*Associate Justice of the Supreme Judicial Court.*

WALDOBORO.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

Waldoboro has no quarantine buildings, disinfecting plant, or ground for the isolation of patients suffering with contagious diseases. There is no designated quarantine anchorage.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Board of health: Dr. J. T. Sanborn; Dr. Eben Alden, secretary and acting health officer; E. V. Philbrook, esq. Post-office address, Waldoboro, Me.

3. There are no local quarantine laws or regulations and no quarantine customs.

4. There are no procedures.

5. No vessels were inspected during the calendar year 1895.

6. No vessels from other United States ports are inspected.

7. There are no quarantine procedures.

8. Communication with vessels in quarantine would not be permitted.

9. Vessels with quarantinable diseases on board should be sent to the Boston or Portland quarantine.

10. No records are kept at the station of the cases of diseases that have occurred during the voyage, on arrival, and during detention.

11. There are no prescribed fees.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port—i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

Month.	Place of entry.				
	Waldo- boro.	Rockland.	Thomaston.	St. George.	Damaris- cotta.
January .....		11		2	
March .....		8			
April .....		40			
May .....	9	38			
June .....		46			1
July .....		49	1		1
August .....		63	9		
September .....		76	15		
October .....		70	8		
November .....		46	4	2	
December .....		28	6	2	
			2	8	

All the above vessels were from the Canadian provinces and did not require inspection, there being no sickness aboard. Wood, lumber, and lobsters were the principal cargoes.



13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Bills of health required and properly filed. There is no immigration to the port.

14. Infected vessels could not be properly handled at Waldoboro with the present facilities.

15. The regulations of the Treasury Department are observed.

16. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

There are four subports in the Waldoboro district—Rockland, Thomaston, Damariscotta, and St. George—but nearly all enter at Rockland and Thomaston. St. George is a place where vessels enter for harbor principally.

Vessels entering any port in the Waldoboro district requiring quarantine procedures should be sent to the Portland or Boston quarantine.

SEPTEMBER 25, 1896.

#### BELFAST.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick and for the removal and detention of suspects; mail and telegraph facilities, etc.

Belfast has no quarantine station, no buildings for the isolation of contagious diseases, no disinfecting plant, and no designated quarantine anchorage. The anchorage in the bay in front of the town is good and ample for all vessels likely to arrive at Belfast.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. Luther Hammond, health officer; post-office address, Belfast, Me.

3. There are no quarantine laws or regulations and no quarantine customs.

4. No quarantine procedures. No vessel has been placed in quarantine for many years.

5. No inspection of vessels is maintained.

6. No vessels from other United States ports are inspected.

7. No quarantine procedures or inspections are had.

8. The health officer informs me that communication with a vessel in quarantine would not be permitted.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

The health officer will inspect any vessel requiring inspection under the United States quarantine regulations when notified by the collector of customs. Infected vessels with quarantinable diseases on board should be sent to the Portland or Boston quarantine for treatment.

10. No records are kept at the station of the cases of disease that have occurred during the voyage on arrival and during detention.

11. No prescribed fees.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.



*From foreign ports.*

Month.	From—	Number.	Month.	From—	Number.
January .....	Canada .....	1	August .....	Canada .....	17
April .....	do .....	15	September .....	do .....	20
May .....	do .....	9	October .....	do .....	13
June .....	St. Thomas .....	1	November .....	do .....	9
July .....	Canada .....	16	December .....	do .....	2
	do .....	11			

All of the foreign vessels above enumerated were entered at Rockport, a sub-port of Belfast, 22 miles below Belfast. The cargoes were principally wood.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Only one vessel arrived in the district requiring inspection under the United States quarantine regulations, and this vessel was not inspected by the local health officer prior to entry. The vessel was from St. Thomas Island, West Indies, and was entered at Rockport. Three immigrants arrived at the port during the year. Consular bills of health are required and properly filed.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

Infected vessels could not be properly treated with the present facilities.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

The inspection of vessels from foreign ports (not Canadian) is not carried out.

16. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

I would recommend that the collector of customs be instructed to enforce the regulation relative to the inspection of vessels by the local quarantine or health officer prior to entry.

SEPTEMBER 26, 1896.

## ROCKLAND.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick and for the removal and detention of suspects; mail and telegraphic facilities, etc.

There are no quarantine buildings, disinfecting apparatus, or isolation grounds at Rockland. There is no designated anchorage for infected vessels, but the anchorage in the bay is ample and safe for all vessels likely to come to the port.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Board of health: Dr. Benjamin Williams, chairman and health officer; Dr. Judkins; Fred S. Sweetland, esq. Post-office address, Rockland, Me.

3. There are no local quarantine regulations.

4. There are no quarantine procedures.

5. No inspections are made.

6. No vessels from other United States ports are inspected.

7. No inspections are made.



8. Communication with vessels in quarantine would not be permitted.
9. Vessels requiring quarantine procedures should be sent to the Portland or Boston quarantine.
10. No records are kept.
11. There are no prescribed fees.
12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

The foreign entries are included in the Waldoboro report. They were all from Canadian ports.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Bills of health are required. No immigration to this port.

14. State whether, in your opinion, the quarantine facilities are sufficient to care for the shipping entering the port.

I believe Rockland should be provided with quarantine ground and buildings for the isolation of patients and suspects. There is considerable shipping coming to this port, and the city has no facilities for the treatment of infected vessels.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection of vessels, are observed.

Regulations of the Treasury Department are observed.

SEPTEMBER 25, 1896.

#### WISCASSET.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick and for the removal and detention of suspects; mail and telegraph facilities, etc.

Wiscasset is located on the Sheepscot River, about 12 miles above the mouth. Many of the vessels entering port within this district go to Boothbay, although all the official files are kept at Wiscasset. There is safe anchorage at Wiscasset and at Boothbay, but there is no quarantine plant of any kind at either port.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Board of health: Dr. S. A. Stephens, health officer; Lewellen Nule, post-office address, Wiscasset, Me.; Dr. Alvin Blossom, post-office address, Boothbay, Me.

3. There are no local quarantine rules. No quarantine customs at Wiscasset.
4. There are no quarantine procedures.
5. No inspections of vessels have been made.
6. No vessels from other United States ports are inspected.
7. No procedures are had.
8. Communication with infected vessels would not be permitted.
9. Vessels requiring quarantine procedures bound for Wiscasset or Boothbay should be remanded to either the Boston or Portland quarantine.
10. No records are kept at the station of the cases of disease that have occurred during the voyage on arrival and during detention.
11. There are no prescribed fees.
12. Make a statement showing the number of vessels arriving at the port during



the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

*From foreign ports.*

Month.	From—	Number.	Month.	From—	Number.
January .....	Canada .....	1	June .....	Canada .....	2
February .....	do .....	2	August .....	do .....	4
March .....	do .....	3	September .....	do .....	8
April .....	do .....	6	October .....	do .....	4
May .....	do .....	5	November .....	do .....	10
	Spain .....	1	December .....	do .....	8

Only 11 of the above vessels discharged cargo; the others put in for harbor and were required to enter, having remained in port over forty-eight hours. The cargoes of the above vessels were mostly coal, lumber, and salt.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Consular bills of health are required and filed at the custom-house.

One vessel from Spain was entered at the custom-house without inspection by the health officer as required by the regulations of the Treasury Department. No immigration to this port.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

Infected vessels with contagious diseases aboard could not be properly treated at either Boothbay or Wiscasset with present facilities.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

Inspection of foreign vessels not required prior to entry.

16. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

The collector of customs should be instructed to enforce the regulations of the Treasury Department regarding the inspection of vessels prior to entry.

The health officers at Wiscasset and Boothbay have indicated their willingness to comply with the United States quarantine regulations regarding inspection of vessels.

SEPTEMBER 24, 1896.

BATH.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

The quarantine anchorage of the city of Bath is designated by city ordinance, as follows: "Quarantine ground opposite where the South Steam Mill formerly stood." It is about  $1\frac{1}{2}$  miles from the water front of the city and nearly opposite. The anchorage is considered safe and ample for the city. There are no buildings, no disinfecting appliances; no ground reserved for the isolation of patients suffering from contagious diseases, and no boarding steamer.



2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. Edwin M. Fuller is the secretary of the board of health. At present there is no health officer, but one will be appointed at an early date. The secretary of the board, Dr. Fuller, informed me that the board will inspect any vessel and furnish the collector a certificate whenever inspection is required by the United States quarantine regulations.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

The following is the city ordinance relating to quarantine:

A quarantine shall be had on all vessels, their officers and crews, passengers and cargoes, on their arrival from any port where contagious sickness prevailed at the time of their departure, and on all vessels on board of which any person shall have died or shall have been sick with any contagious disease during their homeward passage. No person shall be allowed to go on board of, or on shore from, any vessel when in quarantine without a permit from the boarding officer. Vessels subject to quarantine will anchor on the quarantine ground opposite where the South Steam Mill formerly stood. The boarding officer is directed to give notice to pilots and mariners of the foregoing regulations.

Boards of health in the State of Maine have authority to act under the State laws, a copy of which accompanies the report of inspection at Portland.

4. There have been no quarantine procedures during the past year.

5. No vessels were inspected during the calendar year 1895, and no inspections made since that date.

6. No vessels from other United States ports are inspected.

7. No inspections or disinfection of vessels is had.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

Communication would not be permitted with vessels in quarantine.

9. Infected vessels with cases aboard should be remanded to the Boston or Portland quarantine for treatment.

10. No records are made.

11. No fees are prescribed.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

*From foreign ports.*

Month.	From—	Number.
May .....	Canada.....	3
	Cuba.....	1
July .....	Canada.....	2
September .....	do.....	1
	Italy.....	1
October .....	Canada.....	1
December.....	do.....	1

The foreign cargoes are principally lumber and coal.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.



Consular bills of health are required of vessels from foreign ports, but the United States quarantine regulations pertaining to the inspection of foreign vessels prior to entry were not complied with. Two vessels, one from Matanzas, Cuba, and one from Italy, were not inspected by the health officer prior to entry. There is no immigration to this port.

14. In my opinion the quarantine facilities are not sufficient to care for the shipping entering the port.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

No inspection of foreign vessels prior to entry.

16. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

I would recommend that the collector of customs be instructed to enforce the regulations of the Treasury Department regarding the inspection of vessels from foreign ports prior to entry.

SEPTEMBER 24, 1896.

#### PORTLAND.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

The Portland quarantine station is located on the United States Government reservation on House Island, which is in the harbor about 2 miles from the water front of the city. The anchorage is safe and ample for all vessels that may require quarantine procedures. The city has a small steam tug intended for fire protection, which can be used in the inspection of vessels, but usually the boarding is made from a small boat.

As stated in the report of the board of health, "the quarantine plant consists of a building 36 by 78 feet, of one story, frame, with monitor roof and two cupolas for ventilation. In this building are two corridors, 10 by 48 feet, for unpacking and repacking baggage; six rooms 8 by 10 feet, with a bath tub with hot and cold water in each; opening from these are six other rooms of the same size for dressing rooms and waiting for disinfection of clothing after the bath. Attached to the other part of the building, 30 by 36 feet, is a coal shed, and a boiler house containing a 60-horsepower boiler. In the room 30 by 36 feet is a steel retort 7 feet in diameter and 8 feet long, with cast-iron doors 5 feet by 4 feet 3 inches in either end. Baggage and clothing is loosely packed in iron trays of open mesh, and 23 by 46 by 8 inches in size. Of these, 24 can be placed upon a carriage and run into the retort at once, when the doors are closed and live steam admitted until a pressure of 10 pounds to the square inch and a temperature of about 228° F. is obtained. This is shown by a steam gauge and thermometer attached, while a pressure-reducing valve prevents a higher pressure from endangering the retort, which was tested to 30 pounds per inch of cold-water pressure. After continuing the pressure and temperature for a sufficient time, the steam is shut off from retort and allowed to escape through a valve in bottom. When the pressure is sufficiently reduced, a current of air heated by being drawn through a 600-foot Sturtevant heater filled with steam at the boiler pressure, generally about 60 pounds, is forced into the top of the retort by an exhaust fan, thus driving out at the bottom the residual steam,



so that on opening the doors there is no condensation to wet the contents, which come out practically dry. The bathrooms, corridors, etc., are heated by the same method, hot air from the heater being forced into the rooms through galvanized-iron pipes which discharge near the floor and vertically downward, thus giving perfect ventilation as well as heat.

"There is also a sulphur furnace in which 50 to 100 pounds of brimstone can be burned at once, and the sulphur dioxide gas forced by another fan either into a closed room in the building, where trunks, hats, boots, etc., that do not stand the high temperature of the retort, are disinfected, or it can be forced through a wooden conduit down to the end of the wharf and, by means of hose, into the hold of a ship.

"A 12-horsepower engine furnishes the power to run the fans and feed pump for boiler and hot and cold water tanks in the chamber above to feed the bath tubs.

"Water is obtained from a small pond on the top of the hill, which has been connected by piping and supplies the entire system by gravity. A cistern also was built near the house, so that if pond failed it could be filled from the water boats.

"A wharf about 125 feet long was built on piles, and at its end four dolphins of 8 piles each were driven with a depth of water of 24 feet at low tide at their outer sides. Two mushroom anchors of 5,000 and 3,600 pounds weight, respectively, were also kindly loaned us by the Light-House Department of the United States Government and placed by them at a proper distance seaward with chains and buoys for safe anchorage at wharf.

"The old house and the ordnance building on the island were cleaned out, glass set, and stoves put in, to be used for the detention of passengers if needed."

None of the buildings are provided with beds or proper cooking utensils, but these could be supplied at short notice. The machinery for disinfecting is in fair order.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. Henry P. Merrell is chairman of the board of health and health officer. The board of health employs a watchman, who lives in one of the buildings on the island.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

Copy of the annual report of the board of health, in which are a few quarantine rules, is inclosed. No vessels in quarantine during the year. United States quarantine regulations are observed in the inspection of vessels.

4. No quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department.

5. Inspection is maintained throughout the year.

6. No vessels from other United States ports are inspected.

7. United States quarantine regulations are complied with in inspection of vessels.

8. Communication with a vessel in quarantine would not be permitted.

9. Treated at the station according to the United States quarantine regulations.

10. No records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention, as there are no arrivals.

11. No schedule of quarantine fees was obtained.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports.



Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

Month.	From—	Number.	Month.	From—	Number.
January .....	Canada .....	9	May .....	Italy .....	1
	Scotland .....	1	June .....	Canada .....	25
	England .....	4		Puerto Rico .....	2
February .....	Canada .....	2	July .....	Italy .....	1
	British West Indies .....	1		Canada .....	14
	Japan .....	1	Puerto Rico .....	1	
	England .....	4	August .....	Canada .....	10
March .....	Canada .....	1	September .....	Puerto Rico .....	1
	England .....	4		Italy .....	2
April .....	Canada .....	31	October .....	Canada .....	16
	British West Indies .....	3		Puerto Rico .....	1
	May .....	Puerto Rico .....	5	November .....	Scotland .....
England .....		4	December .....	Canada .....	19
Canada .....		21		Puerto Rico .....	1
British West Indies .....		2	Italy .....	26	
	Puerto Rico .....	2		England .....	2
				Canada .....	11
				England .....	8

The commerce of Portland is general.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Bills of health are required and properly filed. The total number of immigrants arriving at Portland during the calendar year 1895 was 415.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

Yes. The station needs some improvements and should be put in order for immediate use for the reception of patients.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

The United States quarantine regulations are observed so far as they apply to this station.

SEPTEMBER 23, 1896.

#### KENNEBUNKPORT.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick and for the removal and detention of suspects; mail and telegraph facilities, etc.

There is no quarantine station, buildings, disinfecting apparatus, or designated anchorage for infected vessels. There are mail and telegraph facilities at Kennebunkport.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. A. W. Langley is the health officer; post-office address, Kennebunkport.

3. There are no local quarantine regulations. Health officer could act under State law if occasion demanded.

There are no quarantine procedures, either under printed regulations or by custom, enforced at the port in addition to the requirements of the Treasury Department.

5. No inspection of vessels has been required.



6. No vessels from other United States ports are inspected.
7. No quarantine procedures are had.
8. Communication with vessels in quarantine would not be permitted.
9. Infected vessels should be remanded to the Boston or Portland quarantine.
10. No records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.
11. There are no prescribed fees.
12. There have been no foreign entries at this port, and no arrivals with quarantinable diseases on board. There were seventeen domestic arrivals during the calendar year 1895, with cargoes principally of coal.
13. No immigration to the port.
14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

A quarantine station at Kennebunkport is unnecessary.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection of vessels, are observed.

No procedures. The health officer will inspect vessels when notified by the collector.

SEPTEMBER 23, 1896.

#### YORK.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick and for the removal and detention of suspects; mail and telegraph facilities, etc.

York has no quarantine station, no prescribed anchorage or disinfecting plant.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

W. L. Hawkes is the health officer; address, York Harbor, Me.

3. There are no local quarantine regulations and no customs.
4. No vessels arrive requiring quarantine procedures.
5. No quarantine inspections are had.
6. No vessels from other United States ports are inspected.
7. No quarantine procedures are had.
8. No vessels have been in quarantine.
9. Infected vessels would be remanded to Boston quarantine.
10. No records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.
11. There are no prescribed fees.
12. No foreign arrivals at the port during the calendar year 1895.
13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

I did not visit the port, but obtained this information from the collector of customs by telephone and by mail.

14. In my opinion the quarantine facilities are sufficient to care for the shipping entering the port.

15. No foreign arrivals or vessels arriving with sickness on board during the year.

18. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.



I would recommend that the collector of customs be instructed to wire the Supervising Surgeon-General the arrival of any infected vessel, and that upon such notice the Department instruct him to remand such vessels to the Boston quarantine for treatment.

SEPTEMBER 21, 1896.

CASTINE.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

Castine is not provided with any quarantine buildings, ground, or disinfecting plant of any character. There is no prescribed anchorage, but the anchorage in the harbor is good and ample for all shipping likely to enter the port. There are mail and telegraph facilities at Castine.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. S. J. Wallace, health officer; post-office address, Castine.

3. There are no local quarantine laws or regulations.

4. There have been no quarantine procedures of any character for several years.

5. There has been no inspection of vessels for several years.

6. No vessels from other United States ports are inspected.

7. No inspections have been made.

8. Communication with vessels in quarantine would not be permitted.

9. Infected vessels with contagious diseases aboard should be sent to the Boston or Portland quarantine.

10. No records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during retention.

11. No fees are prescribed.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

*From foreign ports.*

May .....	1
June .....	1

The above vessels were from Sicily, laden with salt.

The domestic vessels entering the port are not recorded, but the number is small with the exception of passenger steamers touching there during the summer months.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Consular bills of health are required and filed, but the two vessels from Italy that were entered at the custom-house were not inspected by the health officer prior to their entry.

14. Vessels with quarantinable diseases aboard could not be properly treated at this port.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection of vessels are observed.



The inspection of foreign vessels prior to entry is not required.

16. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

I would recommend that the collector of customs be instructed to enforce the Treasury Department regulations regarding the inspection of vessels prior to their entry at the custom-house.

SEPTEMBER 28, 1896.

#### NEW HAMPSHIRE.

##### REPORT OF THE INSPECTION OF THE LOCAL QUARANTINE AT PORTSMOUTH.

By Surg. H. W. AUSTIN, M. H. S.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

Portsmouth is not provided with quarantine buildings, disinfecting plant, or quarantine ground. The collector of customs informs me that there is a safe anchorage for infected vessels just outside of Whaleback Light, off Newcastle, about 3 miles below the city.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. F. S. Towle, chairman of the board of health and acting health officer; post-office address, Portsmouth, N. H.

3. Unable to obtain a copy of the quarantine regulations from the health officer. There are no quarantine customs, as no vessels have arrived requiring inspection or disinfection.

4. There are no quarantine procedures, either under printed regulations or by custom, enforced at the port, in addition to the requirements of the Treasury Department.

5. No inspection of vessels is required or necessary.

6. No vessels from other United States ports are inspected.

7. No quarantine inspections are had.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.) and how regularly? Is there any intercommunication allowed among vessels in quarantine?

No vessels in quarantine.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case?

Health officer recommends that all infected vessels entering the port requiring isolation and disinfection be remanded to the Boston quarantine.

10. No records are kept at the station of the cases of disease that have occurred during the voyage on arrival and during detention.

11. There are no prescribed fees.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

During the calendar year ended December 31, 1895, there were 29 foreign vessels entered at the port, all from the Canadian provinces. The total number of



domestic arrivals during the same period was 1,076. The principal commerce is coal, lumber, and general merchandise.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Consular bills of health are required of all foreign vessels, and they are on file at the custom-house. No immigration to the port.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

I believe Portsmouth should have a quarantine, where persons suffering with quarantinable diseases could be isolated. The health officer will inspect any vessel requiring inspection under the United States quarantine regulations if notified by the collector of customs.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection of vessels, are observed.

No vessels arrived requiring any quarantine procedures.

16. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

I would recommend that infected vessels entering the port requiring isolation and disinfection be remanded to the Boston quarantine.

SEPTEMBER 21, 1896.

#### MASSACHUSETTS.

##### REPORT OF INSPECTION OF LOCAL QUARANTINES.

By Surg. H. W. AUSTIN, M. H. S.

##### NEWBURYPORT.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick and for the removal and detention of suspects; mail and telegraph facilities, etc.

Newburyport has no quarantine plant. There is no prescribed anchorage for infected or noninfected vessels. No buildings of any kind or disinfecting apparatus that are available for quarantine purposes. Vessels could safely anchor in the river about 2 miles below the city, where they could be isolated from other vessels.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

The board of health is organized as follows: John E. Bailey, chairman; Clarence C. Day, M. D.; Arthur Wishington; Amos H. Geary, clerk. Post-office address, Newburyport, Mass.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

Copy of regulations of the board of health is herewith transmitted. These regulations do not, however, pertain to maritime quarantine. There have been no quarantine procedures for several years. Also copy of the quarantine laws of the State of Massachusetts is transmitted.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

No quarantine procedures.



5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

There has been no inspection of vessels. During the past year there have been no arrivals of vessels from foreign ports and no arrivals with sickness on board. Hence inspection under the United States quarantine regulations not required.

6. No vessels from other United States ports inspected.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharged.

Dr. Clarence C. Day would act as health officer for the board and inspect vessels when such procedure is necessary under the United States quarantine regulations. The board would recommend that vessels arriving with quarantinable diseases aboard be remanded to the Boston quarantine for treatment.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

No procedures.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

The collector of customs would notify the Department and recommend that vessels arriving at the port infected with cholera, yellow fever, smallpox, or typhus fever be remanded to the Boston quarantine.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

No records kept.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

No prescribed fees.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year by months—(*a*) from foreign ports; (*b*) from foreign ports in yellow-fever latitudes via domestic ports; (*c*) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

No foreign arrivals, and no record kept of domestic arrivals. There are only a few coal schooners arriving from New York and Philadelphia; also a few pleasure yachts.

13. State results of your visit to (*a*) the custom-house; (*b*) the immigration bureau.

No immigration.

14. State whether, in your opinion, the quarantine facilities are sufficient to care for the shipping entering the port.

The marine commerce of the port is very small and would not warrant the establishment of a quarantine plant. The present arrangement, if carried out, would be sufficient.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

No procedures.

16. Mention any facts which in your opinion should be known to the Department



bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

I would recommend that all infected vessels arriving at the port which require quarantine procedures under the United States quarantine regulations be remanded to the Boston quarantine for treatment, and that the collector of customs be instructed to notify the Department by telegraph of such arrivals.<sup>1</sup>

*Quarantine laws of the State of Massachusetts.*

[Public health—Public statutes.]

CHAPTER 80.

SEC. 62. A town may establish a quarantine ground in a suitable place within or without its own limits; but if such place is without its limits, the assent of the town within whose limits it may be established shall be first obtained.

SEC. 63. Two or more towns may, at their joint expense, establish a quarantine ground for their common use in any suitable place either within or without their own limits; but if such place is without their limits, they shall first obtain the assent of the town within whose limits it may be.

SEC. 64. The board of health in each seaport town may from time to time establish the quarantine to be performed by vessels arriving within its harbor; and may make such quarantine regulations as it judges necessary for the health and safety of the inhabitants.

SEC. 65. Such regulations shall extend to all persons, goods, and effects arriving in such vessels, and to all persons who may visit or go on board of the same.

SEC. 66. Whoever violates any such regulation after notice thereof has been given in the manner before provided in this chapter shall forfeit a sum not less than five nor more than five hundred dollars.

SEC. 67. The board in each seaport town may at all times cause a vessel arriving in such port, when such vessel or the cargo thereof is in its opinion foul or infected so as to endanger the public health, to be removed to the quarantine ground and thoroughly purified at the expense of the owners, consignees, or persons in possession of the same; and may cause all persons arriving in or going on board of such vessel, or handling the cargo, to be removed to any hospital under the care of the board, there to remain under their orders.

SEC. 68. If a master, seaman, or passenger, belonging to a vessel on board of which any infection there is or has lately been, or is suspected to have been, or which has been at or has come from a port where any infectious distemper prevails that may endanger the public health, refuses to make answer on oath to such questions as may be asked him relating to such infection or distemper by the board of health of the town to which such vessel may come (which oath any member of the board may administer), such master, seaman, or passenger shall forfeit a sum not exceeding two hundred dollars; and if not able to pay the said sum he shall suffer six months' imprisonment.

SEC. 69. All expenses incurred on account of any person, vessel, or goods, under quarantine regulations, shall be paid by such person or the owner of such vessel or goods, respectively.

GLOUCESTER.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

The quarantine anchorage is that part of the harbor between Ten Pound Island and Eastern Point. No subdivision of the grounds has been made for infected and noninfected vessels. No quarantine buildings. No disinfecting apparatus or reserved ground for the detention of sick or suspects. Inspection of vessels is

<sup>1</sup>The collector of customs has been directed by the Department to notify the Supervising Surgeon-General of the Marine-Hospital Service by telegraph upon the arrival of any vessel from an infected port or having contagious disease on board, and to permit no communication with the shore.



made by the inspector of the board of health in a small boat. The city has a hospital building located upon the poor farm intended for the reception of smallpox cases occurring in the city. This building might be utilized for the reception of smallpox cases occurring upon vessels, as the location is convenient of access from the harbor. This building will accommodate about ten or twelve patients, and is occupied by an attendant.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

The personnel of the board of health is as follows: Edward B. Hallett, M. D., chairman and physician; Samuel S. Thurston, health officer; William H. Dennen, health officer; Alfred F. Stickney, clerk; Charles Anderson, inspector. The inspection of vessels is made by Inspector Charles Anderson, and when there is sickness aboard, or there has been sickness during the voyage, of a contagious or doubtful character, the physician, Dr. Edward B. Hallett, is notified and makes the inspection. Post-office address, Gloucester, Mass.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

The local quarantine regulations (copy inclosed) provide for the inspection of all vessels arriving from foreign ports; from any sickly port, or having or having had any contagious or doubtful disease on board during the voyage; the care of the sick aboard vessels; and the placing of vessels in quarantine at the anchorage grounds. The necessary disinfection is left to the discretion of the physician to the board of health.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

No inspection of vessels from Canada when the port of departure is healthy. There is no unnecessary detention of vessels in the inspection of the same.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

Inspection of vessels is maintained throughout the year.

6. Are vessels from other United States ports inspected?

Domestic vessels having had sickness on board during the voyage are inspected. The local regulation requires them to anchor at quarantine and display the quarantine flag.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

The United States quarantine regulations are observed in the inspection of vessels. No infected vessels have arrived at this port for several years.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

Communication would not be permitted with an infected vessel.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Infected vessels with cholera, yellow fever, or smallpox would be placed in quarantine at the anchorage, and the Surgeon-General of the Marine-Hospital Service notified by the physician to the board of health, who would recommend that they be remanded to the quarantine station at Boston for treatment.



10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

There has been nothing in recent years to record.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, and tonnage, ballast, wharfage charges, etc.

The fee for inspection of vessels is \$2. When necessary to call upon the physician to make the inspection, the fee is \$3.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

*Statement of vessels arriving at port of Gloucester, year ending December 31, 1895.*

Month.	Foreign ports.	Domestic (north of Key West).	Month.	Foreign ports.	Domestic (north of Key West).
January .....	22	11	August .....	12	21
February .....	42	9	September .....	12	43
March .....	9	29	October .....	7	30
April .....	10	42	November .....	8	82
May .....	11	50	December .....	9	53
June .....	9	49			
July .....	8	62	Total .....	159	481

Twenty-two of these vessels arrived from Trapani with salt, the others were from ports in Nova Scotia, New Brunswick, and Newfoundland, loaded with lumber, wood, fish, etc.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Bills of health are received and filed together with the health officer's pratique from all vessels arriving from foreign ports. There is no immigration at the port except an occasional person from Canada.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

The facilities for inspection appear to be sufficient. No facilities for the treatment of an infected vessel. It would be preferable to have all inspections made by a physician.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding the inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

The quarantine regulations of the Treasury Department are observed.

16. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

I would recommend that any infected vessels arriving at this port be remanded to the quarantine at the port of Boston for treatment, and that the collector of customs be instructed to notify the Department of such arrivals, giving full particulars.<sup>1</sup>

JUNE 11, 1896.

<sup>1</sup>The collector of customs was directed by the Department to notify the Supervising Surgeon-General of the Marine-Hospital Service by telegraph upon the arrival of any vessel from an infected port or having contagious disease on board, and to permit no communication with the shore.



## QUARANTINE REGULATIONS.

REG. 26. Every vessel entering the harbor of Gloucester from any sickly port, or having any case of contagious or doubtful disease on board, or on board of which any person shall have died of any contagious or doubtful disease, shall be brought to anchor in that part of the harbor between Ten Pound Island and Eastern Point, and shall immediately display a yellow flag at the head of the foremast, which shall be kept flying so long as said vessel shall be at anchor in said place.

REG. 27. It shall be the duty of the physician of the board of health to visit every vessel mentioned in the preceding article as soon as he shall receive notice of her arrival, and to give information forthwith to the board of health, if, in his opinion, any action on their part may be necessary. He shall attend the sick on board any such vessel, or at the hospital, and shall also direct in what manner all vessels that have had on board cases of contagious disease are to be cleansed, what articles may be landed, cleansed, buried, or destroyed. No person shall be permitted to go on board or to leave any such vessel while lying at anchorage aforesaid without a written permit from the physician of the board of health, and such vessel shall not be allowed to leave said anchorage until the consent of the board shall be obtained.

REG. 28. The board of health shall annually appoint a suitable person, whose duty it shall be to visit all vessels arriving from foreign ports and make such inquiries as he shall consider necessary to satisfy himself that the vessel, cargo, crew, or passengers are not liable to communicate any contagious disease; and after so satisfying himself he shall present to the master of said vessel a clean bill of health for presentation to the custom-house officers, and no person shall visit such vessel until the master has been given such bill of health.

## SALEM.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

Strictly speaking, there is no quarantine station or quarantine officer in the city of Salem. An old board-of-health regulation designated the quarantine anchorage as follows: "Beginning at Eagle Island and running northwesterly to Coney Island; thence from Coney Island in a more northerly direction to the Great Haste; thence easterly to Bowditch Ledge; thence southwesterly to Eagle Island." Distant from this anchorage ground about  $1\frac{1}{2}$  miles, and located on the poor farm, is a building which might be used for the isolation of patients. It would accommodate about twenty, and has a bath tub in which patients could be bathed. This building is located on Salem Neck, and can be approached from the anchorage with a small boat. The board of health have no boat for boarding vessels, and in case a vessel arrives requiring inspection, which, I am informed, has not been done during the past ten years, the custom-house boat would be used for this purpose. There are no facilities for the disinfection of vessels, cargo, or baggage. Sulphur fumigation might be practiced at the poorhouse hospital.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

The following are members of the board of health: William H. Gove, David P. Waters, William H. Fullam, Jesse Robbins, Richard Connolly; R. L. Newcomb, clerk and inspector. Under the city ordinances the city physician can be called upon to furnish advice and assistance to the board of health. None of the members of the board of health are physicians.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

There are no local quarantine regulations in force at this time. A recent city ordinance authorizes the board of health to make quarantine regulations. I was unable to obtain a copy of the same. The clerk and inspector of the board of



health informed me that the United States quarantine regulations regarding inspection of vessels and the isolation of the same would be observed by the board.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

No quarantine procedures of any character practiced or required during the past year.

5. State whether the inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.

No vessels inspected during the past year, and no arrivals requiring inspection under the United States regulations.

6. Are vessels from other United States ports inspected?

No.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

The United States quarantine regulations would be observed in the inspection of a vessel. Infected vessels would not be treated at this port.

8. What communication is held with vessels in quarantine (and before quarantine, by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

No vessel has been placed in quarantine at this port during the past ten years.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

I would recommend that vessels infected with smallpox, cholera, or yellow fever be remanded to the Boston quarantine.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

No cases have arrived.

11. Transmit schedule of quarantine fees and give other fees and expenses necessarily and usually attendant upon quarantine, as tonnage, ballast, wharfage charges, etc.

No prescribed fees.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year by months—(*a*) from foreign ports; (*b*) from foreign ports in yellow-fever latitudes via domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

There have been 244 vessels entered at the port during the calendar year 1895, all from St. John, New Brunswick. The cargoes of the above vessels were coal and lumber. The number of arrivals from domestic ports during the same period was 1,613. The domestic vessels brought coal, lumber, and fish.

13. State results of your visit to (*a*) the custom-house; (*b*) the immigration bureau.

No immigration through this port. The collector of customs would require an inspection of all vessels subject to inspection under the United States quarantine regulations, prior to entry.

14. State whether, in your opinion, the quarantine facilities are sufficient to care for the shipping entering the port.

Vessels requiring disinfection under the United States quarantine regulations would be remanded to the quarantine station at Boston.



15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

No quarantine procedures necessary during the year.

16. Mention any facts which, in your opinion, should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

Consular bills of health are required and properly filed. I would suggest that owing to the rather imperfect organization of the Salem board of health the collector of customs be requested to notify the Surgeon-General, Marine-Hospital Service, of the arrival of any vessel with quarantinable disease aboard, reporting such facts in the case as he may be able to obtain.<sup>1</sup>

JUNE 5, 1896.

*Extract from the general statutes of Massachusetts, chapter 80.*

SEC. 78. When a householder knows that a person within his family is sick of smallpox or any other disease dangerous to the public health, he shall immediately give notice thereof to the selectmen or board of health of the town in which he dwells. If he refuses or neglects to give such notice, he shall forfeit a sum not exceeding one hundred dollars.

SEC. 79. When a physician knows that a person whom he is called to visit is infected with smallpox or any other disease dangerous to the public health, he shall immediately give notice thereof to the selectmen or board of health of the town; and if he refuses or neglects to give such notice, he shall forfeit for each offense not less than fifty nor more than one hundred dollars.

[Acts of 1891 require physicians to give all notices in writing over their signatures.]

#### MARBLEHEAD.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick and for the removal and detention of suspects; mail and telegraph facilities, etc.

Marblehead has no quarantine plant nor any designated anchorage for infected vessels. There are no buildings for the reception of the sick nor for the isolation of the suspects. No vessels have been inspected prior to entry, and no vessels have arrived at the port for many years requiring inspection. There is an excellent harbor in which there is sufficient room for a quarantine anchorage if properly marked, and an infected vessel could safely lie inside if guarded.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Board of health: Franklin Millet, chairman; Dr. F. L. Marshall; Girdler Stacy, secretary and executive officer. Post-office address, Marblehead, Mass. There is no quarantine officer designated as such.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

The board of health have no formulated quarantine regulations. There have been no arrivals for many years requiring quarantine procedures.

4. No quarantine procedures.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

<sup>1</sup>The collector of customs has been directed by the Department to notify the Supervising Surgeon-General of the Marine-Hospital Service by telegraph upon the arrival of any vessel from an infected port, or having contagious disease on board, and to permit no communication with the shore.



No inspections have been made, no vessels have arrived with sickness aboard, and there have been no foreign arrivals except from healthy Canadian ports.

6. Are vessels from other United States ports inspected?

No.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

The board of health would designate a physician to make an inspection of a vessel, if called upon to do so by the collector of customs.

8. No rules and no procedures of any kind.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessel carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Infected vessels should be remanded to the Boston quarantine station. The collector of customs would require an inspection by a physician designated by the board of health of any vessel with sickness aboard, or of any vessel from a foreign port (not Canadian) or from an infected port. I suggested to the collector of customs that it would be proper to inform the Department by wire of the arrival of an infected vessel requiring procedures.

10. No records kept.

11. No prescribed fees.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(*a*) from foreign ports; (*b*) from foreign ports in yellow-fever latitudes via domestic ports; (*c*) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

There have arrived 63 vessels from Canadian ports during the calendar year 1895, with cargoes of lumber, coal, and vegetables. Number of domestic arrivals not known. They are principally fishing vessels and vessels engaged in the coal trade.

13. State results of your visit to (*a*) the custom-house; (*b*) the immigration bureau.

Bills of health are required and properly filed at the custom-house. No immigration.

14. State whether, in your opinion, the quarantine facilities are sufficient to care for the shipping entering the port.

An infected vessel could not be safely treated at this port.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

No quarantine procedures of any character have been necessary.

16. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

I would recommend that any vessel arriving at this port with quarantinable disease on board be remanded to the Boston quarantine for treatment, and that the collector of customs be instructed to notify the Department by telegraph of such arrivals.<sup>1</sup>

JUNE 5, 1896.

<sup>1</sup>The collector of customs has been directed by the Department to notify the Supervising Surgeon-General of the Marine-Hospital Service by telegraph upon the arrival of any vessel from an infected port or having contagious disease on board, and to permit no communication with the shore.



## BOSTON.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

No changes of any importance have been made in the Boston quarantine since the report furnished the Bureau by Surg. H. W. Sawtelle, dated May 3, 1894. A brief description of the plant may, however, be convenient to have in this report for reference.

The quarantine station is located on Gallops Island, an island within Boston Harbor, 6 miles from the water front of the city, containing 16 acres of fine, high land. There are two wharves extending out to deep water, one for the landing of rags and other freight of like character requiring disinfection; the other, which is distant several hundred feet, for the landing of persons and baggage, and upon which is located the steam sterilizer, bathrooms, and frame coal house and store-rooms. A small, tight frame building is located on the wharf where rags are landed, which can be used for sulphur fumigation. There is also a small room for sulphur fumigation on the landing wharf.

The steam sterilizer is a double-shell iron cylinder 6 by 20 feet, inside measurements, with car, and a track for the same, extending from the chamber to the bath house. The steam is furnished from boilers of boarding steamer. The bath house, 20½ by 80 feet, is furnished with 28 porcelain lined bathtubs, which are provided with hot and cold water from the city waterworks. The water is heated by small furnaces in the building. The bathroom is well finished, warm, and conveniently arranged. The clothing of suspects who are being bathed can be put into the car and be sterilized in the steam chamber while the bathing is in progress. The boarding steamer is a stanch, seaworthy tug of 73 tons burden. Her complement of officers and men is seven. This does not include the boarding officer, who is the assistant port physician.

There is a residence on the island for the overseer and his family, where food is provided in case but one or two patients are in hospital. It is a two-story frame building, 30 by 40 feet, with an L 18½ by 32 feet. Near the landing wharf are two buildings erected for detention barracks, each 30 by 100 feet; neatly finished floors, walls, and ceilings of Georgia pine, and having a capacity of about fifty beds.

The buildings are provided with beds and bedding and have a kitchen attachment. The building holding the steam sterilizer is 12½ by 80 feet.

The storehouse on the wharf is 10 by 30 feet. The coal shed on the wharf has a capacity of 300 tons. Isolated from the other buildings are two hospitals, separated several hundred feet from each other—the smallpox hospital and the fever hospital. The former is a two-story frame building, 27 by 78 feet, with an L 15 by 20 feet. The latter is also a two-story frame building, 27 by 74 feet, with an L 17 by 16 feet.

There is an ice house 15½ by 21 feet, a small coal shed for the coal supply of the island 11 by 36 feet, a blacksmith shop 18½ by 35½ feet, a carpenter shop 18½ by 24½ feet, a barn 40 by 60 feet, a hennery 15 by 25 feet, a storehouse on front of the island 40 by 100 feet. Located near the water front, some distance from the wharf, are 12 frame buildings, 18½ by 24½ feet, intended for the segregation of detained suspects. A new building 27½ by 38 feet has been built for laboratory purposes in connection with the work of producing antitoxin.

The anchorage for infected vessels is in Nantasket Roads, and for noninfected vessels in Presidents Roads. I am informed that the anchorage is good and there is a sufficient depth of water.



The island is supplied with water from the city waterworks.

There are at present six horses undergoing immunization to the toxine of diphtheria at the stable on the island. This work is under the supervision of Dr. H. C. Ernst. All the buildings on the island are well built, well cared for, and in a good state of preservation. Telephone service to Deer Island.

2. Give personnel of the station or port, name of the quarantine officer or officers, post-office address, total number of officers and subordinates, etc.

Health department of the city of Boston: Samuel H. Durgin, chairman; George F. Babbitt, Edwin L. Pilsbury. Quarantine station, Boston Harbor: Dr. D. D. Brough, port physician; Dr. B. H. Metcalf, assistant port physician and boarding officer. Post-office address, Deer Island, port of Boston. Total number of officers and subordinates at the station, 13.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

The quarantine regulations of the Treasury Department pertaining to the inspection of vessels, the detention of persons exposed to contagion, the isolation of the sick, the disinfection of vessels, of baggage, and of merchandise are, I am informed by the port physician, observed. From June 1 to October 31, inclusive, all vessels from ports south of Virginia have been inspected. Cases of measles, typhoid fever, diphtheria, and scarlet fever arriving on vessels would be removed to the hospital at quarantine, and vessels held for the necessary disinfection.

I transmit herewith a copy of the annual report of the port physician, taken from the board of health report for the year 1895, as follows:

The vessels inspected during the year were from the following ports:

West Indies.....	358	Glasgow.....	27
Liverpool.....	184	Hamburg.....	27
Coastwise.....	145	Hull.....	23
London.....	83	Egypt.....	2
Antwerp.....	22	Cebu.....	2
Mediterranean ports.....	22	Danzig.....	2
Mexico.....	20	South Africa.....	2
Manila.....	14	Chitagong.....	1
Java.....	8	Penarth.....	1
Swansea.....	7	Harburg.....	1
Australia.....	5	Plymouth.....	1
West coast of Africa.....	5	Marseilles.....	1
Calcutta.....	4	Archangel.....	1
Nicaragua.....	4	Southampton.....	1
Singapore.....	3		
Azores.....	3		
South America.....	59	Total.....	1,038

Classified as follows:

Steamers.....	637
Schooners.....	234
Barks.....	106
Brigs.....	48
Ships.....	13
Total.....	1,038

Number of vessels disinfected (one of which was a schooner, all the rest steamers).....	5
Removed from vessels for sickness.....	3
Removed for refusing vaccination.....	1
Number of persons vaccinated.....	1,014

In addition to the list of vessels boarded there were 9 steamers, 3 barks, and 1 brig, all from foreign ports, via a United States port, but not having discharged their cargoes, which were boarded and inspected. As their bills showed that they



had already paid their quarantine fees at some other United States port, the usual dues of this quarantine were not collected.

Of those vessels whose fees were remitted 7 paid quarantine fees at New York, 3 at Newport News, 2 at Norfolk, and 1 at Baltimore.

The receipts of the department have been as follows:

Vessels of 500 tons and over, 757, at \$8.....	\$6,056.00
Vessels under 500 tons, 281, at \$5.....	1,405.00
Disinfection of 1 vessel, at \$25.....	25.00
Disinfection of 1 vessel, at \$20.....	20.00
Disinfection of 2 vessels, at \$15.....	30.00
Disinfection of 1 vessel, at \$10.....	10.00
Vaccinating 1,014 persons, at 25 cents.....	253.50
<hr/>	
Total.....	7,799.50
Paid city collector.....	7,799.50

In addition to the above amount of cash, bills for board to the amount of \$60.01 was turned over to the city collector for collection.

Total number of persons inspected during the year, 65,240. Of these, 4,213 were cattlemen, 30,526 seamen, and 30,501 passengers.

The following vessels ran by quarantine during this year: January 8, schooner *Molega*, from Turks Island; cargo, salt. February 20, brig *George*, from Haiti; cargo, logwood. February 20, schooner *Sierra*, from Haiti; cargo, logwood. March 21, schooner *John A. Matheson*, from Cienfuegos; cargo, molasses. June 2, steamship *City of Macon*, from Savannah; cargo, general. July 5, schooner *Ida L. Latham*, from Brunswick; cargo, lumber. July 19, bark *Bessie Markham*, from Cienfuegos; cargo, sugar. October 11, steamship *Cornal*, from Galveston; cargo, cotton. October 19, schooner *Frank W. Howe*, from Brunswick; cargo, lumber. All of these vessels were required to receive the usual quarantine permit before entering at the custom-house.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

The inspection of vessels arriving from healthy domestic Southern ports, and the quarantining of vessels with contagious diseases other than cholera, smallpox, yellow fever, typhus fever, and leprosy, mentioned under answer to No. 3. There is no unnecessary detention in the inspection or disinfection of vessels.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

Inspection maintained throughout the year.

6. Are vessels from other United States ports inspected?

Yes; as above noted.

7. Describe quarantine procedures in the inspection of vessels, and if infected, the treatment. Give time in quarantine (a) between arrival and commencement of disinfection, (b) time occupied by disinfection, and (c) time after completion of disinfection of vessels until discharge.

That required by the United States quarantine regulations. No vessel has arrived at the port during the past year infected with cholera, yellow fever, smallpox, typhus fever, or leprosy.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.) and how regulated? Is there any intercommunication allowed among vessels in quarantine?

No communication is allowed with vessels in quarantine or between vessels which are in quarantine. (United States regulations observed.)

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.



Vessel placed in quarantine and vessel and all aboard treated as required by the United States quarantine regulations.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Records are kept.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

Examination of vessel of 500 tons and upward (registration tonnage), \$8; examination of vessel under 500 tons (registration tonnage), \$5; disinfecting vessels, \$10 to \$50; baths and disinfecting personal clothing and baggage, \$1 for each person; vaccination, 25 cents for each person; board of patients in hospital, \$10 per week.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months, (a) from foreign ports, (b) from foreign ports in yellow-fever latitudes via domestic ports, and (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

*Vessels entered at the port of Boston during the year 1895.*

Month.	(a) From foreign ports.	(b') From foreign ports in yellow-fever latitudes.	(b'') From foreign ports in yellow-fever latitudes via domestic ports.
January .....	91	16	1
February .....	84	21	2
March .....	116	27	3
April .....	199	65	1
May .....	251	66	1
June .....	257	47	2
July .....	251	55	0
August .....	242	42	1
September .....	204	29	0
October .....	206	31	0
November .....	174	26	1
December .....	141	15	1
Total .....	2,216	440	13

NOTE.—Vessels in columns (b') and (b'') are included in column (a). Vessels in column (b'') are included in column (b').

The number of vessels from foreign ports entered during the year 1895 is as follows:

Canada .....	1,312	Central America .....	5
Great Britain .....	320	Mexico .....	26
West Indies .....	351	East Indies .....	17
Germany .....	31	Africa .....	11
Italy .....	24	Philippine Islands .....	13
Belgium .....	22	Australia .....	5
France .....	1	Miquelon .....	15
Russia .....	1		
South America .....	62	Total .....	2,216

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Bills of health and health officer's certificate are required and filed. The number of immigrants arriving at this port during the fiscal year 1896 is 41,790. The medical inspection of immigrants arriving at this port is made by an officer of the



Marine-Hospital Service attached to the marine hospital at the port of Boston. I inclose herewith report of the immigrants arriving at this port during the past fiscal year.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

Yes. Additional room might be necessary in the detention barracks, but this could easily be constructed or tents used during the summer.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

The United States quarantine regulations are observed.

16. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

The quarantine station at the port of Boston is well equipped and the service is efficient.

JUNE 13, 1896.

#### QUARANTINE REGULATIONS.

*Ordered.* That any vessel arriving at this port which has on board at the time of her arrival, or has had during her passage to this port, any sickness of a contagious, infectious, or doubtful character which may be dangerous to the public health, or which has come from or has been in any port or place which has been epidemically infected with any contagious or infectious disease within the six months next preceding such arrival, or has on board any merchandise which has come by transshipment from any such infected port or place within the six months next preceding, or has on board any immigrants (except from British America), shall be anchored at quarantine.

Infected persons found on such vessels shall be removed to the hospital on Gallop's Island and there detained until all power to infect others shall have ceased. Cargoes and personal baggage which, in the opinion of the port physician or the board of health, may be infected shall be removed to Gallop's Island and there disinfected, when such disinfection can not be properly done on board the vessel or on lighters.

All immigrants, on arrival at quarantine, shall be subjected to examination as regards their freedom from contagious or infectious disease and their protection from smallpox.

All persons under ten years of age who have not been successfully vaccinated, and all persons over ten years of age who have not recently been successfully vaccinated or revaccinated, shall be considered as unprotected from the effect of the contagion of smallpox, persons having had an attack of smallpox excepted.

All persons not so protected shall be vaccinated or subjected to a quarantine of fifteen days' observation.

All old rags, paper stock, hair, feathers, hides, skins, wool, and similar materials which are liable to convey disease germs must be accompanied by satisfactory certificates as to their place of collection and packing for shipment.

No article of clothing or bedding in use shall be thrown overboard from any vessel in Boston Harbor without the written consent of the board of health or the quarantine physician, nor shall any such article be removed from any vessel at her dock without such permission; all such articles which are to be destroyed shall be burned in the harbor, under the supervision of the quarantine physician, in the furnaces of the steamers.

No vessel shall leave quarantine, or shall her cargo, or any part thereof, be discharged, nor any person be allowed to go on board or to leave her while in quarantine, without the written permit of the port physician, who is hereby authorized and instructed to take such measures with regard to said vessel, cargo, and persons as in his judgment the public health may require.

It is also hereby ordered that during June, July, August, September, and October of each year, subject to such changes as circumstances may from time to time require, all vessels arriving in this harbor from the following ports shall stop at



the quarantine station, viz: All vessels from any port in Europe, from the Western, Madeira, Canary, or Cape de Verde islands; from the Mediterranean or straits thereof; from the west coast of Africa or around the Cape of Good Hope; from the West India, Bahama, or Bermuda islands; from any American port south of Virginia, including Central and South America, and vessels arriving from any place in the United States or British America where they may have touched on their way from any foreign port or place above named.

No such vessel shall leave quarantine or unload her cargo, or any part thereof, nor shall any person go on board or leave the vessel while in quarantine without the written permit of the port physician, who is hereby authorized and instructed to take any measures in regard to such vessels as in his judgment the public health may require.

The port physician is hereby authorized and instructed to demand and receive the quarantine fees which are hereby made and established by this board.

## PLYMOUTH.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick and for the removal and detention of suspects; mail and telegraph facilities, etc.

There is no quarantine plant; no anchorage marked; no facilities provided for the inspection of vessels, for the care of the sick, or for the disinfection of vessels or of cargo. Post and telegraph office, Plymouth.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Selectmen and board of health: James Millar, chairman; H. M. Saunders, D. H. Craig, T. A. Bagnell, J. B. Collingwood. Joseph W. Hunting, constable, has been designated by the board as health officer. There is no physician connected with the board.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

No quarantine regulations have been formulated by the board of health or other city authority. A copy of the rules of the board is herewith transmitted, which, however, do not relate to quarantine.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

No vessels have entered for many years past requiring quarantine procedures. Bills of health are required from vessels hailing from foreign ports. No detention.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

No inspection has been required, as vessels from foreign ports come only from New Brunswick, and coasters have not arrived from infected ports.

6. No.

7. No quarantine procedures or inspections.

8. No vessels have been placed in quarantine for many years.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Any vessels requiring quarantine procedures would be remanded to the Boston quarantine.

10. No records are kept of cases of disease during the voyage.

11. No quarantine prescribed fees.



12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

*Arrivals from foreign ports during the calendar year 1895.*

Month.	From—	Vessels.
March .....	New Brunswick.....	1
May .....	do .....	1
June .....	do .....	1
August .....	do .....	1
September .....	do .....	1
November .....	Cape Breton.....	1
December .....	New Brunswick.....	1

Domestic arrivals are not recorded at the custom-house. There are a few coasters engaged in lumber and coal, and a few fishing vessels. During the summer there is a small packet plying between this port and Boston.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Bills of health are required of vessels arriving from foreign ports. No immigration to the port.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

When notified by the collector of customs, the board of health will designate a physician to inspect vessels, when an inspection is required by the United States regulations. Vessels arriving with quarantinable diseases aboard could not be properly treated at the port with the present facilities, and the commerce of the place would not warrant the construction of a quarantine plant.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

No vessels arrive requiring inspection under the United States quarantine regulations.

16. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

Infected vessels which may arrive at this port should be remanded to the Boston quarantine for treatment.

JUNE 15, 1896.

*Regulation of board of health relative to smallpox.*

ART. 12. All cases of smallpox, diphtheria, scarlet fever, typhoid fever, measles, or any other diseases dangerous to public health shall be immediately reported to the board of health by the physician in charge of such cases.

BARNSTABLE.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.



Barnstable is not provided with quarantine equipment of any character. There is no designated quarantine anchorage, no buildings, no vessels for boarding, no quarantine rules. It is a very small place, with almost no marine commerce. Two or three domestic vessels enter each year with lumber from Maine ports.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. E. E. Hawes is the health officer of the town of Barnstable, which includes Hyannis and Hyannisport. He resides in Hyannis, which is several miles from Barnstable. I was unable to see him on the day I made the inspection at Barnstable.

3. No quarantine rules or customs.

4. No quarantine procedures.

5. No inspections.

6. No vessels from other United States ports inspected.

7. No inspections made.

8. No procedures.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Infected vessels would be sent to the Boston quarantine.

10. No records kept.

11. No prescribed fees.

12. One vessel arrived from Canada in December, 1895, with a cargo of wood pulp. No other foreign vessels during the year. No records kept of domestic arrivals.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Bills of health received from foreign vessels. The collector informs me that Dr. Hawes, the health officer at Hyannis, would inspect any vessel if called upon to do so, and would furnish a certificate. No immigration to the port.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

Yes. If an infected vessel should arrive (which is not probable), the vessel should be sent to the Boston quarantine for treatment.

JUNE 28, 1896.

#### PROVINCETOWN.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

There are no quarantine buildings or disinfection apparatus at the port of Provincetown. There are no facilities for the detention of suspects or the care of those suffering from contagious diseases. The so-called anchorage ground is about 1 mile from the town and outside of a line drawn northeast from Long Point and eastwardly three-fourths of a mile from the Provincetown shore. The boarding is done by the health officer with the custom-house boat.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Board of health: R. M. Lavender, B. A. Lewis; Dr. W. S. Birge, secretary and health officer. Post-office address, Provincetown, Mass.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.



A copy of the local quarantine rules is herewith transmitted. Vessels arriving from the Canadian provinces from May 1 to November 1 are inspected, and all vessels arriving from other foreign ports are inspected throughout the year. All domestic vessels arriving with sickness on board are inspected. No vessel has been placed in quarantine during the past year.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

Vessels are inspected coming from healthy Canadian ports. No complaint of detention of vessels on account of inspection.

5. State whether the inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.

Answered under heading No. 3.

6. Are vessels from other United States ports inspected?

No.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine—(a) between arrival and commencement of disinfection, (b) time occupied by disinfection, and (c) time after completion of disinfection of vessels until discharge.

The United States quarantine regulations are observed in the inspection of a vessel.

8. What communication is held with vessels in quarantine (and before quarantine, by pilots, etc.) and how regulated? Is there any intercommunication allowed among vessels in quarantine?

No vessels have been placed in quarantine.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Health officer would recommend that vessels infected with cholera, yellow fever, or smallpox be sent to the Boston quarantine.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

No records are kept.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

The fee for inspecting a vessel is \$5.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

There were 13 foreign arrivals during the calendar year 1895, all from the Canadian provinces except 2 which came from the Azores. Domestic vessels not recorded. They are mostly fishing vessels and vessels bringing lumber and coal. There is a daily packet plying between Boston and Provincetown which carries general merchandise.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Bills of health have been required of all foreign vessels except one, upon which a fine of \$80 was imposed for not obtaining the same. There were 48 immigrants from the Azores during the year. These were inspected by the immigration officer and also by the health officer.



14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

No facilities for the treatment of an infected vessel.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

The United States quarantine regulations are observed.

16. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

I would recommend that all vessels arriving at this port requiring disinfection under the United States quarantine regulations be remanded to the Boston quarantine for treatment.

JUNE 19, 1896.

#### QUARANTINE REGULATIONS.

1. Quarantine ground of Provincetown: That portion of the harbor lying without a line drawn due northeast from the eastern extremity of Long Point and eastwardly three-fourths of a mile from Provincetown shore shall be known as Quarantine Grounds.

2. All vessels arriving from or having on board any persons or goods of any description from any foreign port or from any port where smallpox, cholera, typhus or ship fever, or yellow fever, or any contagious disease is known to be prevailing or has lately been known to have prevailed, are hereby forbidden to cross quarantine line to come into harbor, or to land, within the harbor or limits of this town, any person whether of crew or passengers, or any goods, personal effects, or merchandise as aforesaid, until so permitted by the board of health after due inspection or approval of the bill of health by said board. Such vessels may, however, put to sea in preference to going into quarantine, provided there be no infection aboard, in which latter condition they will be subject to regulation 3.

3. Any vessel having on board a case of any of the above-named diseases shall immediately take a position upon Quarantine Grounds, and shall there remain under the special supervision of the board of health until discharged by them, which will not be until after proper disinfection of the said vessel, crew, and cargo. No persons, nor any goods, personal effects, or merchandise, shall be landed from any vessel in quarantine; nor shall any person visiting such vessel again land until the vessel's quarantine is finished, except by a permit from the board of health. Filthy or unclean vessels shall be subject to quarantine for purposes of purification. All vessels liable to quarantine shall discharge in quarantine and be detained thereafter for necessary purification.

4. A quarantine hospital may be established by and shall be subject to the regulations of the board of health.

All persons sick or infected with any of the above diseases, or any person who has been exposed to such infection by traveling in or coming from regions where such diseases are prevalent, or by handling merchandise arriving from such regions, or by going on board of or by handling the cargo of infected vessels, will be subject to examination by the board, as hereinafter provided, and may be removed to the quarantine hospital, unless his condition will not admit of his removal without danger to his health, in which case the house, vessel, or place where he remains shall be considered as a hospital, and all persons in any way concerned within the same shall be subject to the regulations of the board, as before provided.

5. The bodies of persons dying on board vessels in quarantine, or of such as have died at sea on board vessels under quarantine regulations (except the same be subject to inspection by a medical examiner, as provided by law), shall be taken in charge by the board of health and suitably interred in a proper burial ground. The effects of such persons shall be taken in charge by said board, and, if not claimed by the rightful heirs within three months, shall be delivered to the selectmen of Provincetown.

6. Penalties for violations: Whoever violates the above regulations after such notice as is herein given shall forfeit not less than five nor more than five hundred dollars.

Whoever obstructs the board of health or its agent in using such means (as are



provided) to prevent the spreading of the infection, or willfully removes, obliterates, defaces, or handles the signals so displayed (as provided), shall forfeit for each offence not less than ten nor more than one hundred dollars.

A master, seaman, or passenger belonging to a vessel under quarantine regulations who refuses to make answer on oath to such questions as may be asked him relating to such infection or distemper (as referred to in Reg. 2) by the board of health (which oath any member of the board may administer) shall forfeit a sum not exceeding \$200, and if not able to pay said sum he shall suffer six months' imprisonment.

7. All expenses incurred on account of any person, vessel, or goods under quarantine regulations shall be paid by such person or owners, consignees, or persons in possession of such vessel or goods. All passengers on board of a vessel in quarantine must be provided for by the master of said vessel.

The foregoing is respectfully submitted.

These regulations will remain in force until new regulations are published another year, unless changed by board of health, of which due notice will be given.

R. M. LAVENDER,  
B. A. LEWIS,  
W. S. BIRGE, M. D., *Secretary,*  
*Board of Health.*

#### HYANNISPORT.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

Hyannisport is a small village on Nantucket Sound, and a subport of Barnstable. The port has no marine commerce; no vessels enter here, except an occasional pleasure yacht and lumber schooner from New York or Philadelphia put in on account of heavy weather, for safety. There are no quarantine buildings or disinfecting plant. No quarantine anchorage is designated. Anchorage within the breakwater is considered safe.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. E. E. Hawes is the health officer of the town of Barnstable, of which town Hyannisport is a part. He resides in Hyannis, which is about 3 miles distant. I was unable to see him on the day I made the inspection.

3. I was informed that there are no quarantine rules. No inspection of vessels or other quarantine procedures during the past year.

4. No quarantine procedures or customs.

5. State whether the inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.

No inspections made. The collector of customs informs me that Dr. E. E. Hawes, the health officer, would inspect vessels where an inspection is required under the United States quarantine regulations.

6. No vessels from other United States ports inspected.

7. No procedures.

8. No procedures.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Infected vessels would be sent to the Boston quarantine.

10. No records kept of cases of disease during the voyage.

11. No prescribed fees.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign



ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

The following vessels from foreign ports entered during the calendar year 1895:

Month.	From—	Vessels.
May .....	Canada .....	1
June .....	do .....	2
	Porto Rico (wrecked) .....	1
July .....	Canada .....	1
August .....	do .....	1

The above vessels were laden with lumber, except the vessel which was stranded from Porto Rico. Domestic vessels not recorded at the custom-house. They are very few in number.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

The collector requires consular bills of health from all foreign entries. No immigration at the port.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

Yes. If an infected vessel should arrive it could be remanded to the Boston quarantine, and I would recommend that such action be taken.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

Not any.

JUNE 26, 1896.

#### NANTUCKET.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessel and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

Nantucket, formerly one of the great whaling ports of the United States, at present has registered and enrolled very few vessels of any kind, and little marine commerce of any character. There is a daily packet from New Bedford which carries passengers and general merchandise, and a few coastwise schooners which bring lumber and coal from New York and Philadelphia. There are also a few pleasure yachts which arrive at the port during the summer. There is no designated quarantine anchorage, quarantine buildings, or disinfecting plant. The harbor is shallow, and an infected vessel would have to lie outside, and it would not be considered safe in bad weather.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Board of health: Dr. John S. Gronard, Frank A. Mitchell, Alexander C. Swan. Post-office address, Nantucket, Mass.

3. There are no local quarantine regulations in force at this time. The local board of health have authority to establish quarantine, but I am informed that no vessel has entered the port during the past forty years with quarantinable disease on board.

4. No quarantine procedures.

5. No inspection of vessels. No arrivals from foreign ports.



6. Are vessels from other United States ports inspected?

The board of health would inspect any vessel with sickness on board, or inspect vessels from foreign ports, if called upon by the collector of customs.

7. No procedures.

8. No vessel in quarantine.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Board of health would recommend that all infected vessels arriving at this port be sent to the Boston quarantine for treatment.

10. No records kept of disease during the voyage, etc.

11. No prescribed fees.

12. No record of arrivals of domestic vessels, and no arrivals from foreign ports.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

The collector would notify the Department of the arrival of any infected vessel, and recommend that it be remanded to the Boston quarantine for treatment. No immigration.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

Yes. A quarantine station at this port is not necessary.

15. No transactions.

16. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

I would recommend that all infected vessels requiring quarantine treatment be remanded to the Boston quarantine.<sup>1</sup>

JUNE 25, 1896.

#### EDGARTOWN AND VINEYARD HAVEN.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects, mail and telegraph facilities, etc.

There is no local regulation designating the quarantine anchorage at either Vineyard Haven or Edgartown. Edgartown is the port of entry and Vineyard Haven, which is distant about 7 miles, is a subport, in which the larger number of the vessels arriving enter.

The selectmen in each village constitute the board of health, but in neither port have they formulated any quarantine rules or appointed a health officer.

There are no quarantine buildings, disinfecting apparatus, or boarding vessels. The deputy collector of customs at Vineyard Haven has been acting as inspector of vessels when an inspection is required by the United States quarantine regulations.

There have been no foreign arrivals of vessels entered at the port for the purpose of discharging cargo. Those that have entered have been compelled to do so on account of heavy seas, and the entry at the custom-house was made under the

<sup>1</sup>The collector of customs has been directed by the Department to notify the Supervising Surgeon-General of the Marine-Hospital Service by telegraph upon the arrival of any vessel from an infected port or having contagious disease on board, and to permit no communication with the shore.



United States customs regulations requiring all foreign vessels lying in port over forty-eight hours to make a formal entry at the custom-house. The bills of health of such vessels are not taken up by the collector, as there is no discharge of cargo or landing of passengers.

There would be no very safe anchorage for an infected vessel.

2. No quarantine officers at either port.

3. No rules.

4. No procedures.

5. State whether the inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.

Inspection would be required of any vessel with sickness, or of a vessel from a foreign port which made a real entry.

6. No vessels from other United States ports inspected.

7. No procedures.

8. No vessels in quarantine.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Vessels should be sent to the Boston quarantine, and the collector of customs would so recommend.

State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

10. No records of disease occurring during the voyage are kept.

11. No fees.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come and whether in cargo, ballast, or empty.

The following are the arrivals from foreign ports making entry at the custom-house in the calendar year 1895:

Month.	From—	Vessels.	Month.	From—	Vessels.
January .....	Canada .....	3	April.....	West Indies .....	1
	Turks Island, West Indies.	1	May.....	Canada .....	2
February.....	Canada .....	2		Porto Rico.....	1
	Porto Rico.....	1	June.....	do .....	1
March.....	West Indies .....	4		Canada .....	6
	Canada .....	3	July.....	do .....	1
April.....	do .....	2	August.....	do .....	8
			October.....	do .....	2

No record is kept of domestic vessels entering the port. There is a daily packet from New Bedford, and there are quite a number of pleasure yachts and coastwise schooners entering the harbor with coal and lumber as cargoes.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

The collector informs me that all vessels from foreign ports making formal entry have had bills of health, and no vessel entered with sickness of a contagious character on board. No immigration to the port.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

Infected vessels entering this port should be remanded to the Boston quarantine.

JUNE 25, 1896.



## CERTIFICATE OF HEALTH.

VINEYARD HAVEN, MASS., ———, 189—.

This will certify that ———, ———, master, from ———, bound for ———, now laying at this port, has no contagious disease, leprosy, or leper on board said vessel.

—————  
Health Officer.

## NEW BEDFORD.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

New Bedford has no quarantine buildings of any kind; no disinfecting plant; no quarantine wharf or grounds for the landing of persons from infected vessels.

In connection with the poorhouse, and located on the poor farm, near Clarks Point, is a small building which has been used as a smallpox hospital. This building is about 2 miles from the anchorage, and it could be used, I am informed, to receive a patient from a vessel. A patient could be taken from the anchorage to this building in a small boat. For making the inspection of vessels the city employs a tug. The anchorage ground is designated as "south of the 11-foot bank."

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Board of health: Dr. William N. Swift, health officer; Mr. Nathaniel Hathaway, chairman; Mr. F. W. Cook. Post-office address, New Bedford.

3. Copy of the local quarantine regulations is herewith inclosed (marked A). The inspection of vessels is in accordance with the United States quarantine regulations.

4. No quarantine procedures. No unnecessary detention in the inspection of vessels.

5. Inspections of foreign vessels (Canadian vessels excepted), and vessels with sickness on board would be inspected during all seasons of the year.

6. No. Whaling vessels are inspected.

7. Inspections as above noted.

8. No communication would be permitted with vessels in quarantine.

9. Infected vessels would be remanded to some port where there are facilities for the disinfection of the same, either New York or Boston.

10. No records of cases of disease during the voyage have been made recently.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

See quarantine regulations inclosed.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

Foreign vessels entering the port during the calendar year 1895 are as follows:

Atlantic Ocean (whaling vessels) .....	15
Canada .....	35
Cape Verde Islands .....	7
Azores .....	2
St. Helena .....	2



Vessels from Canada with cargoes of lumber; from Cape Verde with salt; from Azores with oil; from St. Helena with oil. There were about 2,000 domestic arrivals during the year 1895.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

The collector is informed of the requirements of the United States quarantine regulations and will enforce them so far as he is authorized to do so. There were 215 immigrants from the Azores, and 173 from Cape Verde Islands. All inspected upon arrival.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

I do not think the quarantine facilities are sufficient. The inspection of vessels is undoubtedly carried out, but it would be difficult, if not impossible, to properly care for an infected vessel at this port.

15. The inspection of vessels is in accordance with the quarantine regulations of the Treasury Department.

16. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

I would recommend that the collector of customs be instructed to notify the Department by wire of the arrival of any infected vessel, and, if the circumstances are such as to warrant, the vessel should be remanded to either New York or Boston for treatment.<sup>1</sup>

JUNE 24, 1896.

EXHIBIT A.—*Quarantine rules and regulations of the city of New Bedford.*

Every vessel arriving from a foreign port shall immediately proceed to the quarantine grounds, and shall be visited by the quarantine officer between sunrise and sunset as soon as possible after such arrival. Such officer shall examine the bill of health, and shall inspect the vessel, and shall require of the captain or master answers, in duplicate under oath, to the following questions:

City and port of ———. Quarantine questions put to the master of ———.  
Name of vessel ———. Date ———:

1. From whence is the vessel you command?
2. How many days have you been on the passage?
3. Have you touched anywhere?
4. If so, where?
5. At what date?
6. For how long?
7. Did you take in cargo or passengers there?
8. Have you any bills of health? If so, produce them.
9. Have you communicated with any vessel in the course of your cruise or passage?
10. If so, at what date?
11. Name of vessel?
12. From what ports were they?
13. Was any sickness existing on such vessels?
14. If so, what?
15. During the course of your cruise or passage, what cases of disease have occurred on board?
16. At what dates?
17. Has any death occurred on board your vessel since you left the last port?
18. If so, what date, and from what cause, to the best of your knowledge?
19. Has yellow fever, typhus fever, cholera, or any other contagious disease ever existed on the ship? If so, when?

<sup>1</sup>The collector of customs has been directed by the Department to notify the Supervising Surgeon-General of the Marine-Hospital Service, by telegraph, upon the arrival of any vessel from an infected port or having contagious disease on board, and to permit no communication with the shore.



20. What is the number of officers, crew, and passengers?
21. Are the officers and crew the same as when you started?
22. How many passengers in first cabin, second cabin, steerage?
23. Have you any reason to think that yellow fever, cholera, typhus fever, or any other contagious disease exist in the vicinity of the port from whence you sailed, or near any others at which you have touched, or any vessel with which you have communicated during the present cruise or voyage?
24. What is your cargo?
25. To whom consigned?
26. What is the present sanitary condition of the vessel, cargo, crew, and passengers, to the best of your knowledge and belief?
27. Have you a medical officer? Give his name and produce his report.

Signature of master or captain: \_\_\_\_\_.

Sworn to and subscribed before me, an officer empowered to administer oaths, etc.  
(Official title): \_\_\_\_\_

QUARANTINE STATION, \_\_\_\_\_, 18—

This vessel has permission to proceed [or is detained for observation].

\_\_\_\_\_, *Health Officer.*

The department of the quarantine shall be placed under the superintendence of the board of health, and they shall have the sole and entire control of any hospital or hospitals which may be established within the limits of the city by competent authority for the reception of persons having a disease dangerous to the public health, and of all vessels lying at quarantine as hereafter directed, and of all persons employed at said hospitals or on board said vessels. It shall be their duty to cause all the ordinances of the city, all the regulations they may institute, and all the laws of the Commonwealth relating to the quarantine of vessels to be duly executed and enforced.

And it shall be the duty of the board of health to provide a suitable number of yellow flags, and whenever any vessel or vessels shall be ordered to the quarantine grounds for purification the master of said vessel shall hoist one of said flags at the head of the mainmast, there to be kept during the daytime, so long as said vessels shall remain at quarantine.

The board of health shall appoint, to hold office at the pleasure of that body, a quarantine physician, whose duty it shall be, at such times as they shall direct, to visit every vessel arriving, liable to quarantine; to direct in what manner she shall be cleansed, if necessary, and what articles from her shall be landed, washed, buried, or destroyed, and what articles of cargo may be unladen; to direct the care and attendance of the sick, for whom he shall prescribe and supply medicine according to his best skill; to report every day to the board of health the condition of every sick person; to direct the pilots where and in what particular place vessels shall be anchored; and to grant a certificate to any passenger by him discharged from quarantine, at any time before the discharge of the vessel in which such passenger arrived, and to give a certificate to the master of each vessel when, in his discretion, he shall think proper that such vessel be discharged from quarantine.

The quarantine physician, whenever required by the board of health, or whenever he may consider it his duty so to do, shall report to them the state and condition of the hospitals and of the vessels at quarantine; and it shall be his duty to recommend from time to time such measures as he may deem expedient relative to all matters connected with the quarantine regulations and operations of the city.

The quarantine physician shall receive such compensation as the city council shall authorize, but such compensation shall not preclude him, in extraordinary cases, from charging to the sick under his care, for medicine and medical attendance, such sums as the board of health may approve.

In case no provision is made for the compensation of the quarantine physician, he shall receive such fees as the board of health may approve.

The board of health may appoint a keeper to each hospital which may be established, and all such attendants and assistants as may be required to carry them on, or to carry into operation the laws, by-laws, and regulations connected with the quarantine, which persons, so appointed and employed, shall be subject to all directions given them by the board of health, and receive such compensation as the board shall allow.

A quarantine shall be had of all vessels, their officers and crews, passengers and cargoes, that come within the harbor of New Bedford, on board of which any person shall have died or been sick of any contagious or infectious disease during



the passage to New Bedford, or which are foul or infected after their arrival, or which are from, or have brought their present cargo or any part thereof from, any port or place where any infectious or contagious disease prevails or recently has prevailed: *Provided, however,* That in the latter case public notice shall first be given by the board of health of such fact of the prevalence of infectious or contagious disease.

The quarantine shall be had and performed at an anchorage ground south of the Eleven Foot Bank, under the direction of the quarantine physician, and shall continue on every such vessel until the master shall receive a certificate from the said physician that he may be discharged: *Provided, however,* That in case of unreasonable delay by the quarantine physician to grant such certificate, the owner, agent, or consignee of such vessel or any part of her cargo may apply to the board of health, who may, on being satisfied of the propriety of discharging such vessel from quarantine, issue such certificate.

The master of every vessel discharged from quarantine shall, within twenty-four hours after such discharge, deliver at the board of health office the certificate and flag he shall have received of the quarantine physician, and pay into the city treasury the sum of \$5, for which he shall be entitled to a certificate from the city clerk to authorize his entry at the custom-house.

During the time that such vessel is performing quarantine no person, without a permit from the quarantine physician, shall go on board thereof, except those employed by or under the quarantine physician, and no person without a permit as aforesaid shall go within a line upon the land adjoining any public hospital, to be designated by the quarantine physician, except as aforesaid; and every person who shall transgress in either of these cases shall be liable to be considered as contaminated with infection, and held to undergo purification in the same manner and under the same regulations and restrictions as those performing quarantine, and shall there remain until discharged by the quarantine physician, and the said physician, or anyone empowered by him for the purpose, may forcibly detain him for the purposes aforesaid.

The board of health shall have the right, at any time, to examine the bill of health issued to any vessel arriving from any port where such documents are usually granted, to enable them to decide what measures it may be necessary to take with regard to the situation and purification of such vessel and cargo.

Any person offending against any of these regulations, from the first to the ninth, both inclusive, shall pay a sum not less than three, nor more than twenty dollars; and in addition he shall be liable to all the penalties provided by the laws of the Commonwealth in relation to quarantine.

#### FALL RIVER.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels, facilities for inspection of vessels, apparatus for disinfection of vessels and of baggage, facilities for removal and treatment of the sick and for the removal and detention of suspects, mail and telegraph facilities, etc.

Fall River is not possessed of any quarantine buildings, wharves, disinfecting apparatus, vessels, or other quarantine equipment.

The designated quarantine anchorage is southerly from light-house on Borden Flats. This anchorage is considered safe, and the water is of sufficient depth for vessels entering the port.

2. Give personnel of the station or port, name of the quarantine officer or officers, post-office address, total number of officers and subordinates, etc.

Board of health: Dr. M. A. Cummings, chairman and port physician, Fall River, Mass., Dr. L. P. De Grandpre, and Samuel D. Morriss.

3. Regulations of board of health inclosed. No vessel in quarantine for many years.

4. No quarantine procedures and no vessels entering the port during the past year requiring inspection under the United States quarantine regulations.

5. No procedures.

6. No vessels from United States ports inspected.

7. No procedures.

8. No procedures. Communication with an infected vessel would not be allowed.



9. Infected vessels should be remanded to New York for treatment. The collector of customs would notify the Department of the arrival of such vessel.

10. No records of disease during the voyage kept.

11. No prescribed fees.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

*Foreign vessels arrived during calendar year 1895 from foreign ports.*

March .....	2	September .....	7
April .....	2	October .....	4
May .....	2	November .....	4
June .....	8	December .....	2
July .....	3		—
August .....	3	Total .....	37

One vessel from the Azores, *Alinda*, 147 immigrants, all inspected; 36 vessels from Nova Scotia, New Brunswick, etc., with lumber. Domestic vessels not recorded at the custom-house.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

The collector of customs will enforce the quarantine regulations in regard to inspection of vessels prior to entry, and would recommend that infected vessels be remanded to the New York quarantine. Consular bills of health required and filed.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

No. There should be a quarantine station in the vicinity of Fall River where infected vessels might be treated. The inspection of vessels is well performed, I believe.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

Not any.

JUNE 23, 1896.

QUARANTINE REGULATIONS.

All vessels arriving at this port from any port where cholera, yellow fever, or any other contagious disease prevailed at the time of said vessel's sailing therefrom, or having on its arrival, or having had during its voyage, either of said diseases on board, shall anchor southerly from the "light-house on Borden Flats," and not less than 2,000 feet westerly from the easterly shore of Mount Hope Bay, at quarantine, and there be examined by the city physician. Such vessels shall only be allowed to come up to the city after such examination, and upon the certificate of said physician that in his opinion the health of the city would not be endangered thereby.

RHODE ISLAND.

REPORT OF THE INSPECTION OF THE LOCAL QUARANTINES.

By Surg. H. W. AUSTIN, M. H. S.

NEWPORT.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for



removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraphic facilities, etc.

Newport is not provided with a quarantine station. The city has no quarantine buildings of any kind; no disinfecting plant; no quarantine wharf or grounds; no quarantine vessels except a small catboat, which the health officer or sentinel uses in boarding vessels.

The quarantine anchorage is northward of the light-house on the breakwater of Goat Island, and to the southward of Coasters Harbor Island, and west of a straight line drawn from said light-house to the western part of Coasters Island. The anchorage is in the outer harbor and is believed to be a sufficient distance from passing vessels. It is located about 2 miles from the city.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Board of health: Dr. Christopher F. Baker, president; Dr. Francis H. Rankin, secretary; Dr. Henry E. Turner, Robert S. Franklin, Ezra J. Barker; George C. Shaw, executive officer; Henry Gladding, health officer and boarding officer. Post-office address, Newport, R. I.

It will be observed in reading the city ordinances (a copy of which was sent with last report), chapter 18, quarantine, that the mayor and the board of aldermen make the quarantine regulations as occasion requires, and that the board of health have no authority whatever in this matter. The health officer, a non-professional man, does the boarding of vessels. A port physician has not been appointed.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

In the inspection of vessels the United States quarantine regulations are observed. In addition thereto, the health officer speaks all domestic vessels from ports south of Virginia from June 1 to September 1.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

No vessel has been placed in quarantine for many years. No unnecessary detention or disinfection of vessels.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

Inspection of vessels maintained throughout the year, i. e., vessels from foreign ports (Canadian ports excepted) and vessels with sickness on board.

6. Are vessels from other United States ports inspected?

As above noted.

7. Describe quarantine procedures in the inspection of vessels, and if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection; (*b*) time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharged.

The United States quarantine regulations are observed in the inspection of vessels.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.) and how regulated? Is there any intercommunication allowed among vessels in quarantine?

No procedures. Communication with vessels in quarantine would not be allowed.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels



carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Infected vessels would be remanded to the New York quarantine station for treatment.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

No records.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

According to the city ordinances the expense of the disinfection of vessels and the care of the sick must be paid by the owner of the vessel. The fees are not prescribed. No fees for the inspection of vessels.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

The following vessels (from Canada) arrived during the calendar year 1895:

January .....	2	July .....	1
April .....	3	August .....	4
May .....	4	October .....	3
June .....	1		

All of the above vessels were inspected by the health officer and a verbal report made to the collector of customs. The vessels came laden with lumber and coal. The domestic arrivals are not recorded at the custom-house. There are many pleasure yachts arriving during the summer months and a few coastwise schooners.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

The collector requires bills of health from all vessels from foreign ports, which bills are properly filed. There is no immigration to this port.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

I believe there should be a fully equipped quarantine plant somewhere on the southern coast of Rhode Island where infected vessels could go and be treated. The inspection is probably as thorough as possible with a health officer who is not a physician.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

United States inspection rules observed. No vessels have been placed in quarantine.

JUNE 23, 1896.

#### BRISTOL.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

The quarantine anchorage is about  $1\frac{1}{2}$  miles below the city, in the bay. It is designated as follows:

The quarantine anchorage shall comprise that portion of the harbor lying and being within the following bounds, viz: Beginning at Middle Ground buoy; thence



running westerly to Ushers Rocks; thence southwesterly to Popasquash Point; thence northwesterly to beacon on Castle Island; thence north by east to Middle Ground buoy.

There are no quarantine buildings, wharves, or disinfecting appliances, or boats. The anchorage, I am informed, is a safe one.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

The city council is the board of health. Mr. George H. Peck is the health officer. Post-office address, Bristol, R. I.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

Practically the quarantine regulations are obsolete and not in force.

4. There are no quarantine procedures, either under printed regulations or by custom.

5. There is no inspection of vessels. No vessel with sickness aboard and no vessel from a foreign port has arrived during the past year.

6. No vessels from other United States ports are inspected.

7. There are no procedures.

8. No vessels in quarantine.

9. The health officer would recommend that infected vessels arriving with cholera, smallpox, yellow fever, or typhus fever be sent to the New York Quarantine Station for treatment.

10. No records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

11. There are no prescribed fees.

12. No foreign vessels have arrived at this port, and very few domestic vessels except pleasure yachts.

13. No immigration.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

I believe there should be a quarantine station somewhere on the Rhode Island coast where an infected vessel could be treated.

15. No quarantine procedures of any kind have been required during the year.

16. Mention any facts which in your opinion should be known to the Treasury Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

The collector of customs should be instructed to notify the Department by wire of the arrival of any infected vessel, and, if the circumstances warrant, the vessel should be remanded to New York or some other station where proper treatment can be given the vessel.<sup>1</sup>

JUNE 22, 1896.

#### PROVIDENCE.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

About 2½ miles below the city, at Kettels Point, on the Providence River, is the residence of a sentinel, who boards vessels arriving at Providence, and notifies

<sup>1</sup>The collector of customs has been directed by the Department to notify the Supervising Surgeon-General of the Marine-Hospital Service by telegraph upon the arrival of any vessel from an infected port or having contagious disease on board, and not to permit any communication with the shore.



the health officer when his services are needed. Opposite this point is the quarantine anchorage, and on the opposite shore, located on the city farm, is the smallpox hospital. This building was built for the reception of smallpox cases that might occur in the city, and not as a hospital for the reception of infectious diseases taken from vessels. However, it could properly be used for such cases, and is located conveniently to the anchorage. The building is a frame building and would accommodate about fifteen patients. It has a bath tub, water-closet, kitchen appliances, etc., and is in fair condition.

The city has also a steam disinfecting cylinder 6 by 14 located near a hospital used as a city hospital, and also near the water front. It is not intended for quarantine purposes, but in an emergency could be used in the disinfection of baggage of persons coming from infected vessels.

The quarantine sentinel has a rowboat at Locust Point, in which he boards vessels. There are no buildings for the detention of suspects. No means provided for bringing patients ashore. This would require a small boat, which could not be obtained without much delay.

The quarantine anchorage ground is designated in the regulations as follows: "The quarantine ground of the port of Providence shall be that portion of the bay lying below a line drawn from Conimicut Point to Nagatt Point and north of Providence and Patience islands." The anchorage is considered safe.

The steam disinfecting plant at the city hospital has been used for the disinfection of school-books taken from the city schools where diphtheria has occurred, and it works satisfactorily.

2. Give personnel of the station or port, name of the quarantine officer or officers, post-office address, total number of officers and subordinates, etc.

Dr. Charles V. Chapin, superintendent of health and health officer. He has telephone connection with the boarding officer (who is not a physician) located at Kettels Point.

3. Copy of the local quarantine regulations is herewith transmitted. All foreign vessels (Canadian provinces excepted) and all vessels with sickness on board, or having had any quarantinable disease on board during the voyage, are inspected.

4. No quarantine procedures, either under printed regulations or by customs, are enforced at the port, in addition to the requirements of the Treasury Department. No unnecessary detention.

5. Inspections are maintained throughout the year.

6. No vessels from other United States ports are inspected.

7. Inspection is made as provided in the United States quarantine regulations. No vessels have been placed in quarantine.

8. No vessels in quarantine. Communication would not be allowed between vessels in quarantine and the shore or with other vessels.

9. Health officer would recommend that vessels infected with smallpox, yellow fever, cholera, or typhus fever be sent to the New York quarantine.

10. Records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

11. Fee for inspection is \$3.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.



*Vessels arriving at Providence from foreign ports during the calendar year 1895.*

Month.	From—	Vessels.	Month.	From—	Vessels.
January .....	Canada .....	4	July .....	Canada .....	13
	Haiti, West Indies .....	1		Jamaica, West Indies .....	1
	Jamaica, West Indies .....	1	August .....	Canada .....	11
February .....	St. Martin, West Indies .....	1		Turks Island .....	1
	Bon Air, West Indies .....	2		Haiti .....	1
March .....	Canada .....	2	September .....	Canada .....	6
	Jamaica, West Indies .....	1		Haiti .....	2
April .....	Canada .....	5	October .....	Canada .....	8
May .....	do .....	12		Jamaica .....	2
	Jamaica, West Indies .....	1		Turks Island .....	2
June .....	Canada .....	10	November .....	Canada .....	8
	Haiti, West Indies .....	1		Turks Island .....	1
	Sicily .....	2	December .....	Canada .....	3
				Jamaica .....	2

No records of domestic arrivals are kept at the custom-house.

The cargoes of vessels from Haiti are logwood; from Turks Island, salt; from Italy, salt and sulphur; from Canada, coal and lumber. Domestic vessels bring general merchandise and coal and lumber. There is a line of daily steamers plying between this port and New York; also a line of steamers plying between Providence and Philadelphia and Providence and Baltimore; also a line of steamers between Providence and Newport and Providence and Fall River.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Bills of health and health officer's certificates have been required according to United States quarantine regulations. No immigration.

14. State whether, in your opinion, the quarantine facilities are sufficient to care for the shipping entering the port.

The quarantine facilities are sufficient for inspection, but not for the treatment of an infected vessel. A small vessel without many persons aboard, if infected with smallpox, might be treated at this station.

15. United States quarantine regulations are observed.

18. Mention any facts which, in your opinion, should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

A refuge quarantine station where infected vessels could be treated should be provided somewhere along this coast for the accommodation of infected vessels arriving at Providence, Newport, Bristol, Fall River, New Bedford, and Hyannis. Infected vessels from the above ports must be sent to either New York or Boston to undergo their quarantine.

JUNE 22, 1896.

#### QUARANTINE REGULATIONS.

1. The quarantine ground of the port of Providence shall be that portion of the bay lying below a line drawn from Conimicut Point to Nayatt Point and north of Prudence and Patience islands.

2. Every vessel arriving in the harbor of Providence that shall have on board, or that shall have had on board during the passage, any person sick with fever of any description, with cholera, smallpox, or other contagious or infectious disease, and every vessel that shall be subject to quarantine under any order or rule that may be established from time to time by the board of aldermen, shall anchor at the quarantine ground; and the person in command of such vessel shall place in the main shrouds thereof a flag as a signal, and such vessel shall remain at anchor at said ground, with the flag in the shrouds, until written permission shall have been given for such vessel to leave by the health officer.

3. If any vessel subject to quarantine under the next preceding rule shall pass the quarantine grounds, or shall leave the same without the written permission of the health officer, the owner or owners, agent or agents, or the person or persons who shall move the same, shall pay a fine of not less than twenty-five nor more



than two hundred dollars for each offence, and such vessel shall be liable to be moved to the quarantine ground at the expense of the owner, owners, agent, or agents of the same.

4. All vessels arriving at the port of Providence, and subject to quarantine under the preceding rules and regulations, shall anchor at the quarantine ground and be subject to examination and quarantine, though they may have called at or discharged their cargoes at any other port in the United States.

5. The health officer may demand such information and ask such questions as he shall deem necessary or proper of the captain or commanding officer or other person on board of any vessel arriving at this port and subject to quarantine, respecting the condition of such vessel and the health of the persons on board the same, and if such captain, commanding officer, or other person shall refuse to answer any such inquiries, or shall evade them, or shall in any way or manner make or cause to be made any false or equivocal statement relative to the state of health of any person on board such vessel, or shall neglect to report to the health officer any sickness or death that may have occurred on board the same, or shall refuse to sign his written examination taken at the time by the health officer when requested so to do by said health officer, such captain, commanding officer, or other person shall pay a fine of not less than twenty-five nor more than two hundred dollars for each offence.

6. If any vessel in the harbor of the city, whether subject to quarantine or not, shall have any sickness on board, or if such vessel or the cargo thereof is in a condition dangerous to the public health, in the opinion of the health officer, said health officer may subject such vessel to the regulations of quarantine, so far as in his opinion may be necessary to prevent all such danger.

7. Every vessel during her quarantine shall wear colors in her main shrouds.

8. No provisions, spirituous liquors, or other articles shall be permitted to be brought on board any vessel at quarantine without the written permission of the health officer.

9. No portion of the cargo, personal baggage, clothing, or other goods shall be delivered from on board any vessel at quarantine except in such manner and at such places as the health officer shall in writing direct.

10. No person in any boat or vessel shall go alongside of any vessel at quarantine, nor be at anchor or remain within one hundred yards of such vessel at quarantine, without written permission from the health officer.

11. Every vessel at quarantine shall be stationed at such place as the health officer shall direct.

12. The directions of the health officer in regard to cleansing and disinfecting any vessel at quarantine, and the bedding, clothing, personal baggage, cargo, and other things on board thereof, and in relation to pumping out the bilge water, shall be strictly complied with by the officers, crew, and all other persons on board thereof.

13. The captain or other commanding officer of any vessel at quarantine shall be answerable for all violations of the foregoing regulations concerning quarantine by any person on board thereof.

14. If any officer of the customs or any person shall go on board of any inward-bound vessel that shall be subject to quarantine, such officer or person shall remain on board such vessel, and shall not land in the city until the time of quarantine of such vessel shall have expired, without the written permission of the health officer.

15. Every person violating any of the preceding regulations respecting quarantine shall, except as hereinbefore provided, pay a fine of not less than ten nor more than twenty dollars.

16. The board of aldermen shall annually, in the month of January, and whenever there shall be a vacancy, appoint a health officer at quarantine, who shall execute the orders of said board, and perform the duties designated in chapter seventy-five of the general statutes, and such other duties as said board may from time to time prescribe relating to quarantine.

17. The health officer shall receive the sum of three dollars for each visit made by him to any vessel subject to quarantine, together with his necessary expenses in making such visit, to be paid by the owners, agents, or commanders of the vessels visited by him.

IN BOARD OF ALDERMEN, *September 6, 1892.*

*Resolved,* That all vessels sailing from European, Asiatic, or cholera-infected ports shall be subject to quarantine, and such vessels shall anchor below a line drawn from Conimicut Point to Nayatt Point until inspected by the superintendent of health.

True copies.

Witness:

WM. E. CLARKE, *City Clerk.*



## CONNECTICUT.

## REPORT OF INSPECTION OF LOCAL QUARANTINES.

By Surg. PRESTON H. BAILHACHE, M. H. S.

## STONINGTON.

1. No quarantine station, buildings, or anchorage.
2. No quarantine officer or officers.
3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

The State health laws govern the management of local quarantine. "The warden and burgess within the limits of the borough have, use, possess, and enjoy all powers and privileges relative to sickness and infectious diseases granted selectmen and justices of the peace in the several towns." The judge of the supreme court appoints a health officer for each county, who shall be an attorney at law, and said attorney appoints a medical man as health officer for each town. The county health officer makes his report in June of each year to the State board of health.

4. There are no quarantine procedures.
5. No inspections are maintained.
6. No vessels from other United States ports are inspected.
7. No quarantine procedures or inspections.
8. No vessels in quarantine.
9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

All vessels infected with contagious disease would be refused admission and the fact telegraphed to the Bureau.

10. No records of disease during the voyage.
11. No quarantine fees.
12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

From foreign ports, 17; foreign ports in yellow-fever latitudes via domestic ports, 2; from domestic ports, 1. All vessels from foreign ports came from Nova Scotia, and the freight has been lumber; all had cargoes.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Satisfactory. No immigration.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

In present condition of the country a quarantine establishment is not needed.

15. No quarantine established.

16. No quarantine established.

17. What disposition is made of the consular bills of health?

Filed in custom-house.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

None other than above stated.

SEPTEMBER 9, 1896.



## NEW LONDON.

1. No quarantine station or buildings. The anchorage grounds for infected vessels is located upon a line drawn east from light-house at the entrance of the harbor, and flags are set upon opposite sides of harbor to indicate location. No facilities for inspection of vessels; no apparatus for disinfection of vessels and baggage other than sulphur in pots; no facilities for removal and treatment of the sick and removal and detention of suspects.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Capt. H. S. Bartlett, harbor master, makes inspection of foreign vessels, and, if infected or disease on board, reports the same to board of health. Dr. Hiram B. Thomson is city physician, but has no authority in quarantine matters outside of the city.

3. The local quarantine is governed by State laws, copies of which I was unable to obtain.

4. Foreign vessels are inspected; no detention unless infected.

5. Inspections from May until October only.

6. No vessels from other United States ports are inspected.

7. No quarantine procedures have been had in recent years.

8. No communication with vessels in quarantine is had until inspected.

9. Infected vessels will be detained and the Bureau notified.

10. No records are kept at the station of the cases of diseases that have occurred during the voyage, on arrival, and during detention.

11. Quarantine fee is \$5 for each foreign vessel inspected; no other vessels inspected.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries, chiefly, the vessels come, and whether in cargo, ballast, or empty.

Seven foreign and three American vessels arrived, as follows: New Brunswick, 6; Haiti, 4. From domestic ports, 11—7 from Fernandina, Fla.; 1 from Philadelphia; 2 from New York; 1 from New Haven; all arrive in cargo. The commerce of the port consists of lumber from New Brunswick and logwood from Haiti. The collector says: "It is impossible for me to give you an account of the number of vessels which arrive in the lower harbor and stay there at anchor for a short time only, as this custom-house is at present without a boat fit to be used for the purpose of boarding."

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Answered above.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

Not sufficient for the safety of the country in case a cholera-infected vessel arrived in the harbor.

15. No quarantine establishment exists.

16. No certificate of inspection is given.

17. Consular bills of health are filed in custom-house.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

Nothing further than above stated. The inspection of vessels by a harbor master instead of by a medical man does not seem to comply with the regulations of the Department, and should be corrected.

SEPTEMBER 8, 1896.



## SAYBROOK.

There is no quarantine station or anything provided for the disinfection of vessels or the care of the sick with contagious or infectious diseases at Saybrook. Saybrook Point, some 2 miles below Saybrook, is located at the mouth of the Connecticut River, and is the proper place for protecting by quarantine facilities all the cities and villages upon the river, including Hartford. An island opposite Saybrook Light, known as Poverty Island, is well adapted for such a station if it ever becomes necessary to have one located on the river.

Mr. D. W. Pratt, agent for the New York Transportation Company at Saybrook Point, informed me that a few years ago he received a telegram from the company's headquarters in Hartford to hold a vessel consigned to them which had no bill of health, and that he went aboard with the health officer and fumigated the vessel, although there was no sickness aboard. It appeared that the captain took advantage of a favorable wind to leave New Brunswick without waiting for his bill of health, and the agent fearing trouble at Hartford, ordered the vessel fumigated, and it was then furnished with a health officer's certificate from Saybrook. He says no foreign vessels are allowed to pass without a proper bill of health. Dr. John H. Grannis, whom I saw subsequently at Saybrook, corroborated the agent's statement.

SEPTEMBER 10, 1896.

## HARTFORD.

1. No quarantine station, buildings, or anchorage.
2. No quarantine officer or officers.
3. The local quarantine is governed by State laws.
4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department.

In case an infected vessel is bound for Hartford, it will be held at Saybrook Point, at the mouth of the Connecticut River, and the Bureau notified.

5. No inspection is maintained throughout the year.
6. No vessels from other United States ports inspected.
7. No quarantine procedures other than stated above.
8. No communication is held with vessels in quarantine.
9. All infected vessels will be reported to the Bureau.
10. No records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.
11. There is no schedule of quarantine fees.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

The British schooner *Pefetta*, from St. Johns, New Brunswick, lumber laden, and the British schooner *Vera*, lumber laden; no other foreign entries; none from yellow-fever latitudes, and only local packets from domestic ports.

13. State results of your visits to (a) the custom-house; (b) the immigration bureau.

See above. No immigration.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

There being no quarantine, there are no facilities, and, judging from the entries given above, none seem to be necessary.

15. No quarantine established.



16. No certificate of inspection given.
17. Consular bills of health are filed in custom-house.
18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

Nothing further than above stated.

SEPTEMBER 9, 1896.

NEW HAVEN.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

No quarantine station or buildings. Anchorage grounds located on an imaginary line from watchhouse to Beacon Hill, at entrance of harbor; no facilities for inspecting vessels except by different harbor tugs; disinfection is had by means of pots and kettles with sulphur; no facilities for removal of sick or removal and detention of suspects.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. Frank W. Wright is quarantine and health officer of the port; he is assisted by three inspectors.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

The local quarantine laws have been amended since my last inspection to conform to the regulations of the Department (copy inclosed).

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

None. There is no undue or unnecessary detention of vessels.

5. State whether the inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.

For foreign vessels throughout the year and domestic vessels from May to November.

6. Are vessels from other United States ports inspected?

Yes.

7. Quarantine procedures consist simply in fumigation by sulphur in pots or by chlorine gas, if infected.

8. No communication is held with vessels in quarantine. There is no intercommunication allowed among vessels in quarantine.

9. A vessel infected with any contagious disease would be detained and facts reported to Bureau, except in cases of smallpox, which would be removed to pest-house, vessel disinfected, and all hands vaccinated.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

No cases of disease have arrived on board ship.

11. Quarantine-inspection fee, \$5; no other charges.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.



Month.	From foreign ports.	From domestic ports.	Month.	From foreign ports.	From domestic ports.
January .....	2	62	August .....	10	63
February .....	1	61	September .....	5	64
March .....	1	67	October .....	5	66
April .....	6	63	November .....	4	64
May .....	4	62	December .....	3	66
June .....	8	65			
July .....	10	62	Total .....	59	765

No arrivals from yellow-fever latitudes.

Lumber, grindstones, and plaster from provinces; molasses, sugar, and salt from West Indies; rags from Egypt; all vessels in cargo. Consular bills of health are filed with entries.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Given above. No immigration.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

Not sufficient in case a cholera-infected ship entered the harbor.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

Inspections only appear to be necessary at this port, as nearly all foreign vessels enter via New York quarantine.

16. Does the certificate of inspection or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with, as required by section 5, act of February 15, 1893?

Yes; no foreign vessel can enter without such certificate.

17. Consular bills of health are filed in custom-house.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

No additional facts obtained, and no recommendations apparently necessary at this time.

SEPTEMBER 10, 1896.

#### QUARANTINE LAWS.

[Chapter 155, title 43, general statutes, public health and safety, as amended, 1895.]

SEC. 2594. The board of health, in any town contiguous to navigable waters, may assign, within the town or the waters contiguous thereto, the port or place in any harbor, road, river, or bay, where vessels coming into the limits of such town or into such contiguous waters shall, if need be, perform quarantine; and every vessel which shall come from any foreign port or place, or, between the first day of June and the first day of November, come from any port or place in the United States south of the capes of Delaware Bay, or in the British provinces, and come to anchor in any such harbor, road, river, bay, or contiguous waters, if any place for quarantine shall have been assigned as aforesaid, shall come to anchor and lie at such place so assigned, and at no other place, until discharged in manner as is hereinafter provided; and the master of every vessel coming to anchor as aforesaid shall forthwith make signal for a health officer by hoisting colors in the shrouds, or, if need be, may send a person on shore, who shall notify immediately the health officer of the port, or, if there be no health officer, a member of the board of health, of the arrival of such vessel, and forthwith return on board; but the provisions of this section shall not apply to any such vessel which shall have entered any port or place north of said capes, where there are quarantine regulations, and been visited by a health officer, received a clean bill of health, and been permitted to go, and has actually gone, to the wharves and unloaded thereat; and



such clean bill of health, or a certified copy thereof, shall be left with or filed at the office of the board of health of the town or city having jurisdiction over said port within twenty-four hours after the arrival of such vessel.

SEC. 2595. When the board of health in any town shall deem it expedient that vessels arriving in its town or in the waters contiguous thereto from any port or place in the United States north of the capes of the Delaware, should perform quarantine, such board may by an order, published or posted as aforesaid, subject such vessels to quarantine in the same manner as if they arrived from a foreign port or place.

SEC. 2596. Any vessel subject to quarantine, arriving in the harbor of New Haven, on board of which there shall be no sickness at the time of such arrival, or on board of which, during the passage, there shall have been no case of malignant or contagious disease, may come to and make fast at the end of any public wharf in said harbor without incurring any penalty for violation of the quarantine laws; but no person shall be allowed to leave said vessel, except to make fast to the wharf, until said vessel shall have been visited by a health officer, and by him discharged from quarantine; and if the health officer, on visiting any such vessel, shall find any such sickness on board as, in his opinion, shall make it proper for him to cause such vessel to continue subject to quarantine, he shall order it to be removed to such place as shall be assigned as a place of quarantine. But this section shall not apply to any vessels coming from any foreign port or ports, except a port in Canada and the British provinces.

Any vessel from any port or place having sickness of any kind on board shall be subject to inspection and quarantine before making fast to any wharf.

Any master of any tugboat who shall violate, or assist any other person to violate, the quarantine regulations of any port shall be fined not more than one hundred dollars, or imprisoned not more than three months, or both.

SEC. 2597. On notice given to a health officer or member of the board of health of the arrival of any vessel as aforesaid, he shall visit it without delay, and may, on examination, give a certificate of health, discharging it from quarantine, or cause it to continue subject to quarantine; and every vessel so subjected to quarantine shall perform quarantine under the regulations of such board of health.

SEC. 2598. The board of health may establish the fees, not exceeding five dollars, which the health officer shall be entitled to receive for visiting a vessel as aforesaid, and the master or owner of such vessel shall pay the same to such health officer.

SEC. 2599. No master of any vessel, liable to perform quarantine as aforesaid, shall fraudulently attempt to elude a quarantine by false declarations of the port or place from whence he came, or land, or suffer to be landed from his vessel any person or thing except in the manner hereinbefore provided, or permit any person to board such vessel, before it shall have been visited as aforesaid.

SEC. 2600. When a health officer or member of the board of health shall, on visiting any vessel as aforesaid, think it necessary that it should be cleansed or purified, he shall direct its master to hoist a white flag on the head of the mainmast, there to be kept during the daytime; and shall apply without delay to the board of health to direct the time and manner in which the cargo on board such vessel shall be, in part or in whole, cleansed or purified; and such vessel, or such part thereof as may be infected, shall be cleansed in such other method as such board shall direct. And when such vessel shall contain any person ill of a contagious or infectious disease he shall be removed on shore to such place as said board may direct, and nursed and provided for, in the manner prescribed by law. And such board may also cause any passenger on board, and such of the mariners as the master shall not require to continue on board, to be removed on shore and secluded for fourteen days, in such place as the board shall direct; and if any person shall, without such permission, visit any person so confined, he shall be deemed to be contaminated with infection, and be liable to the same confinement and penalty as are imposed upon the person visited.

SEC. 2601. If the board of health shall find that any certificate of health granted by them was obtained by fraud or false representation, or be of opinion that any vessel, person, or cargo should perform further quarantine for the purpose of being cleansed or purified, on notice thereof being given by the board to such person, or the owner, master, supercargo, or consignee of such vessel or cargo, as the case may be, the same shall in all respects be liable to be proceeded with in the same manner as if no certificate of health had been given.



## BRIDGEPORT.

1. No quarantine station, buildings, or anchorage.
2. No quarantine officer or officers.
3. No quarantine laws except State laws.
4. No quarantine procedures had.
5. No inspections maintained.
6. No vessels from other United States ports are inspected.
7. No quarantine procedures or inspections.
8. No vessels are held in quarantine.
9. All infected vessels would be reported to the Bureau.
10. No records are kept at the station of the cases of diseases that have occurred during the voyage, on arrival, and during detention.
11. No quarantine fees charged.
12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

Month.	From foreign ports.	From domestic ports.	Month.	From foreign ports.	From domestic ports.
January .....	1	58	August .....	1	58
February .....	0	39	September .....	5	59
March .....	0	40	October .....	4	57
April .....	2	57	November .....	2	57
May .....	1	58	December .....	0	58
June .....	3	57			
July .....	1	56	Total .....	20	654

No arrivals from yellow-fever latitudes.

*Foreign entrances at Stamford, Conn.*

March .....	1	October .....	2
April .....	3	November .....	4
June .....	3	December .....	6
July .....	2		
August .....	4	Total .....	27
September .....	2		

No arrivals from yellow-fever latitudes or domestic ports.

From St. John, New Brunswick, for Norwalk, 7 vessels; to Greenwich, 3. Character of commerce, lumber from Northern ports and logwood from Haiti and Jamaica.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

See above.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

As all vessels arrive through New York quarantine, no further inspection would seem necessary.

15. There are no quarantine regulations.

16. Does the certificate of inspection or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with, as required by section 5, act of February 15, 1893?

Yes. Certificate is signed by New York health officer, copy of which is filed with New York report.

17. Consular bills of health are filed in custom-house.



18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

No other facts obtained.

SEPTEMBER 10, 1896.

NEW YORK.

REPORT OF INSPECTION OF LOCAL QUARANTINE.

By Surg. PRESTON H. BAILHACHE, M. H. S.

SAG HARBOR.

1. There is no quarantine station, buildings, or anchorages; no facilities for inspection of vessels; no apparatus for disinfection of vessels and of baggage; no facilities for removal and treatment of the sick or for the removal and detention of suspects.

2. William R. Reimann is president of the board of health, but there is no health officer.

3. No quarantine is maintained.

4. No quarantine procedures, either under printed regulations or by custom, are enforced at the port.

5. No inspection is maintained at any time throughout the year.

6. No vessels from any United States ports are inspected.

7. No quarantine procedures are had.

8. No vessels arrive except daily packets from New York and New London.

9. All infected vessels will be detained by the collector of customs until communication is had with the Marine-Hospital Bureau.

10. No records are kept.

11. There being no quarantine, no fees are collected.

12. No vessels arrive other than noted above at No. 8.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Learned that no foreign vessel has entered the port since 1894.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

As the collector of the port, Cornelius R. Sleight, stated that he would assume charge of any vessel entering the port with contagious disease on board and communicate with the Bureau before permitting it to enter, I am of opinion that his action will be sufficient protection in the present condition of the country.

15. No regulations and no procedures.

16. No inspections.

17. What disposition is made of the consular bills of health?

Would be filed in custom-house.

18. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

It might be of advantage to direct the collector of the port to perform the duty of informing the Bureau in the circumstances as stated above.

SEPTEMBER 11, 1896.

NEW YORK.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.



The quarantine station at the port of New York may, for convenience in making this report, be divided into the "boarding station," "detention and disinfecting station," and "hospital station."

#### BOARDING STATION.

The boarding station is situated upon the eastern bank of Staten Island, in the village of Edgewater; post-office address, Rosebank, N. Y.

The large executive building, referred to in my report of 1895 as having been destroyed by fire on May 19 of that year, has not yet been replaced, but work was begun a few days ago laying the foundation for a new structure, and it is proposed to make it even more complete than the one destroyed. It will be two stories in height and contain on the first floor the general business offices, press and telegraph offices, private office, and laboratory for the health officer; and the second floor with necessary modern conveniences. The upper floor of the old building will be fitted up for the accommodation of the captains and crews of the station boats. At present the offices, etc., are located in an old building upon the grounds known as the carpenter and machine shop. The residences of the health officer and his deputies are beautifully located upon the bluff overlooking the bay, the docks, and the site of the executive building. A description of these residences and their gardens of flowers, grass terraces, etc., would be well worth reading, but out of place in this report. The grounds occupied by the station comprise about 8 acres.

The anchorages are convenient to the boarding station, and the "holding ground" excellent. The quarantine boundaries extend from Sandy Hook on the south to Long Island on the north, and are described as follows: All the waters of New York Bay and Harbor to low-water mark from Sandy Hook to Mattewan Creek on the shores of New Jersey; thence along an imaginary line to the lighthouse at Seguines Point; thence along the shores of Staten Island to a point in the Kill von Kull opposite the western end of Shooters Island; thence along an imaginary line due north, passing westward of said island; thence along the shore line of New Jersey to the Hudson River as far as vessels may proceed. These boundaries may be divided into lower, middle, and upper quarantine grounds. The lower grounds, south of Hoffman and Swinburne Islands, are marked by the placing of four spar buoys, painted yellow and marked "Q," indicating the anchorage grounds for infected vessels in quarantine (which is directly west of said buoys), and no other vessels are allowed within half a mile of these buoys, or to communicate with vessels in quarantine. Hoffman and Swinburne islands are located in the middle division, and the upper quarantine grounds are directly opposite the boarding station above described.

The station is amply supplied with boarding facilities for the inspection of incoming vessels, comprising the steam tugs *Governor Flower* and the *Charles F. Allen*, both large and powerful vessels of their class. In addition to the above is a launch and several small boats. The dockage is also ample, consisting of a bulkhead wharf 150 feet long, connected by a flying bridge with the shore. The depth of water on the outside is 20 feet, and on the inside, where the vessels are sheltered, 10 to 12 feet. The shore line of the grounds is fully protected by a well-constructed granite wall.

The apparatus for the disinfection of vessels and of baggage is most complete. The steamer *James W. Wadsworth*, formerly the *Ripple*, has been fitted up with the most modern machinery for the use of both sulphur and bichloride disinfection. In addition to disinfecting vessels and baggage, the *Wadsworth* is provided with the necessary equipment for bathing the immigrants while their clothing is being disinfected, separate compartments being provided for the sexes. The great advantage of this equipment is the facility with which disinfection, etc.,



can be accomplished by the *Wadsworth* steaming alongside the suspected or infected vessel, removing the immigrants to her own decks, and disinfecting the former while bathing the latter.

#### DETENTION AND DISINFECTING STATION.

The detention and disinfecting station is located on Hoffman Island, about 2 miles east of the south bank of Staten Island and 2 miles below the boarding station. It is an artificial island of at present about 3 acres, but is being rapidly enlarged, and when completed will be 8 acres in extent. A heavy, solid granite sea wall, protected by riprap, is in course of construction, and will entirely surround the island. There are five principal buildings upon the island—four brick and one frame. The latter, constructed about two years ago, is 270 by 60 feet, three stories high, and fitted with double-twin iron cots, with wire bottoms, so arranged with pulleys and weights that they can be raised from the floor when not in use, thus preventing their occupancy during the day and leaving the floors clear for cleaning. This building, which is finished in North Carolina pine, will accommodate 1,100 persons very comfortably.

Galleries on the east side of the building, with long porcelain enameled-iron sinks or wash basins, furnish ample room for morning and evening ablutions, besides giving a pleasant outdoor view of the bay. Near the building is the new bath house, 125 by 50 feet, finished in North Carolina pine and fitted with 36 bathing stalls on each side (72 in all), and separated by a partition for the accommodation of the two sexes. The disinfecting building, with plant and transfer tracks and trucks complete, contains three improved disinfecting steam chambers, 18 by 5 by 4 each—Blake & Williams type. This room is divided by a partition across the middle, so arranged that articles put in at one end of the disinfecting chamber can be taken out at the other end thoroughly disinfected, and without danger of becoming again contaminated or the employees coming in contact with each other. Cement floors complete this building.

The boiler house contains three 180-horsepower boilers, supplying steam for heating, disinfecting, electric lighting, etc.

Another building containing two wards, 12 by 20 feet (one for each sex), has been added for the purpose of isolating suspects while awaiting transfer to Swinburne Island. These wards contain bathrooms, latrines, etc. The old buildings, four in number, are all brick, two stories high; two of them, known as the north and south dormitories, 142 by 65 feet, will accommodate 450 persons each, and are fitted with cots and hoisting apparatus similar to those in the new barracks, except that they have canvas instead of wire bottoms. The others are the executive building, 40 by 50 feet, for the accommodation of the superintendent and employees, and is well furnished; and a building 109 by 51 feet, in which are located the boilers, the laundry, with 36 tubs and 10 drying frames, the lavatories, the dining rooms, storerooms, baggage rooms, etc. There are, in all, four kitchens with ranges, jacketed kettles, boilers, etc., having a capacity for supplying 3,000 persons with cooked food. Each building, new and old, used for detention purposes, is supplied with latrines consisting of lead-lined boxes of suitable depth, arranged for effective disinfection before emptying and flushing. The water supply is obtained from nine cisterns of 50,000 gallons capacity, collected from the roofs of the various buildings and distributed from elevated tanks. It is proposed to have in the near future either an artesian well or pipes laid from Staten Island to this station, in order that an abundant supply of water may be had at all times. Boats now furnish water when the cisterns are empty, and seawater is used for flushing latrines and sewer pipes. Heating is by steam; the pipes and radiators are hung from the ceiling to prevent accident or being tampered with by unauthorized persons. Lighting is done by both a gasoline and an electric-



light plant, the latter by 250 incandescent 16-candlepower lamps, and the former by a Springfield gas machine. Precautions against fire are provided by six lines of fire hose of 1,200 feet each, a large steam fire pump, with working pressure of steam kept up while buildings are occupied, and the floors and barracks are rendered fireproof by asphaltum (except the new barracks, which have not yet been covered). Fire escapes are provided from the upper stories of the frame building by outside stairways. The mail facilities are by boat from the boarding station, and telephonic communication between all the stations is soon to be put in.

The only building in use at present is one of the old brick barracks, which accommodates the detained passengers of the Ward Line of steamers each week. It, with the corresponding building, also of brick, are regarded by the health officer as the best on the island, as he fears to use the new frame (Georgia pine) building on account of its inflammable character. He contemplates reducing the latter building to one story on that account.

As soon as the enlargement of the island is completed, the health officer intends to erect additional brick buildings upon the new part (appropriations for which have been made by the State legislature), thus more than doubling the capacity of the island for the detention of suspects.

Although there is a depth of water of from 14 to 15 feet around the island, there is but one landing place, which is at the north end and is reached by a channel across the bar, or "west bank," as it is called. Both Hoffman and Swinburne islands are located upon this bar, which is southwest by northeast. Mooring buoys are located at convenient distances all around the island, where fully equipped barges may be secured in case of emergency for the detention and segregation of suspects.

At present there are two Whitehall boats at this station, but a steam launch is soon to be supplied for the accommodation of the superintendent and employees in case of an emergency arising from any cause.

#### HOSPITAL STATION.

The hospital station is located on Swinburne Island, 1 mile south of Hoffman Island, and about the same distance as the latter from Staten Island. It also is an artificial island, 3 acres in extent, and protected by extensive riprap. The hospital building consists of 10 pavilion wards (80 by 24 feet, with 12 feet ceilings), 5 on each side, of 16 beds capacity, and opening on a central corridor 9 feet wide. This corridor extends from the executive building to the engine house, which latter is 160 by 23 feet in dimensions. There is ample room in these wards to care for 200 patients. The beds in use are of iron, with wire spring and excelsior mattresses. It is the intention of the health officer to have these beds enameled and use only blankets upon them instead of mattresses, which can be disinfected by dry heat each time after using. The nurses' rooms are located at the corridor end of the wards. The wards, which are of wood, with slate roofs, are heated by steam throughout and equipped with fire hose for protection in the event of fire.

In the rear of the wards is the boiler house. This is equipped with three boilers of the Blake & Williams pattern, with an estimated 375 horsepower. These furnish heat for buildings and power for steam laundry. In the rear of the boiler house is located the morgue and crematory. The latter, called the "American incinerator," is a coal burner. For complete incineration in this type of furnace seven or eight hours is required. In connection with the crematory is a vault room for receiving 32 bodies. The steam laundry is sufficient for doing the washing for 500 people, and there is another laundry for use of officials. An ice house has recently been erected on the northwest side of the island.

The administration building is two stories high, with attic, and contains ample



room for officers and employees. All the rooms are fairly well furnished. Suitable buildings are provided for boathouses, blacksmith shop, storerooms, etc.

The wards are separated from the administration building by a heavy iron grating, which extends across the island, and the space between each of the wards, which are of the pavilion style, are likewise inclosed to prevent the possible mingling of convalescent patients with each other.

The water at this island is derived from 22 cisterns, which have a total capacity of 500,000 gallons. Extending around the island is a 15-foot concrete walk, and outside of this riprap bulkheads. There are two approaches or landings at this island, one on the south end and the other at the northwest side. At the last-named the riprap work is being rebuilt, having been greatly displaced by the winter's storms.

The island lies nearly southeast by north-northwest, and has at low water at the southern extremity about 11 feet, while at the northwest side there is barely 5 feet. Placed at suitable distances around the island are mooring buoys for barges, etc. The buildings upon the island are lighted by gasoline furnished by a Springfield machine.

The means of communication is by boat (steamer *Flower* or *Allen*), though it is intended to have telephone connection with both the detention and boarding station at an early day. At present there is only a Whitehall boat at the island, but a steam launch is to be placed there very soon.

The health officer contemplates overhauling the wards and improving their sanitary condition, as much of the woodwork inside needs repairing, and the walls and ceilings are to be made aseptic.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

The personnel of the station is as follows: Dr. Alva H. Doty, health officer (ex-officio member of State and municipal boards of health); Dr. E. B. Sanborn, deputy health officer; Dr. J. B. Hommedieu, deputy health officer; post-office address, Rosebank, Staten Island, New York; a secretary, 2 clerks, one who acts as telegraph operator; 1 messenger, 1 carpenter, 2 watchmen, who are sworn policemen; 2 engineers, 2 captains, 4 deck hands, 3 fumigators, 2 firemen. Employees are interchangeable in performing their duties.

The personnel of the detention station comprises 1 superintendent, 1 engineer, 2 boatmen, 1 matron—cooks to be supplied by the steamship companies.

The personnel of the hospital station comprises 1 superintendent, 2 engineers, 1 boatman, 1 carpenter, 1 matron, 1 laundress, 1 cook, 1 laborer, and nurses and attendants as needed.

Additional help will be employed, including physicians, at both the detention and hospital stations, when the islands are occupied by large numbers of suspects or patients.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

Extracts from the quarantine laws of the State of New York have been furnished me by Health Officer Doty. (Exhibit A.)

In addition to the copious extracts from the laws of the State of New York governing quarantines I inclose copies of the quarantine regulations governing pilots and others. (Exhibits B and C.)

A slight change in the quarantine customs of the port is the permission to land passengers after dark. This is done by means of an electric light while making inspection and appears to be quite as safe as when done by daylight, for the reason that those undergoing the ordeal are required to pass directly toward a powerful electric light, which shines upon their faces and brings their entire person under



the eye of the inspector, whose back is toward the light. Only "liners" are thus inspected, and in case any suspicion is aroused the vessel is detained until morning.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

Extracts from a letter from the health officer showing his procedure in addition to the requirements of the Treasury regulations and the changes necessary to meet the different contingencies that may arise is given as follows:

The principal change has been in the mode of disinfection, and from the great variety of vessels which arrive here under different circumstances it is necessary that each one should be treated as the occasion demands. In a general way, I may say that I depend mainly on heat as a disinfectant; sulphur dioxide is also used, in conjunction always with steam; a solution of bichloride is also employed. Vessels coming from Rio de Janeiro and Santos and other infected ports of this character are held for disinfection on their arrival. The passengers and crews of said vessels, also their clothing, bedding, cushions, curtains, and other dressings, are removed to Hoffman Island, where the crew and passengers are bathed, and the clothing, bedding, etc., subjected to heat. While this is being done at the island, the fore-castle and cabins are washed with soap and water and a solution of bichloride, 1:800, and the said apartments subjected to a fumigation by sulphur dioxide with steam. They are sealed by the disinfector in charge, who indicates on said seal the time at which these apartments can be opened. (Exhibit D.) At the present time all vessels coming from Naples, Genoa, Marseilles, and other Mediterranean ports are held for fumigation of steerage, in consequence of the epidemic of smallpox which now exists at those ports. The masters of vessels who are subject to this rule have been instructed to see that the immigrants open their baggage and place the articles contained about their bunks in the steerage. This is to be done before they reach the station. On their arrival they are ordered to the decks, and the disinfectors of this Department, after having admitted some steam, fumigate the steerage with sulphur, about 4 pounds to the 1,000 cubic feet. The hatches are then sealed as above described. As this means a closure of about seven or eight hours, with no place for the immigrants to sleep, vessels reaching here late in the afternoon or evening can not be fumigated until the following morning. Fortunately, vessels from these ports carry a very few if any cabin passengers. Arrangements have been made with the North German Lloyd Steamship Company, which is about the only line which carries cabin passengers from these ports, that in case of the late arrival of one of their vessels the cabin passengers are to be released at once and the vessel remain in quarantine until fumigation is performed the following morning. Vessels arriving with smallpox on board are treated as follows: The case is removed to hospital, the clothing, bedding, and contents of hospital apartment washed with soap and water and a solution of bichloride and fumigated with sulphur. The passengers who are members of the patient's family, and those who have been in any way exposed, are removed to Hoffman Island for observation. All who are not properly protected by vaccination are subjected to this operation. The steerage is then subjected to fumigation by sulphur and steam. As a rule, the cheap mattresses in the apartment occupied by the patient are destroyed. Frequently cases of illness are found among the crew of vessels; there are no marked symptoms, simply an elevation of temperature, etc. These cases are removed, with their clothing, bedding, etc. the patient being taken to Swinburne Island, the clothing, bedding, etc., to Hoffman Island, for disinfection. In the recent case of the *Mozambique*, where five deaths occurred during the voyage, in addition to the disinfection, bathing, etc., above spoken of, the vessel and crew were held for a period of five days after disinfection was performed. In regard to the Ward Line steamers which come from Habana, you are already aware of the rules which are followed in this particular instance. I have endeavored to give you a general idea or outline of the work as it is now performed here. As you will see, it is necessary to treat each case in a little different manner. For this reason there can be no regular rules which are to be followed in all cases.

I inclose a sample of the seal used after closing the hatches of a vessel undergoing disinfection (Exhibit D); also a sample of the adhesive strips used in closing up cracks and apertures about open seams, windows, etc.

There is no unnecessary detention or disinfection of vessels at this port; in fact,



the inauguration of the disinfecting steamer *Wadsworth* is intended to further facilitate the work of disinfection and release of the vessel.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

All foreign vessels are inspected throughout the year and disinfection performed if from an infected or suspected port. Ballast is used for filling in at Hoffman Island.

6. Are vessels from other United States ports inspected?

Yes, from May to November.

7. Describe quarantine procedures in the inspection of vessels, and if infected, the treatment. Give time in quarantine—(a) between arrival and commencement of disinfection, (b) time occupied by disinfection, and (c) time after completion of disinfection of vessels until discharge.

Fully described under question No. 4.

8. What communication is held with vessels in quarantine (and before quarantine, by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

None. (See copy of regulations governing pilots and others, marked A and B.)

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

A vessel infected with cholera would be ordered to lower quarantine, the sick removed to Swinburne Island, the suspects to Hoffman Island, where they would be segregated, bathed, and their clothing, baggage, etc., disinfected; the cabin passengers would be removed from the vessel, and, if the disease were confined to the steerage, probably discharged, or segregated and placed on board fully equipped barges moored in the vicinity of Hoffman Island. The vessel would be subjected to steam disinfection by the vessel's own boilers and pipes leading into the compartment, or by employing the disinfecting steamer *Wadsworth*, or by both, as seemed best, and be subjected to thorough mechanical cleansing with soap and water, followed with a bichloride solution. The vessel would be held five to seven days and disinfection repeated if deemed necessary. About the same procedure would be had in case of yellow-fever infection. In case of smallpox, the sick would be removed to North Brother Island, all persons vaccinated, and those exposed to the contagion held under observation fourteen days. The vessel would be subjected to thorough disinfection, as in the former instances.

A vessel having had cholera, yellow fever, or smallpox on board during the voyage or at the time of arrival at quarantine would be conclusive evidence of infection; a vessel having had a quarantinable disease on board within thirty days next preceding arrival would be a "suspect," and a vessel sailing from an infected port would also be a "suspect," and both would be held for disinfection.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Yes; also the ship surgeon's record and ship's log are examined and contents noted.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

The quarantine fees are as follows: \$5 for inspection of foreign vessels between sunrise and sunset; after sunset, \$5 extra; \$2 in addition to the above for any vessel carrying immigrants, this rate per 100 or fraction thereof; \$1 to \$3 for sailing vessels and "tramps" engaged in coasting trade, between sunrise and sunset, subject to an additional charge of \$5 after sunset; \$5 to \$50 for disinfecting a vessel,



dependent upon the labor involved; \$2 to \$3 for transfer of passengers from steamer to Hoffman or Swinburne islands and return of same to New York.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

I give herewith an extract from a letter from the collector of customs covering these questions:

In reply to your verbal request for information concerning the commerce of this port, to enable you to complete your annual report to the Supervising Surgeon-General Marine-Hospital Service, I transmit herewith a statement covering the entrance of vessels from foreign ports and from domestic ports during 1895. Relative to the inquiry concerning vessels arriving from foreign ports in yellow-fever latitudes, via domestic ports (presumably Central and South America, Cuba, Mexico, and West Indies), I would state that the records of this office do not show such arrivals separately, and it would involve considerable labor and time to compile such a statement. The number is doubtless approximately the same as reported in response to your previous request under date July 2, 1895, to which you are respectfully referred.<sup>1</sup> Relative to the character of commerce carried on by this port and the disposition of consular bills of health, I would refer you to the letter above quoted, wherein these questions are fully answered.

*Number of vessels entered from foreign ports during 1895.*

January .....	333	August .....	421
February .....	249	September .....	422
March .....	359	October .....	414
April .....	444	November .....	361
May .....	470	December .....	317
June .....	433		
July .....	465	Total .....	4,688

*Number of vessels entered from domestic ports during 1895.*

January .....	208	August .....	220
February .....	144	September .....	207
March .....	180	October .....	221
April .....	196	November .....	226
May .....	202	December .....	198
June .....	208		
July .....	248	Total .....	2,458

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

My visit to the custom-house this year was quite satisfactory, as may be seen from the letters quoted. I herewith furnish a table showing the number of steerage passengers landed at Ellis Island during the year 1895, also cabin passengers landed at the port of New York:

Steamship line.	Where from.	Cabin.	Steerage.
North German Lloyd .....	Bremen .....	10,805	44,326
White Star .....	Liverpool .....	11,805	30,725
Hamburg-American .....	Hamburg .....	10,543	30,141
Cunard .....	Liverpool .....	18,844	21,724
American .....	Southampton .....	16,146	19,580
General Transatlantique Co. ....	Havre .....	7,587	16,469
Red Star .....	Antwerp .....	4,890	12,554
North German Lloyd .....	Mediterranean .....	2,065	11,691
Netherlands-American Steam Navigation Co. ....	Rotterdam .....	2,855	11,416

<sup>1</sup>Extract from letter above referred to: "The commerce of this port, as you doubtless know, is of the most general character, and is chiefly carried on with Europe and the West Indies, and most of the vessels arriving bring cargo.

"The consular bills of health required by act February 15, 1893, are filed in this office and are carefully preserved."



Steamship line.	Where from.	Cabin.	Steer- age.
Anchor .....	Glasgow .....	6,604	10,011
Anchor .....	Mediterranean .....	41	9,837
Fabre .....	do .....	20	7,477
Thingvalla .....	Copenhagen .....	747	6,889
Union .....	Hamburg .....		6,404
Scandia .....	Gothenburg .....	47	6,398
Hamburg-American .....	Mediterranean .....	535	3,972
Allen State .....	Glasgow .....	2,509	3,512
Netherlands-American Steam Navigation Co. ....	Amsterdam .....	291	2,286
Cunard .....	Mediterranean .....	12	920
Baltic .....	Stettin .....		347
Florio Rubatino .....	Mediterranean .....		44
Miscellaneous .....		212	1,837
Total .....		96,558	258,560

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

Yes.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

All the regulations of the Treasury Department are, I believe, properly enforced, particularly those regarding inspection and disinfection, and the period of observation after disinfection of vessels is observed.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

Yes. Copy of certificate herewith transmitted. (Exhibit C.)

17. What disposition is made of the consular bills of health?

The irregularity of consuls in issuing bills of health, reported by me last year, has been corrected, and two such bills are now issued at foreign ports, both of which are filed in the custom-house, the health officer making a copy of such as he desires. In this connection I may say that I was informed at the custom-house that the collector has never been notified that a consul is now stationed at Alexandretta, and the first intimation of the fact was observed a few days ago when a vessel came in with such a bill noted as "No. 1."

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

As stated in previous reports, there is some danger of the introduction of contagious disease through the lack of quarantine facilities at Perth Amboy, N. J. (See report on Perth Amboy.) I discussed the matter with Health Officer Doty and with the collector of customs at Perth Amboy. (See the latter's letter in my Perth Amboy report.) Dr. Doty stated that he would be not only willing, but is anxious to have all vessels entering the bay at Sandy Hook report to him for inspection and disinfection, and even went so far as to say that I might notify the health officers and collectors of customs at all ports in New York, New Jersey, and Connecticut that infected or suspected vessels would be cared for by him if ordered to his station. He intends inviting the health officers at Perth Amboy, Newark, and Elizabethport to a consultation with a view of inaugurating necessary precautions as far as applicable to vessels coming in at Sandy Hook.

The protection of New York's back door (Hell Gate) is intrusted to an agent stationed at City Point, who is authorized to make the inspection of vessels bound south through Hell Gate. He is under the supervision of the health officer, to whom he reports by telegraph every vessel passing through that channel.



The station at Fire Island is practically abandoned as a quarantine annex, the present health officer believing that fully equipped barges (such as are used for excursion parties on the bay) would be much more satisfactory in case of emergency for housing and segregating passengers than taking them 40 miles from his base of operations.

I am informed by the health officer that health certificates are withheld from children under 10 years of age coming from Cuban ports, but that he allows them to pass upon satisfactory proof that no contagious disease exists among them and the acquiescence of their parents or guardians to their being held in custody by the bureau of contagious diseases of New York or for observation at their hotel or residence.

Brooklyn, New York, and Jersey City and Hoboken, N. J., are protected by the New York quarantine.

JUNE 17, 1896.

#### EXHIBIT A.

#### EXTRACT.

[Chapter 661, Article VII, quarantine laws of the State of New York.]

SEC. 103. Examinations, warrants for offenders. The health officer may administer oaths in all examinations to be conducted by him, or under his direction, prescribed by this article, and relative to any alleged violation of quarantine law or regulations. He may issue a warrant to any constable or other citizen for the pursuit and arrest of any person violating any quarantine law or regulation, or obstructing the health officer in the performance of his duty, and for the delivery of any person arrested to the health officer, to be detained in quarantine until discharged by him, not exceeding ten days. Every constable or other citizen to whom any warrant shall be delivered shall obey the direction thereof.

SEC. 104. Boarding vessels. The health officer shall board every quarantinable vessel as soon after her arrival as practicable, between sunrise and sunset; shall ascertain by the inspection of the bill of health, manifest, log book, or otherwise as to the health of all persons on board and the condition of the vessel and cargo; shall examine on oath as many persons on board or elsewhere as he may deem expedient to enable him to determine the period of quarantine and the regulations to which the vessel and cargo shall be made subject, and shall report the facts and his conclusions, and especially the number of sick persons and their diseases, to the quarantine commissioners. It shall be the duty of the health officer at the several ports of entry within the State of New York to require the masters of all merchant vessels arriving at said ports from any foreign port to present a bill of health, duly executed by the consul, vice-consul, or other consular officer of the United States, or by the medical officer attached to the United States consulate by the appointment of the United States Government, or the representative of the United States Government resident at said port of departure, which shall set forth the sanitary condition and history of said vessel; also the sanitary condition of the cargo and of the crew and passengers; also the sanitary condition of the food, water, and ventilation of said vessel; the number of cases at such port of yellow fever, cholera, smallpox, typhus fever, relapsing fever, scarlatina, measles, and diphtheria, the total number of deaths from each of these diseases from all causes the week preceding the day of said bill of health, as far as can be ascertained by the said consul, vice-consul, or other consular officer of the United States, or the medical officer attached to such consulate. Said bill of health shall contain, in addition to the above, a statement of any circumstances affecting the public health in relation to infectious or contagious diseases at the port of departure or the community adjacent thereto. Vessels that touch at other ports on the passage shall bring a bill of health from each and every port, or shall have indorsed upon the original bill of health by the consul, vice-consul, consular officer, or medical officer of the consulate the facts and conditions of those ports as to the existence and prevalence of the infectious and contagious diseases mentioned in this section. All persons coming from or through any port or place who, after the passage of this act, may arrive at the port of New York shall be liable to an examination by the health officer or his deputies, as regards their protection from smallpox. In any case any person so arriving shall refuse to submit to such examination, or upon such examination shall be found not sufficiently protected from smallpox, or refuses to be protected by vaccination, such person, and in case such person be a



minor, then also the person having him or her under charge, shall be detained in quarantine until he or she shall have passed the incubative period from date of last possible exposure; and the expense of such detention shall be chargeable by the commissioners of quarantine upon the consignees or owners of the vessel having such person on board, and such expense as may be incurred shall be a lien upon such vessel. The master of a vessel who shall refuse or neglect to comply with the provisions of this section shall be guilty of a misdemeanor, and be punished by a fine of not less than one hundred dollars nor more than five hundred dollars.

SEC. 105. Bills of health. The health officer shall require the masters of all merchant ships and vessels arriving at such port to present a bill of health duly executed by the consul, vice-consul, or other consular officer of the United States Government, or the representative of the United States Government resident at such port of departure, setting forth the sanitary condition of the vessel, its cargo, crew, passengers, food, waters, and ventilation, and the sanitary history of the vessel, the number of cases at such port of yellow fever, cholera, smallpox, typhus fever, relapsing fever, scarlatina, measles, and diphtheria, the total number of deaths from each of these diseases, and from all causes the week preceding the date of the bill of health, as far as can be ascertained by the officer executing such bill of health, and a statement of any circumstances affecting the public health in relation to infectious or contagious diseases at such port of departure or the community adjacent thereto. Vessels touching other ports on the passage shall also bring a bill of health from each port, or shall have indorsed on the original bill of health by one of such United States officers thereat the facts and conditions of the ports touched as to the existence or prevalence there of any such infectious or contagious disease.

SEC. 106. Effects of deceased persons. The health officer shall secure the effects of deceased persons in quarantine from waste and embezzlement, make a true inventory thereof, and if the rightful claimants thereto do not appear within three months, deliver the same to the public administrator of the city of New York, unless they ought not to be removed, or ought to be destroyed under the provisions of this article.

SEC. 107. Boards of health of New York and Brooklyn. The health officer shall keep the boards of health of New York and Brooklyn at all times informed of the number of vessels in quarantine, of the number of sick in the floating hospital, and their diseases; and he shall receive any vessel or merchandise sent to him by the health authorities of New York or Brooklyn dangerous to the public health.

SEC. 108. Power over master, owner, or consignee of vessel. If the master, owner, or consignee of any quarantinable vessel shall neglect or refuse to do any act or thing lawfully directed to be done by the health officer, or to comply with any lawful order or direction of the health officer, or with any regulation relative to such vessel, or any person or thing on board thereof, the health officer may employ such assistance as may be necessary to enforce any such order, direction, or regulation. The health officer in the lighterage, stevedorage, and storage of quarantinable vessels and merchandise may permit the captains and owners thereof to employ men upon their own account, subject to the same restrictions for the protection of the public health as if licensed by the health officer and quarantine commissioners.

SEC. 109. Quarantinable diseases. The quarantinable diseases are yellow fever, cholera, typhus or ship fever, smallpox, scarlet fever, diphtheria, measles and relapsing fever, and any other disease of a contagious, infectious, or pestilential nature which has been or may be determined to be quarantinable by the health officer. Persons with insufficient evidence of effective vaccination and known to have been recently exposed to smallpox shall be vaccinated as soon as practicable, and detained until the vaccination shall have taken effect, under regulations prescribed by the health officer.

SEC. 110. Quarantinable vessels and period of quarantine.—Every vessel arriving at the port of New York from any place where a quarantinable disease existed at the time of departure, or which shall have arrived at any such place and proceeded therefrom to New York, or on board of which during the voyage any case of any such disease shall have occurred, shall remain at quarantine until the health officer grants a permit for the discharge of such cargo or both. Every vessel arriving at the port of New York from any foreign port, and every vessel from a domestic port (in the ordinary passage from which they pass south of Cape Henlopen, arriving between the first day of May and the first day of November) shall, on their arrival at the quarantine ground, be subject to visitation by the health officer, but shall not be detained beyond the time requisite for due examination and observation, unless they have had on board during the voyage some case of quarantinable disease, in which case they shall be subject to such regulations as the



health officer shall prescribe. No vessel shall be put in quarantine without a written decision of the health officer, of which the captain or master shall be immediately informed. No quarantinable vessel shall depart from quarantine without the written decision of the health officer, which shall be delivered by the master of the vessel to the board of health of the city of New York or the health commissioner of the city of Brooklyn, according to the destination of the vessel, within twenty-four hours after the permit is received by him.

SEC. 111. When vessels may return to sea without quarantine. A vessel may, before breaking bulk, put to sea in preference to being quarantined, if the health officer is satisfied that its sick will be taken care of for the remainder of the voyage, and its bill of health shall be returned if it has not arrived at its port of destination. The health officer shall state on such bill of health the length and circumstance of its detention and its condition on re-putting to sea, and shall take care of such of its sick as prefer to remain.

SEC. 112. Detention for examination. If a vessel which has not had, during the voyage, a case of quarantinable disease is found in a condition which the health officer deems dangerous to the public health, the vessel and its cargo shall be detained until the case can be considered, but the decision of the health officer shall be rendered within twenty-four hours. Any vessel in an unhealthy state, whether it has sickness on board or not, shall not be allowed pratique until it shall have been broken out, duly cleansed, and ventilated.

SEC. 113. Sanitary measures; admission to pratique. The health officer may require, before permission to pratique of any vessel, baths and other bodily care of the persons on board; washing and other disinfecting means for clothing; the displacement or complete breaking out of cargo on board; subjection to high steam, incineration, or submersion of a distance below the surface of the water of infected articles; the destruction of tainted or spoiled food or beverages; the complete ejection of the water; the thorough cleansing of the hold; the disinfection of the well; the complete purification of the vessel in all its parts by the use of steam, fumigation, force pumps, rubbing or scraping, and, if deemed necessary, the sending to quarantine anchorage until disinfection is perfected. Admission to pratique shall be preceded by as many visits to the vessel by the health officer as he may deem necessary.

SEC. 114. Disposition of well and sick persons. On the arrival of an infected vessel all well persons on board shall have their freedom as soon as possible consistently with the regulations prescribed by or pursuant to law. All sick persons shall be immediately transferred to the hospital set apart for their reception, and the vessel unladen, purified, and admitted to pratique as soon as possible. Persons sick with different diseases shall be kept separately.

SEC. 115. The yellow flag. The health officer shall cause all vessels, warehouses, and merchandise in quarantine to be designated by a yellow flag, and shall prohibit communication with or passage within range of the same, except under such regulations as he may designate compatible with the public safety.

SEC. 116. Quarantinable merchandise. For the purpose of the sanitary measures adopted at quarantine there shall be three classes of merchandise:

1. Merchandise to be submitted to an obligatory quarantine and purification, comprising personal baggage and dunnage, rags, paper rags, hides, skins, feathers, hair, and all other remains of animals, cotton, hemp, and wool.

2. Merchandise subject to an optional quarantine, comprising sugar, silks, linen, and cattle.

3. Merchandise exempt from quarantine, comprising all merchandise not enumerated in the other two classes.

Merchandise of the first class shall be subjected to such disinfection as the health officer shall direct.

Merchandise of the second class may be admitted to pratique immediately or disinfected, according to circumstances, at the option of the health officer, with due regard to the sanitary condition of the port.

Merchandise of the third class shall be declared free and shall be admitted without unnecessary delay.

Merchandise coming from different vessels and places and at different times in quarantine shall be kept separate.

Clothes and dunnage contaminated with infection shall be disinfected or destroyed.

No putrid animal substance or substances liable to putrify shall be admitted into the warehouses, but all such substance shall be rendered innocuous or destroyed. All merchandise shall be submitted to such measures as the health officer may deem necessary.

SEC. 117. Letters and papers. If there has been a quarantinable disease on board the vessel during the voyage, letters and papers thereon shall be subjected



to the usual purification, but with such precautions as not to affect their legibility. Articles of merchandise or other things not subject to purifying measures, in an envelope officially sealed, shall be immediately admitted to pratique without regard to the condition of the vessel. If the envelope is of a substance considered as optional, its admission shall be equally optional.

SEC. 118. Vaccination. All persons coming from or through any foreign port or place who may arrive at the port of New York shall be liable to an examination by the health officer or his deputies as regards their protection from smallpox.

If any such person shall refuse to submit to such examination or on such examination shall be found not sufficiently protected from smallpox, or shall refuse to be protected by vaccination, such person, together with the person having him in charge if he be a minor, shall be detained in quarantine until he shall have passed the incubative period from the date of the last possible exposure; and the expense of such detention shall be charged by the commissioners to the consignees or owners of the vessel having such person on board, and such expenses so incurred shall be a lien upon the vessel.

SEC. 119. Diseases subject to quarantine regulations. Typhus-fever and smallpox patients shall be sent to and supported at such places as are now devoted to their care, or to such other places as may be designated from time to time by the health officer and commissioners of quarantine, and all other quarantinable diseases shall be removed to the immigration hospital for care and treatment. The diseases against which maritime sanitary regulations at the port of New York shall apply are yellow fever, cholera, typhus or ship fever, smallpox, scarlatina, diphtheria, measles, relapsing fever, and any disease of a contagious, infectious, or pestilential character which shall be considered by the health officer dangerous to the public health.

SEC. 127. Confinement of offenders. The health officer, upon the application of the master of any vessel under quarantine, may confine in any suitable place on shore any person on board of the vessel charged with the commission of any offense punishable by the laws of this State or of the United States and who can not be secured on board of such vessel. Such confinement may continue during the quarantine of such person, or until he shall be proceeded against in due course of law. The expenses of such confinement shall be charged and collected in the same manner as the expenses of providing for passengers, which the master of the vessel is required to pay.

#### EXHIBIT B.

STATE OF NEW YORK,  
HEALTH OFFICER'S DEPARTMENT,  
*Quarantine, Staten Island, April 1st, 1896.*

*To Pilots, Masters of Vessels, and Others:*

Your attention is called to sections 393, 394 of the penal code, State of New York, of which the following is a copy:

SEC. 393. A person who, being on board any vessel at the time of her arrival at the port of New York, lands from such vessel, or unlades or transships, or assists in unlading or transshipping, any portion of her cargo, before such vessel has been visited and examined by the health officers, is punishable by imprisonment not exceeding one year, or by a fine not exceeding two thousand dollars, or both.

SEC. 394. A person who goes on board of, or has any communication or intercourse with, any vessel at quarantine, or with any of the crew or passengers of such vessel, without the permission of the health officer, and every person who, without such authority, enters the quarantine grounds or anchorage, is punishable by imprisonment not exceeding one year, or by a fine not exceeding two thousand dollars, or both; and in addition thereto he may be detained at quarantine so long as the health officer directs, not exceeding twenty days. And in case such person shall be taken sick of any infectious, contagious, or pestilential disease during such twenty days, he may be detained at the marine hospital for such further time as the health officer directs.

A. H. DOTY,  
*Health Officer, Port of New York.*



## EXHIBIT C.

[Face of blank.]

PORT OF NEW YORK,  
Quarantine, Staten Island, —, 189—.

This permit to be exhibited at the office of the board of health of the city of New York if docked on the New York side; or at the city of Brooklyn board of health if on the Brooklyn side, within 24 hours (Sunday excepted) of your arrival, under a penalty of \$200.

Regulations complied with according to act of Congress, February 15th, 1893.

Arrived ———.  
Commander, ———.  
Date of sailing, ———.  
From ———.  
Officers and crew, ———.  
1st cabin, —; 2d, —; steerage, —; total, —.  
Cargo ———.  
Consignee, ———.  
Health, ———.

This vessel has permission to proceed.

—————,  
*Health Officer.*

[Reverse of blank.]

To the captain or person having charge of the vessel named in this permit:

Any person, except the master, owner, or consignee, who shall go on board the vessel before this permit shall be delivered, shall be guilty of a misdemeanor, punishable by a fine of five hundred dollars and imprisonment.

Any person, also, who shall neglect or refuse to comply with any provision of the law relative to quarantine, or with any direction or regulation which the health officer may prescribe in the execution of the powers imposed and conferred upon him by law, shall be guilty of the like offence, and subject to the like punishment. [Health Code, article 6, chapter 661, Laws of N. Y., 1893.]

QUARANTINE, STATEN ISLAND,  
—————, 189—.

The undersigned master of ———, being duly sworn, deposes and says: That the port or ports from which he sailed were, to the best of his knowledge and belief, perfectly healthy, being free from all malignant, contagious, or infectious disease, except such as are recorded in the bill of health from said port or ports. That no death or sickness has occurred on outward or inward voyage except such as has been duly reported to the health officer. And the surgeon further affirms and declares that the number of persons examined with reference to their protection from smallpox, and found sufficiently protected, and the number so protected by him by vaccination, is faithfully and truly rendered below.

No. found sufficiently protected, —.  
No. vaccinated by surgeon, —.

Sworn before me this — day of —, 189—.

—————, *Master.*

—————, *Surgeon.*

—————, *Health Officer.*

## EXHIBIT D.

HEALTH OFFICER'S DEPARTMENT, STATE OF NEW YORK,  
Quarantine, Staten Island.

The within apartment is closed for disinfection and must not be opened until ———.

Dated ———, 1896.

A. H. DOTY, M. D.,  
*Health Officer, Port of New York.*



## NEW JERSEY.

## REPORT OF INSPECTION OF THE PORT OF PERTH AMBOY.

By Surg. PRESTON H. BAILHACHE, M. H. S.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

There is no quarantine station or quarantine buildings at Perth Amboy; no facilities for inspection of vessels except a small rowboat; no apparatus for disinfection of vessels or baggage; no facilities for the removal of sick or their treatment, or for the removal and detention of suspects. Anchorage for vessels to be inspected by the health officer is designated by a buoy with a flag upon it and is located at the entrance of Staten Island Sound, just off Wards Point.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

There is no quarantine officer other than the health officer, whose name is John G. Wilson, M. D.; his post-office address is Perth Amboy, N. J.; he is authorized to employ a deputy, and generally selects a pilot for that duty.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

There are no local quarantine laws or regulations at this port. (See State laws, under the heading of "Diseases," for such meager provisions against the entrance of diseases as exist.) The quarantine customs of the port consist in a simple inspection by the health officer or his deputy of all foreign vessels entering the harbor and all domestic vessels south of Cape Henlopen, Virginia.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

None. There is no "undue or unnecessary detention or disinfection of vessels;" in fact, no disinfection of vessels whatever is practiced.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

No. Inspections are made from May until November; no treatment is practiced.

6. Are vessels from other United States ports inspected?

Yes; vessels hailing from ports south of Cape Henlopen are inspected.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

No quarantine procedures have been had in recent years, as no infected vessel has appeared at this port during the incumbency of the present health officer. "Chlorine disinfection" was practiced several years ago in the case of a tank steamer.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.) and how regulated? Is there any intercommunication allowed among vessels in quarantine?

None.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels



carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Infected vessels will be detained at the quarantine anchorage and request made by the health officer for instructions.

10. No records are kept at the station of the cases of disease that have occurred during the voyage on arrival and during detention.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

Quarantine fees are \$7.50 for foreign vessels, except those from Prince Edward Island, which are \$5, and \$3 for coasters.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

The number of vessels arriving at the port of Perth Amboy, N. J., during the preceding calendar year is as follows:

Month.	From foreign ports.	From foreign ports in yellow-fever latitudes via domestic ports.	From domestic ports.
January .....	1	2	10
February .....	2	1	3
March .....			3
April .....	1		3
May .....	2	1	3
June .....	1	3	11
July .....	4	1	6
August .....	4		9
September .....	5		13
October .....	2		5
November .....	3	2	6
December .....	1	3	4
Total .....	26	13	76

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

My visit to the custom-house was satisfactory, and I found that the regulations with regard to bills of health and quarantine certificates were duly observed.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

No. On the contrary, the port of Perth Amboy is a constant menace to the public health from the danger of an invasion of foreign pestilence.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

All imperfectly carried out, as there is no quarantine station in existence.

16. Does the certificate of inspection or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with, as required by section 5, act of February 15, 1893? Transmit copy of certificate.

No.<sup>1</sup>

<sup>1</sup>The Bureau called the attention of the collector of customs to this neglect, who now requires the certificate referred to.



17. What disposition is made of the consular bills of health?

Consular bills of health are filed with master's oath and manifest on entry of vessel at the custom-house.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

In my opinion there should be an inspector of the Service stationed at Perth Amboy, either in the person of the health officer of the port or independent of him. All efforts to prevent the entrance of infectious diseases by a quarantine at New York will prove futile unless the open gate at Perth Amboy is closed. It is proposed by Dr. Doty to require all foreign vessels entering Sandy Hook to proceed to the New York boarding station before going to Perth Amboy or beyond. In this connection I quote a letter received from the collector of customs at Perth Amboy upon this subject:

I would offer the suggestion that Greater New York, for its own safety and protection, should have sole control and authority in matters of public health over all vessels entering at Sandy Hook. No matter where these vessels may discharge, at Perth Amboy, Newark, or elsewhere, the crews invariably go to New York, and one authority, one set of rules, can better govern matters of this kind than a divided responsibility. Should an epidemic start on the Jersey shore, it is very likely to reach the city of New York.

In conclusion, I have the honor to state that Dr. Alva H. Doty, health officer of New York, appreciating the gravity of the situation, has expressed a willingness to care for all suspicious or infected vessels bound for Perth Amboy and above at the New York Quarantine Station. In the meantime the collector of customs at Perth Amboy has been notified by the Bureau that an inspection certificate is required of vessels arriving at Perth Amboy from all foreign ports excepting Canada throughout the entire year, as a prerequisite to entry, and that, in the event of the arrival of an infected vessel, or of a vessel with disease on board, or of a vessel requiring disinfection under the regulations, said vessel must be remanded to the New York Quarantine.

JUNE 16, 1896.

*INSPECTION REPORT, CAMP LOW, UNITED STATES QUARANTINE STATION.*

By Surg. PRESTON H. BAILHACHE, M. H. S.

SANDY HOOK.

My visit to Camp Low Quarantine Station was made upon the revenue steamer *Manhattan*. I found everything belonging to the Service in fair condition except the buildings, which are gradually going to decay. The sand about the hospital building has drifted away to such an extent that it is liable to fall to pieces in the near future. The piling under the docks has suffered from attacks of the teredo to such an extent as to render it quite unsafe for the property located upon it. The electric plant and laundry are in danger of injury from the piling giving way. The disinfecting plant and tanks appear to be safely out of danger, and are well taken care of by the keeper. The cottage which was removed by the Ordnance Department has not been returned to the Service, but is used, I understand, by one of the sergeants on duty at the proving grounds, to which place it was carried in April last. There is much serviceable property stored at Camp Low that could be utilized at other stations, as may be seen by reference to my property return for January last. The laundry would be a very acceptable addition to the equipment of the marine hospital at this port; the electric plant I consider worthless, as it is out of date and was second hand when put in at Camp Low.

The leaky condition of the various buildings has already been reported, the



most important of which is the leakage over the boiler room and disinfecting apparatus in the new part of the building.

As a sand bar has encroached upon the station to such an extent as to render it necessary to land at considerable distance from the entrance doors to the station, and as the necessity for a quarantine establishment at Camp Low appears to no longer exist, I am of opinion that the sooner it is abandoned and the property utilized before it becomes unfit, the better it will be for the Service.

MAY 28, 1896.

[NOTE.—By direction of the Secretary of the Treasury, arrangements are being made for abandoning this station, the War Department having demanded the return of their reservation for military purposes.]

*REPORT OF INSPECTION OF LOCAL QUARANTINES.*

By SURG. GEORGE PURVIANCE, M. H. S.

TUCKERTON.

1. No quarantine station. Anchorage 6 miles in one direction and 7 in another. Inlets: Little Egg and Barnegat. No facilities for disinfection or taking care of sick. Mail and telegraph facilities.

2. None.

3. Mr. S. P. Bartlett, deputy collector of this port of entry, was advised and instructed, in case infectious disease was brought into this harbor to at once quarantine the vessel and telegraph to the Supervising Surgeon-General, Marine-Hospital Service, for instructions. The collector has no assistance in the way of an inspector.

4. None.

5. None.

6. No.

7. None.

8. Was instructed not to allow any communication whatever.

9. These facts would be telegraphed at once to the Supervising Surgeon-General, Marine-Hospital Service.

10. No record kept.

11. No fees collected.

12. No vessels enter or clear from this port. Vessels come chiefly from New York and different ports of Virginia and ports along Southern coast laden with coal, lumber, phosphates, and ice.

13. (a) See above answers. (b) None.

14. No quarantine facilities at this port. No inspections made.

15. No quarantine established.

16. None except as mentioned above.

MAY 15, 1896.

SOMERS POINT.

1. No anchorage except in narrow channel; mail and telegraph facilities; no facilities for disinfection; no place to take care of sick.

2. None.

3. No recent laws on quarantine, and nothing on hand except the Revised Statutes. When a vessel enters or clears from this port, a record is kept of the condition of the crew. No foreign vessels have entered or cleared from this port for seventeen years, except one vessel from Cuba last April. There are a great many vessels owned and documented at this port, but do not enter or clear here.

4. None.

5. None.

6. No.



7. No quarantine procedures.
  8. No quarantine procedures.
  9. Have recommended that the collector of customs telegraph to the Surgeon-General United States Marine-Hospital Service for instructions in each case mentioned.
  10. None.
  11. None.
  12. No record of vessels from foreign ports in yellow-fever districts, nor from domestic ports. Cargoes of lumber, brick, coal, and ice.
  13. I called on the collector of customs of Somers Point and obtained from him the answers to the above questions, and I recommended that he should at once write to the Bureau of the United States Marine-Hospital Service and ask for a copy of the quarantine laws and regulations of the United States.
- I recommend that instructions be given to the collector of customs to send any vessel that may apply for entry, with quarantinable diseases on board, to the nearest national quarantine station for disinfection.
14. No quarantine facilities.
  15. No inspections made.
  16. None except as mentioned and recommended above.

MAY 12, 1896.

BRIDGETON.

1. No quarantine station. Water connection to this port from the Delaware Bay by a small creek; a vessel could anchor at any place in this creek. Mail and telegraph facilities.
  2. No officer here except the deputy collector, Theodore R. Lore.
  3. The collector has a copy of the United States quarantine laws and regulations of April 26, 1894.
  4. None.
  5. None.
  6. No.
  7. No established rule.
  8. Instructed not to allow any communication.
  9. The collector reports, in accordance with instructions, that in case a vessel should enter this port with a quarantinable disease on board he would at once communicate the fact by wire to the Supervising Surgeon-General, United States Marine-Hospital Service, and while awaiting instructions he would quarantine the vessel and allow no one either to leave her or go on board.
  10. No records.
  11. No charge except tonnage tax on foreign vessels.
  12. Record kept of foreign vessels only; have had two foreign vessels in last fiscal year, one in September, 1895, and one in April, 1896; both vessels from Chile; cargo, nitrate of soda.
  13. I called at the custom-house and saw Mr. Theodore R. Lore, deputy collector of the port, of Bridgeton, and obtained from him the answers to above questions.
  14. No quarantine facilities at this port.
  15. No inspection made at this port.
  16. Except as mentioned above.
- MAY 20, 1896.



## PENNSYLVANIA.

REPORT OF INSPECTION OF THE LOCAL QUARANTINE OR BOARDING STATION AT  
MARCUS HOOK.

By Surg. GEORGE PURVIANCE, M. H. S.

1. This station is on the border line between Pennsylvania and Delaware, about 18-miles below the city of Philadelphia, with a frontage on the Delaware River of 500 feet. The State of Pennsylvania leased from the Farson estate 7 acres of land at this point for the purpose of establishing a quarantine or boarding station. The lease began on the 1st of October, 1895, and continues for a term of six years. There are three good dwellings and three barns on this property. One pier, 498 feet long, 8 feet wide; end of pier, 50 feet square; depth of water at end of pier, 12 feet at low water. No apparatus for disinfection of vessels and baggage, and no facilities for the removal and detention of suspects. Has mail and telegraph facilities.

2. Henry C. Boenning, M. D., quarantine physician, is in charge of the station; Alfred M. Seymour, M. D., deputy quarantine physician; J. M. B. Ward, M. D., deputy quarantine physician; 7 employees: 1 captain, 1 pilot, 1 engineer, 1 fireman, 1 cook, 1 gardener, 1 special messenger.

3. Treasury laws and laws of the State of Pennsylvania.

4. None.

5. Throughout the year.

6. Yes.

7. None.

8. None.

9. Returned to Federal quarantine station at Reedy Island.

10. Records kept.

11. Fees collected in Philadelphia.

12. Vessels arrived during the year is as follows:

January .....	98	July .....	130
February .....	69	August .....	133
March .....	131	September .....	101
April .....	134	October .....	119
May .....	143	November .....	90
June .....	132	December .....	99

Cargo and ballast.

JUNE 2, 1896.

## DELAWARE.

## INSPECTION REPORT OF LOCAL QUARANTINES.

By SURG. GEORGE PURVIANCE, M. H. S.

## WILMINGTON.

1. No quarantine station. No vessel allowed to enter without health certificate of the medical officer in command of Reedy Island Quarantine Station. Good mail and telegraph facilities; no other facilities.

2. None.

3. Advised the collector to ask the Supervising Surgeon-General for copies of quarantine regulations.

4. None.

5. None.

6. No.

7. No procedures.

8. No procedures.



9. I instructed collector to report to the Supervising Surgeon-General, Marine-Hospital Service.

10. No.

11. Tonnage tax collected on all foreign vessels, and American vessels in foreign trade.

12. Vessels arrived from foreign ports as follows:

January .....	5	August .....	5
February .....	3	September .....	6
March .....	3	October .....	4
April .....	6	November .....	4
May .....	8	December .....	5
June .....	6		
July .....	8	Total .....	63

The following arrived from foreign ports in yellow-fever latitudes:

January .....	5	August .....	5
February .....	1	September .....	3
March .....	4	October .....	8
April .....	9	November .....	7
May .....	5	December .....	6
June .....	12		
July .....	13	Total .....	78

Vessels chiefly come from England, France, and Germany, with cargo or ballast.

I called on the deputy collector, Mr. George L. Townsend, and obtained from him the above information. I also called on Dr. Willard Springer, physician to board of health, and was informed by him that no vessel with a suspicious disease aboard is allowed to enter Christiana Creek, which is a mile from the city of Wilmington, without first notifying the port physician. The port physician then inspects said vessel, and should he find any contagious disease aboard, he would not allow the vessel to enter the creek. The owners of tugboats are instructed to inquire as to whether a vessel has any contagious disease on board or not, and failing to do so, are subject to a fine. The only hospital at Wilmington where a contagious disease would be taken care of is in connection with the almshouse, which is 3 miles distant from the city of Wilmington.

JUNE 8, 1896.

*REPORT OF INSPECTION OF THE UNITED STATES QUARANTINE STATION AT REEDY ISLAND, DELAWARE RIVER, PENNSYLVANIA.*

By Surg. GEORGE PURVIANCE, M. H. S.

INSTRUCTIONS TO MEDICAL OFFICERS OF THE MARINE-HOSPITAL SERVICE DETAILED TO MAKE INSPECTIONS OF UNITED STATES QUARANTINE STATIONS.

1. Your visit to the station should be unannounced.
2. Upon arrival at the station you will first call upon the commanding officer, and arrange with him for an inspection of the station, which should be made as soon after arrival as practicable.
3. You will make proper entries to each question of this inspection blank and forward to this office upon completion of your duty.

WALTER WYMAN,

*Supervising Surgeon-General, Marine-Hospital Service.*

Name of quarantine station: Reedy Island United States Quarantine Station.

When was the station last inspected? August 17, 1894.

Name of inspecting officer: Surg. George Purviance.



## I. PERSONNEL.

Name of officer in command: P. A. Surg. A. H. Glennan.

Date of assignment to duty: August, 1893.

Name and rank of assistants, including acting assistant surgeons: Sanitary Inspector A. B. McDowell.

Give number of members in each family: Passed assistant surgeon has two boys at school.

Name of steward and number of members in family: None.

Name and duties of each attendant: John Tracey, pilot; Henry C. Turner, engineer; Phillip W. West, fireman; John J. Neill, fireman; J. Steven, watchman; Andrew Ostensen, boatman; Fred Dohllorf, deck hand; George F. Swartz, cook; Fred Bendler, steward on *Pasteur*; Catharine Wilkins, laundress; George W. Patterson, deck hand; Alexander Johnson, deck hand; Frank Olsen, cabin boy; Harry Hehl, telegraph operator.

## II. GENERAL DESCRIPTION OF STATION.

Number of buildings: Three buildings and boathouse.

Limit of anchorage for noninfected vessels: Three miles by  $1\frac{1}{2}$  miles.

Limit of anchorage for infected vessels: One mile by one-half mile.

Facilities for inspection of vessels: Steamer *Pasteur*, naphtha launch, and 22-foot cedar rowboat.

Apparatus for disinfection of vessels and of baggage: A 50-horsepower boiler, 2 steam chambers, 1 sulphur furnace, 2 pumping engines, 1 bichloride tank, and 4 cars for steam chambers.

Facilities for removal and treatment of sick: Small boats; one cottage hospital with 18 beds.

Facilities for removal and detention of suspects: Same as above.

Mail and telegraph facilities: Both mail and telegraph.

Give number of wharves: Two.

What is the length of the wharf frontage? One 200 feet; another 10 feet.

Are the wharves in good condition? Yes.

Are the mooring facilities ample? Disinfecting wharf needs 8 mooring and 40 fender piles 18 inches in diameter.

What is the depth of the water at mean low tide along the front of the wharf? Thirty feet.

What is the source of water supply? Cistern water.

Is it sufficient? No; there should be an artesian well.

Is it potable? Yes.

Hard or soft? Soft.

If hard, does it injuriously affect the boilers in use at the station? Is not hard.

How is it distributed and stored, if storage is necessary? In and from tanks.

## III.—DISINFECTING MACHINERY.

Enumerate the machinery constituting the disinfecting plant. See above.

What is the general condition of all machinery? Good, with the following exceptions: Section to steam pipe on east chamber; both chambers have sagged and require leveling; new lubricator for engine to sulphur furnace; one elbow for water pipe from main water tank; cost of same about \$50.

Does it appear well taken care of or neglected? Yes; it is well taken care of.

Is there a steam hoisting engine for ballast? No.

Are there ballast tubs and a ballast car for the distribution of ballast? No.

How is ballast disposed of? Water ballast only; generally discharged at sea.

What are the dimensions of the steam disinfecting chamber? Fifteen feet long, 4 feet wide, and  $4\frac{1}{2}$  feet high.



Is it rectangular or cylindrical? Rectangular.

How many cars are provided? Four cars.

Are infected articles put in at one end and brought out at the other after disinfection, or is one end of the chamber used for loading and unloading? One end for receiving and the other end for taking out.

Is the chamber provided with thermometers for indicating the temperature during the process of disinfection? Yes, two; one in each end.

Is the chamber equipped with any apparatus for the production of a partial vacuum? What is the nature of the appliance? If efficient in operation? Yes; one vacuum steam pump.

What vacuum is produced, and how long does it take to obtain it? Fifteen minutes.

Is a sulphur furnace provided? Yes.

How many feet of sulphur hose are provided? About 100 feet.

What is its condition? Good.

What is the condition of the fan and engine? Good.

What is the method of storing bichloride solution? In wooden tank on top of building.

What is the capacity of the tank or tanks? Three thousand gallons.

Are they of wood or iron? Wood.

What is the elevation of the tanks above the wharf flooring? Sixty feet.

Is the solution distributed by gravity, or is there a pump for the purpose? Both by gravity and steam pressure.

How many feet of hose are provided for the distribution of the bichloride solution, and what is its size and condition? Two hundred feet; 1 inch in diameter; in fair condition.

How many steam boilers are provided? One.

What is their condition, and do they supply sufficient steam for all purposes? Good, and the supply ample.

#### IV. BOATS.

Is the station provided with a steam tug or other steam vessel? One steam tug. If so, is she of wood or iron? Iron.

Give dimensions: Eighty-seven feet 9 inches long, 16 feet 6 inches beam, 6 feet 1 inch deep.

If of wood, is the vessel sheathed with metal? Not wooden.

Are the engines and boiler in good condition? Yes; as far as known, the boiler has not been inspected since she came to the station three years ago.

Give engineer's statement as to necessary repairs and renovation: See answer above.

Is the station provided with a steam or naphtha launch? Yes; one naphtha launch.

Give dimensions: Thirty-six feet long, 7 feet beam, 3 feet draft.

What is its condition? Good.

Give report of medical officer as to efficiency of the launch: Good.

How many small boats are provided, and what is the condition of them and their equipment? One metal lifeboat and two cedar boats, both in fair condition.

Are more boats necessary or desirable? Yes; one metal lifeboat, to ply between the pier and the island; cost, \$70.

#### V. HOSPITAL.

Give location of buildings used as hospital: On north end of the island, well separated from other buildings.

Give general description of the building: One cottage hospital, accommodation for 18 beds, 1 kitchen, 1 dispensing room, 1 room for nurse, and 1 office. It should have sewer connections.



Dimensions: Thirty-six feet by 56.

Number of beds in each ward: One ward, 18 beds.

How many beds can be added for emergencies? Six beds.

Cubic air space allowed each patient: Ample air space.

Heating, lighting, and ventilating: Heated by large stove, lighted by lamps, 1 ventilator in roof.

Has the hospital sufficient furniture? Yes.

What kind of bedsteads and what kind of mattresses and bedding? Service iron bedsteads, cotton and hair mattresses, blankets, sheets, and pillows.

Condition of bedding occupied by patients: Good.

Are the beds clean and free from vermin? Yes.

What is the condition of wards as to general cleanliness? Good.

Is the nursing sufficient and is the nurse immune? No nurses at present; they will be employed as needed.

Does the character of the diet furnished conform to that prescribed in the diet table for marine hospitals? Yes.

Is a proper record of the patients under treatment kept? No patients.

#### VI. OUTBUILDINGS AND GROUNDS.

Describe general condition of outbuildings. All in good condition.

Describe officers' quarters and condition of furniture. Good.

Describe steward's and attendants' quarters and condition of furniture. Good. (See Annual Reports, 1894 and 1895.)

Describe dining room, condition of table furniture and tableware. Dining room in good condition; ordinary table furniture and tableware.

Describe kitchen and furniture. Frame building, ample in size, and sufficient furniture.

Describe dispensary. A small room; one closed case and small supply of drugs.

Describe laundry. No laundry.

Describe approaches to the station. By boat. (See Annual Reports, 1894 and 1895.)

Describe condition of fences and grounds. No fences. The grounds are being filled in at present all around the building, under a special appropriation, under the supervision of the medical officer in command.

Describe drainage and condition of water-closets. Only sewer connections to surgeon's quarters.

Describe disposal of slops. Thrown into the river.

State whether any animals not authorized by the Department are kept on the reservation. None.

#### VII. EQUIPMENT.

State approximately age and condition of each horse and how long in service at this station. No horses.

Give number and character of vehicles: No vehicles except boats.

Are they properly cared for? Yes.

Are harnesses in good condition? No harness.

Is there a blacksmith's forge provided? No.

Are there farming implements; and if so, are they in good condition? Yes; in good condition.

Is there a fire apparatus provided; and if so, is there a fire drill organized? No fire apparatus except Star hand grenades.



## VIII. DISCIPLINE.

Are officers and employees supplied with uniforms in compliance with the revised uniform regulations? Yes; according to last regulations.

Are uniforms properly worn? Yes.

Give method of granting leaves to officers and employees: According to United States Marine-Hospital Regulations.

Describe when and how inspection, muster, and fire drills are conducted: Daily inspections made in accordance with United States Marine-Hospital Regulations.

## IX. GENERAL ADMINISTRATION.

Make a statement showing the number of vessels arriving at the station during the preceding calendar year, by months: January, 58; February, 4; no boarding from February to March 12, on account of ice; March, 55; April, 90; May, 119; June, 93; July, 96; August, 109; September, 88; October, 96; November, 74; December, 82. All are from foreign ports.

From foreign ports in yellow-fever latitudes via domestic ports: January, 20; February, 2; March, 28; April, 35; May, 66; June, 39; July, 44; August, 35; September, 17; October, 30; November, 24; December, 25. None from domestic ports.

From what countries chiefly do the vessels come? Cuba, England, Germany, and South America.

Are they in cargo, ballast, or empty? Chiefly in cargo; some in water ballast; none empty.

State whether, in your opinion, the quarantine facilities are sufficient to care for the shipping arriving at the station: Yes.

Give annual amount expended at station for last three years:

July 1, 1894, to December 31, 1894, inclusive.....	\$7,476.83
January 1, 1895, to December 31, 1895, inclusive.....	13,698.75
January 1, 1896, to April 20, 1896, inclusive.....	4,778.45
Total.....	25,954.03

Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

Fender and mooring piles for disinfecting pier; additional strength in the way of iron rods, etc., should be added to the piling under the disinfecting machinery to support the heavy weight on that particular part of the pier; one metal lifeboat for the pier; window blinds and a brick chimney to attendants' building to correspond with the other buildings; terra-cotta sewers for attendants' quarters and cottage hospital; one stationary washstand in surgeon's bathroom; calk deck of inspection steamer *Pasteur*; one new smokestack for inspection steamer *Pasteur*, the old one being worn-out and in bad condition.<sup>1</sup>

I certify that the foregoing is a careful and correct statement of the condition of the service at the Reedy Island Quarantine Station, inspected by me this 13th day of May, 1896.

GEO. PURVIANCE,  
*Surgeon, M. H. S., Inspector.*

<sup>1</sup>The commanding officer was directed by the Bureau to make a special report of the requirements of the station with his recommendation in due form.



REPORT OF INSPECTION OF THE UNITED STATES QUARANTINE STATION AT  
DELAWARE BREAKWATER, NEAR LEWES, DEL.

By Surg. GEORGE PURVIANCE, M. H. S.

[NOTE.—The quarantine establishment at the Delaware Breakwater is an inspection and refuge station. Infected vessels are sent to the United States Quarantine Station at Reedy Island (40 miles below Philadelphia, on the Delaware River), where disinfection is performed, the exposed condition of vessels at the breakwater rendering it impracticable to disinfect them at that point. Seamen suffering with contagious disease are sent to the lazaretto; suspects are removed to the barracks and kept under observation.]

Name of quarantine station: Delaware Breakwater Quarantine Station.

When was the station last inspected? June, 1895.

Name of inspecting officer: Surg. George Purviance.

I. PERSONNEL.

Name of officer in command: P. A. Surg. C. P. Wertenbaker.

Date of assignment to duty: September 1, 1894.

Name and rank of assistants, including acting assistant surgeons; also give number of members in each family: None.

Name of steward and number of members in family: John F. Kuhn; no family.

Name and duties of each attendant: Horace Williard, engineer; William N. Jeffries, pilot of launch; Thomas Palmer, night watchman; Hans Schellwick, attendant; Charles Bracher, attendant; Hans Thorsen, carpenter and seaman on launch; George Langford, attendant.

II. GENERAL DESCRIPTION OF STATION.

Number of buildings: Fifteen.

Limit of anchorage for noninfected vessels: Twenty square miles.

Limit of anchorage for infected vessels: Five miles square.

Facilities for inspection of vessels: One naphtha launch.

Apparatus for disinfection of vessels and of baggage: One disinfecting chamber for disinfection of baggage and clothing.

Facilities for removal and treatment of sick: One barge and launch to tow the same; three hospitals—contagious, noncontagious, and suspect.

Facilities for removal and detention of suspects: Same as above for removal. Barracks capable of accommodating 800 immigrants; no means to take care of cabin passengers.

Mail and telegraph facilities: Has mail and telegraph facilities.

Give number of wharves: No wharves; one landing pier for small boats, 75 feet long, 8 feet wide. Long iron pier belonging to Government adjoins the reservation.

Are the mooring facilities ample? Ample.

What is the source of water supply? By cistern to surgeon's quarters; surface well in sand for attendant; artesian well for barracks.

Is it sufficient? Not a full supply.

Is it potable? Yes.

Hard or soft? Soft.

How is it distributed and stored, if storage is necessary? Stored for barracks in elevated tanks—3,000 gallons each—for hospitals by pumps.

III. DISINFECTING MACHINERY.

Enumerate the machinery constituting the disinfecting plant: One steam chamber, one boiler, one vacuum pump, and one force pump.

What is the general condition of all machinery? Good.



Does it appear well taken care of or neglected? Well taken care of.

Is there a steam hoisting engine for ballast? No.

Are there ballast tubs and a ballast car for the distribution of ballast? No.

How is ballast disposed of? No ballast discharged, except water ballast.

What are the dimensions of the steam disinfecting chamber? Nine feet 6 inches by 4 feet 5 inches by 5 feet 4 inches.

Is it rectangular or cylindrical? Rectangular.

How many cars are provided? Two cars.

Are infected articles put in at one end and brought out at the other after disinfection, or is one end of the chamber used for loading and unloading? Put in at one end and brought out at the other.

Is the chamber provided with thermometers for indicating the temperature during the process of disinfection? Yes; two.

Is the chamber equipped with any apparatus for the production of a partial vacuum? What is the nature of the appliance? Is it efficient in operation? One vacuum pump.

What vacuum is produced, and how long does it take to obtain it? Vacuum in jacket, three minutes; in chamber, ten minutes.

Is a sulphur furnace provided? No.

What is the method of storing bichloride solution? In barrels.

How many steam boilers are provided? One.

#### IV. BOATS.

Is the station provided with a steam tug or other steam vessel? No.

Is the station provided with a steam or naphtha launch? Naphtha launch.

Give dimensions: Thirty-eight feet long, 8 feet beam, 4 feet depth, 3 feet 6 inches draft, 12 horsepower; speed, 12 miles an hour.

What is its condition? Good.

Give report of medical officer as to efficiency of the launch: Good.

How many small boats are provided and what is the condition of them and their equipment? Two small boats; one a tender to the launch in good condition; one attached to barge condemned four years ago; one whaleboat in good condition.

Are more boats necessary or desirable? Two more boats are desirable; one flat-bottom boat for general work, and one light cedar boat.

#### V. HOSPITAL.

Give location of building used as hospital: On the northwest side of reservation.

Give general description of the building: One noncontagious two-story frame building, ward occupying first floor; one suspect hospital, a one-story frame building; one contagious-disease hospital made of frames, covered with canvas.

Number of beds in each ward: In the first building 20 beds; in suspect hospital 12 beds; in contagious hospital 12 beds.

How many beds can be added? Double the above number.

Cubic air space allowed: Ample air space.

Heating, lighting, and ventilating: Heated by stove, lighted by lamps, ventilated by windows.

Has the hospital sufficient furniture? Yes.

What kind of bedsteads, and what kind of mattresses and bedding? Iron bedsteads, woven-wire and cotton mattresses, sheets, blankets, and counterpanes.

Condition of bedding occupied by patients: Good.

Are the beds clean and free from vermin? Yes.

What is the condition of wards as to general cleanliness? Good.

Is the nursing sufficient, and is the nurse immune? Nursing is sufficient at present; additional nurses can be employed when needed. Nurses are not immune to yellow fever.



Does the character of the diet furnished conform to that prescribed in the diet table for marine hospitals? Yes.

Is a proper record of the patients under treatment kept? Yes.

#### VI. OUTBUILDINGS AND GROUNDS.

Describe general condition of outbuildings: Good.

Are the grounds well policed? Yes; by attendants.

Describe officers' quarters and condition of furniture: Large brick building; furniture in good condition.

Describe steward's and attendants' quarters and condition of furniture: Frame building ample in size; furniture in good condition.

Describe dining room, condition of table furniture and tableware: Frame building; furniture and tableware in good condition.

Describe kitchen and furniture: In good condition; some few articles needed.

Describe dispensary: Good condition; very little furniture, but enough for present needs.

Describe laundry: Sufficient at present.

Describe approaches to the station: By water and driveway.

Describe condition of fences and grounds: Good with the exception of what is mentioned and recommended below.

Describe drainage and condition of water-closets: Mentioned and recommended below.

Describe disposal of slops: Such as are suitable are fed to the cow; others are removed from station by wagon.

State whether any animals not authorized by the Department are kept on reservation: No.

#### VII. EQUIPMENT.

State, approximately, age and condition of each horse, and how long in service at this station: One horse about 12 years old, two years at station.

Give number and character of vehicles: One road wagon, one cart, one two-wheel cart for hauling latrine cans to discharging grounds.

Are they properly cared for? Yes.

Are harnesses in good condition? Yes.

Is there a blacksmith's forge provided? Yes.

Are there farming implements; and if so, are they in good condition? None.

Is there a fire apparatus provided; and if so, is there a fire drill organized? A pipe from the tanks to the buildings and taps at convenient distances for attaching hose can be used in case of fire.

#### VIII. DISCIPLINE.

Are officers and employees supplied with uniform in compliance with the revised uniform regulations? Yes.

Are uniforms properly worn? Yes.

Give method of granting leaves to officers and employees: According to United States Marine-Hospital Regulations.

Describe when and how inspection, muster, and fire drills are conducted: Formal inspection made every Saturday.

#### IX. GENERAL ADMINISTRATION.

Make a statement showing the number of vessels arriving at the station during the preceding calendar year, by months: January, 7; February, 18; March, 34; April, 29; May, 45; June, 54; July, 45; August, 25; September, 31; October, 23; November, 28; December, 12; total, 343. This not being a port of entry, no note



is taken of vessels arriving from domestic ports, or from foreign ports via domestic ports. No records kept of arrivals from domestic ports.

From what countries chiefly do the vessels come? These vessels come chiefly from the East and West Indies, and bring sugar, principally. They are usually here for orders. They usually come with cargo.

State whether in your opinion the quarantine facilities are sufficient to care for the shipping arriving at the station: Yes.

Give annual amount expended at station for last three years: During July, August, September, October, November, and December, 1893, \$46,934.18; twelve months of 1894, \$9,598.17; twelve months of 1895, \$14,513.66. During January, February, March, and April, 1896, \$3,312.85. The above is for improvements, repairs, salaries, etc.

Mention any facts which, in your opinion, should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper: Piling placed along river front to protect the site of contagious-disease camp. At least 150 feet should be put in at once. About 300 feet of fence should be put up to fill up gap in present fence. A bulkhead should be built along one side of contagious-disease camp. A picket fence 8 feet high should be built around the contagious-disease camp. The barracks for immigrants, also kitchen and storeroom, should be shingled at once. The platform in barracks needs repairing. All the buildings should be repainted. There should be an increase in water supply, and I would recommend that an additional water tank be erected. The sewer from the surgeon's quarters should be extended to what is now low-water mark. The other sewers also need a similar extension, the shore line having extended considerably. Officers' quarters in good condition, but need paint for outside and interior woodwork. The steward's quarters are good, but need painting. Attendants' quarters are in fair condition, but would be improved by painting. Officers' furniture is in good condition; new carpets, table, and chairs needed. Kitchen in good condition. Dispensary, very little furniture, but probably sufficient for present needs. Laundry, good.

I certify that the foregoing is a careful and correct statement of the condition of the Service at the Delaware Breakwater Quarantine Station inspected by me this 19th day of May, 1896.

GEO. PURVIANCE,  
*Surgeon, M. H. S., Inspector.*

#### MARYLAND.

##### *REPORT OF INSPECTION OF THE LOCAL QUARANTINE STATION AT BALTIMORE.*

By Surg. GEORGE W. STONER, M. H. S.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

The quarantine station is located at Little Hawkins Point, about 8 miles from the city by water and about 19 miles by land. The ground, an area of about 18 acres, is high and dry, beautifully located, and bounded on about two-thirds of its outline by the waters of Curtis Bay and the Patapsco River or Hawkins Bayou. In the rear it joins a truck farm and a small reservation of the light-house service (Leading Point Light). The buildings on the quarantine grounds are (1) the hospital, a two-story building containing four wards, with water-closets and bath-rooms for each, and four other rooms and kitchen; (2) physician's residence, a two-story and attic building containing twelve rooms; (3) employees' building, two-story and attic, containing twelve rooms, with a lookout on top; (4) the stable, containing three stalls and two box stalls; (5) the disinfecting building, and (6)



the boathouse. The limits of anchorage for noninfected vessels is about 1 square mile, and for infected vessels several miles. The facilities for inspection of vessels are the tugboat *Hygeia*, steam launch *Inspector*, and one four-oared yawl boat.

For the disinfection of vessels there is no special apparatus, the quarantine physician depending upon the facilities for generating steam on the vessel requiring disinfection, or, if a sailing vessel, the steam apparatus of the boarding tug *Hygeia*, together with the other disinfecting agents—sulphur fumigation and washing down with solution of bichloride of mercury, carbolic acid, etc.

For the disinfection of baggage a new disinfecting apparatus (copies of plans and specifications of this apparatus were forwarded in connection with my former reports) is in place in the new brick building constructed for the purpose. This building is divided by brick partitions into three compartments: (1) Furnace room with storage space for fuel, etc.; (2) room for the reception of infected articles (this room also contains a furnace for the destruction of articles which can not be properly disinfected), and (3) room in which disinfected articles are taken out of the iron disinfecting chamber. This chamber is 20 feet long and presents the appearance of a tunnel between the room for the reception of infected articles and the room where disinfected articles are removed, one-half of the chamber extending into each of these rooms, the object being to prevent any communication or contact of the disinfected with the infected. The cars upon which infected articles are placed and conveyed to the disinfecting chamber are about 10 feet long and 3 feet wide and have each four racks or tiers. Two of the cars can be placed in the chamber at one steaming.

The facilities for the removal of the sick are the boats of the station already referred to, and in case of large numbers lighters would be used. For the care and treatment of the sick a hospital is provided, and for the care of suspects, or for the care and treatment of a large number of the sick, tents would be pitched or temporary barracks constructed. The mail facilities are by boat to the city, post-office box No. 231, and the telegraph facilities are by telephone to the city by long-distance telephone.

2. Give personnel of the station or port, name of the quarantine officer or officers, post-office address, total number of officers and subordinates, etc.

Dr. S. O. Heiskel is the resident quarantine physician, and during the active quarantine season an assistant quarantine physician is employed. Dr. A. W. Smith was the assistant last year and has been reappointed. The crew of the tug *Hygeia* consists of captain, engineer, fireman, and deck hand, and the crew of the steam launch *Inspector*, captain, engineer, and deck hand. The other regular employees are the nurses, cook, laundress, house servant, farmer, and laborer.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

Copies of the laws and regulations (Exhibits A and B) governing the local quarantine are forwarded and the quarantine customs of the port are carried out in accordance therewith. The regular period for quarantine for all vessels from foreign ports and from ports south of Cape Henry is from April 30 to November 1, but is sometimes opened as early as April 1 and continued until December 1, and for vessels coming direct from foreign ports inspection is maintained throughout the year.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

The local regulations are carried out, and the requirements of the Treasury Department are also observed. There is no undue or unnecessary detention or disinfection of vessels.



5. State whether the inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.

Inspection is maintained throughout the year for all foreign vessels and all vessels with sickness on board or coming from infected localities.

6. Are vessels from other United States ports inspected?

All vessels from other United States ports south of Cape Henry are inspected from April 30 to November 1, and all vessels having had sickness on board during voyage are subject to inspection and quarantine the year round.

7. Describe quarantine procedures in the inspection of vessels; and if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection; (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

As described above in paragraphs 1 and 4, vessels in quarantine handled as expeditiously as possible. Disinfection of vessels begins immediately after arrival. United States quarantine regulations observed.

8. What communication is held with vessels in quarantine (and before quarantine) by pilots, etc., and how regulated? Is there any communication allowed among vessels in quarantine?

Speaking communication only allowed with vessels brought to or detained in quarantine. Pilots not allowed to leave vessel until permission of quarantine hospital physician shall be first obtained. Penalty of heavy fines. (See local quarantine regulations.)

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Vessels infected with cholera, yellow fever, or smallpox will be treated in accordance with the regulations governing the United States quarantine service. The conditions regarded as giving evidence of such infection are the conditions described in the said regulations, especially in Article II, page 25.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Records are kept at the station of all cases of disease occurring on the voyage or during detention.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

The fees for inspection are 1 cent a ton for vessels over 200 tons (net) and a charge of \$2 is made for vessels under 200 tons. There are no other quarantine fees, no charges for disinfection, and no wharfage charges.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(*a*) from foreign ports; (*b*) from foreign ports in yellow-fever latitudes via domestic ports; (*c*) from domestic ports. Show also the character of the commerce carried on by the port; i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

The following is a tabulated statement, furnished by the collector of customs, of vessels arriving at the port during the year ended December 31, 1895.



Month.	Total from foreign ports.		Total from domestic ports.		Great Britain.		Netherlands.		Italy.		Brazil.		Cuba.		Jamaica.		Other West Indies.		Germany.		Spain.	
	Cargo.	Ballast.	Cargo.	Ballast.	Cargo.	Ballast.	Cargo.	Ballast.	Cargo.	Ballast.	Cargo.	Ballast.	Cargo.	Ballast.	Cargo.	Ballast.	Cargo.	Ballast.	Cargo.	Ballast.	Cargo.	Ballast.
January	35	92	13	6	2	1	---	1	2	---	2	2	3	---	2	---	---	---	---	---	---	---
February	27	78	8	3	2	---	---	---	3	---	3	---	2	---	1	---	---	---	2	---	2	---
March	44	102	14	2	1	2	---	---	7	---	4	---	4	---	4	---	---	---	---	---	1	---
April	34	108	8	4	2	1	4	---	2	---	2	---	7	---	7	---	---	---	1	---	---	---
May	48	96	7	---	6	2	1	---	1	---	3	---	9	---	15	---	---	---	1	---	---	---
June	59	97	6	1	1	1	3	---	1	---	4	---	7	---	22	---	---	---	---	---	---	---
July	60	98	6	---	2	2	---	---	7	---	4	---	6	---	22	---	---	---	2	---	---	---
August	29	97	6	1	1	1	1	---	1	---	4	---	4	---	3	---	---	---	1	1	2	---
September	40	89	11	2	3	---	---	---	2	---	6	---	6	---	---	---	---	---	2	---	---	---
October	31	103	6	1	3	---	---	---	---	1	3	---	4	---	---	---	---	---	1	3	2	---
November	44	99	9	5	2	1	4	---	3	---	4	---	4	---	---	---	---	---	3	---	2	---
December	60	96	9	3	4	---	10	---	3	---	5	---	5	---	2	---	---	---	4	3	3	---
Total	511	1,155	103	28	29	10	27	1	32	1	45	2	61	---	83	---	---	---	11	15	12	---

There were also 3 arrivals from Russia; 1 from Cape Colony; 11 from Belgium; 7 from Colombia; 2 from Hongkong; 7 from Algeria; 4 from Greece; 1 each from Turkey, France, Venezuela, and Canary Islands, and 10 from Canada. No arrivals from foreign ports in yellow fever latitudes.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

The statement of the number of vessels arrived at the port of Baltimore from the different countries and coastwise, as given above, was obtained from the collector of customs at the custom-house.

14. State whether, in your opinion, the quarantine facilities are sufficient to care for the shipping entering the port.

The quarantine facilities are as stated in the foregoing report. Steam apparatus of the vessel requiring the disinfection, and if a sailing vessel, steam from the boarding tug. The sulphur fumigation is applied in the ordinary way, there being no apparatus for applying the same under pressure. The disinfecting solutions are used for washing down, and are also applied by pressure of force pump. The distance from the landing at the quarantine dock to the deep-water channel is about 600 yards, and the removal of persons and baggage from vessel to shore at quarantine station is done by the boats belonging to the station or by the use of lighters. A long pier, with pier head extending to deep water, would be of great advantage to the station; but it is doubtful if one could be constructed of sufficient strength to stand the weather during the winter.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection of vessels, are observed.

The quarantine regulations of the United States Treasury Department are in force (see blank form of certificate of health officer inclosed). The mayor, a year ago, in his message to the city council, referred to the new disinfecting plant, and quoted approvingly from the quarantine officer's report that the building of this plant became necessary in order to comply with the regulations promulgated by the United States Treasury Department. The apparatus, including the substantial brick building in which it is placed, cost the city \$15,000. The local quarantine physician seems especially desirous of carrying out the regulations prescribed by the Treasury Department, so that, as he says, no discrimination may be made against the port of Baltimore by subjecting Baltimore-bound vessels to quarantine at the capes (at the United States quarantine at Cape Charles, Va.).

16. Does the certificate of inspection or of pratique signed by the quarantine



officer state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

The certificate of the quarantine officer states that the vessel has in all respects complied with the quarantine regulations prescribed by the Secretary of the Treasury, and that, in his opinion, the vessel will not convey quarantinable disease. The following is a copy of the blank form:

BALTIMORE, MD., ———, 189—

I certify that ———, of ———, from ———, has in all respects complied with the quarantine regulations prescribed by the Secretary of the Treasury, and that, in my opinion, she will not convey quarantinable disease. Said vessel is this day granted free pratique.

*Health (Quarantine) Officer, Port of Baltimore.*

17. What disposition is made of the consular bills of health?

Duplicate copy is taken up by quarantine physician and placed on file at station. Original copy is taken up by the customs officers.

18. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

The general recommendation that I would make applies not alone to Baltimore, but to every State or local maritime quarantine: That maritime quarantine be placed under direct national control and be conducted at the expense of the General Government, the same as all other matters pertaining to the commerce of the port. Vessels infected with cholera should not be allowed to come up the bay.

MAY 22, 1896.

#### EXHIBIT A.

[From Baltimore City Code, 1893.—Quarantine hospital.]

138. The hospital on the southern shore of the Patapsco River shall be known as the "Quarantine Hospital of the Port of Baltimore;" and a suitable person, to be known and designated as the Quarantine Hospital physician, shall be biennially appointed as other city officers are appointed, who shall be a legally authorized practising physician whose duty it shall be to reside permanently on said hospital grounds, and generally to superintend the affairs of the hospital and the grounds attached thereto, and under the direction of the board of health to manage the whole domestic economy of the premises; to collect all moneys which may become due from patients of every class, and from all immigrants and others who may be received into said hospital, and to pay over said money to the register of the city on the first Monday of each and every month, and make a monthly report on the same day to the board of health of the affairs of the hospital, the number of inmates, by whose order received, and at whose expense. It shall be the further duty of the Quarantine Hospital physician, and he is hereby required, when making his monthly returns to the city register to render a statement in detail of all the several articles, with the quantities and prices attached, purchased by him or by his authority, or in any other manner, for the use of the Quarantine Hospital during the month just ended; also the number of patients resident and under treatment at said hospital at the several times of making said monthly returns. (City Code, 1879, art. 23, sec. 131, res. 202, May 17, 1881.)

139. He shall promptly attend to all messages or communications sent to or left at the hospital which may in any way concern his duties under this ordinance, at all seasons of the year, at any hour of the day between sunrise and sunset; he or his assistant, as hereinafter provided for, shall also carry into execution the quarantine laws and regulations provided for by this ordinance. He may, in case of ill health, or when the mayor and board of health may deem it absolutely necessary, employ, with their consent, one assistant, who shall also be a legally authorized practising physician, and reside at said hospital during the time he is so employed, for whose acts he shall be responsible, and whose compensation shall not exceed the sum of five dollars per day during the time his services may be required; said Quarantine Hospital physician shall, before he enters upon the duties of his office, execute a bond to the corporation, with such sureties as the mayor and comptroller may approve, in the penal sum of five thousand dollars, and with the condition that he will faithfully discharge the several duties and trusts reposed in



him, and pay over to the register all money collected by him or his assistant for the city. (City Code, 1879, art. 23, sec. 132.)

140. No vessel arriving from sea between the thirtieth day of April and the first day of November, and at such other times as the mayor and board of health may direct, shall approach nearer to the city than the quarantine ground, which shall be upon the southern or main branch of the Patapsco River; and it shall not be lawful for any vessel that is subject to quarantine regulations to approach nearer to the city than a line drawn from the point of Fort McHenry to the hospital ground; nor shall any such vessel come within the Lazaretto Light, upon the north side of Fort McHenry, until she has received a written permit from the Quarantine Hospital physician, or his assistant, to that effect; and said Quarantine Hospital physician, or assistant, shall board all vessels arriving from sea (except vessels returning in distress with outward cargo on board) after their arrival at quarantine ground, as soon as practicable, and such ship or other vessel shall come to anchor whenever required by the Quarantine Hospital physician, or his assistant, from the thirtieth day of April to the first day of November in each and every year; and it shall be the duty of the said physician, or his assistant, carefully to examine into the health of all the officers, crew, and passengers of such vessels, the condition of the cargo, the state of the vessel as to cleanliness, and generally into all such circumstances as may in any way affect or concern the health of the city; and if he shall believe it to be unsafe to permit any vessel so examined to unlade her cargo or come to the wharf, he shall order said vessel to the Lazaretto Wharf or to some other place outside the city limits, there to perform the necessary purification, which shall be done in such manner as may be directed by the said physician, or his assistant, to his entire satisfaction, or whenever the health of the city, in the opinion of the physician, or his assistant, may be endangered, whether from the actual presence of disease or from an unclean condition of the ship, vessel, or passengers, to require such ship or vessel to come to anchor at the quarantine ground, and there remain until the passengers have been removed and the ship or vessel thoroughly cleaned and purified; and all expenses of purification and removal and all other expenses incurred by said physician, or his assistant, to prevent the introduction or propagation of contagious and infectious diseases, to be paid by the master, owner, or consignee of the ship or vessel for which the expense was incurred. And it shall not be lawful for any person commanding or having charge of such vessel to remove her from the place assigned or designated by the said physician, or his assistant, without his written permission, or to suffer such vessel to be so removed by others. And any ship, vessel, or person violating any of the provisions of this section, or neglecting to comply with any orders issued or given by said physician, or his assistant, in conformity hereto, shall be liable to a penalty of five hundred dollars, and a further penalty of fifty dollars for every hour the ship or vessel may remain in any position in violation hereof; and an action for the recovery of all fines, forfeitures, or expenses incurred in carrying into effect any of the provisions of this ordinance may be laid against the ship or vessel, the master, the owner, or consignee of the ship or vessel so violating, each or all of them, at the election of the city. (City Code, 1879, art. 23, sec. 133.)

141. All vessels, after their cargoes are discharged, shall, if deemed necessary by the board of health, be forthwith removed to the stream and to a proper distance from the wharf, and thoroughly cleansed and ventilated under the direction of the said board; and any person offending against the provisions of this section, or who shall refuse or neglect to comply with the order of the officer or officers charged with its execution, shall forfeit and pay the sum of one hundred dollars, and twenty dollars thereafter during said disobedience shall continue. (City Code, 1879, art. 23, sec. 134.)

142. The commander, captain, pilot, or person having charge of any vessel coming to the port of Baltimore, from sea or elsewhere, and on board of which there shall be any person or persons affected with smallpox, varioloid disease, or whose condition would authorize a suspicion that the malady may be smallpox or any modification thereof, of any other infectious or contagious diseases, or on board of which smallpox, varioloid, or any eruptive disease of a kind which would authorize a suspicion that it had been any form or modification of smallpox, or any other infectious or contagious diseases, shall have appeared at any time during the voyage from the port or place at which the vessel had cleared, shall bring the said vessel to at the quarantine ground, and there await the arrival of the Quarantine Hospital physician or his assistant, and not depart thence until a written permission from the Quarantine Hospital physician or his assistant shall be obtained for that purpose; and it shall not be lawful for the said commander, captain, pilot, or other person having charge of said vessel to land or bring on shore, or suffer to be landed or brought on shore, any passenger or passengers or any of the officers or crew of such vessel, or any part or parcel of the baggage, goods or effects, or any other



articles contained in said vessel, until he has obtained a written permission from the Quarantine Hospital physician or his assistant so to do; and it shall, moreover, be the duty of the person aforesaid having charge of said ship or vessel to make a full disclosure of all such circumstances in relation to the health of the officers, crew, and passengers on board said vessel during voyage, and at the time of the inquiry, as may be necessary to enable the Quarantine Hospital physician or his assistant to determine on the measures necessary to be taken in the premises, and particularly to answer any interrogations which may be put to him by said officer in reference to the existence of smallpox, varioloid, or other eruptive, infectious, or contagious diseases among the officers, crew, or passengers on board the vessel at the time of inquiry, or at any previous time during the passage; and any person neglecting or refusing to comply with any requisitions or provisions contained in this section, or with any order of the Quarantine Hospital physician or his assistant, in pursuance of and in conformity thereto, shall forfeit and pay the sum of five hundred dollars; and if the said penalty shall have been incurred by the commander, captain, pilot, or other persons having charge of such vessel, and he shall abscond or evade the execution of this ordinance, then the said penalty shall be paid by the owner or consignee of such ship or vessel, unless he shall give such information as may lead to the apprehension of the delinquent. (City Code, 1879, art. 23, sec. 135.)

143. Each member of the board of health shall have full power and authority to give an order for the reception of any person affected with a contagious disease dangerous to the community into the Quarantine Hospital. (City Code, 1879, art. 23, sec. 136.)

144. It shall not be lawful for any person or persons knowingly to bring or cause to be brought into the city any damaged coffee, hides, rice or any other article which, by its nature, is liable to produce disease at any time between the first day of May and the first day of November, in each and every year, under a penalty of one hundred dollars; and it shall be the duty of the mayor and each member of the board of health, whenever any article shall have been brought into the city, to cause a written notice to be served on the person or persons having the same under his, her, or their charge to have the same forthwith removed to such place as may be directed in such notice, and shall likewise order that the vessel (if any) bringing the same be removed within six hours after delivery at said place to the quarantine ground, there to remain until cleansed and ventilated to the satisfaction of the Quarantine Hospital physician, and any person or persons refusing or neglecting to comply with the directions prescribed in the notice, either of the mayor or a member of the board of health, shall forfeit and pay a fine of one hundred dollars for each and every offense and twenty dollars for each and every hour such neglect shall continue. (Ibid., sec. 137.)

145. The mayor and board of health may, in their discretion, exempt from the quarantine regulations of the city of Baltimore all steam vessels coming into the port of Baltimore from any port in the United States north of Cape Henry, which exemption shall be certified to the physicians at the Quarantine Hospital, and shall remain in force until countermanded by said mayor and board of health and no longer; provided, however, that no exemption granted under the provisions of this section shall be so construed as to exempt the commander, captain, pilot, or other person having charge of any vessel coming into the port of Baltimore, or the owners or consignees of the same, from the penalties and fines imposed by section 142 of this article. (City Code, 1879, art. 23, sec. 138.)

146. Vessels arriving from the ports north of Cape Henry free from epidemic or contagious disease, and with cargoes from said ports, shall not be subject to the usual quarantine regulations contained in section 140 of this article, unless, in the judgment of the board of health, compliance with said regulations shall be necessary to protect the health of the city. (Ibid., sec. 139.)

147. The Quarantine Hospital physician or his assistant shall visit all ships or vessels that may come to at the quarantine grounds, as directed in section 142, as soon as practicable, in daylight, after the knowledge of such fact shall have been by any means obtained by him; and said officers are hereby authorized and directed to send all persons affected with smallpox, varioloid, or other infectious or contagious diseases, who may be found on board such vessels, to the Quarantine Hospital, to take or direct such measures in regard to the officers, crew, and passengers as, in their opinion, may be necessary to disinfect them and to prevent their propagating the disease, to direct all such articles on board the vessels to be landed in order to be purified from infection, as they may deem proper, and to subject all such articles to such process of disinfection as they may think necessary for that purpose. And the Quarantine Hospital physician is, moreover, authorized and required to keep all such articles as he may deem necessary to subject to the disinfecting process aforesaid under his own care and supervision until such purpose be accomplished. And it shall be the duty of said Quarantine Hospital



physician or his assistant, without approbation of the mayor, to adopt all means or measures consistent with the laws of the United States, or of the State of Maryland, and with the ordinances of the city of Baltimore, to prevent any communication between the citizens of Baltimore and those detained until the necessary means are used to disinfect them, their baggage, and other property to the satisfaction of the Quarantine Hospital physician or his assistant. And any person removing, or attempting to remove, any baggage or merchandise detained in virtue of this section, or any of the health ordinances of the city, shall forfeit and pay twenty dollars and all expenses of removing said baggage or merchandise back to the hospital or lazaretto grounds as may be directed, and of delivering the same into the charge of the Quarantine Hospital physician or his assistant. (City Code, 1879, art. 23, sec. 140.)

148. The expenses which may be incurred in disinfecting and purifying vessels and persons, baggage, and other articles from the infection of smallpox or other diseases, as provided for in the preceding section, shall be done at the proper cost and charge of the commander, captain, owner, or consignee of the infected vessel, and such part thereof as it may be necessary for the Quarantine Hospital physician or his assistant to incur in the first instance shall be charged to the commander, captain, owner, and consignee, or either of them, at the discretion of the Quarantine Hospital physician or his assistant, and collected by him; but if it can not be so collected, the amount which said physician shall have necessarily expended for the purpose aforesaid shall be refunded or repaid by the register of the city, with the approbation of the mayor. (City Code, 1879, art. 23, sec. 141.)

149. All passengers placed under quarantine, whether detained on shipboard or removed on shore, as the Quarantine Hospital physician or his assistant may direct, who shall fail to maintain themselves, shall be provided for by the master of the vessel in which they shall have arrived; and if the master shall omit to provide for them, as above directed, the expense of their maintenance shall be charged to the vessel in which they arrived. And such vessel shall not be permitted to leave the quarantine ground until such expense shall have been repaid or secured to be paid in a manner satisfactory to the mayor. (Ibid., sec. 142.)

150. If the captain, commander, or other person having charge of any vessel which shall be detained at quarantine by the Quarantine Hospital physician or his assistant shall refuse or neglect to obey or carry into effect any order or requisition of the Quarantine Hospital physician or his assistant made in pursuance of, and in conformity with, the provisions of section 147, he shall forfeit and pay the sum of twenty dollars for every such refusal or neglect, and the further sum of twenty dollars for every hour thereafter during which such disobedience shall continue; and if any person on board such vessel shall leave it and come on shore without the permission of the Quarantine Hospital physician or his assistant he or she shall forfeit and pay the sum of fifty dollars; and any person who shall have been permitted to land, and directed to remain at the Quarantine Hospital until permitted to go into the city, and shall leave the hospital grounds without the permission of the Quarantine Hospital physician or his assistant shall forfeit and pay the sum of fifty dollars; and if any person shall go on board, or have communication in any manner otherwise than by speaking with the persons on board any vessel brought to or detained under the provisions of this ordinance under quarantine, before he or she hath obtained permission from the Quarantine Hospital physician or his assistant, in writing, he or she shall forfeit and pay for every such offense the sum of twenty dollars. If smallpox, varioloid, or any infectious or contagious disease shall appear upon any of the officers, crew, or passengers of any vessel at any of the wharves of the city, or at anchor in the basin or harbor, at any season of the year, and the fact shall come to the knowledge of the board of health, it shall be the duty of the said board, or any of them, to order said vessel to the quarantine ground, to be subject to the regulations hereinbefore provided for in respect to vessels detained at quarantine; and if the commander, captain, or other person having charge of such vessel shall refuse or neglect to obey such order, he shall forfeit and pay the sum of one hundred dollars for such refusal or neglect, and the further sum of twenty dollars for every hour thereafter during which time such disobedience shall be persisted in; and it shall be the duty of the said board of health, or any member thereof, to notify the Quarantine Hospital physician or his assistant of the fact, for his government in the case. (Ibid., sec. 143.)

151. The Quarantine Hospital physician or his assistant, upon visiting any vessel in compliance with the provisions of this ordinance, whether at quarantine or elsewhere, shall demand and receive from the commander, captain, owner, or consignee of such vessel the following sums of money, viz: From any vessel not exceeding two hundred tons register measurement, two dollars for each and every voyage, and for vessels over and above two hundred tons, one cent a ton for each



and every voyage. And it shall be the duty of the Quarantine Hospital physician or his assistant to make monthly returns, on oath, of all the money collected by him and pay over the same to the register of the city, without discount or reduction, and also to return the number of vessels boarded by him and tonnage of each. And if any commander, captain, owner, or consignee of such vessel shall refuse or neglect to pay the sum authorized to be demanded of him by this ordinance, it shall be the duty of the Quarantine Hospital physician or his assistant to issue and deliver, or cause to be delivered, to said commander, captain, owner, or consignee a written order forbidding the landing of any part of the cargo of such vessel until the demand is paid; and if any person so notified shall disobey such order, he or she shall forfeit and pay the sum of twenty dollars and the further sum of twenty dollars for every hour thereafter during which such disobedience shall continue. (City Code, 1879, art. 23, sec. 144.)

152. In consideration of the duties to be performed as Quarantine Hospital physician, and in order to secure the best professional services, said officer shall hereafter receive, in lieu of all commissions or perquisites, a salary at the rate of three thousand dollars per annum, payable monthly, and may occupy the dwelling on the hospital grounds free of charge; but all expenses incurred for his support or that of his family shall be defrayed out of his salary. (Ibid., sec. 145.)

153. The Quarantine Hospital physician, with the consent and approbation of the board of health, shall be authorized, and he is hereby empowered, to employ such persons as may be required for boatmen (whose wages shall be at the rate of sixty dollars per month), farm hands, or nurses at such prices as may be agreed on by them; such person or persons to be discharged as soon as their services are not needed. (City Code, 1879, art. 23, sec. 146.)

154. The Quarantine Hospital physician shall be authorized, and is hereby directed and empowered, to charge each patient over fifteen years of age who may be sent to the Quarantine Hospital fifty cents for each and every day they may continue therein, and twenty-five cents for each and every person under fifteen years of age, except infants, for whom no charge shall be made. And should patient or patients, liable to pay such charges, fail to do so prior to leaving said hospital, then the master, owner, or consignee of the ship or vessel from which such patient was received shall be answerable for such charge, and it shall not be lawful for any person commanding or having charge of such ship or vessel to remove such ship or vessel from the quarantine grounds before executing in writing an agreement to pay to the mayor and city council of Baltimore such sum or sums as shall be chargeable to each and every patient sent to said hospital from such ship or vessel. (Ibid., sec. 147.)

155. Said Quarantine Hospital physician, through the board of health and with the approbation of the mayor, may obtain the necessary supplies for the support of the hospital, and for carrying out the provisions of this ordinance, and all bills for these purposes must be contracted by the board of health, and said physicians may, with the approbation of the mayor, draw on the comptroller for such sums as may be required for the purposes aforesaid, provided the same shall not exceed the sum appropriated for the current year by the mayor and city council for the support of the Quarantine Hospital department. (Ord. 114, Sept. 23, 1882.)

156. Whenever the Quarantine Hospital physician, or his assistant, shall find it necessary to order the goods, baggage, or bedding from on board a ship or vessel for the purpose of cleansing or disinfecting the same, he shall take care to have them kept safe from injury or depredation, and cause them, when disinfecting, to be returned to the ship or vessel from which they were taken, before such ship or vessel shall leave the quarantine grounds, unless the owner or owners thereto be detained at the hospital, in which case the same shall be delivered to the respective owner or owners thereof, when they shall be discharged from the hospital; the captain, owner, or consignee shall be answerable for all expenses incurred by carrying out the provisions of this section. (City Code, 1879, art. 23, sec. 149.)

157. It shall be the duty of the Quarantine Hospital physician, or his assistant, to carefully inspect the condition of all passengers and passenger ships or vessels arriving at this port from any foreign country; and whenever, in their opinion, the health of the city may be endangered, whether from the actual presence of disease or from an unclean condition of the ship or passengers, to require such ship or vessel to come to anchor at the quarantine grounds, and there remain until all the passengers have been removed, and the ship or vessel thoroughly cleansed and purified; all expenses of purification and removal and all other expenses incurred by the Quarantine Hospital physician or his assistant, to prevent the introduction or propagation of contagious or infectious diseases, to be paid by the master, owner, or consignee of the ship or vessel for which the expense was incurred. (Ibid., sec. 150.)



158. The Quarantine Hospital physician or his assistant may, when either of them deem it necessary to prevent the propagation of smallpox or varioloid disease among the crew and passengers of ship or vessel detained at the quarantine ground, vaccinate any one or more of said crew and passengers, and may charge twenty-five cents a person for performing said duty, and in case one or more persons on board a ship or vessel whom it would not be necessary to send to the hospital, but who may desire the attendance of the Quarantine Hospital physician or his assistant during any part of the time said ship or vessel may remain at the quarantine grounds, shall charge fifty cents per day for each and every person he may so attend; and in case said person or persons shall fail to pay such charges, then the ship or vessel, the master, the owner, or consignee of the ship or vessel shall be answerable for the charges provided to be made; the money, when collected, to be paid to the city register, to be placed by him to the credit of the Quarantine Hospital. (City Code, 1879, art. 23, sec. 151.)

159. Whenever the harbor masters, or any one of them, shall hear or know of any violation of any of the provisions of this ordinance, it shall be his or their duty to report said violation to the board of health, who shall promptly enforce the penalties of this ordinance; and all money so collected shall be paid to the city register, who shall place the same to the credit of the Quarantine Hospital. (Ibid., sec. 152.)

The mayor of the city, the presidents of the two branches of the city council, the president of the German Society, the president of the Hibernian Society, and the president of the St. Andrew's Society are a committee, ex officio, and are hereby empowered to visit said hospital once during each month, or oftener, if necessary, and to examine the condition of the patients, their food, bedding, clothing, cleanliness, and ventilation of the apartments, as well as into all other things connected with the general or medical management of the institution; and said committee, through mayor only, may make such suggestions to, or requisitions upon, the board of health as may be deemed expedient or necessary in relation to the food, bedding, or other suitable supplies for the comfort of said patients, with due consideration at the same time of an economical expenditure of such moneys as from time to time may be appropriated for the use of the said hospital. (Ibid., sec. 153.)

161. The officers, respectively, of the aforesaid visiting committee shall be honorary and without pecuniary remuneration; provided, however, that the board of health is hereby authorized to supply at all necessary times suitable conveyance for said committee to and from said hospital, the vouchers for the expense of which conveyance shall be allowed in the annual statement of said board, properly charged to the account of the said hospital. (City Code, 1879, art. 23, sec. 154.)

162. The mayor of the city, the city comptroller, and the engineer of the harbor board are hereby authorized to enter into an agreement with the owners of the land adjoining on the south the property belonging to the mayor and city council of Baltimore, known as the Quarantine Hospital, establishing and defining a line prolonged into the river from the dividing line between the said two parcels of land, along which the respective owners of said two parcels of land may extend improvements into the river in front of their respective parcels of land, as allowed by law, which line shall thenceforth be the boundary line between said parcels of land to the extent to which the respective owners of said land are now, or may hereafter be, entitled by law to extend improvements into the river. (Ord. 70, May 14, 1881.)

163. The mayor is hereby authorized, in behalf of the mayor and city council of Baltimore, to execute all deeds that may be necessary to give legal effect to said agreement, subject to the approval of the city solicitor. (Ord. 70, May 14, 1881.)

#### CONTAGIOUS AND INFECTIOUS DISEASES.

164. Every physician shall report to the commissioner of health, in writing, upon blanks to be furnished by said commissioner, every person having smallpox, cholera, yellow fever, malignant diphtheria, measles, whooping cough, mumps, pseudo-membranous croup or scarlet fever, and varioloid, and his or her place of dwelling, and name, if known; such report to be made within twenty-four hours after the first visit, if such report was not previously made by some physician. (Ord. 125, Oct. 24, 1882; ord. 22, May 20, 1890.)

165. It shall be the duty of each and every practising physician in the city to report, in writing, to the commissioner of health the death of any of his patients who shall have died of contagious or infectious disease within twenty-four hours thereafter, and to state in such report the specific name and type of such disease. (Ord. 125, Oct. 24, 1882.)



166. The keepers of all hotels and boarding houses, and the agents and owners of all tenement houses or private residences or dwelling houses, having any person or persons in their hotels, boarding houses, tenement houses, or private residences or dwelling houses, suffering from or afflicted with any malignant, infectious, or contagious disease, as mentioned in section 164, after they shall have become acquainted with the fact, or are apprised of the same, shall immediately notify the commissioner of health, at his office in the city hall, stating the name of the person or persons so afflicted, their age and residence or location, and such other facts as they may be in possession of. Any such keeper, owner, or clerk of any hotel or boarding house, or any agent or owner of any tenement house, private residence, or dwelling house who shall fail or neglect to notify, in writing, the commissioner of health within twenty-four hours of such case of malignant, contagious, or infectious disease after having become aware, apprised, or informed of the same, shall be subject to the penalties hereinafter specified. (Ibid.)

167. The commissioners, managers, principals, or other proper person or head officer of each and every public or private institution in the city, where persons lodge or abide temporarily or permanently, shall report, in writing, the name, if known, and the condition and disease of any and every person being thereat, and sick of smallpox, cholera, or yellow fever, malignant diphtheria, scarlet fever, and varioloid. (Ord. 125, Oct. 24, 1882.)

168. The master, chief officer, or consignee, or any of them, of every vessel not being in quarantine or within quarantine limits, but being within one-fourth of a mile of any dock, wharf, or building of the city, having on board any contagious disease, shall report to the commissioner of health, or cause to be reported immediately, in writing, the particular location of said vessel and its name, and shall in said report state the name, disease, and condition of any person being in or on such vessel, and sick of any contagious disease, as aforesaid. (Ibid.)

169. No person shall bring to any dock, wharf, or building, or within one thousand feet thereof, in the city, or unload at any dock, building or pier therein, or have storage in the city, any skins, fish, rags, bones, hides, or similar articles or materials which have been brought from any infected place, without or otherwise than according to a written permit so to do from the commissioner of health; and no person shall sell, exchange, or in any way make any exposure of any straw, bedding, clothing, or articles that have been exposed to any contagious disease, or are liable to communicate such disease, till after the same shall have been adequately cleansed or disinfected, and a written permit so to do obtained from the commissioner of health. (Ibid.)

170. No person shall, within the city, without a permit from the commissioner of health, carry or remove from one building to another, or from one vessel to the shore, any person sick of any contagious disease; nor shall any person, by any exposure of any individual sick of any contagious disease, or of the body of such person, or by any negligent act connected therewith, or in respect of the care or custody thereof, or by needless exposure of himself, cause or contribute to, or promote the spread of disease from any such person or from any dead body. (Ord. 125, Oct. 24, 1882.)

171. All bodies of persons who shall have died of any of the contagious diseases mentioned in section 164 shall be buried within twenty-four hours after death, unless extension of time shall be granted by the health commissioner; and no such body shall be exposed to the peril or prejudice of the life or health of any person. (Ibid.)

172. Whenever a disease of a contagious and infectious character is discovered to exist in any dwelling house or building within the city, and which is situated in an unhealthy or crowded part of the same, and is in a filthy and neglected state, or is inhabited by too many persons, the said commissioner of health, by advice and consent of the mayor, may, and at the expense of the city, compel the inhabitants of such dwelling house to remove therefrom, and may place them in such buildings or temporary structures in some more salubrious situation, until measures can be taken, under the direction and at the expense of the city, for the immediate cleansing, ventilation, purification, and disinfection of such dwelling. (Ibid.)

173. The commissioner of health, with the approbation of the mayor, may cause all houses, districts, or parts of districts where contagious and infectious diseases exist, as mentioned in section 164, to be fenced in and guarded by sentinels; and said commissioner may also in such cases, with the approbation of the mayor, furnish such subsistence and clothing as may be necessary during the time said district or part of district may be fenced in as above; the expense of the same to be borne by the city. (Ibid.)

174. When a disease dangerous to the public health exists, and in order to prevent



the spreading of the same, the commissioner of health, with the approval of the mayor, shall have the power to rent halls, dwelling houses, and other suitable places, or have erected such temporary structures for a hospital or place of reception for the sick and infected as is judged best for their accommodation and the safety of the inhabitants, which shall be subject to such rules and regulations as the commissioner of health, with the approval of the mayor, may prescribe; and the commissioner of health may cause any sick and infected person to be removed thereto, unless the condition of such person will not admit of his or her removal without danger to his or her health, in which case the house or place where he or she remains shall be considered as a hospital; and all persons residing in, or in any way concerned, within the same, shall be subject to such regulations as may be prescribed by the commissioner of health, with the approval of the mayor. (Ibid.)

175. When such disease is found to exist, the commissioner of health shall use all possible care to prevent the spreading of the infection, and to give the public notice of infected places by displaying a yellow flag on the premises where said infectious disease exists, and by all other means which in his judgment shall be most effectual for the common safety; and whoever obstructs the commissioner of health or his agents in using such means to prevent the spreading of the infection, or wilfully removes, obliterates, defaces, or handles the yellow flags or other signals so displayed, shall be subject to such fines and penalties as prescribed in section 183. (Ibid.)

176. Whenever the commissioner of health may have just cause to suspect that any baggage, clothing, bedding, or goods of any character, found in the city, are infected with any contagious or infectious diseases which may be dangerous to the public health, he shall proceed to the nearest magistrate and obtain a warrant, and have said goods removed to such place as he may deem best, or otherwise detained until, in the opinion of the commissioner of health, they are freed from infection. (Ibid.)

177. Parents and guardians shall cause their children and wards to be vaccinated before they attain the age of one year, and revaccinated whenever the commissioner of health shall, after five years from the last vaccination, require it. (Ibid.)

178. The commissioner of health shall require and enforce the vaccination of all persons residing in the city and not before vaccinated, and the revaccination of any person in the infected district, whenever, in his opinion, the same may be necessary. (Ibid.)

179. It shall not be lawful for any person or persons to convey any body suffering from smallpox, scarlet fever, diphtheria, or other contagious diseases, to or from any point in the city of Baltimore, nor any known to have died from smallpox, or other contagious diseases, in any hackney coach, buggy, cab, or gig which is for public hire, under penalty of having it or them taken by the commissioner of health, disinfected, fumigated, and quarantined for thirty days, unless it or they are used for that purpose only, and then the commissioner of health must be satisfied that such is the case. (Ibid.)

180. It shall not be lawful for any person or persons having hackney coaches, buggies, cabs, or gigs for hire to hire or cause or permit the same to be hired or loaned, or in any manner to be used, by any person or persons for the purpose of conveying a dead body known or supposed to have died from smallpox, scarlet fever, diphtheria, or any other infectious diseases, to or from any dwelling or public building to any cemetery or other point within or through the city, unless they conform to the restriction in section 179. (Ibid.)

181. In every case where there has been smallpox, diphtheria, scarlet fever, or other contagious diseases, and the sick person has either died or been removed from the premises where the disease existed, and the occupant or occupants have vacated the property without causing a thorough and complete fumigation and disinfection of said property, then it shall be the duty of the owner or owners of said property to have said premises properly fumigated and disinfected before permitting any person or persons to visit the property for the purpose of becoming tenant or tenants, owner or owners of said premises. (Ibid.)

182. The commissioner of health, whenever in his judgment he may deem it expedient to properly vaccinate the citizens of Baltimore, may, with the advice and consent of the mayor, appoint extra vaccine physicians to fully carry into effect the provisions of this section of this ordinance. (Ibid.)

183. Any person who violates, disobeys, omits, neglects, or refuses to comply with or who resists any of the provisions of this ordinance, shall be fined not less than one dollar nor more than two hundred dollars for each offense; said fines to be collected as other fines are collected, except that the fine for the refusal to vaccinate shall not exceed ten dollars. (Ibid.)



## EXHIBIT B.

Masters, pilots, and other persons having charge of vessels coming to the port of Baltimore will take notice that the following quarantine regulations are in force at said port, and that any violation thereof will subject the vessels and persons offending to the penalties therein mentioned.

I. All vessels arriving from sea, between April 30 and November 1 (except from ports in the United States north of Cape Henry), are required to stop at quarantine ground, and there await the arrival and orders of the Quarantine Hospital physician or his assistant.

Any vessel violating this regulation, or any order given by the Quarantine Hospital physician or his assistant in conformity therewith, will incur a penalty of \$500, and a further penalty of \$50 for every hour the said vessel shall remain in any position in violation thereof.

II. Masters, pilots, or other persons having charge of vessels coming to the port of Baltimore, whether from sea or elsewhere, at any and all seasons of the year, on board of which there may be, or may have been, at any time during the voyage, any sickness of an infectious or contagious character, or which would authorize a suspicion that it might be infectious or contagious, are required to stop at quarantine, and there await the arrival of the Quarantine Hospital physician or his assistant, and shall not leave there without the written permission of said physician or his assistant; and said masters, pilots, and other persons having charge of said vessels are warned not to suffer any person who may be on board, or may come on board before the quarantine officers, to leave said vessels, or any baggage, goods, or other article to be landed or brought on shore from said vessels until the written permission of the Quarantine Hospital physician or his assistant shall be first obtained.

Any violation of this regulation will subject the master, pilot, or other person so offending to a fine of \$500, and a like penalty will be imposed for any violation of the orders of the Quarantine Hospital physician or his assistant, given in pursuance thereof, or for any refusal to make full disclosure of all circumstances in relation to the health of the officers, passengers, and crew on board of said vessels, at the time of inquiry and during the voyage.

III. Any person who shall go on board, or have communication otherwise than by speaking with the persons on board any vessel brought to or detained at quarantine, before he or she shall have obtained permission in writing from the Quarantine Hospital physician or his assistant, shall be fined \$20 for each and every offense.

IV. If any person on board such vessel shall leave it and come on shore without the permission of the Quarantine Hospital physician or his assistant, he or she shall be fined \$50.

V. Any person removing or attempting to remove any baggage or merchandise detained at quarantine, under any of the health ordinances of the city of Baltimore, without the permission of the Quarantine Hospital physician or his assistant, will be fined \$20 and all expenses of returning said baggage or merchandise into the charge of said physician or his assistant.

VI. Persons engaged in the act of violating any of the foregoing regulations or orders of the Quarantine Hospital physician or his assistant, in pursuance thereof, will be subjected to summary arrest besides incurring the pecuniary penalties named.

VII. Masters of vessels are authorized by act of Congress to arrest and hold as prisoners, to be delivered to the proper authorities, any persons who, not being in the United States service or authorized by law, shall come on board their vessels without leave prior to the actual arrival of said vessels at their port of destination and before they shall be completely moored.

By order of the board of health.

[NOTE.—These regulations are also printed in Spanish and Italian.]

## DISTRICT OF COLUMBIA.

## REPORT OF INSPECTION OF LOCAL QUARANTINE STATION AT WASHINGTON, D. C.

By P. A. Surg. W. J. S. STEWART, M. H. S.

1. No quarantine station; no anchorage. Vessels from foreign ports are inspected by the District health officer or deputy health officer. No apparatus for disinfection of vessels or baggage; no facilities for removal and treatment of sick other than afforded by the city hospitals; no facilities for removal or detention of suspects.



2. No station; inspection done by District health officer or his deputy.
3. No local quarantine.
4. No additional requirements; no unnecessary detention.
5. Inspection of all vessels from foreign ports is maintained throughout the year.
6. No vessels from other United States ports are inspected.
7. The inspection consists in examination of the bill of health, mustering the crew and seeing that there is no contagious disease among them, and, in future, filling out blank attached (Exhibit A). If an infected vessel, or one considered so by the inspector, should arrive, he would communicate with the office of the Marine-Hospital Service by telephone.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.) and how regulated? Is there any intercommunication allowed among vessels in quarantine?

The majority of vessels arriving from foreign ports are towed up from the mouth of the river. After docking, word is sent to the custom-house, and from there a telephone message is sent to the health office for an inspector to go to Georgetown to issue the pratique. In the interim no attempt is made to prevent communication with the vessel.

9. In case of infection or suspected infection the health officer would consult with the Marine-Hospital Bureau.

10. No records are kept. The "bill of inquiry preliminary to issue of permit to enter," attached (Exhibit A), will in future form a record.

11. No fee for inspection is required.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months, from (a) foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port—i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

Month.	Vessels.	From—	Cargo.
January .....	1	New Brunswick .....	Laths.
March .....	1	Trinidad .....	Asphalt.
April .....	1	New Brunswick .....	Ice.
June .....	1	Trinidad .....	Asphalt.
July .....	1	New Brunswick .....	Laths.
.....	2	do .....	Ice and laths.
.....	1	Trinidad .....	Asphalt.
August .....	1	do .....	Do.
September .....	1	New Brunswick .....	General cargo
October .....	1	Trinidad .....	Asphalt.
November .....	1	New Brunswick .....	General cargo
.....	3	Trinidad .....	Asphalt.

For 1896 to date, 4 from Trinidad and 1 from New Brunswick. Imports, ice and laths, and a few cargoes of gypsum. No exports. Some coal is carried to southern United States ports and the vessels return in cargo of yellow pine from there to New Brunswick. No arrivals from foreign ports in yellow-fever latitudes or from domestic ports.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

I ascertained that the bills of health are filed in the custom-house; that no vessel from a foreign port, or from an infected domestic port, is admitted to entry without a certificate from the health officer or deputy. No immigrants at this port.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

If the vessels were inspected in the stream before being docked, and no communication allowed until after pratique had been granted, I think, in consideration



of the character of the cargoes, the fact that no immigrants arrive, and the infrequency of the arrival of foreign vessels, the facilities would be sufficient.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

Article X, paragraph 4, and Article I, paragraph 4, inasmuch as no effort is made to prevent communication until after visit of health officer or deputy.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with, as required by section 5, act of February 15, 1893? Transmit copy of certificate.

It does not; copy attached (Exhibit C). It seems to imply a previous inspection.

17. The consular bills of health are filed at the custom-house with other papers relating to the vessel.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

No other facts known by me other than above stated. Recommendations are that Article I, D. 4, p. 25, and Article X-4, p. 31, Quarantine Regulations, be enforced.

OCTOBER 7, 1896.

EXHIBIT A.

BILL OF INQUIRY PRELIMINARY TO ISSUE OF PERMIT TO ENTER.

DISTRICT OF COLUMBIA, HEALTH DEPARTMENT,  
Washington, ———, 189—.

1. What is the name of this vessel? \_\_\_\_\_.
  2. What is the rig of the vessel? \_\_\_\_\_.
  3. What is the name of the commander? \_\_\_\_\_.
  4. From what port did she start on this voyage? \_\_\_\_\_.
  5. When did she clear this port? \_\_\_\_\_.
  6. What is her tonnage? \_\_\_\_\_.
  7. To what port does she belong? \_\_\_\_\_.
  8. How many men, all told, compose your crew? \_\_\_\_\_.
  9. How many passengers have you? \_\_\_\_\_.
  10. How many passengers are foreigners? \_\_\_\_\_.
  11. Are all the passengers you have taken on board now on board of your vessel? \_\_\_\_\_.
  12. Where were the passengers taken on board? \_\_\_\_\_.
  13. Have you had any sickness on board since the commencement of this voyage? If so, what? \_\_\_\_\_.
  14. Are all now on board in good health? \_\_\_\_\_.
  15. At what port or places did your vessel touch or trade during the voyage, and what time did she leave each of them? \_\_\_\_\_.
  16. Did any sickness prevail in the harbor or on shore or at any of said ports or places? \_\_\_\_\_.
  17. Of what does your cargo consist? \_\_\_\_\_.
  18. To whom is your cargo consigned? \_\_\_\_\_.
  19. To whom is your vessel consigned? \_\_\_\_\_.
  20. Have you a bill of health? \_\_\_\_\_.
  21. Has any person boarded your vessel since you entered the Capes? \_\_\_\_\_.
  22. Has any person left your vessel since you entered the Capes? \_\_\_\_\_.
  23. Have you any rags or waste aboard? \_\_\_\_\_.
- Inspected and passed \_\_\_\_\_, 189—.

\_\_\_\_\_  
Inspector.



## EXHIBIT C.

## PERMIT TO ENTER.

DISTRICT OF COLUMBIA, HEALTH DEPARTMENT,  
Washington, ———, 189—.

This is to certify that ——— has been discharged from quarantine, with free pratique, and having been again examined this day and found in sanitary condition and free from disease, is therefore entitled to enter at the custom-house at Georgetown, D. C.

—————, *Health Officer.*

## VIRGINIA.

REPORT OF INSPECTION OF UNITED STATES QUARANTINE STATION AT CAPE CHARLES.

By Surg. H. R. CARTER, M. H. S.

INSTRUCTIONS TO MEDICAL OFFICERS OF THE MARINE-HOSPITAL SERVICE DETAILED TO MAKE INSPECTIONS OF UNITED STATES QUARANTINE STATIONS.

1. Your visit to the station should be unannounced.
2. Upon arrival at the station, you will first call upon the commanding officer and arrange with him for an inspection of the station, which should be made as soon after arrival as practicable.
3. You will make proper entries to each question of this inspection blank and forward to this office upon completion of your duty.

WALTER WYMAN,  
*Supervising Surgeon-General, Marine-Hospital Service.*

Name of quarantine station: Cape Charles Quarantine.

When was the station last inspected? Last record is August 19, 1894.

Name of inspecting officer: Surgeon-General Wyman, M. H. S.

## I. PERSONNEL.

Name of officer in command: P. A. Surg. W. J. Pettus, M. H. S.

Date of assignment to duty: November 16, 1895.

Name and rank of assistants, including acting assisting surgeons: No assistants.

Name of steward and number of members in family: F. J. Herty; no family.

Name and duties of each attendant: Charles V. Merkle, engineer; H. C. Harman, keeper at Fishermans Island; C. J. Bonneville, keeper of steamer *Koch*; Hugh Harper, keeper of ship *Jamestown*; Charles Engleson, keeper of steamer *Dagmar*; W. R. Melson, assistant keeper of Fishermans Island; Henry Simpson, cook; Andrew Andersen, seaman; Andrew Brady, seaman; Ira Sawyer, fireman; Harry Winingder, attendant. The men designated as "keepers" are, save Harper, not available for general use.

## II. GENERAL DESCRIPTION OF STATION.

Number of buildings: Seven—2 barracks, 1 laundry and dining room, 1 disinfecting building and bath house, 1 pump house (over artesian well), 1 storehouse on pier head, 1 keeper's house; all on Fishermans Island.

Limit of anchorage for noninfected vessels: Off the *Jamestown*, to leeward if possible, for inspection only. Vessels detained here only for inspection.

Limit of anchorage for infected vessels: To northwest of Fishermans Island.

Facilities for inspection of vessels: Yawl boats and naphtha launch.

Apparatus for disinfection of vessels and of baggage: Two steam chambers, modern type, one on *Jamestown* and one at Fishermans Island; two sulphur furnaces, one on *Jamestown* and one on the *Koch*, and two bichloride tanks and steam



pumps for the same, similarly distributed. The plant on the *Jamestown* is complete, well designed, and in good order. Those on the *Koch* and Fishermans Island are also complete, but the sulphur furnace is not so good as the other.

Facilities for removal and treatment of sick: For removal of sick, none; a tug would be hired and the *Koch* used as a transfer barge. The sick would be treated at Fisherman's Island in one of the buildings (barracks). The yellow-fever cases from the *Daspa* were so treated in 1894.

Facilities for removal and detention of suspects: For removal, none; it would be done by ship's boats or chartered vessels. For detention, the barrack at Fishermans Island would be used; they are ample and well equipped.

Mail and telegraph facilities: For boarding station, good; Fort Monroe. For Fishermans Island, not good, but there is a telephone to Cape Charles at Smiths Island, belonging to the United States, about 2 miles distant.

Give number of wharves: One at Fishermans Island, only.

What is the length of the wharf frontage? One hundred and four feet.

Are the wharves in good condition: No; save 31 new creosoted piles; those under the pier head are practically all gone, and I think none of the old piles will hold until winter. The 31 new piles will hold the pier head, but the gangway will probably go next winter, unless new piles are put in.

Are the mooring facilities ample? Vessels moor by their own anchors and ground tackle.

What is the depth of water at mean low tide along the front of the wharf? Fifteen feet.

What is the source of water supply? Artesian well and four cisterns for rain water, with a good roof supply; well has a steam pump for distribution.

Is it sufficient? Yes.

Is it potable? Yes.

Hard or soft? The artesian water is hard.

If hard, does it injuriously affect the boilers in use at the station? Never been used in them.

How is it distributed and stored, if storage is necessary? No storage except rain water, as given above. The artesian water is connected with the cisterns at the disinfecting building, bath house, and laundry, and thence distributed, but there is no general service to barracks, etc.

### III. DISINFECTING MACHINERY.

Enumerate the machinery constituting the disinfecting plant: Two steam chambers, 2 sulphur furnaces, 2 bichloride pumps and tanks, with hose and nozzles, etc. There are two complete plants, with boilers, engines, etc.

What is the general condition of all machinery? All disinfecting machinery is in good order.

Does it appear well taken care of or neglected? Well cared for.

Is there a steam hoisting engine for ballast? There is such an engine aboard the *Jamestown* that could be so used. There has never been occasion to use it.

Are there ballast tubs and a ballast car for the distribution of ballast? No.

How is ballast disposed of? Very little has ever been handled, and it was thrown overboard off Fishermans Island.

Is it disinfected prior to being discharged, and what facilities exist for supplying ballast to vessels needing it? It was not disinfected. Sand could be taken from Fishermans Island for vessels, but there has been (I think) occasion to do so but once.

What are the dimensions of the steam disinfecting chamber? *Jamestown*, 9 feet by 5 feet 4 inches by 4 feet 4 inches; at Fishermans Island, 15 feet by 8 feet by 8 feet.



Is it rectangular or cylindrical? Both rectangular.

How many cars are provided? Two for each.

Are infected articles put in at one end and brought out at the other after disinfection, or is one end of the chamber used for loading and unloading? Put in at one end and brought out at the other.

Is the chamber provided with thermometers for indicating the temperature during the process of disinfection? That on the *Jamestown* has no thermometer. They have been requisitioned for but not received. That at Fishermans Island has a thermometer.

Is the chamber equipped with any apparatus for the production of a partial vacuum? What is the nature of the appliance? If efficient in operation? Yes; have vacuum air pumps; said to be efficient by the engineers who have used them.

What vacuum is produced and how long does it take to obtain it? It has been used at 5 inches and takes five minutes on the *Jamestown* and eight minutes at Fishermans Island.

Is a sulphur furnace provided? Two of them; one aboard the *Jamestown* and one aboard the *Koch*.

How many feet of sulphur hose are provided? Sixty feet, in five sections.

What is its condition? Good; almost new; only two sections have been in use.

What is the condition of the fan and engine? Good on board both *Jamestown* and *Koch*.

What is the method of storing bichloride solution? Aboard *Jamestown* in a 1,000-gallon wooden tank (deck); aboard *Koch* in two 1,000-gallon iron tanks (hold).

Are the tanks of wood or iron? The one on the *Jamestown* is of wood, and the two aboard the *Koch* are of iron.

What is the elevation of the tanks above the wharf flooring? None on wharf.

Is the solution distributed by gravity, or is there a pump for the purpose? Distributed by a steam pump on both vessels.

How many feet of hose are provided for the distribution of the bichloride solution, and what is its size and condition? Two hundred and fifty feet of 2-inch hose, new and in good condition; 2-inch nozzles,  $\frac{1}{2}$ -inch and  $\frac{1}{4}$ -inch delivery.

How many steam boilers are provided? Three—1 at the artesian well, Fishermans Island; 1 at the disinfecting house, Fishermans Island; 1 aboard *Jamestown*.

What is their condition, and do they supply sufficient steam for all purposes? Good; they supply sufficient steam.

#### IV. BOATS.

Is the station provided with a steam tug or other steam vessel? Two steam vessels—the *Dagmar*, for boarding, and the *Koch*.

If so, is she of wood or iron? Both of iron.

Give dimensions: *Dagmar*, 101 feet by 16 feet 6 inches.

If of wood, is the vessel sheathed with metal? The *Jamestown* is of wood and metal sheathed.

Are the engines and boilers in good condition? Boilers are not; the *Koch's* engine is in good condition, but the *Dagmar's* engine needs a larger circulating pump.

Give engineer's statement as to necessary repairs and renovation: Aboard the *Jamestown* none are needed; at Fishermans Island none are needed; aboard *Dagmar*, renewal of part of the boiler, new grate, and circulating pump, bars and bearing bars, and some piping; aboard *Koch*, new tubes in boiler, forward tanks connected with pump aft, inspirator, steam gauge, and sheet-iron covering around boiler, new connection door for boiler.

Is the station supplied with a steam or naphtha launch? Has a naphtha launch.

Give dimensions: Twenty-one feet; 2-horsepower engine.



What is its condition? Good.

Give report of medical officer as to efficiency of the launch: Good.

How many small boats are provided, and what is the condition of them and their equipment? Four small boats, all in good condition.

Are more boats necessary or desirable? No.

#### V. HOSPITAL.

Give location of building used as hospital: No building erected for a hospital. Barracks can be so used.

Give general description of the building: There are two barracks buildings 300 by 26 feet each, made of dressed lumber and divided into six wards, with 96 bunks in each ward.

How many beds can be added for emergencies? Six in each ward.

Cubic air space allowed each patient: About 325 cubic feet, if ward is full.

Heating, lighting, and ventilating: No arrangements for heating; would be lighted by lanterns. Have ventilators in roof, etc.

Has the barracks sufficient furniture? Yes.

What kind of bedsteads and what kind of mattresses and bedding? Bunks, with moss mattresses and blankets.

Are the beds clean and free from vermin? Yes.

What is the condition of wards as to general cleanliness? Clean.

#### VI. OUTBUILDINGS AND GROUNDS.

Describe general condition of outbuildings: Good.

Are the grounds well policed? Yes.

Describe officers' quarters and condition of furniture: None.

Describe steward's and attendants' quarters and condition of furniture: None.

Describe dining room, condition of table furniture and tableware: 80 by 30 feet (about); condition of table furniture and ware is good; some things from Camp Low, which are rusty; everything else is in the original package.

Describe kitchen and furniture: Two steam boilers for vegetables; four steam boilers for soup, etc., 50 gallons each; one coffee boiler; one range.

Describe dispensary: Small space in corner of storeroom.

Describe laundry: Large building under the same roof as the kitchen and storeroom; has 24 stationary tubs with water connections to tank and hot-water boiler.

Describe approaches to the station: Board walks are laid from the wharf to the buildings, and also between them.

Describe condition of fences and grounds: No fences. Grounds are partly quite firm and partly shifting sand dunes.

Describe drainage and condition of water-closets: There are none.

Describe disposal of slops: Thrown overboard.

State whether any animals not authorized by the Department are kept on reservation: On the island the keeper has a cow and a pig; the latter in a pen.

#### VII. EQUIPMENT.

State approximately age and condition of each horse, and how long in service at this station: No horse.

Give number and character of vehicles: No vehicle.

Are harnesses in good condition? No harness.

Is there a blacksmith's forge provided? No.

Is there a fire apparatus provided; and if so, is there a fire drill organized? Aboard the *Jamestown*, hose connected with a hand pump. Aboard the *Dagmar* and *Koch*, hose connected with their steam pumps. At Fisherman's Island, fire buckets at convenient places in the buildings are provided. Drill aboard *Jamestown*; none elsewhere.



Are officers and employees supplied with uniforms in compliance with the revised uniform regulations of 1896? Have uniforms, as required by regulations now in force.

Are uniforms properly worn? Yes.

Give method of granting leave to officers and employees. Granted by officer in command at his discretion. Very seldom granted; about one night in two or three weeks. No leave granted save to men aboard *Jamestown*.

Describe when and how inspection, muster, and fire drills are conducted. Once a week aboard the *Jamestown*. The other parts of the station can not be inspected save at long intervals.

#### IX. GENERAL ADMINISTRATION.

Make a statement showing the number of vessels arriving at the station during the preceding calendar year, by months: See appended list (A).

From what countries chiefly do the vessels come? Great Britain.

Are they in cargo, ballast, or empty? See schedule; mainly in cargo.

State whether, in your opinion, the quarantine facilities are sufficient to care for the shipping arriving at the station? The present facilities are amply sufficient for disinfection; for inspection they are not sufficient. In general, the work is fairly satisfactory and vessels are boarded without delay, but in bad weather boarding from the *Jamestown* must cause more or less delay, because the steamers can not always stop where they are wanted.

Give annual amount expended at station for last three years: In 1893, \$23,738.87; in 1894, \$20,012.85; in 1895, \$14,275.17.

Give the immediate needs of the station as stated by the commanding officer: Boarding would be more satisfactory if done in a steam vessel.

Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

#### REMARKS AND RECOMMENDATIONS.

This is both a disinfecting station and an inspecting station, besides being fitted for the care of passengers from an infected vessel. As a disinfecting station it is well equipped, having two complete disinfecting plants, two being needed on account of the peculiar location and arrangement of the station. There seems to be no need of change for this. The method of boarding, however, is not altogether satisfactory. In general the boarding can be done by a yawl from the *Jamestown*, as is the present arrangement, without undue delay; but in rough weather it is difficult, and will occasionally cause detention of vessels. Still, with the small number of vessels inspected here, the work can be fairly well done from the *Jamestown*, and it will be but seldom that a vessel is detained. It could of course be more satisfactorily done if boarding were done from a steamer. For recommendations for this part of the station, in addition to the repair of the boilers of the steamers *Dagmar* and *Koch*, recommended by the engineer in paragraph 4, in which I concur, I would recommend the renewal of the metal at and just above the water line of the *Jamestown*. It is as thin as paper and breaks off easily. I am informed that the metal on her bottom under the water line is in good condition, but that I have mentioned is not.

The arrangements for the care of steerage passengers on Fishermans Island, with what I am told has been contracted for, are fairly complete. The matter of lighting the barracks should be looked into by the custodian, and also the manner of getting any large number of people ashore expeditiously.

I would recommend at Fishermans Island that the piles needed to hold up the gangway be replaced this summer, else it will almost certainly go down next winter. There are 39 defective, worthless piles still under the pier head, but the



31 new piles put under, with their bracing, renders that part of the wharf fairly safe. The gangway, however, simply can not hold without repair. In this work there is no need of large piles, which are costly. At the distances they stand a 10-inch pile is sufficiently heavy, and near the shore 8-inch will do. One hundred and forty-two new piles are needed (as at present spaced) for the gangway.

I certify that the foregoing is a careful and correct statement of the condition of the Service at the Cape Charles Quarantine Station, inspected by me this 23d day of May, 1896.

H. R. CARTER,  
Surgeon, M. H. S., Inspector.

MAY 21, 1896.

EXHIBIT A.—*Vessels inspected at Cape Charles Quarantine from May 1, 1895, to November 30, 1895.*

[From foreign ports.]

Month.	In cargo.	In ballast.	Total.
May.....	7	6	13
June.....	6	3	9
July.....	4	1	5
August.....	5	2	7
September.....	9	1	10
October.....	8	1	9
November.....	9	3	12
Total.....	48	17	65

Of these 8 are from ports subject to yellow fever.

#### ALEXANDRIA.

1. There is no quarantine station. Vessels from foreign ports come in through the Virginia capes. Those needing inspection can stop for that purpose at the Cape Charles Station.

2. There is no quarantine officer.

3. No local quarantine is maintained.

4. There are no quarantine procedures at this port.

5. There is no inspection or treatment of vessels at any season here.

6. No vessels from other United States ports are inspected here.

7. There are no inspection or other quarantine procedures here.

8. No vessels are held in quarantine here.

9. Infected vessel would be reported to the Bureau and held for instructions.

10. No records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

11. No fees connected with quarantine.

12. Vessels from foreign ports entered the port of Alexandria, Va., during the calendar year 1895 as follows: May, 3; June, 1; July, 1; September, 2; December, 1; total, 8. All were schooners from Nova Scotia or New Brunswick, in gypsum, taking coal coastwise as cargo. There is no record of coastwise entries.

13. The data given in No. 12 are from the custom-house. There is no immigration bureau.

14. There are no quarantine facilities here and none are needed.

15. No quarantine regulations of the Treasury Department are applicable to the class of vessels entering here; hence none are violated.

16. There is no certificate of inspection or of pratique given any vessel which has entered at this port.



17. Consular bills of health are filed with the entry papers.

18. The vessels which make customs entry at Alexandria are all from the British provinces, the inspection of which by a quarantine officer is not required by the United States Treasury regulations. The statute, however (sec. 5, act of February 15, 1893), requires that every vessel clearing from any foreign port shall present as a prerequisite for entry a certificate from the health officer at the quarantine station that the regulations made by the Secretary of the Treasury have been complied with. It would seem, then, that although these vessels do not by regulation require inspection, i. e., a full examination of the vessel and its personnel, yet that they do require such an examination as is needed to grant this certificate, and as is implied by this certificate.

Now, the regulations which are to be certified to as having been observed by these vessels are, (1) that they have bills of health; (2) that they are from the British provinces; (3) that they have no foreign immigrants as passengers, and (4) that the port of departure is free from quarantinable disease. Of the first three the customs officer must ex officio take cognizance, and in the absence of a quarantine officer, I see no reason why he should not be directed by the Department to read the bill of health, and, if the port of clearance be free from quarantinable disease, to issue himself the certificate required by law for customs entry. Should the port of clearance not be free from quarantinable disease, he should report the matter to the Bureau. Such a chance would be of very rare occurrence—not once in ten years.

The alternatives are (1) the appointment of a sanitary inspector at Alexandria, and (2) require the vessels to come to the Cape Charles Station for inspection. The first seems hardly required by the commerce of the port, and the second, as long as the Cape Charles Station is located in Hampton Roads, would involve some delay, it not being in the track of vessels for Alexandria, and an additional expense for pilotage, as these vessels would have to pay the Virginia Pilots' Association as well as the Chesapeake Association, as they do now.

SEPTEMBER 7, 1896.

#### WEST POINT AND TAPPAHANNOCK.

1. There is no quarantine station at either place. All vessels from foreign ports entering the York or the Rappahannock must come through the Virginia capes and do come via the Cape Charles Station and are inspected and disposed of there.

2. There is no quarantine officer at either place.

3. No local quarantine is maintained.

4. There are no quarantine procedures enforced here; those at Cape Charles have been described in the report on that station.

5. Inspection of vessels for these ports is maintained at Cape Charles, some years the entire year, and some years not. Last year there was no inspection from December 1, 1895, to May 1, 1896. There is no inspection either at West Point or Tappahannock.

6. Vessels from other United States ports are not inspected, unless they have sickness aboard when they pass the capes.

7. There are no quarantine procedures here; those at Cape Charles are set forth in report of that station.

8. No vessels are quarantined here.

9. Should an infected vessel apply for entry at either port and the conditions be suspected, she would be remanded to Cape Charles Quarantine for disposition and allowed to enter only on the pratique of that station.

10. No records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

11. No fees of any kind connected with quarantine.

12. Vessels from foreign ports entering the port of West Point, Va., during the



calendar year 1895: January, 3; November, 1; December, 1; total, 5. All were large steamships from transatlantic ports in water ballast, for cotton mainly. In addition there were three entries of foreign steamships, coastwise, coming for cotton, staves, and shuttle wood. There are no coastwise entries recorded save those of regular steamers. Owing to the removal of the terminus of the Southern Railroad from this place to Norfolk, Va., it is believed that there will be no more entries of vessels from foreign ports at West Point. Indeed, there have been none in the present calendar year. At Tappahannock there were no entries from foreign ports in 1895, and no coastwise entries recorded, save the regular steamers from Baltimore.

13. The data given in No. 12 are from the customs books; save an occasional stowaway there are no immigrants.

14. Cape Charles is in position to care for both ports, and its facilities are ample.

15. All regulations of the Treasury Department are observed.

16. The certificate of inspection complies with the Treasury regulations.

17. The consular bills of health at West Point are filed with the entry papers at Richmond; at Tappahannock none are received.

18. The remarks made in the report on Petersburg and City Point are applicable to these ports also. They are cared for by the Cape Charles Station, and, indeed, Tappahannock needs no care of any kind for maritime quarantine.

AUGUST 22 and SEPTEMBER 4, 1896.

#### PETERSBURG AND CITY POINT.

1. There is no quarantine station here. All vessels entering at Petersburg enter through Hampton Roads, and are thus inspected and passed on by the United States Quarantine Station of Cape Charles.

2. There is no quarantine officer. The collector of customs sees that the vessels present the proper certificate from the Cape Charles Quarantine as a prerequisite for entry.

3. No local quarantine is maintained; all depends on the Cape Charles Station.

4. There are no quarantine procedures here.

5. The inspection at Cape Charles was maintained from May 1 to December 1 of the last year; none in the interval. No treatment of vessels there during the winter season, save in special instances.

6. Unless vessels have sickness aboard, they are not inspected at Cape Charles Quarantine; none inspected here.

7. All quarantine procedures take place at Cape Charles Quarantine and have been described.

8. No vessels are quarantined here. Cape Charles has been described.

9. Should an infected vessel pass Cape Charles and the condition be discovered here, she would be sent back to that station.

10. No records are kept here.

11. There are no fees connected with quarantine here.

12. Vessels entering the port of Petersburg, Va., during the calendar year 1895—from foreign ports: May, 1; July, 1; October, 1; total, 3; all from New Brunswick, with gypsum. Coastwise: January, 3; February, 1; May, 1; December, 4; total, 9; all in cargo from northern ports, taking return cargoes of cross-ties and lumber.

13. There is no immigration bureau. The data in No. 12 are from the custom-house.

14. The shipping is sufficiently cared for at the Cape Charles Quarantine.

15. All the quarantine regulations for the shipping of this port are enforced at Cape Charles Quarantine.

16. The certificate of inspection states that the Treasury regulations have been complied with. (Exhibit A.)



17. Consular bills of health are filed with the entry papers.

18. This port, like all of the ports in Virginia, is provided for, as far as maritime quarantine is concerned, by the United States station in Hampton Roads, and like all, save Norfolk and Newport News, depends altogether on that station, having no quarantine arrangements of any kind. None are needed, the collector really doing all that a local inspector would in seeing that the vessels have been passed on at Cape Charles.

AUGUST 27, 1896.

EXHIBIT A.

\_\_\_\_\_, \_\_\_\_\_, 189—.

I certify that the schooner \_\_\_\_\_, of \_\_\_\_\_, from \_\_\_\_\_, has in all respects complied with the quarantine regulations prescribed by the Secretary of the Treasury, and that in my opinion she will not convey quarantinable disease.

Said vessel is this day granted free pratique.

\_\_\_\_\_,  
P. A. Surgeon, M. H. S., Quarantine Officer, Cape Charles Quarantine.

NEWPORT NEWS.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

Vessels are inspected about one-half mile below lower coal pier. Quarantine officer goes to them on one of the Chesapeake and Ohio tugs, which meet vessels for the purpose of docking them. It is an inspection station only, and has no buildings and no plant of any kind.

2. Dr. A. C. Jones is quarantine officer; no deputies and no subordinates. Post-office address, Newport News, Va.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

Copy of the recent law (A) and regulations (B) is herewith transmitted. Vessels are boarded by the quarantine officer, as described in paragraph 1, and inspected by him. Although paragraph 2 of the inclosed regulations (B) provides for the disinfection of certain vessels by the health officer, this has not been done for some years, as no vessel requiring disinfection has been allowed to pass the Cape Charles Station in the roads. Should any vessel inspected at the Newport News Quarantine require disinfection the quarantine officer says he would send her to the Cape Charles Station for that purpose, having no means of properly disinfecting her. No vessels, then, are detained at this quarantine, as paragraph 3 of its regulations imply. It is an inspection station only, and the remarks made of the Norfolk Quarantine apply in the main to it. There is, however, less delay to vessels in this inspection than in that of Norfolk; indeed, there is practically no delay at Newport News.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

Vessels from United States ports south of Cape Lookout are required to be inspected. There is no undue delay and no disinfection of vessels.

5. Inspection of vessels from foreign ports is maintained throughout the year. No treatment of vessels at any time of the year.

6. Are vessels from other United States ports inspected?



Yes; from "all ports south of Cape Lookout," and vessels from northern ports of the United States which have been south within thirty days.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection; (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

Vessel is boarded, bills of health examined, and if in quarantine season, the pratique of the Cape Charles quarantine officer is asked for. Crew mustered and compared with the articles in crew list. If infected, the vessel would be sent to Cape Charles Quarantine. None have been, however. There is no detention or disinfection; only inspection.

8. What communication is held with vessels in quarantine and before quarantine by pilots, and how regulated? Is there any intercommunication allowed among vessels in quarantine?

Communication is forbidden by regulation. Pilot goes aboard at the Capes and stays aboard until pratique is given. No one else allowed aboard until pratique is given.

9. Any infected vessel would be sent to Cape Charles Quarantine. Articles 2 and 3 of regulations define a vessel's inspection for this port.

10. No records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

11. Quarantine (inspection) fee is \$7. There are no other fees and no other services.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(*a*) from foreign ports; (*b*) from foreign ports in yellow-fever latitudes via domestic ports; (*c*) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

[From customs entries.]

Month.	Foreign ports.			Coastwise ports.		
	In cargo.	In ballast.	Total.	North.	South.	Total.
January.....	6	2	8	10	31	41
February.....	6	2	8	10	19	29
March.....	10	4	14	12	17	29
April.....	6	4	10	14	23	37
May.....	4	4	8	11	11	22
June.....	6	1	7	5	10	15
July.....	3	0	3	6	19	25
August.....	1	0	1	6	14	20
September.....	5	1	6	4	8	12
October.....	6	0	6	4	16	20
November.....	6	1	7	4	22	26
December.....	6	1	7	14	21	35
Total.....	65	20	85	110	210	320

Of the vessels from foreign ports, six only came for bunker coal from Mexico and the West Indies. Nearly all in this list (from foreign ports) are steamships, and mainly from Great Britain. Save the six above mentioned, all came for cargo. There is a line of six vessels from Newport News to London and Liverpool. Of the coastwise entries, all are steamships; the 210 from the South came, without exception, for bunker coal; the remainder for cargo. Seventy-eight of the vessels coming coastwise from the South are subject to quarantine inspection.

13. State results of your visit to (*a*) the custom-house; (*b*) the immigration bureau.

The consular bills of health, in duplicate, one of which bears the quarantine officer's indorsement, "Inspected and passed," are filed with the entry papers of



vessels from foreign ports. To these, during the time they are issued, are also added the certificate of pratique of the Cape Charles quarantine officer. Immigration inspector is common to this port and to Norfolk.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

With Cape Charles quarantine, yes; without it, no.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

Except the form of pratique issued on which the vessel enters, when Cape Charles quarantine is closed, all the regulations of the Treasury Department are, I believe, properly carried out. There is no disinfection or detention; only clean vessels are handled here.

16. No certificate of inspection, or of pratique, signed by the quarantine officer, is furnished. Can not transmit copy of certificate, because none is issued. One of the consular bills of health is indorsed "Inspected and passed." It is signed by the health officer.

17. Both bills of health are filed at custom-house with the entry papers.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

The attention of the customs officer should be called to the fact that when Cape Charles quarantine is closed, he is granting entry to vessels from foreign ports without the certificate required by the law of February 15, 1893. The general remarks made of the Norfolk quarantine are applicable to this, and the work is the same. The inspection of coastwise vessels from southern ports is less onerous to the vessels than that at Norfolk, however, as there are no regular lines of this kind coming into Newport News, and there is less delay in boarding; indeed, the boarding is so managed that there is no delay worth mentioning.

#### A.

CHAP. 65.—An act to amend and reenact an act approved March 6, 1886, entitled "An act to authorize the judge of the county court of Warwick to appoint a quarantine officer at Newport News," by placing the appointing power with the governor, and defining the duties of said officer, and adding thereto sections 2, 3, 4, 5, 6, 7, and 8.

[Approved January 16, 1896.]

*Be it enacted by the general assembly of Virginia,* That the act approved March sixth, eighteen hundred and eighty-six, entitled "An act to authorize the judge of the county court of Warwick to appoint a quarantine officer at Newport News," be amended and reenacted so as to read as follows, and that sections two, three, four, five, six, seven, and eight be enacted and added thereto, as follows:

SEC. 1. *Be it enacted by the general assembly of Virginia,* That the governor of Virginia be, and he is hereby, authorized to establish quarantine at the port of Newport News, and to appoint a quarantine officer, and to regulate his fees; to make such health arrangements and sanitary regulations at the port of Newport News as in his judgment may be necessary to prevent the introduction and spread of any infectious or contagious disease.

SEC. 2. The quarantine officer to be appointed under this act shall be a practicing physician, having his residence in the city of Newport News. His term of office shall be two years, the first term to begin on the first day of May, one thousand eight hundred and ninety-seven, and he shall be appointed during the month of March prior to the succeeding term.

SEC. 3. Said quarantine officer shall be subject to removal for cause, and any vacancy in said office shall be filled for the unexpired term by appointment made by governor.

SEC. 4. The said quarantine officer shall appoint an assistant, who shall be a practicing physician and a resident of Newport News, and who may be removed at pleasure.



SEC. 5. The fees to be fixed by the governor shall be the same as the fees fixed by law for Norfolk for quarantine, and no expense under this act shall be imposed on the city of Newport News or any port of this Commonwealth.

SEC. 6. The quarantine officer at Newport News now holding this office at the time of the introduction of this bill shall continue in office until his successor shall be appointed by the governor and enter upon the discharge of his duties.

SEC. 7. All acts or parts of acts in conflict with this bill are hereby repealed.

SEC. 8. This act shall be in force from its passage.

B.

HEALTH NOTICE.

1. All vessels, steam or sail, arriving in the waters of this port between the 1st day of May and the 1st day of November from ports to the southward of Cape Lookout will be required to stop at quarantine anchorage, opposite quarantine flag pole on right-hand shore as you approach the docks, one-half mile below the port.

2. All vessels arriving in the waters of this port within the period above specified from ports known, suspected, or liable to be infected with yellow fever, cholera, or any other infectious or contagious disease, but having had no case on board during voyage, will be quarantined at least ten days, counting from day of sailing from last port, and thoroughly disinfected under the supervision of the health officer; and in case of any vessel arriving with any case of infectious or contagious disease on board, or having had any such case on board during voyage, she shall be quarantined at the discretion of the health officer, and then only allowed to proceed to port by concurrence of board of health.

3. All vessels arriving in the waters of this port within the above specified period having previously visited, within thirty days, any port, foreign or domestic, known, suspected, or liable to be infected with any infectious or contagious disease, as above specified, or having had any such case on board within the period of thirty days, shall remain at quarantine anchorage subject to such orders as may be given by the health officer upon inspection.

4. Vessels, crews, or passengers of vessels subject to quarantine are forbidden communication with the shore, other vessels, or boats without written permission of health officer.

5. Vessels from foreign ports are subject to quarantine inspection by health officer during the whole year.

6. It shall be the duty of all licensed Virginia pilots to furnish the captain of any vessel bound into the waters of this port with a copy of these regulations, if the captain desires it.

7. Captains of vessels, pilots in charge, and harbor masters will be held responsible for any violation of the above rules.

By order of the county judge.

A. C. JONES, M. D., *Health Officer.*

RICHMOND.

1. There is no quarantine station; no quarantine inspection, disinfection, or any other quarantine procedure in force at this port. The health officer does not inspect vessels. Such vessels as enter from foreign ports are inspected at the Cape Charles Station and are admitted to entry on the pratique of that station.

2. There is no quarantine officer.

3. There are no laws and no regulations; no customs.

4. There are no quarantine procedures of any kind carried out.

5. No inspection here. Inspection for this port is done at the United States station, Cape Charles.

6. No vessels are inspected here.

7. Answered above.

8. No vessels quarantined; no restriction of communication.

9. Should an infected vessel arrive, the collector would inform the health officer and wire the Department for instructions. A vessel with cholera or yellow fever would be sent to Cape Charles; smallpox would probably be cared for by the city.

10. No station and no records.

11. No fees are collected.



12. Only two vessels arrived from foreign ports, both in September, 1895. Coast-wise American vessels do not enter at the custom-house. Of the two vessels from foreign ports, one had guano from Orchilla and the other plaster of paris from Nova Scotia. Both had the certificate of pratique from Cape Charles, in proper form, and on it entry was made.

13. Bills of health (circular) and certificate of pratique from the Cape Charles Quarantine were filed with the entry papers of vessels from foreign ports.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

Yes; Cape Charles does such little quarantine work as is needed for Richmond. There is no need of a quarantine here.

15. All necessary quarantine regulations for this port are carried out at the United States quarantine station at Cape Charles, Va.

16. Answered above.

17. Both copies of the bill of health are filed with entry papers at the custom-house.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

There seems to be nothing to say or to recommend, save that the condition of this port is an argument, as far as it goes, for keeping up the Cape Charles inspection during the winter.

MAY 20, 1896.

#### NORFOLK.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick and for the removal and detention of suspects; mail and telegraph facilities, etc.

This is an inspection station only, and simply proposes to see that only noninfected vessels are allowed to come to the dock, infected vessels being refused entry and remanded to the United States Quarantine at Cape Charles. There are no buildings, no anchorage for infected vessels, no disinfecting apparatus, and no arrangements for the care of the sick or of suspects. The quarantine station, i. e., the place of inspection, is in the stream, off the coal pier at Lamberts Point, where (with the exceptions to be noted, paragraph 3) pilots are directed to bring vessels, and where they are boarded by the quarantine officer, inspected, and disposed of by him.

2. Give personnel of station or port, name of quarantine officer or officers, post-office address, and total number of officers and subordinates.

Quarantine officer, Dr. F. S. Hope; deputy quarantine officers, Drs. C. F. Parrish and E. A. Hatton. All reside and practice medicine in Portsmouth, Va., which is also their post-office address.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

Copies of the laws and regulations under which this quarantine is conducted (Exhibits A and B) are inclosed, and in addition a copy of the United States quarantine regulations of 1894 is bound with them. As stated in paragraph 1, this is an inspection quarantine only, and does no disinfecting. The pilots' association is kept informed by the quarantine officer what classes of vessels are subject to inspection. These are anchored off Lamberts Point, and await his inspection there. As stated in paragraph 2, the quarantine officer does not reside at the quarantine station, but at Portsmouth, 4 miles distant (his predecessor resided in



Norfolk). He is advised of the arrival of a vessel requiring inspection, generally by the consignee or the pilot's association, by telephone, and goes to the station by a steam launch or the electric cars. If notified when the vessel passes Cape Henry, he will generally meet her when she comes to anchor. If not, she awaits his arrival. In either case the inspection is made in the stream and no one allowed to leave the vessel, and no one, save the pilot, to go aboard her until pratique is granted, when she comes to her dock. Exceptions: The vessels of the Merchants' and Miners' Line from Savannah, Ga., have, for the past year, been allowed to come to their own dock, foot of Main street, in Norfolk, for inspection. Also, in special instances of foreign coastwise steamers for bunker coal, the vessel is allowed to go to the pier head and be inspected there, as much time would be lost by waiting for the quarantine officer by laying in midstream. The present quarantine officer also states that he intends to grant to vessels of the Navy the privilege of being inspected at the navy-yard in Portsmouth. These last three concessions are not provided for in the quarantine regulations of this port, but are in force by custom. It will be observed that the local regulations provide for inspection alone, and do not even say what classes of vessels shall be refused entry, this being left absolutely to the discretion of the quarantine officer. Any vessel refused pratique by him would doubtless be referred to the quarantine board of Elizabeth River.

4. (a) Inspection from May 1 to November 1 of all vessels from United States ports south of Cape Lookout; (b) of any vessel from May 1 to November 1 from a United States port which has been in any port south of Cape Lookout within thirty days previous to arrival.

Class (a), vessels from United States ports are not subjected to inspection by United States quarantine regulations, and of class (b) only the small number which come from yellow-fever ports via northern ports without disinfection. There is some detention of vessels due to the quarantine officer living at a distance and being engaged in practice, and vessels must wait until either he or one of his deputies comes. No delay in any other way, and I think this is not considerable, the quarantine officer waiving his regulations (see last paragraph) when their enforcement would make delay.

5. State whether the inspection is maintained throughout the year, or for what period (and what treatment of vessels is enforced during the entire year).

Inspection of vessels from foreign ports, from infected ports, and of those which have a contagious disease aboard, or which have had it aboard en route, is continued all the year; that of coastwise vessels only from May 1 to November 1. No treatment of vessels at any time.

6. Are vessels from other United States ports inspected?

Yes.

7. This is described in No. 2.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

No communication is allowed with a vessel until pratique is granted, save that she takes a pilot aboard at the Capes, who stays aboard until she is given pratique.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Such vessels would be remanded to the United States quarantine station at Cape Charles. The presence, within a reasonable time (thirty to ninety days), without efficient disinfection of any one of these diseases would be held evidence of infection; also coming from a port infected with such disease.



10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Record is kept of cases of sickness en route and on arrival. There is no detention. I inclose copy of record (Exhibit C).

11. Quarantine fee is \$7 for inspection; no other services rendered and no other fees.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come and whether in cargo, ballast, or empty.

There are no data in either the collector's office or that of the quarantine officer by which the second question (b) can be answered, and the third question (c) can be answered only imperfectly, as no record is kept of the entries of all American vessels in the coastwise trade. I give the following table, taken from the customs books and quarantine records, respectively:

*Customs entries.*

Month.	Foreign ports.			Coastwise ports (foreign).		
	In cargo.	In ballast.	Total.	North.	South.	Total.
January .....	1	2	3	4	40	44
February .....	4	2	6	4	31	35
March .....	1	5	6	10	21	31
April .....	2	2	4	1	27	28
May .....	1	1	2	2	19	22
June .....	2	1	3	5	17	22
July .....	1	1	2	2	11	13
August .....	2	1	3	1	12	13
September .....	3	1	4	15	15	15
October .....	1	1	2	6	19	25
November .....	1	4	5	5	21	26
December .....	2	6	8	8	27	35
Total .....	21	24	45	48	260	308

No American vessels are included in the coastwise entries. They are foreign steamships, and those that came via northern ports came (either in ballast or partly loaded) for cargo; and those from southern ports, almost all for bunker coal. They are vessels which have taken in cargo at the southern (United States) ports and coal at Lamberts Point. The ninety-three vessels of this class which came between April 30 and November 1 are subject to "quarantine" (inspection) by the regulations of this port.

*Quarantine records.*

Month.	From foreign ports.	From the United States, South America, West Indies, and West Africa.	Month.	From foreign ports.	From the United States, South America, West Indies, and West Africa.
January .....	4	2	August .....	2	25
February .....	10	6	September .....	4	25
March .....	4	1	October .....	7	30
April .....	6	6	November .....	6	4
May .....	5	17	December .....	8	3
June .....	5	33			
July .....	2	22	Total .....	63	174



In the first column are included not only vessels directly from foreign ports, but those via northern United States ports which have been in Spanish or Mediterranean ports within thirty days. A comparison of "customs entries" with "quarantine records" will show how many of this class there were in each month—18 during the year. The second column, for the months from November to April, inclusive, simply gives vessels from southern ports other than those of the United States. For the remainder of the year (the quarantine season) these figures include these vessels and all those from United States ports south of Norfolk as well—sailing craft as well as steamers. The vessels from foreign ports are mainly from Great Britain and Spain, the former especially. The imports are iron, tin, sulphur ore (from Huelva), and other materials used in fertilizers. The exports are coal and cotton. It is a coaling station for steamers from all the United States ports south of it, and from most of the Mexican and Central American ports; also a port of call of considerable importance, but it is as a coaling station that it is specially known.

13. State the result of your visit (a) to the custom-house; (b) immigration bureau.

The certificate from Cape Charles quarantine (required by paragraph 4, Article X, United States Quarantine Regulations, 1894) and the bill of health (paragraph 2, Article I) in duplicate, and the certificate of the local quarantine officer are appended to the entry papers of each vessel from a foreign port which enters between May 1 and the closure of the Cape Charles quarantine. The certificate of the Cape Charles station is not given during the winter months, and entry is made without it, on the certificate of the local quarantine officer, which is not of the form required by law. The immigration bureau is represented by one official, an inspector, who also does duty at Newport News. Three immigrants, he informs me, have entered the past year.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

With the Cape Charles station, yes; without it, no.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection of vessels are observed, particularly the time of observation after disinfection.

Except that the certificate of pratique issued is not of the form required by the act of February 15, 1893, I think that all of the quarantine regulations of the United States relating to the inspection of vessels are enforced. They do not handle or in any way provide for the disinfection of infected vessels.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer state that the Treasury regulations have been complied with, as required by section 5, act of February 15, 1893? Transmit copy of certificate.

No. Copy of certificate transmitted. (Exhibit D.)

17. What disposition is made of the consular bills of health?

Both bills (original and duplicate) are filed with the entry papers at the custom-house.

18. Mention any facts which, in your opinion, should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

The situation here will not be appreciated unless one considers that, save in the winter months, every vessel requiring inspection by United States quarantine regulations (that is, all save from healthy United States ports) is inspected and passed on at the Cape Charles Station, and only those found clean are allowed to proceed, and are reinspected by the quarantine officer here. Naturally, then, as only clean vessels report for inspection during the quarantine season, there is no need for providing for infected vessels, nor of special precautions against conveying infection during inspection. The work of this station is, then, perfectly safe. But for



this provision, there would be risk in inspecting vessels at the present inspection place on account of its immediate proximity to shipping, and in the present manner, viz, the communication with the city by the quarantine officer, who is not immune to yellow fever. All the necessary work for this port, save for the winter, is really done at the Cape Charles Station. The inspection of vessels from "all United States ports south of Cape Lookout" is a relic of the old belief that yellow fever is endemic on the South Atlantic and Gulf coasts. At present it simply shows a lack of sanitary knowledge in the framers of the regulations. Its enforcement is absolutely without sanitary value and is simply an obstruction to commerce; a slight one, it is true, but absolutely unnecessary.

I have no recommendation to make, save that the collector of the port be advised to require a certificate of pratique of the proper form for the entry of vessels from foreign ports when the Cape Charles Station is closed for the winter, if it be so closed next winter.

MAY 24, 1896.

#### EXHIBIT A.

##### *Quarantine regulations, quarantine district of Elizabeth River.*

[Adopted April 30, 1877, by resolution of the board of quarantine commissioners, as authorized by act of assembly approved February 26, 1877.]

No. 1. The following classes of vessels shall be subjected to the inspection of the quarantine medical officer, to wit:

(A) Such as have on board any case of infectious or contagious disease at the time of arrival.

(B) Such as have had any infectious or contagious disease on board at any time during the voyage, though there is no case on board at the time of arrival.

(C) Such as have sailed from any port at which any infectious or contagious disease prevailed at any time during the stay of the vessel at such port, or within sixty days previous to her arrival at such port.

(D) Such as shall arrive from any American port to the southward of the latitude of Cape Lookout between the first day of May and the first day of the ensuing November in each year.

(E) Such as shall arrive from any foreign port.

(F) Such as shall arrive from any other home port which, for due reasons, may have been interdicted by the board of quarantine commissioners, of which due notice shall be given to all concerned.

(G) Such as shall arrive from any American port between the 1st day of May and the 1st day of the ensuing November, if she shall have been in any port (foreign or domestic) south of Cape Lookout during any portion of thirty days previous to arrival.

No. 2. The quarantine ground or anchorage for the inspection of vessels arriving within the limits of this quarantine district via Hampton Roads shall be in the bight of Craney Island Buoy No. 9, bearing east, and for those arriving from the southward via the canals at any point in the southern branch not less than one and a half miles above the navy-yard.

No. 3. All vessels liable to inspection shall come to at said anchorages until visited by the quarantine medical officer, and any master, pilot, or other person having charge of any such vessel who shall bring her nearer the ports of this district than the aforesaid anchorages, without the sanction of the quarantine medical officer, shall be subjected to a fine not less than twenty dollars nor more than one hundred dollars.

No. 4. Any person (other than a licensed pilot) who shall board a vessel liable to inspection, either before or during the continuance of the quarantine term imposed upon her, without the permission of the quarantine medical officer, shall be subjected to a fine of twenty dollars, and in addition to a forced residence upon said vessel, under the same restrictions as are imposed upon the crew, during her quarantine term.

No. 5. Any person landing from or leaving a vessel while she is under quarantine restrictions, or procuring the landing of any part of her cargo, ship furniture, clothing, or chattels of passengers or crew, without the written permission of the quarantine medical officer, shall be subject to a fine of not less than twenty nor more than five hundred dollars, and be prosecuted for a misdemeanor.



No. 6. Any vessel having on board damaged or infected cargo shall be subjected to disinfection under the direction of the quarantine medical officer before being allowed to come into port, and the concealment of the fact of damaged or infected cargo, furniture, or clothing shall be punished by a fine of not less than twenty dollars nor more than five hundred dollars and a prosecution for misdemeanor.

No. 7. Any vessel may be sent back to perform a quarantine term and disinfection, under the orders of the quarantine medical officer, after arrival in port, upon the discovery of damaged cargo (or such as may affect the health of either port) during the discharge thereof; and a failure to give information to the quarantine medical officer of such discovery of damaged cargo shall be punished by a fine of not less than twenty nor more than five hundred dollars.

No. 8. Every vessel subject to inspection shall display the usual yellow flag upon her arrival at the quarantine anchorage, and keep the same at her mast until allowed pratique by the quarantine medical officer.

#### EXHIBIT B.

CHAP. 114.—An act to constitute one quarantine district of the Elizabeth River and its branches, and to create a board of quarantine commissioners and a quarantine medical officer for said district. Approved February 26, 1877.

1. *Be it enacted by the general assembly of Virginia*, That for the better protection of the cities of Norfolk and Portsmouth and Norfolk County against the introduction of infectious and contagious diseases by vessels arriving in the common harbor of said cities or into any part of the Elizabeth River, and to secure uniformity in the administration of the laws and regulations concerning quarantine appertaining to shipping in said river, the Elizabeth River and its branches shall constitute one quarantine district.

2. That a board of commissioners is hereby created, to be known as the board of quarantine commissioners for the district of Elizabeth River, the said board to consist of seven commissioners, three of whom shall be appointed by the council of the city of Norfolk, three by the council of the city of Portsmouth, and one by the judge of the county court of Norfolk County. Each of said representations of three commissioners on said board shall embrace at least one practicing physician, if practicable. The said commissioners shall hold their office for the term of four years, commencing on the first day of April, eighteen hundred and seventy-seven, unless sooner removed by the authority appointing them. All vacancies in the board shall be filled in the same manner as the original appointments. The said board shall organize by electing one of their number president, with such other officers as they may deem necessary, and a majority of the board shall constitute a quorum for the transaction of business.

3. That the said board of quarantine commissioners shall be invested with all the powers now granted by law to the councils of the cities of Norfolk and Portsmouth and to Norfolk County, or by the general law on the subject, in regard to the establishment and regulation of matters of quarantine, and they shall prescribe such rules and regulations, conformably to existing law, as they may deem necessary and have exclusive control of the quarantine appertaining to shipping for the Elizabeth River and its branches and the cities, towns, and villages situated thereon. They shall meet monthly upon any day agreed upon by themselves, but the president of the said board may, upon his own motion, and shall at the request of any two members of the board by written notice to each member convene the board at any time when circumstances may render prompt action necessary. The said board shall at their first meeting or as soon thereafter as practicable select a suitable quarantine anchorage and shall adopt and publish for the information and government of all concerned rules and regulations for the management and enforcement of an efficient system of quarantine for said district. All pilots licensed by the laws of this State are hereby required to conform to the rules and regulations thus adopted, under the penalty of a fine of not less than twenty nor more than one hundred dollars. The said board shall require the quarantine medical officer hereinafter created to faithfully carry out these rules and regulations, and they shall have power to review the official action of said officer and to revoke or reverse his decision in regard to any particular vessel, but in such case they shall record their reasons for so doing in the minutes of their transactions. The said board of quarantine commissioners shall not as a board nor shall any of the members thereof in their official characters make any recommendation for the appointment of the quarantine medical officer hereinafter provided for.

4. That the said board of quarantine commissioners shall have power, whenever in their opinion circumstances may demand it, by and with the consent of the councils of the cities of Norfolk and Portsmouth, to acquire by condemnation, as



provided for by existing laws, or by purchase, a suitable site for a lazaretto at any eligible point on Elizabeth River, and to erect thereupon one or more buildings, to be constructed of wood, for temporary accommodation and treatment of sick seamen and passengers arriving at the quarantine anchorage upon infected vessels; provided, the cost of such a site and the erection of the buildings thereon shall not exceed the sum of five thousand dollars; and provided further, that the cost of maintenance and treatment of the persons so removed to the lazaretto buildings from infected vessels shall be paid by the masters or owners of such vessels, upon which the costs thus incurred shall constitute a lien.

5. That the said board may, by and with the consent of the councils of the cities aforesaid, in lieu of the purchase of a site and the erection of lazaretto buildings, provide and fit out a floating hospital for the accommodation and treatment of the same class of infected persons as is described in section four of this act; provided, the expense so incurred shall not exceed the amount specified in said section; such floating hospital to be moored, when having on board infected persons, at such point in the lower river or Hampton Roads, sufficiently removed from the channel, so as not to endanger the health of persons on board of passing vessels.

6. That the said board of quarantine commissioners shall pay the annual salary of five hundred dollars, in quarterly instalments of one hundred and twenty-five dollars each, to the quarantine medical officer created by this act; and in case they shall see fit to purchase the site and erect the lazaretto buildings, or instead thereof to provide and fit out the floating hospital hereinbefore provided for, they shall make a report of their proceedings, accompanied by a verified statement of all the expenditures thereby incurred, to the councils of the cities of Norfolk and Portsmouth and to the county court of Norfolk County.

7. That the governor shall appoint and commission a quarantine medical officer for said district, who shall be a resident of the city of Norfolk or of the city of Portsmouth, or Norfolk County, and whose term of office shall be for two years from the first day of April, eighteen hundred and seventy-seven, unless sooner removed by the governor, and who shall be the inspecting officer for all vessels arriving in Elizabeth River or any of its branches, subject to such inspection as shall be required by and in accordance with the rules and regulations of the board of quarantine commissioners created by this act; provided, that no one shall receive such appointment who is not a doctor of medicine of good standing, and who has not had at least five years' experience in the practice of his profession.

8. That the quarantine medical officer shall board with promptness all vessels liable to his inspection, and no vessel shall be detained in quarantine without his stated decision. No vessel thus detained by him shall change her assigned position without his written permission. He shall superintend the thorough cleansing, by the most approved methods, of any infected vessel, at the proper cost of such vessel. He shall not allow pratique to any vessel once detained by him, by reason of said vessel's having, at the time of his inspection, infectious disease on board, or of her having had such disease on board at any time during her voyage, without the express sanction of the board of quarantine commissioners. He shall have general superintendence and control of any lazaretto or floating hospital that may be established under the provisions of this act, and the care and treatment of any sick thereon. He shall administer oaths and take affidavits in examinations as to the sanitary condition of vessels, and in relation to any alleged violation of the quarantine regulations, such oath to have the same validity and efficacy as if administered by a justice of the peace. He shall have authority to direct, in writing, any constable or police officer to pursue, within the limits of his district, and to arrest any person, who shall violate any quarantine regulation or obstruct him in the performance of his duty; and any person violating the quarantine laws or regulations, or obstructing the quarantine medical officer in the discharge of his duty, shall be deemed guilty of a misdemeanor, punishable by fine of not less than twenty nor more than five hundred dollars, or by imprisonment of not less than one nor more than six months; and warrants for any offender under this act may be issued upon the oath of any party complaining, by any justice of the peace or county, or the mayor of any city in this State in which such offender may be at the time; and upon proof of probable cause, the offender shall be bound, with security in due form of law, to appear at the next term of the corporation or county court of said city or county, for trial of such misdemeanor; and the corporation or county court of such city or county shall have jurisdiction for the trial thereof, as in other cases of misdemeanor. All fines recovered under the provisions of this act shall be turned over to the said board of quarantine commissioners, to be used by them in carrying out the objects of this act.

9. The quarantine medical officer shall exact of the master, owner, or consignee of each vessel visited by him in performances of his official duties, a fee of seven



dollars for each necessary visit of inspection, and also the cost of cleansing, fumigation, or disinfection, whenever necessary, recoverable before the mayor or any justice of the peace of either of the said cities or said county. He shall defray all expenses attending upon his inspection of vessels out of the fees thus received, and he shall keep a true record of his receipts and expenditures, and report annually to the board of quarantine commissioners the items of the same. He shall also report to the said board, annually, on or before the twentieth day of December, the names and class of all vessels visited by him during the year, the disposition made of such vessels, and such other information concerning the quarantine service as he may deem expedient.

10. The quarantine medical officer shall, when required by the board of quarantine commissioners, reside at or near the quarantine grounds or anchorage. He may, with the consent of the said board, appoint a deputy, who shall possess like qualifications, and be invested with the same powers as himself; but the said quarantine medical officer shall be held responsible for the conduct and compensation of such deputy.

11. That for the purpose of defraying the necessary expenses to be incurred by the board of quarantine commissioners in carrying out the provisions of this act, the city of Norfolk shall be assessed with and shall pay three-sevenths thereof, and the city of Portsmouth shall be assessed with and shall pay three-sevenths thereof, and the county of Norfolk shall be assessed with and shall pay one-seventh thereof; provided, that the said board of quarantine commissioners shall receive no compensation for their services.

12. That all acts and parts of acts inconsistent with the provisions of this act are hereby repealed.

13. This act shall be in force from its passage.

#### EXHIBIT C.

##### *State quarantine officer's report.*

Name of vessel, ———. Nationality, ———. Class, ———. Iron or wood, ———.  
Tons burden, ———. Name of commander, ———. Days of passage, ———.  
Day of arrival, ———. From what port, ———. Where last from, ———. No.  
passengers, —; cabin, —; steerage, —. No. officers, —. No. crew, —.  
Cargo, ———. Sanitary condition, ———. Prevailing diseases at port of departure,  
———. No. cases of sickness and character during voyage, ———. Fee due,  
———. Fee paid, ——. Disposition, ———. Consignee, ———. Remarks,  
———.

—————, M. D.,  
*State Quarantine Officer for District of Elizabeth River.*

#### EXHIBIT D.

##### *Certificate of State quarantine.*

PORTSMOUTH, VA., ———, 189—.

I certify that ———, of ———, from ———, bound for ———, has in all respects complied with the quarantine regulations prescribed by the State of Virginia, and in my opinion the vessel, cargo, and passengers are each and all free from infectious disease or danger of conveying the same. Said vessel is this day granted free pratique.

—————, M. D.,  
*State Quarantine Officer, District of Elizabeth River.*

#### NORTH CAROLINA.

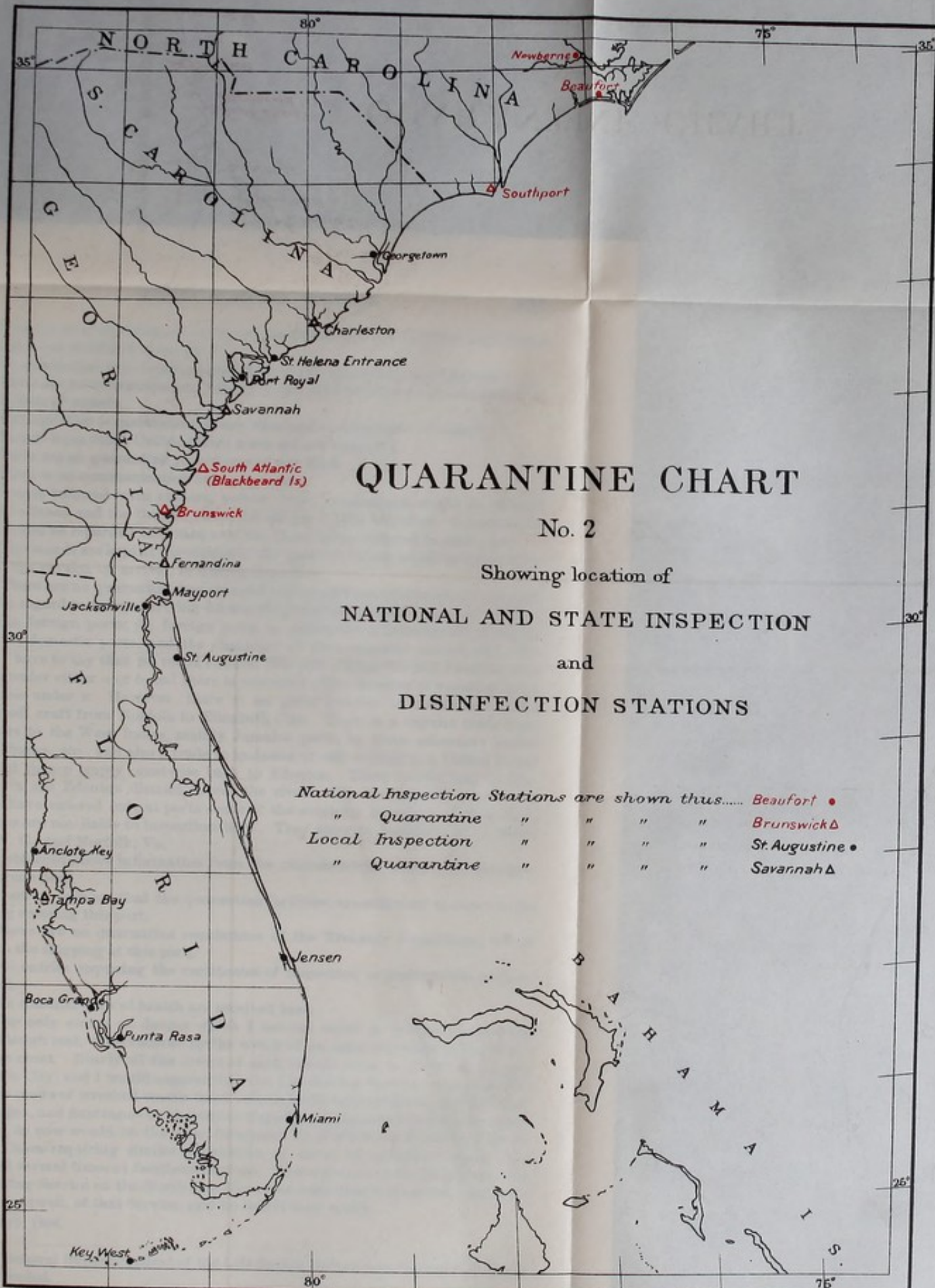
##### *REPORT OF INSPECTION OF UNITED STATES QUARANTINE AND INSPECTION STATIONS.*

By Surg. H. R. CARTER, M. H. S.

EDENTON.

1. There is no quarantine station, buildings, or anchorages, nor is there any anchorage for noninfected or infected vessels, nor for removal and treatment of the sick. There are good mail and telegraph facilities.





# QUARANTINE CHART

No. 2

Showing location of  
**NATIONAL AND STATE INSPECTION**  
 and  
**DISINFECTION STATIONS**

*National Inspection Stations are shown thus.....* Beaufort ●  
 " Quarantine " " " " Brunswick Δ  
*Local Inspection* " " " " St. Augustine ●  
 " Quarantine " " " " Savannah Δ



# QUARANTINE

No. 1

Shoreline

NATIONAL AND STATE

QUARANTINE STATIONS

DIRTY

- National Inspection Stations
- State Inspection Stations
- Quarantine Stations
- Quarantine Stations

Stations

Stations

Stations

Stations

Stations

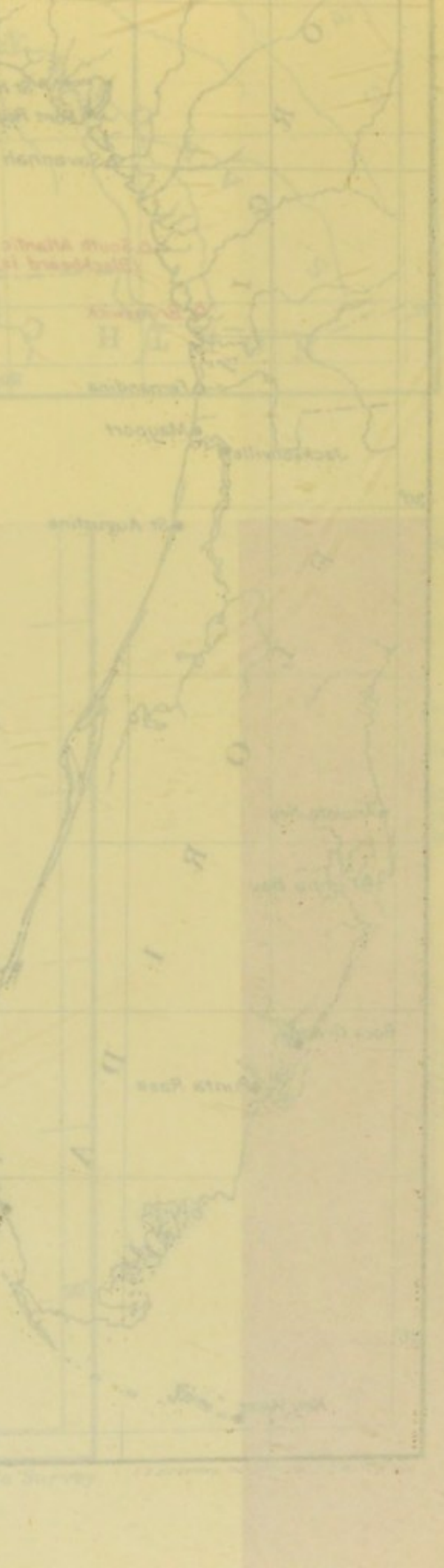
Stations

Stations

Stations

Stations

Stations





2. There is no quarantine officer; the commissioners of the town are empowered to appoint one should they see fit.

3. No quarantine is maintained and there are no quarantine regulations.

4. There are no quarantine procedures of any kind in force and no detention or disinfection of vessels.

5. No inspection is maintained at any time and no treatment of vessels.

6. Vessels from other United States ports are not inspected.

7. There are no quarantine procedures of any kind.

8. There is no communication between vessels.

9. Vessels infected with cholera, yellow fever, or smallpox would be ordered into the stream and the Bureau asked for advice by the collector. I don't know what would be regarded as evidence of the vessel being infected in each case.

10. No records are kept at the station of the cases of disease which have occurred during the voyage, on arrival, or during detention.

11. There are no quarantine fees charged and no services are rendered to vessels.

12. In regard to vessels arriving during the preceding calendar year, by months, (a) from foreign ports; (b) foreign ports in yellow-fever latitudes via domestic ports; (c) domestic ports, and the character of the commerce carried on by the ports, I have to say that no vessel entered this port during the last calendar year falling under either *a* or *b*, and there is no record of the number of vessels coming coastwise under *c*. However, there is no great number of coastwise vessels, save small craft from Norfolk to Elizabeth City. There is a regular trade from this port to the West Indies, mainly Jamaica ports, by three schooners loaded with shingles, etc., and also a trade in molasses or salt or fruit to a United States port and thence empty coastwise back to Edenton. These vessels load at Plymouth, in the Edenton district, across the river. For the past two years these vessels have entered only at ports south of the southern boundary of Maryland, and thus are not liable to inspection here. They enter at Beaufort, N. C., Newbern, N. C., and Norfolk, Va.

13. I obtained above information from the custom-house; there is no immigration bureau here.

14. I am of opinion that the quarantine facilities are sufficient to care for the shipping entering this port.

15. There are no quarantine regulations of the Treasury Department which apply to the shipping at this port.

16. No entries requiring the certificates of inspection or pratique are made at this port.

17. No consular bills of health are received here.

18. The only source of danger which I see can occur at this port, extremely slight though real, would accrue by the wreck of an infected vessel on the North Carolina coast. Nearly all the crews of such vessels come to Norfolk, Va., via Elizabeth City, and I would suggest that the Life-Saving Service be requested to send the crews of wrecked vessels from certain badly infected ports—say Habana, Cienfuegos, and Santiago—by tugboat to Cape Charles Quarantine for inspection, and not, as now would be the case, forwarded to Norfolk via Elizabeth City by rail.<sup>1</sup> Cases requiring similar disposition of crews of wrecked vessels have occurred several times at Southern stations. I have spoken to the inspector of the Life-Saving Service on the North Carolina coast regarding this matter, and Lieutenant Cantwell, of that Service, said he would keep watch.

JUNE 17, 1896.

<sup>1</sup>The General Superintendent of the Life-Saving Service was requested as above recommended.



## WASHINGTON.

Name of station: Washington, N. C.

When was the station last inspected? July, 1895.

Name of inspecting officer: P. A. Surg. L. L. Williams, Marine-Hospital Service.

## I. PERSONNEL.

Name of officer in command: Sanitary Inspector John. C. Rodman, M. D.

Date of assignment to duty: July 7, 1895.

Name and rank of assistants, including acting assistant surgeons; also give number of members in each family: No assistants.

Name of steward and number of members in family: No steward.

Name and duties of each attendant: Ivey Foreman, boatman; John Harris, boatman.

## II. GENERAL DESCRIPTION OF STATION.

Number of buildings: No buildings.

Limit of anchorage for noninfected vessels: Off a yellow flag below Washington, on the Tar River, about three-fourths of a mile.

Limit of anchorage for infected vessels: Same as above.

Facilities for inspection of vessels: Small boat and two boatmen.

There is no apparatus for disinfection of vessels and of baggage.

Facilities for removal and treatment of sick: None; noncontagious cases would be brought ashore.

Facilities for removal and detention of suspects: None; suspects would be detained on vessel under guard or sent to Cape Charles Quarantine Station, as might be directed by the Bureau.

Mail and telegraph facilities: Good; town of Washington.

Give number of wharves: None.

Are the mooring facilities ample? Vessels use their own ground tackle; holding ground good.

What is the source of water supply? No water supply. Could use the water of the Tar River, which is fresh.

Is it sufficient? Yes.

Is it potable? Yes.

Hard or soft? Soft.

## III. DISINFECTING MACHINERY.

Enumerate the machinery constituting the disinfecting plant: No disinfecting plant.

Is there a steam hoisting engine for ballast? No.

Are there ballast tubs and a ballast car for the distribution of ballast? No.

How is ballast disposed of? No ballast comes in.

Is it disinfected prior to being discharged, and what facilities exist for supplying ballast to vessels needing it? None is discharged and no ballast is needed here by vessels.

What are the dimensions of the steam disinfecting chamber? No steam chamber.

Is a sulphur furnace provided? No furnace provided.

What is the condition of the fan and engine? No fan; no engine.

What is the method of storing bichloride solution? No method of storing bichloride.

What is the capacity of the tank or tanks? No tanks.

No steam boilers are provided.



## IV. BOATS.

Is the station provided with a steam tug or other steam vessel? No.

Is the station provided with a steam or naphtha launch? No.

How many small boats are provided, and what is the condition of them and their equipment? One; good; not the property of the service.

Are more boats necessary or desirable? No.

## V. HOSPITAL.

Give location of building used as hospital. No hospital.

## VI. OUTBUILDINGS AND GROUNDS.

Describe general condition of outbuildings: No outbuildings.

Are the grounds well policed? No grounds.

Describe approaches to the station: No approaches; officer (inspector) comes in rowboat to vessel at anchor near the flag, which is the station.

Describe condition of fences and grounds: No fences or grounds.

Describe drainage and condition of water-closets: No water-closets.

Describe disposal of slops: No slops.

State whether any animals not authorized by the Department are kept on reservation: No.

## VII. EQUIPMENT.

No equipment.

## VIII. DISCIPLINE.

Are officers and employees supplied with uniforms in compliance with the revised uniform regulations dated June 20, 1896? Uniforms are not required of officers or employees at this station, and they have none.

Give method of granting leaves to officers and employees: No leaves granted.

Describe when and how inspection, muster, and fire drills are conducted: No inspection; no muster; no fire drills.

## IX. GENERAL ADMINISTRATION.

Make a statement showing the number of vessels arriving at the station during the preceding calendar year, by months:

(a) From foreign ports: February, 1; June, 1; no other in 1895; both from St. Christopher.

(b) From foreign ports in yellow-fever latitudes via domestic ports: None.

(c) From domestic ports: No record save of steamers of inland (North Carolina Sound) navigation.

From what countries chiefly do the vessels come? British West Indies, Danish West Indies, St. Christopher, St. Martins, and Barbadoes.

Are they in cargo, ballast, or empty? Cargo.

State whether in your opinion the quarantine facilities are sufficient to care for the shipping arriving at the station: Yes.

Give annual amount expended at station for last three years: Nine hundred and thirty-six dollars for the fiscal year ending June 30, 1896; none before that.

Give the immediate needs of the station as stated by the commanding officer: No recommendations.

Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

The schooner *Cora*, twice from foreign ports (St. Christopher and St. Martins), has been inspected since the appointment of the inspector, and the pay seems excessive for the work done. Inspections were: One in February and one in May,



1896—both inspections of the same vessel. Another vessel now in the West Indies is to be back in July. Some arrangement for inspection of vessels from foreign ports is obviously necessary to enable them to enter in accordance with the act of February 15, 1893, but the compensation, \$936 per annum, seems excessive for the service rendered, and I would recommend that the pay of the sanitary inspector and boatmen be discontinued and that the former be paid only for services when performed, say \$15 for each inspection, furnishing his own boat and boatmen. If it is not in accordance with Department custom to employ a sanitary inspector in this manner, I would recommend that the customs officer (deputy collector) be authorized to employ a physician to make the inspection of such vessels as require it for entrance to the custom-house under the act of February 15, 1893. The first method seems preferable at this port, and if approved I would recommend the present sanitary inspector, Dr. John C. Rodman, of Washington, N. C. In either case the inspection should be made about where made at present, and no communication between the vessel and the shore, directly or indirectly, be allowed previously to granting pratique. The place where the sanitary guard for this station should be located is at Ocracoke Inlet, Portsmouth, N. C.

I certify that the foregoing is a careful and correct statement of the condition of the Service at the Washington (N. C.) Quarantine Station inspected by me this 3d day of June, 1896.

H. R. CARTER,  
*Surgeon, M. H. S., Inspector.*

#### NEWBERN.

Name of station: Newbern, N. C.

When was the station last inspected? June, 1895.

Name of inspecting officer: P. A. Surg. L. L. Williams.

#### I. PERSONNEL.

Name of officer in command: Sanitary Inspector Claude M. Benton, M. D., Marine Hospital Service.

Date of assignment to duty: July 3, 1895.

Name and rank of assistants, including acting assistant surgeons; also give number of members in each family: No assistants.

Name of steward and number of members in family: No steward.

Name and duties of each attendant: William S. Parsons; boatman.

#### II. GENERAL DESCRIPTION OF STATION.

Number of buildings: None.

Limit of anchorage for noninfected vessels: Off a buoy, with yellow flag, about 1 mile below Newbern, in the Neuse River.

Limit of anchorage for infected vessels: Same as above.

Facilities for inspection of vessels: Yawl boat.

Apparatus for disinfection of vessels and of baggage: An inspection station only; no apparatus for disinfecting.

Facilities for removal and treatment of sick: Noncontagious cases have been brought ashore to the United States Marine Hospital in the small boat; infectious diseases not treated.

Facilities for removal and detention of suspects: If suspicions were very slight, suspects would be detained aboard vessel, with a guard; if grave, the vessel would be sent to Cape Charles Quarantine Station, with suspects aboard.

Mail and telegraph facilities: Good; town of Newbern.

Give number of wharves: None.



Are the mooring facilities ample? Vessels lie to their own ground tackle; good holding ground.

What is the source of water supply? No water supply; could get water from Newbern for drinking, etc.

### III. DISINFECTING MACHINERY.

Enumerate the machinery constituting the disinfecting plant: No disinfecting plant.

How is ballast disposed of? None ever comes to Newbern.

Is the station provided with a steam or naphtha launch? No.

How many small boats are provided and what is the condition of them and their equipment? One; not the property of the Service; a yawl or sometimes a skiff is used to reach the station.

Are more boats necessary or desirable? No.

### V. HOSPITAL.

Give location of building used as hospital: No hospital.

### IX. GENERAL ADMINISTRATION.

Make a statement showing the number of vessels arriving at the station during the preceding calendar year, by months:

(a) From foreign ports: January, 1; February, 1; no other arrivals.

(b) From foreign ports in yellow-fever latitudes via domestic ports: One in June, 1895, from St. James and 2 from Jamaica via Baltimore.

(c) From domestic ports: No records save coastwise steamers in the North Carolina sounds.

From what countries chiefly do the vessels come? Two from Jamaica, 1 from St. Johns.

Are they in cargo, ballast, or empty? In cargo.

State whether in your opinion the quarantine facilities are sufficient to care for the shipping arriving at the station. Yes.

Give annual amount expended at station for last three years: \$816 for the fiscal year ending June 30, 1896; none before that.

Give the immediate needs of the station as stated by the commanding officer: He states that the inspector at Beaufort, N. C., gets \$75 per month, and the boatman \$40, and thinks this station should have as much, or else that the Service should buy a boat for the use of the station.

Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper:

As no vessels have entered this port requiring inspection by the United States quarantine regulations, or for any sanitary reason, since the appointment of the sanitary inspector, July 3, 1895, it would seem that the amount expended for this inspection (\$816) is excessive. Still, foreign vessels do enter, and there are two schooners now running regularly between this port and the West Indies, so that arrangement for inspection seems necessary, if only to allow vessels to enter in accordance with the law. I would therefore recommend that the present compensation of the sanitary inspector and boatman be discontinued and that the sanitary inspector be paid only for services rendered, \$10 or \$15 for each inspection, no allowance being made for boat hire. If this be approved, I would recommend Dr. Claude M. Benton, the present sanitary inspector, for the position. If this be deemed inadvisable, I would recommend that the collector of customs be authorized (when a vessel requiring inspection by the act of 1893 applies for entrance) to employ a physician, preferably the acting assistant surgeon, Marine-Hospital Service, to make the inspection and issue the certificate required. The latter



method seems to me preferable here, for reasons which need not be explained. All vessels specially liable to convey infection should be turned back at Ocracoke Inlet and none allowed to come to this inspection station save those reasonably safe. In any case, the vessel should stop at the place for inspection and not come to the wharf or communicate with the shore until pratique is given.

I certify that the foregoing is a careful and correct statement of the condition of the Service at the Newbern Quarantine Station, inspected by me this 30th day of May, 1896.

H. R. CARTER,  
*Surgeon, M. H. S., Inspector.*

BEAUFORT.

1. There are no arrangements for quarantine service of any kind here at present. From July 9, 1895, to November 1, 1895 (the close of quarantine season), Dr. F. M. Clarke acted under appointment from the Treasury Department as sanitary inspector Marine-Hospital Service. During that period there were arrangements to inspect vessels in Beaufort Harbor opposite a yellow flag on a point of marsh. Inspection was done in a sail or row boat, with one or two boatmen, as needed. This is all the plant or station that has ever been here, and at present, save the mail and telegraph facilities, none of the things asked for by the Bureau exist. I will add that no vessels needing inspection have entered during this period.

2. At present, there is no one in any way concerned with maritime quarantine, save the collector of the port. Sanitary Inspector F. M. Clarke, with one or two boatmen, maintained an inspection quarantine under the United States Quarantine Regulations from July 9, 1895, to the close of the quarantine season, November 1, 1895. His post-office address is Beaufort, N. C.

3. During the period above specified the inspection quarantine was maintained under the laws and regulations of the United States. At present there is no quarantine. I transmit herewith a copy of the statutes of North Carolina, which shows that the commissioners of Beaufort are empowered to enforce quarantine, etc. (Exhibit A). At present there is no port physician, and there are no quarantine regulations. If there was, it would be in accordance with these statutes.

4. No quarantine procedures, either under printed regulations or by custom, are enforced at the present time. When the sanitary inspector was on duty, as above stated, only the United States quarantine regulations were carried out. There is no unnecessary detention or disinfection of vessels.

5. No inspection this year; last year it was had only during the quarantine season.

6. No vessels from other United States ports are inspected.

7. No quarantine procedure or inspection of vessels is at present performed, nor do any arrangements exist for the same.

8. A vessel in quarantine, either under North Carolina laws or the United States regulations, would have no communication with other vessels in or out of quarantine or with the shore. Pilots would be allowed to bring vessels in, but they must be isolated in accordance with United States regulations, or remain aboard, as required by North Carolina law. In point of fact, the pilots would generally "con" such a vessel in and not go aboard, thus avoiding quarantine. At present vessels can communicate as they please.

9. A vessel infected with cholera, yellow fever, or smallpox would be sent to Cape Charles or South Atlantic quarantine, as might be preferred.

10. No records are kept, as there is no station; in fact, no vessels enter requiring inspection.

11. No quarantine fees are required, as there are no quarantine operations.

12. In regard to the number of vessels arriving at the port during the preceding



calendar year, by months, (a) from foreign ports, (b) from foreign ports in yellow-fever latitudes via domestic ports, (c) domestic ports, I have to report that but two vessels arrived from foreign ports, both in cargo; one was from La Guayra en route to New York, and merely stopped for coal, and therefore did not enter at the custom-house, staying less than twenty-four hours. The other vessel was loaded with salt from St. Martins. There were no arrivals from foreign ports in yellow-fever latitudes, and no record of any arrival from domestic ports.

13. Above information was obtained from the custom-house. There is no immigration bureau.

14. In my opinion the quarantine facilities at this port are insufficient.

15. The regulations of the Treasury Department requiring the inspection of vessels from foreign ports are not complied with.

16. No certificate of inspection or pratique is furnished.

17. Consular bills of health are filed at the custom-house.

18. The commerce of this port is insignificant; only two vessels requiring inspection under regulations of the Treasury Department have entered during the last calendar year. Still, vessels from foreign ports and a few coastwise vessels require inspection as a prerequisite to entry, and some facilities for this inspection, I presume, should be provided. There is also sanitary risk—slight, indeed, but real—that a quarantinable disease (yellow fever) may be conveyed by the few vessels which enter here, they being all from tropical ports.

The anchorage under Cape Lookout is used as a "harbor of refuge" by a considerable number of small vessels, mainly coastwise, and also by schooners from the West Indies, which lie there at times for days and even weeks. These have communication with the shore by fishing vessels, etc. The use of this harbor is said to be increasing, and therein is a possible source of infection.

I do not recommend the appointment of a sanitary inspector on the same terms as last season. While the appointee is a most excellent man, the compensation of \$115 per month for himself and boatman seems to be excessive for the work done. I would recommend, if it be practicable, that the sanitary inspector be appointed (Dr. F. M. Clarke preferred), to be paid only when his services are rendered, i. e., when he inspects a vessel requiring it by the regulations of the Treasury Department. Fifteen dollars per vessel would be sufficient compensation, allowing nothing for boat hire, unless he went to Cape Lookout, when boat hire could be allowed.<sup>1</sup>

<sup>1</sup> Dr. F. M. Clarke was appointed inspector and instructions given him in accordance with the above. The following letter was addressed to the secretary of the State board of health:

TREASURY DEPARTMENT,  
OFFICE OF THE SUPERVISING SURGEON-GENERAL MARINE-HOSPITAL SERVICE,  
Washington, D. C., June 25, 1896.

SIR: I have respectfully to request that the pilots bringing vessels to Beaufort, N. C., be directed to bring all vessels from foreign ports, and all vessels from the West Indies, Central and South America, and Mexico, coming via a northern United States port, to a convenient place in Beaufort Harbor, which will be designated by Acting Asst. Surg. F. M. Clarke, quarantine inspector, said vessels to fly a yellow flag and to be considered in quarantine, as per the laws of North Carolina and the United States, until released by the quarantine officer, Dr. Clarke.

Respectfully, yours,

WALTER WYMAN,  
Supervising Surgeon-General, M. H. S.

RICHARD H. LEWIS, M. D.,  
Secretary North Carolina Board of Health, Raleigh, N. C.

[Reply.]

NORTH CAROLINA STATE BOARD OF HEALTH,  
Raleigh, July 9, 1896.

DEAR SIR: Your communication of 25th ultimo in regard to the quarantining of vessels at Beaufort was duly received. A copy has been transmitted to the superintendent of health of Carteret County, with the request that he convey the information therein contained to the pilots of that port.

Very respectfully, yours,

RICH. H. LEWIS, Secretary.

WALTER WYMAN, M. D.,  
Supervising Surgeon-General, M. H. S., Washington, D. C.



*Recommendations.*—1. Request the board of health or the governor of North Carolina to direct the Beaufort pilots to "bring to" all vessels from foreign ports and from yellow-fever (southern) ports via a northern United States port, at a convenient place in the Beaufort Harbor, to be designated by the sanitary inspector, said vessel to fly a yellow flag, and be held in quarantine as far as the laws of North Carolina and the United States require, until released.

2. The sanitary inspector to then board and inspect them and determine on their disposition and give them the proper certificate.

The customs officer (boarding officer) should be instructed to notify the inspector of the arrival of a vessel. If this is not practicable the collector should be given authority to employ a physician to board the vessel and make the inspection required by law.

JUNE 8, 1896.

#### EXHIBIT A.

[Extracts from statutes of North Carolina.]

SEC. 2893. Quarantine, when and by whom directed; masters and pilots to report the health of vessels; duty of those ordered to perform quarantine; penalties on masters and pilots. (R. C., c. 94, s. 1; 1783; c. 194, s. 12; 1793; c. 379, s. 1; 1802; c. 624.)

The commissioners of navigation in the respective ports and inlets of the State, and where there are no such commissioners, any three justices of the peace convenient to said ports or inlets, or the commissioners of any seaport town, shall meet together and appoint such place or places as they may think proper for vessels to perform quarantine; and when a vessel shall arrive at any of the said ports or inlets, having an infectious distemper on board, or which came from any place that was at the time of her sailing, or shortly before, infected with any malignant disorder, the master and pilot of the vessel shall anchor her at the place so appointed, and give immediate information thereof to the commissioners of navigation, or to the commissioners of the seaport town; or, where there are no commissioners, to the nearest justice of the peace, who, with two others, to be summoned by him, or any three of the commissioners aforesaid, or any one commissioner and two justices, or any one justice and two commissioners, shall thereupon cause such vessel and her crew to be examined by at least one experienced physician, when to be had, upon whose report in writing (which said physician is required to make), and on other information they may receive, any three of such commissioners, and where there are no commissioners any three neighboring justices, or any one commissioner and two justices, or any one justice and two commissioners, or the commissioners of the town to which such vessel is bound, may order and command the master of the vessel, crew, and passengers to perform quarantine, as by them shall be deemed most proper and requisite, to check or prevent any infectious distemper from spreading in the State; and every person on board such vessel directed to perform quarantine shall, from time to time during such quarantine, obey all orders given by the authority of the said commissioners or justices, respecting the victualing, purifying, and cleansing of such vessel and all persons and articles on board, and the intercourse of said persons with the inhabitants of the State, the receiving any persons on board, or the putting them on shore; and if the pilot or master neglect to give such information as above required, the pilot, for such neglect, shall forfeit and pay one hundred dollars, and the master, for the like neglect, shall forfeit and pay two hundred dollars. And in case the master of any vessel so ordered to perform quarantine shall refuse to comply with or fail to fulfil the orders for performing quarantine with his vessel as aforesaid, he shall forfeit and pay two hundred dollars for each day he shall fail to perform the quarantine; for which forfeiture the property of the captain, with the vessel and cargo, shall be liable, if it shall appear that the breach of the order was by the consent of the owner or consignee; but if the owner or consignee did not consent, then the master of such vessel only shall be liable.

SEC. 2894. Vessels coming from infected place to anchor at quarantine ground; coming into port without permission, master or pilot indictable. (R. C., c. 94, s. 2; 1817, c. 946, s. 1.)

If any vessel shall be brought into the State from a place which at the time of her departure was infected with the yellow fever, smallpox, or other infectious disorder, or if any vessel arriving in the State shall have the smallpox or yellow fever



or other infectious disorder on board, or shall have had such disorder on board during her passage to the State, such vessel shall be anchored at the place appointed for quarantine, and there remain until permitted to remove by the commissioners of navigation, or by the commissioners of the town to which the vessel is bound, or by the justices aforesaid; and if any such vessel shall come to such town, or into its harbor, without permission obtained as aforesaid, the pilot or master conducting the vessel, or ordering or permitting her to be conducted, to such town or harbor, shall be guilty of a misdemeanor, and fined not less than one thousand dollars and imprisoned not exceeding one year.

SEC. 2895. Such vessel to be removed. (R. C., c. 94, s. 3; 1817, c. 946, s. 2.)

The commissioners of navigation, or the commissioners of the town in the harbor of which any vessel shall have arrived in violation of this chapter, or the justices aforesaid, may use such force as shall be necessary to remove said vessel to the place of quarantine; their reasonable charge for which service shall be paid by the master or owner of the vessel, and may be recovered of either of them before any court having jurisdiction.

SEC. 2896. Port physicians appointed. (R. C., c. 94, s. 4; 1802, c. 624, s. 2.)

The commissioners of navigation in the several ports of the State, and, where there are no such commissioners, the commissioners of the several seaport towns, may appoint port physicians, and regulate and prescribe the fees to which they shall be respectively entitled, according to the different quarantine stations, which they shall be bound to attend for the purpose of inspecting vessels, as required by this chapter, and giving certificates of their situation and condition in regard to the health of their respective crews and passengers.

SEC. 2897. Penalty on passengers or crews breaking quarantine. (R. C., c. 94, s. 5; 1793, c. 379, s. 2.)

When a vessel shall be directed to perform quarantine, and any seaman or passenger shall, contrary to the order and direction of the commissioners or justices as aforesaid, leave the vessel and land on any other place than they shall allow of, every person offending shall forfeit and pay two hundred dollars for each offence, and when he shall have left the vessel with the master's consent, the master shall pay a like penalty of two hundred dollars for every such offence of any of his passengers or seamen.

SEC. 2898. On person going on board without leave, and on masters allowing it; such person to remain on board. (R. C., c. 94, s. 6; 1793, c. 379, s. 3.)

When any vessel shall be directed to perform quarantine, and any person knowing of such order, by the information of the master or otherwise, shall go on board of such vessel without permission of the commissioners or justices aforesaid, every such person shall forfeit and pay one hundred dollars. And if any person shall be permitted by the master to come on board without informing him of the order and directions of the commissioners or justices of the peace, the master shall forfeit and pay two hundred dollars for every person so offending, and four hundred dollars for suffering any person so on board to depart his vessel without leave of the commissioners or justices aforesaid, and the said commissioners or justices are empowered to order every person who shall go on board any such vessel to remain there for such length of time as they may think proper; and if he disobey such order, he shall pay one hundred dollars.

SEC. 2899. Persons breaking quarantine arrested and sent back. (R. C., c. 94, s. 7; 1793, c. 379, s. 4.)

The commissioners or justices aforesaid, or a majority of them, respectively, may issue their warrant to any sheriff or other officer, commanding him to take the body of any person that may have left any vessel ordered to ride quarantine, and carry him on board of said vessel; and the said officer may summon such persons to assist him in the execution of the warrant as he may see fit.

SEC. 2900. Penalty for landing articles. (R. C., c. 94, s. 8; 1793, c. 379, s. 5.)

If any master of a vessel ordered to ride quarantine shall convey, or cause or permit to be conveyed, any article of goods, wares, and merchandise from his vessel on any other lands, or into any other boat or vessel than the said commissioners or justices shall authorize, he shall forfeit and pay two hundred dollars for every such offence. And any other person so conveying, or causing to be conveyed, any article as above mentioned, shall be liable to the like penalty.



SEC. 2904. Penalty on pilots bringing in vessels without certificate, etc. (R. C., c. 94, s. 12; 1797, c. 486, s. a.)

If any pilot shall bring any vessel beyond the place fixed and limited by the commissioners of navigation, without a certificate of the health officer declaring that there is no danger to be apprehended from any infectious disease on board said vessel, such pilot shall forfeit his branch or commission, and thence be incapable to act as a pilot in any port of the State.

SEC. 2905. Commissioners of navigation may appoint harbor master and health officer and enact by-laws. (R. C., c. 94, s. 13.)

The commissioners of navigation of the several seaport towns in the State shall have power to appoint a harbor master and health officer, to prescribe their duties and authority, to make rules and regulations for their government, allow them a reasonable compensation for their services, and determine how such compensation is to be paid. And they shall have power to pass such by-laws (not inconsistent with the laws of the land) for the better regulation of the quarantine to be performed by vessels arriving from ports infected, or suspected to be infected, with any infectious disease, and for preventing all intercourse between such vessels and persons on shore, as to them may seem meet and proper, and to enforce obedience to such by-laws by imposing such penalties as they may think proper.

SEC. 2906. Of seaport towns, where no commissioners of navigation, to have like authority. (R. C., c. 94, s. 14.)

The commissioners of the several seaport towns and towns having a port of entry, where there are no commissioners of navigation, shall have the same power and authority and be subject to the same duties as are prescribed for the commissioners of navigation in relation to the quarantine of vessels in the ports of their respective towns; and all persons offending against the regulations of the commissioners of such towns shall be subject to the same fines, penalties, and forfeitures as though the said regulations had been made by the commissioners of navigation.

#### UNITED STATES QUARANTINE, SOUTHPORT.

Name of quarantine station: Southport Quarantine Station.

When was the station last inspected? Never before.

#### I. PERSONNEL.

Name of officer in command: John. M. Eager, passed assistant surgeon, Marine-Hospital Service.

Date of assignment to duty: July 6, 1895.

Name and rank of assistants, including acting assistant surgeons: None.

Name of steward and number of members in family: No steward.

Name and duties of each attendant: Knud Tobiasen, engineer and carpenter; James K. Hansen, messenger and watchman; Einar T. Eriksen, boatman; Thomas Larsen, cook; Niels Jorgensen, keeper of steamer *Woodworth*.

#### II. GENERAL DESCRIPTION OF STATION.

Number of buildings: None complete.

Limit of anchorage for noninfected vessels: Not laid out.

Limit of anchorage for infected vessels: Not laid out.

Facilities for inspection of vessels: Naphtha launch and a yawl boat (clinker-built).

Apparatus for disinfection of vessels and of baggage: None.

Facilities for removal and treatment of sick: Could remove sick in yawl; no facilities for treatment and nowhere to treat them.

Facilities for removal and detention of suspects: None.

Mail and telegraph facilities: Post-office and telegraph office at Southport, N. C.

Give number of wharves: One under process of construction.

What is the length of the wharf frontage? Will be 120 feet.

Are the wharves in good condition? Not yet completed.

Are the mooring facilities ample? Will be when completed, I think.



What is the depth of water at mean low tide along the front of the wharf? Twenty-two feet.

What is the source of water supply? None at present; will have artesian well.

### III. DISINFECTING MACHINERY.

Enumerate the machinery constituting the disinfecting plant: None so far.

Is there a steam hoisting engine for ballast? No.

Are there ballast tubs and a ballast car for the distribution of ballast? No.

How is ballast disposed of? None has been disposed of so far.

What are the dimensions of the steam disinfecting chamber? No chamber.

Is a sulphur furnace provided? No.

What is the method of storing bichloride solution? No method provided.

How many steam boilers are provided? None.

### IV. BOATS.

Is the station provided with a steam tug or other steam vessel? Has a steam tug, but it is used simply as quarters; it is moored in the river; no steam on her.

If so, is she of wood or iron? Wood.

Give dimensions: Eighty by 17 feet.

If of wood, is the vessel sheathed with metal? Yes.

Are the engines and boiler in good condition? No.

Give engineer's statement as to necessary repairs and renovations: No engineer on the tug; for present use no repairs are needed. For use as a steam tug, see Exhibit A.

Is the station supplied with a steam or naphtha launch? Yes.

Give dimensions: Thirty by 6 feet; engine, 6 horsepower.

What is its condition? Good.

Give report of medical officer as to efficiency of the launch: Good.

How many small boats are provided, and what is the condition of them and their equipment? Two; in good order.

Are more boats necessary or desirable? Yes, a light-draft sailboat for general use; this is urgently needed to save launch.

### V. HOSPITAL.

Give location of building used as hospital: Not built yet; will be on pier head.

Give general description of the building: Pavilion; not completed.

Dimensions: Thirty-six by 15 feet, of which 17 by 15 feet is ward.

Number of beds in each ward: Four.

How many beds can be added for emergencies? Two.

Cubic air space allowed each patient: One thousand six hundred and twenty for four beds.

Heating, lighting, and ventilating: Stove; lamps; ventilator in roof and windows.

Has the hospital sufficient furniture? None as yet.

Is the nursing sufficient, and is the nurse immune? No nurse.

Does the character of the diet furnished conform to that prescribed in the diet table for marine hospitals? No patients. The diet of the employees is less varied and, indeed, less good than at a marine hospital, but is as good or better than at most quarantine stations. It is good enough.

### VI. OUTBUILDINGS AND GROUNDS.

Are the grounds well policed? No grounds; everything afloat and on piles.

Describe officer's quarters and condition of furniture: The officer has no quarters; he has an office and storeroom and coalbin ashore, at Southport.



Describe steward's and attendants' quarters and condition of furniture: No steward's quarters; attendants' on the steamer *Woodworth*.

Describe dining room, condition of table furniture, and tableware: No dining room or furniture save that aboard the *Woodworth*.

Describe kitchen and furniture: Galley of *Woodworth*, with ordinary galley outfit in very bad repair.

Describe dispensary: No dispensary; one will be under the same roof as the hospital, when built.

Describe laundry: No laundry; men wash their own clothes.

Describe approaches to the station: Station will be on piles, and there will be no approaches, save by a ladder.

Describe condition of fences and grounds: No grounds.

Describe drainage and condition of water-closets: None yet; water-closet will be over water.

Describe disposal of slops: Thrown overboard from the *Woodworth*, and will be thrown overboard from the station.

State whether any animals not authorized by the Department are kept on reservation: No.

#### VII. EQUIPMENT.

Is there a blacksmith's forge provided? One asked for.

Are there farming implements; and if so, are they in good condition? No.

Is there a fire apparatus provided; and if so, is there a fire drill organized? No apparatus, except fire buckets filled and in good order aboard the *Woodworth*; no fire drill.

#### VIII. DISCIPLINE.

Are officers and employees supplied with uniform, in compliance with the revised uniform regulations dated June 20, 1896? Yes.

Are uniforms properly worn? Yes.

Give method of granting leaves to officers and employees: Officer takes none; granted to men at discretion of officer; practically one day in five weeks.

Describe when and how inspection, muster, and fire drills are conducted? The steamer *Woodworth* generally inspected once a week and men mustered; no fire drill.

#### IX. GENERAL ADMINISTRATION.

Make a statement showing the number of vessels arriving at the station during the preceding calendar year, by months.

(a) From foreign ports: July, 4; August, 1; September, 5; October, 6; November, 12; December, 9.

(b) From foreign ports in yellow-fever latitudes via domestic ports: None.

(c) From domestic ports: July, 2; September, 1.

The above is obtained from the records of the station.

The maritime quarantine for Wilmington, N. C., has long been done by an inspection station at Southport, N. C., and is still so done. It seems, then, consonant with the instructions relative to quarantine inspection to make no report of inspection of Wilmington, it being covered by that of Southport. As, however, the United States inspection station at Southport has only been in operation since July, 1895, complete statistics of entries of vessels for the last calendar year, called for by paragraph 12 of said instructions, will not be furnished by the report on that station. I have the honor, therefore, to submit the following statistics taken from the customs records at Wilmington, N. C., so as to make a more complete exposé of the commerce which is to be passed on at the Southport quarantine.



*Report of vessels entering at Wilmington, N. C., for the calendar year 1895.*

Month.	Tropical.			Transatlantic.		Total.
	Ballast.	Cargo.	Empty.	Ballast.	Cargo.	
January .....	6	4	-----	2	-----	12
February .....	10	-----	-----	2	3	15
March .....	4	-----	-----	3	2	9
April .....	5	-----	-----	1	2	8
May .....	4	-----	-----	1	-----	5
June .....	2	-----	-----	2	-----	4
July .....	2	1	1	-----	-----	4
August .....	1	-----	-----	-----	-----	1
September .....	1	-----	-----	4	-----	5
October .....	2	-----	-----	3	1	6
November .....	-----	2	1	6	2	11
December .....	5	2	-----	-----	1	8
Total .....	42	9	2	24	11	88

Of these, seven were steamships (one only from a tropical port in sand ballast), the remainder were sailing crafts, schooners and small square-rigged vessels (brigs and barks). This trade is with the West Indies and mainly to the more healthful ports, though not confined to them, twenty-four of the vessels being from ports which are regarded with more or less suspicion by southern quarantine authorities, and some from ports certainly infected. The ballast brought is sand, earth, gravel, and rubbish. And here I would say that for vessels from tropical ports the ballast record taken from the manifests is misleading. These vessels are almost exclusively schooners, and while taking aboard a small amount of ballast (sand or earth), at the port of departure, this is thrown overboard off Cape Fear to avoid ballast charges, etc., in Southport and Wilmington. Schooners from tropical ports come in then with "swept holds."

The imports are a few cargoes of fruit from Harbor Island and the Bahamas, salt from the smaller West India Islands and Liverpool, sulphur from Spain and Italy, kainite from Germany, and guano from Navassa. The export of cotton is mainly carried by steamers that enter coastwise. The trade to the West Indies is in lumber, shingles, and staves.

*Entries of foreign vessels coastwise.*

Month.	From ports north.	From ports south.	Total.
January .....	-----	1	1
February .....	2	-----	2
March .....	1	-----	1
April .....	2	-----	2
May .....	3	-----	3
June .....	2	-----	2
July .....	2	-----	2
August .....	1	-----	1
September .....	4	-----	4
October .....	4	1	5
November .....	2	1	3
December .....	3	-----	2
Total .....	26	3	29

Of these, twelve were sailing vessels, the remainder steamships for cotton, which had previously come from "ports in yellow-fever latitudes," and hence fall under (b) of this paragraph. There is no means of finding out the facts from the customs records. American vessels coastwise, save steamers in regular lines, do not enter here, and there is thus no record of the coastwise trade in American vessels. It consists of lumber and naval stores, the latter in small amount.



From what countries chiefly do the vessels come? From Great Britain in October, November, December, January, and February; other months from the smaller West Indian ports.

Are they in cargo, ballast, or empty? Mainly in ballast, which is almost entirely sand and rubbish.

State whether in your opinion the quarantine facilities are sufficient to care for the shipping arriving at the station: No.

Give annual amount expended at station for last three years: Not in annual report.

Give the immediate needs of the station as stated by the commanding officer: Makes no recommendation for immediate needs, except that he requires a flat-bottom sailboat for transportation of supplies and to save the launch.

Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

The station at present is simply an inspection station, and has no means of handling infected vessels. Any such vessel must be sent to some disinfecting station, Cape Charles or the South Atlantic Quarantine.

I would earnestly recommend the completion of the plant here, so that vessels can be disinfected. It would seem that the number of attendants (five) is in excess of the requirements of an inspection station doing so little work as this, but I am informed that at times less than four men can not pull a boat against the current to board a vessel.

The naphtha launch in use is little suited to the needs of a boarding boat. A smaller one, 18 to 20 feet long, without upper works and decked over, with the same engine that this one has, could be used as a boarding boat in almost all weather, and would require two less men at the station while only an inspection station. I would add that the records of the station are well kept, the attendants efficient and under good discipline, and the floating craft is kept in most excellent condition.

I certify that the foregoing is a careful and correct statement of the condition of the Service at the Southport United States Quarantine Station, inspected by me this 6th day of June, 1896.

H. R. CARTER,  
*Surgeon, M. H. S., Inspector.*

#### EXHIBIT A.

WILMINGTON, N. C., *May 19, 1896.*

Dr. J. M. EAGER, Passed Assistant Surgeon,  
*Southport, N. C.*

DEAR SIR: I take pleasure in making you the following proposition for the repair of your quarantine tug:

I find, upon examination, that the valve and valve seat of the engine require refitting; that the engine requires new brasses for both gibs, crossheads, and cranks; that the links require overhauling; that a section of the copper pipe requires repairing; steering-wheel and bells require overhauling; engine requires lining up; the pumps overhauling, repacking, etc., and I propose to do this work, putting the engine in running order, for the sum of \$173.

I find also that the smokestack requires repairing; that there is a patch to be put on the back connection; also a patch in the port furnace. The patch on the bottom requires renewing, and her tubes will all have to come out and be replaced with new ones.

This work I propose to do for the sum of \$325, making the overhauling of both engine and boiler cost \$498. This with the understanding, of course, that you put the boat in Wilmington at my disposal.

Owing to the boat being in the water, my representative was unable to examine the wheel and the stern bearing to ascertain whether they required attention or not.

The above is based on the supposition that the wheel and stern bearing are in good order.



Trusting that I may be favored with your order for the work, and assuring you that it shall have prompt and careful attention, and that all work shall be done in a thorough and workmanlike manner, I am,  
Yours, truly,

CHAS. M. WHITLOCK.

### SOUTH CAROLINA.

#### REPORT OF INSPECTION OF LOCAL QUARANTINE STATIONS.

By Surg. H. R. CARTER, M. H. S.

#### GEORGETOWN.

1. The quarantine station at this port is located on South Island, about 11 miles below the city of Georgetown, on Winyaw Bay, on the west side of its entrance. It is marked by a yellow flag, and has no buildings save the residence of the officer. It is essentially an inspection station from May 1 to November 1, but disinfects certain classes of vessels. The anchorage for all vessels in quarantine is off the flag as far to the east shore of the bay as is practicable, the channel being close to the west shore. It is not marked out in any way, and there is no plant of any kind save a boarding boat and some pots, and I think none is needed. Mail facilities are good. No telegraph, but a telephone line will, I am told, be laid to Georgetown.

2. Dr. J. William Folk is the quarantine officer. His address is South Island, S. C. One subordinate.

3. I transmit herewith copy of the State laws and regulations for quarantine stations (Exhibit A). Vessels from ports known to be infected with yellow fever, or having had that disease aboard, are sent to Sapelo Quarantine. Other vessels in ballast from all West India ports, and vessels the sanitary condition of which the quarantine officer is suspicious, are disinfected at this station, ballast being always discharged previous to disinfection. Only one such disinfection has, however, been performed in the last eighteen months—a schooner from Ponce, Puerto Rico, in March, 1895.

4. The quarantine procedures in the case of a vessel from an infected port or suspected latitude should be its disinfection during the entire year, by regulations, but this was not done at this station in the only case that has presented itself (a vessel without ballast). A vessel with ballast was disinfected.

5. Inspection is maintained during the entire year. Vessels from ports infected with yellow fever, and vessels in ballast from any West Indian port, are disinfected or sent for disinfection elsewhere during the entire year.

6. No vessels from other United States ports are inspected.

7. The quarantine procedures in the inspection of vessels are set forth in section 958, page 13, general statutes of South Carolina (Exhibit A). An infected vessel is sent to the United States South Atlantic Quarantine Station. The disinfection of such vessels as are disinfected here begins as soon as the ballast is discharged and the hold cleaned. The time occupied is not known—probably from twenty-four to forty-eight hours. The time after completion of this disinfection, five to fifteen days, at the option of the quarantine officer. Some are not detained.

8. No communication is held with vessels in quarantine or between vessels in quarantine. Pilots board safe vessels, but would "con" dangerous ones in.

9. A vessel infected with cholera, yellow fever, or smallpox could be sent to Sapelo Quarantine or Southport when completed. The evidence of infection would be a foul bill of health or other evidence of the existence of the disease at the port of departure, or at port of call, the presence of fomites or the disease aboard, or, indeed, any condition capable of conveying contagion which would induce the quarantine officer to hold her.

10. Records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, or during detention, copies of which are forwarded to the chairman of the quarantine committee of the State board of health.



11. The quarantine fees are as follows: Inspection fee, \$3; disinfection, not over 100 tons, \$10; over 100 and less than 250 tons, \$14; 250 and less than 500 tons, \$20; 500 tons and less than 750 tons, \$28; 750 tons and less than 1,000 tons, \$34; 1,000 tons and less than 1,250 tons, \$40; 1,250 tons and upward, \$44 to \$68. This charge is made for each process of fumigation and disinfection, and I presume refers to the fact that by Article VI, page 8, of the laws referred to, certain vessels must be subjected to at least two fumigations, and not to the different processes of the same disinfection. There are no other charges here, ballast being thrown overboard, and there being no wharf.

12. The number of vessels arriving from foreign ports in 1895 was one from Guantanamo, January 1, swept hold; and one from Ponce, Puerto Rico, in ballast, which was discharged and the vessel disinfected. There were no entries of vessels from foreign ports via United States ports during the calendar year. There was one in June, 1894. There are no complete entries in custom-house book of coastwise vessels, and none were inspected at quarantine in 1895. The commerce is almost entirely coastwise with Northern ports, in lumber and naval stores; some cotton, which also goes to Northern United States ports. About two or three vessels come in from the West Indies per annum, usually in the winter.

13. My visit to the custom-house resulted in obtaining the above information. No immigration bureau here.

14. In my opinion the quarantine facilities are insufficient; there are none for the care of infected vessels, should one come; but with the present arrangement of sending all the infected vessels during the period from May 1 to November 1 to the South Atlantic Quarantine Station, the present station simply serves as one for inspection, so far as infected vessels are concerned, and is sufficient.

15. All the regulations of the Treasury Department which apply to vessels entering here during the past eighteen months have been observed, except that the certificate of pratique in the form required is not furnished vessels, inspection only being required.

16. The certificate of inspection or pratique is not signed by the quarantine officer, copy of which is herewith transmitted (Exhibit B).

17. The consular bill of health is filed, one copy in the custom-house and the other at the station.

18. This station has not the facilities to treat an infected vessel as required by modern sanitation or the United States quarantine regulations, but, considering the amount and character of the commerce, they are not needed.

With the present order to the collector of customs, which agrees with the State regulations in force at the South Island Quarantine, requiring from vessels from infected ports a certificate of disinfection at the South Atlantic or similar station, I believe the inspection is sufficient, and very carefully and conscientiously done. The discharge of ballast under water from all tropical ports, even in the winter season, is, I think, a wise precaution, and to be commended even if not always necessary.

I find no change to recommend, save that the quarantine officer be requested to sign the certificate of pratique required by the Treasury regulations in addition to the certificate of discharge which he now signs for the mayor of the town. I presume if a few blank certificates of the form required be furnished him and he be informed that the certificate is necessary for customs entry, there would be no difficulty.<sup>1</sup>

JUNE 15, 1896.

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<sup>1</sup>Blank certificates were sent to the quarantine officer June 20, 1896, through the collector of customs at Georgetown, and the secretary of the State board of health was requested to have said officer comply with the Treasury regulations relative to signing pratique.



## EXHIBIT A.

*Rules and regulations of the quarantine service at the several ports of the State of South Carolina.*

1. Every vessel arriving from a foreign port or infected port of the United States shall immediately proceed to the boarding station and display a yellow flag or the vessel's ensign in the rigging, and shall be visited by the quarantine officer between sunrise and sunset, as soon as possible after such arrival.

The quarantine officer, on boarding a vessel, will furnish the master with a printed copy of the quarantine regulations of the port.

The quarantine officer shall examine her bill of health and inspect the ship, and require of the captain or master answers, in duplicate, under oath, to the following questions, of which, as soon as obtained, a copy shall be forwarded to the chairman of quarantine committee of the State board of health:

STATE OF SOUTH CAROLINA, QUARANTINE STATION,  
Port of ———, 188—.

DEAR SIR: I have the honor to report the arrival of ——— at this station on ———, and submit the following answers of commanding officer, over his signature:

- (1) From what port did your vessel clear?
- (2) When did you sail?
- (3) From what port did you clear prior to last clearance?
- (4) What was your cargo or ballast from that port?
- (5) Number of your crew?
- (6) Number of passengers?
- (7) What ports have you touched at during voyage?
- (8) Was there any infectious or contagious disease at port from which you cleared—if so, what?
- (9) Was there any infectious or contagious disease at any port at which you touched? If so, where, and what disease?
- (10) Has there been any infectious or contagious disease on board this vessel during last twelve months? If so, what disease?
- (11) Have you a bill of health? If not, why?
- (12) What sickness on board while in port of clearance?
- (13) What sickness on board during voyage?
- (14) What sickness on board since arrival here?
- (15) What cargo?
- (16) What kind of ballast?
- (17) Where was this ballast obtained?
- (18) Have any of your crew or passengers come in contact, during the voyage, with any vessel having sickness on board, or with any vessel from an infected port?

I certify that I have truthfully answered each and every one of the above questions; also, that I have received a copy of the printed quarantine regulations from the quarantine officer.

—————,  
Captain of ship ———, of ———.

Having made a thorough inspection of vessel, cargo, ballast, and log book of the ———, I respectfully report. [1. That she is discharged from quarantine.] [2. That she is held for discharge of ballast and disinfection.]

—————,  
Quarantine Officer.

2. No vessel shall be kept under observation more than twenty-four hours without a stated decision in writing by the quarantine officer.

3. Vessels neither suspected nor infected shall be at once given free pratique and allowed to proceed to the wharf or usual anchorage.

4. In case the vessel is infected, the following rules shall govern the quarantine officer:

(a) The crew and passengers shall be inspected by the quarantine officer, and if any are sick, they shall be removed to the proper hospital, care being taken that their persons be cleansed, as far as is consistent with their condition, and that no part of their clothing or bedding enters the hospital until thoroughly disinfected.

(b) Passengers not sick shall be removed to quarters prepared for their reception, and their clothing and baggage shall be thoroughly disinfected.

(c) All other clothing, bedding, and dunnage in the vessel shall be thoroughly disinfected.



(d) The vessel's hold shall be subjected, for twenty-four hours, as thoroughly as practicable, to a first process of disinfection by fumes of burning sulphur before disturbing the cargo, the hatches and air ports being tightly closed, after which the hatches shall be opened and the hold of the vessel, as far as possible, aired, the bilge water pumped out, and the cargo immediately transferred to the warehouses or lighters, if such transfer is deemed necessary by the quarantine officer, either to secure the thorough cleansing and disinfection of the ship, or because the cargo itself is of such a character that requires disinfection.

In deciding as to the necessity for removal or treatment of cargo the quarantine officer shall be governed by the following considerations:

If the ship be a foul ship, the removal of cargo and ballast will always be necessary to secure thorough cleansing of the hold.

(e) The ballast, if earth, sand, or porous stone, shall be deposited under water at a point to be selected by the proper health authorities. Vessels needing a certain amount of ballast to maintain their upright position will be required to use float ballast, in order to complete the proper cleansing of the hold.

(f) After this preliminary disinfection, and the discharge of cargo or ballast, if necessary, the vessel shall be thoroughly cleansed, disinfected, and reventilated, under the supervision of the quarantine officer; and this shall apply to the hold, bilge, limbers, the forecastle or sleeping apartments of the crew, the caboose, and the cabins for passengers, as well as bunks, portable berths, bedding, etc. All decaying wood shall be scraped and disinfected with strong solutions of the sulphates or chlorides of iron or zinc.

(g) Until this process of cleansing and disinfection has been completed to the satisfaction of the quarantine officer, as shown by his certificate to that effect, there shall be no communication between the vessel and the shore, or other vessels, except by the written permit of the quarantine officer, and then only in the manner and for the purpose specified in said permit; and any person or vessel communicating, without such permit, with a vessel in quarantine, shall also be placed in quarantine and treated as suspected, besides incurring the penalties prescribed by statute. The vessel shall be discharged from quarantine after a thorough cleansing and disinfection, but only upon the certificate of the quarantine officer.

5. The sick shall be detained in hospital until the quarantine officer decides that their discharge will not be attended with danger to themselves or to others.

6. Persons under observation shall be detained for not less than five days, or as long as it shall be necessary, in the judgment of the quarantine officer. Passengers shall be detained no longer than for the period of incubation of the disease, or diseases, for which the ship is quarantined. In case, however, that yellow fever, cholera, plague, smallpox, or relapsing fever, occur among the passengers so detained, the quarantine officer shall send the person or persons affected with such disease to hospital, and the others shall be detained until he shall be satisfied of their freedom from infection.

7. In case of smallpox the sick shall be sent to hospital, and those not sick shall be immediately vaccinated, or revaccinated, at the discretion of the quarantine officer, after which they shall be allowed to proceed to their destination (after the period of incubation of diseases has passed).

8. Persons employed at the quarantine station, brought in contact with vessels infected with yellow or typhus fevers, smallpox, plague, or cholera, shall not be permitted to leave such station until their clothing and baggage have been disinfected, nor until, in the judgment of the quarantine officer, sufficient time has elapsed since the last exposure.

9. It shall be the duty of the quarantine officer to take the responsibility of applying such measures as he may deem indispensable for the protection of the public health.

#### QUARANTINE CODE.

I. On and after the opening each year of the National Quarantine Station (Sapelo Sound) all vessels from infected or suspected latitudes arriving with plague, cholera, smallpox, yellow or typhus fever on board, or having had same during voyage, must be directed by the pilot to proceed to said National Quarantine Station.

II. Any vessel arriving at any port bearing the certificate of the national quarantine officer must be brought to anchor at the quarantine station, and there remain until released by the order of the quarantine officer.

III. During the closure of said National Quarantine Station all vessels such as above described must anchor at the Port Quarantine Station, under personal direction of the quarantine officer.

IV. Vessels from any foreign port direct or via American ports, with or without



sickness on board, will, during the entire year, be compelled to anchor and remain at the quarantine station until released by written permit of the quarantine officer.

(Dr. Folk construes this section to mean if via one United States port, quarantine; if via two or more, no quarantine.)

V. All vessels arriving at any port with sickness on board, or having had same during voyage, will, at all seasons of the year, no matter from what port, either American or foreign, anchor at the quarantine station, and there remain until released by order of the quarantine officer of the port.

VI. Vessels from infected or suspected latitudes will, during the entire year, be required to discharge any and all ballast at the quarantine station, or such other place as may be designated by the health authorities, to have bilges and limbers cleaned and sweetened. From November 1 to May 1 of each year said vessels shall be subjected to at least one fumigation. From May 1 to November 1 of each year said vessel shall be subjected to at least two fumigations and such other disinfection as may be necessary, and be detained at least fifteen days during said latter period.

VII.<sup>1</sup> On and after May 1 and until November 1 of each year, and longer if the State board of health so determine, all coastwise vessels or steamers from latitudes south of Cape Hatteras, other than those by inland route, must anchor at the quarantine station. Steamers and vessels from noninfected or nonsuspected ports will not be detained longer than necessary for the quarantine officer to satisfy himself of their perfect sanitary condition. [Not enforced.]

VIII.<sup>1</sup> Coastwise steamers and vessels arriving at this port by inland route, from latitudes south of Cape Hatteras, between May 1 and November 1, and later of the State board of health so determine, must be inspected and given permits by the quarantine officer before the landing of either passengers or freight. [Not enforced.]

IX. From May 1 to November 1 of each year, no vessel from an infected or suspected latitude will be allowed to either lighter or bring cargo of fruit up from quarantine station.

X. Pilots must in each case, before boarding, make inquiry as to the sanitary condition of vessels; in no case must they board if the vessel has contagious or infectious sickness on board, or has had same during voyage; in such case they must either direct to Sapelo quarantine station, lead the vessel in, or have their small boat hoisted alongside, clear of the water, and in this way pilot the vessel in.

By order of State board of health.

Quarantine Officer, Port of \_\_\_\_\_, S. C.

LAWS RELATING TO QUARANTINE—PART I, TITLE VIII, CHAPTER XVIII, GENERAL STATUTES OF SOUTH CAROLINA.

SECTION 947. The anchorage ground for vessels at quarantine at the ports of Georgetown, Charleston, and Hilton Head shall be designated by buoys, to be anchored under the direction of the health officers; and every vessel subject to quarantine shall, immediately on her arrival, anchor within them and there remain, with all persons arriving on her, subject to the examination and regulations imposed by law. For the purpose of quarantine, the port of Hilton Head shall be held to include the port of Beaufort. The quarantine anchorage for Port Royal Harbor shall be not less than 1 mile below and south of the mouth of Johnsons or St. Helena River.

SEC. 948. For the more certain prevention of the introduction of disease into the several ports of this State, every vessel arriving from a foreign port or from a suspected or infected port of the United States, shall immediately proceed to the quarantine station of the port of arrival and display a yellow flag or the vessel's ensign in the rigging, and shall be visited by the quarantine officer, between sunrise and sunset, as soon as possible after such arrival.

All vessels which have had infectious or contagious diseases on board during the voyage or while in the port of departure, and also all vessels from infected or suspected latitudes or ports, shall be subjected to a detention of not less than five days, or for such longer time as the constituted health authorities at the port of arrival may deem requisite, and pratique shall not be given to any such vessel until such vessel shall have been thoroughly disinfected and fumigated, the cargo and ballast having been first discharged.

SEC. 949. All vessels and persons remaining at quarantine on the 1st day of

<sup>1</sup>Sections VII and VIII will not be enforced unless specially ordered by the State board of health.



November shall thereafter be subject to such quarantine and restrictions as vessels and persons arriving on and after that day.

SEC. 950. All vessels arriving on and after the 1st day of November, having had during the voyage a case of smallpox, cholera, or typhus, or infectious or contagious disease, and every vessel from a foreign port having passengers, and not heretofore declared subject to quarantine, shall, on her arrival, be anchored at quarantine ground and be visited by the health officer or his deputies, but shall not be detained beyond the time requisite for due examination, unless she shall have had on board during the voyage some case of smallpox, typhus, or other infectious or contagious disease, in which case she shall be subject to such quarantine as the health officer or his deputies shall prescribe. And it shall be the duty of the health officer or his deputies, whenever necessary for the public health, to cause the persons on board of any vessels to be vaccinated.

SEC. 951. The health officers, intendant, and wardens, or the mayor and aldermen, as the case may be, and in the port of Charleston the harbor commission, whenever in their judgment the public health shall require, may order any vessel at the wharves of either of said ports, or in their vicinity, to the quarantine ground or other place of safety, and may require all persons, articles, or things introduced into said ports from such vessels to be seized, returned on board, or removed to the quarantine ground or other place. If the master, owner, or consignee of the vessel can not be found, or shall refuse or neglect to obey the order of removal, the health officer, intendant, and wardens, or mayor and aldermen, and in the port of Charleston the harbor commission, as the case may be, shall have power to cause such removal, at the expense of such master, owner, or consignee, and such vessel or person shall not return to the port without the written permission of the health officer.

SEC. 952. If any vessel arriving at the quarantine ground subject to quarantine shall be bound to some port north of either of said ports, the health officer, after having duly visited and examined her, may permit her to pass on her voyage; but no such vessel shall be brought to anchor off either of said ports, nor shall any of her crew or passengers land in or hold any communication with either of said ports, or any persons therefrom.

SEC. 953. The master of every vessel released from quarantine and arriving at a wharf in either of said ports shall, within twenty-four hours after such release, deliver the permit of the health officer at the office of the mayor or intendant, as the case may be.

SEC. 954. Nothing in this chapter shall prevent any vessel arriving at quarantine from again going to sea before breaking bulk.

#### DUTIES OF PILOTS.

SEC. 955. It shall be the duty of each pilot belonging to either of the said ports to use his utmost endeavors to hail every vessel he shall discover entering the port, and to interrogate the master of such vessel in reference to all matters necessary to enable such pilot to determine whether, according to the provisions of the preceding sections, such vessel is subject to quarantine or examination by the health officer.

SEC. 956. If, from the answers obtained to such inquiries, it shall appear that such vessel is subject to quarantine or examination by the health officer, according to the preceding sections, the pilot shall immediately give notice to the master of the vessel that he, his vessel, his cargo, crew, and passengers are subject to such examination, and that he must proceed and anchor said vessel at the quarantine anchorage, there to await the further directions of the health officer.

SEC. 957. It shall be the duty of every pilot who shall conduct into port a vessel subject to quarantine or examination by the health officer—

1. To bring such vessel to anchor within the buoys marking the quarantine anchorage.

2. To prevent any vessel or boat from coming alongside of the vessel under his charge, and to prevent anything on board from being transferred to or thrown into any other vessel or boat.

3. To present to the master of the vessel a printed copy of this chapter when such copy shall have been delivered to him for that purpose.

4. To take care that no violations of this chapter be committed by any person, and to report such as shall be committed, as soon as may be, to the health officer.

5. To subject himself to such detention and delay and cleansing and purification as to his person and clothing as shall be prescribed by the health officer after having boarded or brought to the quarantine ground any vessel subject to quarantine.

SEC. 979. Every pilot or other person who shall bring, or attempt to bring, or



cause to be brought, into any port of this State any vessel, or the whole or any part of the crew, passengers, or cargo, beyond the place appointed for her examination, without such vessel being examined according to law, shall forfeit and pay, the one-half to the use of the State and the other half to the use of such person as shall sue for the same, the sum of \$500; and the pilot shall, moreover, be deprived of his branch as a pilot: *Provided*, That nothing herein contained shall extend to persons who may be shipwrecked.

## DUTIES OF QUARANTINE PHYSICIANS.

SEC. 958. It shall be the duty of the health officer to board every vessel subject to quarantine or visitation by him immediately on her arrival, between sunrise and sunset; to inquire as to the health of all persons on board and the condition of the vessel and cargo, by inspection of the bill of health, manifest, log book, or otherwise; to examine, on oath, as many and such persons on board as he may judge expedient to enable him to determine the period of quarantine and the regulations to which such vessel shall be made subject, and report the facts and his conclusions, and especially to report the number of persons sick, and the nature of the disease with which they are afflicted, to the mayor or intendant in writing.

SEC. 959. It shall be the duty of the health officer to reside within or near the quarantine ground; and he shall have power—

1. To remove from the quarantine anchorage ground any vessel he may deem dangerous to the public health to any place south or east of the quarantine ground, inside the bar.

2. To cause any vessel under quarantine, when he shall judge it necessary for the purification of the vessel, or her cargo, passengers, or crew, or either of them, to discharge or land the same at the quarantine grounds.

3. To cause any such vessel or cargo, or bedding and the clothing of persons on board, to be ventilated, cleansed, and purified in such manner and during such time as he shall direct; and, if he shall judge it necessary to prevent infection or contagion, to destroy any portion of such bedding or clothing, and, with the concurrence of the mayor or intendant, any portion of such cargo which may be deemed incapable of purification.

4. To prohibit and prevent all persons arriving in vessels subject to quarantine from leaving quarantine or removing their goods or baggage therefrom until fifteen days after the last case of pestilential, contagious, or infectious disease shall have occurred on board and ten days after her arrival at quarantine, unless sooner discharged by him.

5. To permit the cargo of any vessel under quarantine, or any portion thereof, when he shall judge the same free from infection or contagion, to be conveyed to the landing.

6. To cause all persons under quarantine to be vaccinated when he deems it necessary for the preservation of the public health.

7. To administer oaths and take affidavits in all examinations prescribed by this chapter and in relation to any alleged violations of quarantine law or regulation; such oath to have the like validity and effect as oaths administered by a trial justice.

SEC. 960. The health officer may direct, in writing, any sheriff or constable to pursue and apprehend any person not discharged who shall elope from quarantine, or who shall violate any quarantine law or regulation, or who shall obstruct the health officer in the performance of his duty, and to deliver him to said officer, to be detained at quarantine until discharged by said officer; but such confinement shall in no case exceed ten days. It shall be the duty of the sheriff or constable so directed to obey such direction; and every such person so eloping, or violating quarantine law or regulations, or obstructing the health officer, shall be considered guilty of a misdemeanor, punishable with fine and imprisonment, in the discretion of the court.

SEC. 961. Every vessel during her quarantine shall be designated by colors, to be fixed in a conspicuous part of her main shrouds.

SEC. 962. No vessel or boat shall pass through the range of vessels lying at quarantine or land at the quarantine grounds without the permission of the health officer.

SEC. 963. No lighter shall be employed to load or unload vessels at quarantine without permission of the health officer, and subject to such restrictions and regulations as he shall impose.

SEC. 964. All persons being on board of vessels under quarantine shall be provided for by the master of the vessel in which they shall have arrived; and if the master shall omit or refuse to provide for them, or they shall have been sent on shore by the health officer, they shall be maintained at the expense of such vessel,



her owners, consignees, and each and every one of them; and the health officer shall not permit such vessel to leave quarantine until such expenses shall have been repaid or secured; and the said health officer shall have an action against such vessel, her owners and consignees, and each and every one of them, for such expenses, which shall be a lien on such vessel, and as such may be enforced as other liens on vessels.

SEC. 965. The health officer, upon the application of the master of any vessel under quarantine, may confine in any suitable place on shore any person on board of such vessel charged with having committed an offense punishable by the laws of this State or the United States, and who can not be secured on board of such vessel; and such confinement may continue during the quarantine of such person, or until he shall be proceeded against in due course of law, and the expense thereof shall be charged and collected as in the last preceding section.

SEC. 966. Any person aggrieved by any decision, order, or direction of the health officer may appeal therefrom to the governor, attorney-general, and comptroller-general, who shall constitute a board of appeal. The said board shall have power to affirm, reverse, or modify the decision, order, or direction appealed from, and the decision of the board thereon shall be final.

SEC. 967. An appeal to the board of appeal must be made by serving on the health officer a written notice of such appeal within twelve hours after (Sundays excepted) the appellant receives notice of the order, decision, or direction complained of. Within twelve hours after the health officer receives such notice (Sundays excepted) he shall make a return in writing, including the facts on which his order, decision, or direction was founded to the governor, who shall immediately call a meeting of the board of appeal, and shall be president of said board; and said appeal shall be heard and decided within twenty-four hours thereafter (Sundays excepted); and until each decision is made, the order, decision, or direction complained of, except it refer to the detention of a vessel, her cargo, or passengers at quarantine, shall be suspended.

SEC. 968. Whenever the said health officer, in the performance of the duties and in the execution of the powers imposed and conferred upon him by law, shall order or direct the master, owner, or consignee of any vessel under quarantine to remove such vessel from her anchorage, or to do any act or thing, or to comply with any regulation relative to said vessel or to any person or thing on board thereof or which shall have been brought to said ports therein, and said master, owner, or consignee shall neglect or refuse to comply with such order or direction, the said health officer shall have power to employ such persons and assistants as may be necessary to carry out and enforce such order or direction, and the persons so employed shall have a lien on such vessel, her tackle, apparel, and furniture, for their services and expenses.

SEC. 969. All masters of vessels or other persons violating any of the provisions of this chapter, or disobeying any of the published regulations of the health authorities of any port, and all persons whosoever, who shall, without permission of said authorities, invade the quarantine grounds or station of such port, or who shall hold any communication or attempt to hold any communication with any vessel, or any officer, or any passenger, or member of the crew of any vessel lying at the quarantine or under control of the said authorities, shall be guilty of a misdemeanor, and upon conviction shall be punished by fine not exceeding two thousand dollars, or by imprisonment not exceeding twelve months, or both, in the discretion of the court.

#### DUTIES OF MASTERS.

SEC. 974. Every master of a vessel subject to quarantine or visitation of the health officer, arriving in either of the said ports, who shall refuse or neglect either—

1. To proceed with and anchor his vessel at the place assigned for quarantine at the time of his arrival;

2. To submit his vessel, cargo, and passengers to the examination of the health officer, and to furnish all necessary information to enable that officer to determine to what length of quarantine and other regulations they ought, respectively, to be subject; or

3. To remain with his vessel at quarantine during the period assigned for the quarantine, and while at quarantine to comply with the directions and regulations prescribed by law—

Shall be guilty of a misdemeanor, and be punished by fine not exceeding two thousand dollars, or by imprisonment not exceeding twelve months, or by both such fine and imprisonment.



SEC. 975. Every master of a vessel hailed by a pilot who shall either—

1. Give false information to such pilot relative to the condition of his vessel, crew, or passengers, or of the health of the place or places from whence he came, or refuse to give such information as shall be lawfully required;

2. Or land any person from his vessel, or permit any person except a pilot to come on board of his vessel, or unlade or transship any portion of his cargo before his vessel shall have been visited and examined by the health officer;

3. Or shall approach with his vessel nearer to the wharves in said ports than the place of quarantine to which they may be directed—

Shall be guilty of the like offense and subject to the like punishment; and any person who shall land from any vessel, or unlade or transship any portion of her cargo, under like circumstances, shall be guilty of a like offense and subject to the like punishment.

SEC. 976. Any person who shall violate any provision of this chapter, or neglect or refuse to comply with the directions and regulations which any of the health officers may prescribe, shall be guilty of the like offense, and be subject for each offense to the like punishment.

#### QUARANTINE PORT OF CHARLESTON.

SEC. 977. The administration of quarantine of the port of Charleston shall be in charge of the board of health of the city of Charleston, subject to the advice and supervision of the executive committee of the State board of health, and they shall have full power and authority to make such rules and regulations for the institution and enforcement of quarantine as they may deem expedient and as may be conformable to law.

The quarantine officer of the port of Charleston shall be appointed by the governor on the nomination of the board of health of the city of Charleston. He shall be invested with all powers and authority heretofore conferred by law upon the health officer of the port of Charleston, and he shall exercise such powers and authority under the direction and control of the said board of health of the city of Charleston. He shall receive a salary from said board at the rate of \$1,800 per annum, and he shall reside at the quarantine station. He shall be appointed during the month of January of each year and hold his office for one year and until his successor shall be appointed, unless sooner removed by the governor, at the request of the board of health of the city of Charleston, or for other reasons satisfactory to him.

For the purpose of carrying out the provisions of this chapter with regard to the port of Charleston the sum of \$2,800 shall be annually appropriated, to be paid by the State treasurer on the order of the chairman of the board of health of Charleston.

#### QUARANTINE OF THE PORTS.

The ports of the State which are not specifically provided for in this chapter shall remain under the supervision and control of the executive committee of the State board of health, and a quarantine officer shall be appointed at each of the said ports, who shall be vested with the powers and authority heretofore by law conferred upon the health officer, and shall exercise the same under the direction and control of the executive committee of the State board of health, or of such local board as the executive committee or the State board of health may appoint for that purpose. He shall return to the said executive committee, or to the said local board, all fees collected by him, and shall receive for his services annually the following, to wit:

Quarantine officer of the port of Georgetown, \$500, and \$150 for boat hire.

Quarantine officer at St. Helena entrance, \$800, and \$150 for boat hire.

Quarantine officer at Port Royal, \$800, and \$150 for boat hire.

He shall be appointed by the governor, on the recommendation of the executive committee of the State board of health, during the month of January of each year, and hold his office for one year and until his successor shall be appointed, unless sooner removed by the governor at the request of the executive committee of the State board of health, and shall reside at the quarantine station.

SEC. 978. Wherever the words "health officer" occur in this chapter they shall be understood to mean the health officer or his deputies: *Provided*, That said deputies shall in all cases be graduates of a regular medical school.

SEC. 980. The officer or officers who may be intrusted with the execution of the quarantine laws are authorized and directed, in case of a violation or attempt to violate any of the said laws, to board by force of arms any vessel used in such violation or attempt to violate, and to detain her and her crew and passengers.



SEC. 981. Any vessel which shall be restrained under quarantine laws and shall attempt to violate the same may be fired upon and detained by force of arms.

SEC. 982. When the governor may deem it necessary he shall, at the expense of the State, hire and employ boats and small craft, and a sufficient number of able men well armed, to be stationed wherever he may think fit and to act under his directions, in order to enforce obedience to the laws of this State requiring the performance of quarantine, and also to arm such men, if requisite, with any fire-arms belonging to this State.

SEC. 983. All fines and forfeitures and penalties provided by the laws of the State for the violation of the quarantine laws or disobedience of the orders of the governor establishing quarantine regulations shall be recovered by indictment in the court of sessions, and all persons offending against the same, upon conviction, shall be liable to imprisonment not exceeding twelve months, in addition to such fines, forfeitures, and penalties.

SEC. 985. The following uniform schedule of charges is hereby adopted for quarantine dues for all ports of the State, the amount collected to be expended for the more effective enforcement of quarantine at each port, to wit:

For every vessel boarded and inspected, \$3.

For every vessel of 100 tons or less, fumigating and disinfecting, each process, \$10.

For every vessel over 100 tons and less than 250 tons, fumigating and disinfecting, each process, \$14.

For every vessel over 250 tons and less than 500 tons, fumigating and disinfecting, each process, \$20.

For every vessel over 500 tons and less than 750 tons, fumigating and disinfecting, each process, \$28.

For every vessel over 750 tons and less than 1,000 tons, fumigating and disinfecting, each process, \$34.

For every vessel over 1,000 tons and less than 1,250 tons, \$40.

For every vessel over 1,250 tons, fumigating and disinfecting, according to tonnage of vessel, each process, \$44 to \$68.

In all cases the quarantine officer will collect the charges made against vessels before giving permission to leave quarantine, either by captain's draft on consignee or in currency, and shall return the same to the board charged with the administration of quarantine at such port, who shall be responsible for the disbursement of the same.

#### EXHIBIT B.

PORT OF GEORGETOWN, S. C.,  
Quarantine Station, ———, 189—.

Name, ———. Arrived, ———. Commander, ———. Days passage, ———.  
From, ———. Crew, ———. Passengers, cabin, ———. Passengers, steerage,  
———. Cargo, ———. Bill of health, ———. Remarks, ———.

This vessel has permission to proceed.

—————,  
Quarantine Officer.

This permit must be delivered at the mayor's office within twenty-four hours after discharge from quarantine (Sundays excepted).

#### CHARLESTON.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

The station is in Charleston Harbor, at Fort Johnson, about 7 miles from the wharves, perfectly isolated, no communication being allowed with it save under permit of the health officer of the city. There are two wharves, one with an excellent ballast plant (hoisting engine, tubs, self-dumping cars, and track) for the discharge of ballast and one for the disinfection of vessels. The buildings comprise quarters for officers and employees and for the personnel of vessels undergoing disinfection, divided into three sets, for officers, women, and crew. These, while not elaborate, are sufficient and comfortable. There is also a bath house



and facilities for bathing such as may require it. The limits of anchorage are not marked, but are perfectly well understood by vessels and all who have to do with the station. A vessel treated here is supposed to be infected or suspected of infection until after disinfection. She then lies either at the ballast wharf or at the disinfecting wharf. The station is so arranged that vessels can in almost every case go at once to the wharf she is ready for, and thus it is extremely rare that an infected vessel lies anywhere else save at one of the two wharves.

After disinfection the noninfected vessel is drawn off in the stream to await the expiration of her quarantine of observation. Vessels certainly infected with any quarantinable disease—those that have or have had such disease aboard—are not allowed to enter Charleston Harbor, but are sent by the pilots to the South Atlantic Quarantine. On arrival off the quarantine station, in the stream, the incoming vessel is boarded by the quarantine officer, in a yawl boat, inspected, and what disposition to make of her is determined, i. e., whether she be passed in pratique or be held for disinfection.

The apparatus for disinfection of vessels and baggage is the so-called "Holt system of maritime sanitation," established in 1890, and with all of the essential improvements since introduced added. The sulphur furnace is of the Valk & Murdoch type—I think this is the first one of the kind made—with exhaust fan, and so arranged as to be used in two compartments of a vessel at once. Rubber suction hose is used for the final distribution of the gas. Eighteen per cent  $\text{SO}_2$  (by volume) can be obtained (in the pipe) as the product of this furnace. Pots are used for certain small spaces where it is not practicable to introduce the hose.

The bichloride solution is supplied by an elevated tank, 500 gallons' capacity, being distributed by gravity.

The steam chamber (by Valk & Murdoch) is a modification of those put up at the New Orleans Quarantine in 1889 by H. D. Coleman, but receives its steam differently, giving better circulation of steam, and has recently (1895) been fitted with a steam exhaust for the purpose of securing a vacuum. This, I am told, works well and very expeditiously, giving a 5-pound vacuum (10 inches), to which it is habitually worked. In my opinion the steam exhaust is unquestionably superior to the vacuum pump for securing the low vacuum needed in a steam chamber, though the efficiency is the same.

It is not proposed to treat quarantinable disease ashore; other diseases could in general be treated aboard ship, but could be readily landed at the wharf and treated in all comfort in one of the houses ashore. Suspects, save for the time the vessel is undergoing disinfection, forty-eight to sixty hours, are kept aboard; they are practically the crews of vessels, this not being an immigrant port.

Mail and telegraph facilities to the health officer in Charleston are of course good. Any communication needing to go to the station he sends. All communication with the station is by his order, and only by his own employees.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. H. B. Horlbeck, health officer of Charleston, S. C., is in control of the quarantine of this port; Dr. R. Lebbey, quarantine officer; R. B. Fulcha, engineer. Two boatmen are regularly employed, and acclimated negro laborers are employed as needed; these stay at the station. A captain for the launch is employed who does not remain at the station.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

The laws are the same as those forwarded with the report on Georgetown Quarantine, save the amendment noted on page 1 of the quarantine regulations of Charleston, S. C. (Exhibits A and B.)



4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

The quarantine customs of this port are pretty clearly given by their regulations, which are followed very closely, and the classes of vessels inspected and disinfected and the methods of disinfection and time of detention are as indicated in the United States quarantine regulations. It is construed that "ports infected or suspected of infection with yellow fever" include all the ports not known to be free of infection in the West Indies, Mexican and Central American littoral, and the ports of South America on the Caribbean Sea and Atlantic north of the Rio de la Plata, and ports on the west coast of Africa.

Recently a fruit trade has been established and a physician, nominated by Dr. Horlbeck, accompanies the vessel to inquire into the sanitary condition of the ports to which she trades, his inspection determining whether it shall be considered free of yellow fever. The trade is with the fruit islands and part of the coast of Honduras and Jamaica. This vessel then, sailing under certain safeguards imposed by the board of health (the same as are in use in similar trade in the Gulf), is not subjected to disinfection or detention on entrance.

All vessels in ballast, no matter from what port, must discharge their ballast at quarantine, unless they can prove to the satisfaction of the quarantine officer that it comes from a healthy source. A vessel is always cleaned after ballast has been discharged in quarantine. This rule is for ballast which would be left in the city; ballast for stiffening and not disturbed is, in the winter season, less rigidly dealt with.

The acclimated laborers referred to as employed when needed are not from Charleston and are not allowed to leave the island (quarantine) until their clothing has been disinfected, and, although believed to be immune, held in observation the usual time.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

Inspection is maintained the entire year. Vessels in ballast have it discharged at quarantine, and are always washed down with bichloride. Vessels in ballast from "suspected ports" are treated at all seasons alike. Vessels without ballast from such ports are subject at all seasons to disinfection, etc., at option of health officer.

6. Are vessels from other United States ports inspected?

No; unless they are vessels which have come from a foreign port via a United States port—the so-called "via vessels"—and this whether the United States port be north or south.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

Inspection has been described under previous paragraphs. The treatment is such as is usual at plants of this character. The vessel is cleansed, fumigated, and washed down in the bichloride solution or carbolic acid, and held for observation. As a preliminary to the handling of rock ballast, Dr. Lebbey tells me that he wets it down very thoroughly with bichloride, and, if he is specially doubtful of a vessel, subjects the hold to a preliminary fumigation.

(*a*) The time from arrival, completion of inspection, and beginning of disinfection for a clean vessel without ballast is nil, unless some other vessel is at the wharf, or unless the lateness of the hour renders it inadvisable to begin. If she have ballast or is dirty, she must be cleansed. The ballast plant is an excellent



one, and but little time need be taken in its discharge from a vessel, and but little is taken.

(b) Two and a half to three days.

(c) Five days from completion of disinfection.

8. What communication is held with vessels in quarantine (and before quarantine) by pilots, etc., and how regulated? Is there any intercommunication allowed among vessels in quarantine?

Communication with vessels in quarantine is solely through quarantine officers. No one save quarantine employees are allowed aboard or close to them. There is no intercommunication between vessels in quarantine. Pilots do not board infected vessels, and may not leave the deck of vessels from suspected ports, and are retained aboard at the option of the quarantine officer.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Such a vessel would be sent to the South Atlantic Quarantine (Sapelo) if she had or had had the disease aboard, but if merely from an infected port she would be disinfected here. The ruling as to what ports are (for yellow fever) suspected as infected have been given. Vessels carrying material (fomites) or persons from such places would be treated as if the vessel were from the place itself.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Yes; in retained copy of report made to health officer on arrival of vessel and in letter book he is notified of any sickness aboard. (See rules and regulations of the quarantine service in the Georgetown report.)

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

There are no fees for disinfection. They were abolished in 1894. Inspection fees as follows: Schooner or brig, \$8; bark, \$10; ship or steamship, \$15; ballast discharge, 40 cents per ton; no wharfage or other charges.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

[Customs records.]

Month.	Tropical ports.		Other ports.		Total.
	Cargo.	Ballast.	Cargo.	Ballast.	
January .....	2	7	8	2	19
February .....	1	2	2	1	6
March .....	3	5	3		11
April .....	1	2		1	4
May .....		1	3		4
June .....				1	1
July .....			1		1
August .....		1			1
September .....		1	3	2	6
October .....	1		2		3
November .....	2	5	2	1	10
December .....	1	3	7		11
Total .....	11	27	31	8	77

It will be seen that a very small number of vessels came directly from tropical ports during the quarantine season. The cargoes brought from tropical ports are



mainly fruit; some salt in small vessels. I would also state that many of the vessels from these ports, listed as in ballast, are really empty—American schooners with “swept holds”—the customs books making no distinction between this condition and ballast. The vessels coming from other than tropical ports are mainly steamers coming in cargo—materials for fertilizers, kainit from Germany, and sulphur ore from Italy and the Spanish Peninsula. Those in ballast are from the United Kingdom, in water ballast. A certain number of sailing vessels, however, come from transatlantic ports in cargo, the same as the steamers; none in ballast.

The appended list, obtained from the harbor master's books, gives the vessels coastwise during 1895, not including regular lines of steamers, vessels under 100 tons, nor vessels which arrived here from ports in this State:

Month.	Steamers.	Barks and brigs.	Schooners.	Month.	Steamers.	Barks and brigs.	Schooners.
January .....	3	3	27	August .....		3	34
February .....	5	1	24	September .....	6	4	30
March .....	3	2	26	October .....	3	1	31
April .....	3	1	19	November .....	4	3	32
May .....	5	1	34	December .....	1	4	33
June .....	1	2	27				
July .....	3		39	Total .....	37	25	356

These coastwise vessels are mainly from northern ports, including all of the steamers save three or four, and come mainly empty. Some of the square-rigged vessels are in ballast and a few in cargo. The steamers are for cotton.

I also submit the following table from the books of the quarantine station, which is of more sanitary interest than those preceding:

*Vessels inspected at quarantine.*

Month.	Tropical ports.			Other ports.			Ports in yellow fever zone, via domestic ports.			Domestic ports.	Total.
	Ballast.	Cargo.	Empty.	Ballast.	Cargo.	Empty.	Ballast.	Cargo.	Empty.		
January .....	1	2	6		8	2				3	23
February .....	1	1		1	2					3	9
March .....	4	3			3					2	14
April .....	1	1			1						3
May .....	1			3						1	5
June .....						1				1	2
July .....			1						1	2	4
August .....	1		1				1		1		4
September .....				1	2		1	1	2	2	9
October .....		1			3	1			1	6	11
November .....	1	2	3		3	2			1	1	13
December .....		4		2	8					1	15
Total .....	11	14	13	7	29	6	2	1	6	22	111

Of these, all from tropical ports and two from ports in the yellow-fever zone via domestic ports were disinfected and detained for observation; in all, eighteen vessels. Two of the “via vessels” were not disinfected, because they had been disinfected at Delaware Breakwater and Tortugas. All of the cargoes from tropical ports were of fruit, save one of salt. It is very obvious that the main commerce of this port with incoming vessels is from European ports, due doubtless to the fact that these vessels can come in cargo with materials for fertilizers, for the manufacture of which Charleston is a center, and also to the stringent method in which the quarantine against the infected ports south is enforced.



13. State the results of your visit to (a) the custom-house; (b) immigration bureau.

Found that vessels were entering without the certificate of the quarantine officer required by the act of February 15, 1893. No immigration bureau.

14. State whether, in your opinion, the quarantine facilities are sufficient to care for the shipping entering the port.

Yes; the plant here could handle double the shipping that requires it with ease. It is an excellent plant and well administered.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, are observed.

Except that the certificate of discharge is not such as is contemplated in the act of February 15, 1893, and is necessary for legal entrance at the custom-house, every regulation of the Department is, I believe, properly enforced, and the regulations regarding inspection, disinfection, and the period of observation after detention are observed.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

No. (Exhibit C.) The quarantine officer issues a "leprosy certificate," which seems to have been considered by the customs officer as the one required by the act of February, 15, 1893.

17. What disposition is made of consular bills of health?

One is filed with the entry papers at the custom-house; one at the quarantine office.

18. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

I do not know of any facts likely to be of interest to the Department not covered by the foregoing report. The fruit trade with the tropics is just starting, and while it will not likely reach the dimensions of that of Mobile and New Orleans owing to our greater distance from the supply (unless some nearer source be developed), yet it unquestionably will increase and probably be a considerable factor in the quarantine of the future. I have no recommendations to make. Dr. Horlbeck has already directed a certificate of the form contemplated by the act of February 15, 1893, to be given by the quarantine officer as a pratique to vessels. I would say that I had no opportunity of seeing a vessel disinfected, so that the description thereof and of many other things is from the statement of the quarantine officer; but I have seen the plant in operation for trial and in actual use previously; indeed, I have made myself familiar with the quarantine methods here for some years.

JUNE 13, 1896.

#### EXHIBIT A.

*An act to render more efficient the quarantine service of the several ports of the State.*

SECTION 1. *Be it enacted by the senate and house of representatives of the State of South Carolina, now met and sitting in general assembly, and by the authority of the same, That for the more certain prevention of the introduction of disease into the several ports of this State every vessel arriving from a foreign port or from a suspected or infected port of the United States shall immediately proceed to the quarantine station of the port of arrival and display a yellow flag or the vessel's ensign in the rigging, and shall be visited by the quarantine officer, between sunrise and sunset, as soon as possible after such arrival.*



SEC. 2. All vessels which have had infectious or contagious diseases on board during the voyage, or while in the port of departure, and also all vessels from infected or suspected latitudes or ports, shall be subjected to a detention of not less than five days, or for such longer time as the constituted health authorities at the port of arrival may deem requisite, and pratique shall not be given to any such vessel until such vessel shall have been thoroughly disinfected and fumigated, the cargo and ballast having been first discharged.

SEC. 3. All masters of vessels, or other persons, violating any of the provisions of this act, or disobeying any of the published regulations of the health authorities of any port, and all persons whomsoever who shall, without permission of said authorities, invade the quarantine grounds or station of such ports, or who shall hold any communication, or attempt to hold any communication, with any vessel, or any officer, or any passenger, or any member of the crew, of any vessel lying at quarantine, or under control of the said authorities, shall be guilty of a misdemeanor, and upon conviction shall be punished by fine not exceeding \$2,000, or by imprisonment not exceeding twelve months, or both, in the discretion of the court.

## EXHIBIT B.

OFFICE BOARD OF HEALTH,  
Charleston, S. C., July 1, 1893.

From and after this date the following charges will be enforced at the quarantine station of this port:

*Act of the general assembly, ratified December 17, 1889, to amend section 985, general statutes of South Carolina.*

That in every port in this State where the Holt system of maritime sanitation is in use the following charges shall be enforced, to wit:

Inspection fees: Every schooner or brig, \$8; every bark, \$10; every steamship or ship, \$15.

CITY OF CHARLESTON, S. C., July 1, 1893.

From and after this date, the following rules will be enforced at quarantine station, same being in accord with act of Congress, February 15, 1893.

(See "Quarantine code" in Georgetown report.)

## EXHIBIT C.

*Permit of discharge from quarantine.*

QUARANTINE OFFICE, CHARLESTON HARBOR,  
Fort Johnson, S. C., ———, 189—.

Arrived, ———. Nationality, ———. Class and name of vessel, ———. Name of captain, ———. Number of days passage, ———. From what port, ———. Number of crew, ———. Number of passengers, ———. Healthy or sickly, ———. Disease, ———. Cargo, ———. Bill of health, ———. Quarantine officer's decision, ———. Remarks, ———.

This vessel is hereby discharged from quarantine.

—————  
Quarantine Officer.

This permit to be delivered at office of board of health, city hall, within twenty-four hours after discharged from quarantine (Sundays excepted).

## ST. HELENA ENTRANCE.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

The station, designated by a yellow flag, is on Buzzards Island, on Coosaw (or Bull) River, about 18 miles from Beaufort, and is well isolated. The buildings consist of quarters for the quarantine officer, quarters for two boatmen, and a hospital. The hospital was washed away in 1893, and a new smaller one has been erected. The anchorage is off the station, marked by buoys, no difference being made between the anchorage for infected and noninfected vessels, two vessels not



being in quarantine at one time. Vessels are inspected in a yawl boat. There is no apparatus for the disinfection of vessels or baggage. There are some sulphur pots. The sick could be treated in hospital. Suspects would have to be kept aboard. The mail and telegraph facilities poor, especially the latter.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. M. M. Sams, quarantine officer; post-office address, Chisholm, S. C. Two boatmen.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

The laws and regulations are the same as those transmitted in the report of Port Royal, and it is under exactly the same laws and regulations.

The interpretation of the regulations at the two stations is also the same, recent instructions to that effect having been given by the Beaufort board of health. As at Port Royal, vessels are considered in three classes:

(1) Vessels from ports infected with yellow fever, which are so judged (*a*) if they have a foul bill of health; (*b*) if the port is mentioned in the public health reports as having had that disease there recently; (*c*) if from any other reason the quarantine officer judges the port to be infected. Vessels which have, or have had fever aboard, are, of course, included in this class. These vessels are sent to the South Atlantic quarantine for disinfection.

(2) All other vessels from tropical ports and the Rio Plata country. These are disinfected at the station once during the winter months and twice during the summer season, and detained for observation from five to ten days after arrival in quarantine, and not less than fifteen days from the port of departure. This disinfection, as described to me by the quarantine officer, consists in (*a*) burning sulphur in pots in the closed compartments of the vessel, cabin, fore-castle, and hold, for about three hours; (*b*) discharge of ballast, if it be a vessel in ballast, and (*c*) in any case a fumigation with sulphur for three hours. In case a vessel in ballast comes in the winter season, the one fumigation required by the quarantine code (Exhibit A, Georgetown report, Article VI) is given after the ballast is discharged. If there is no ballast, and two fumigations are given, they are given two or three days apart. From the statement of the quarantine officer I judge that a sufficient quantity of sulphur is placed in the cabin and fore-castle, although it seems impossible to burn much in three hours, and proportionately less in the hold. These vessels do not require disinfection by the Treasury regulations.

(3) All vessels not in class 1 or 2, and with no sickness aboard, are passed in pratique. All vessels from foreign ports, all foreign vessels coastwise, and all American vessels coastwise from ports south of Port Royal are inspected.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

All foreign vessels coastwise and all American vessels coastwise from ports south of Port Royal are inspected. All vessels from tropical ports are disinfected during the entire year, and detained for observation not less than five or ten days from date of arrival. Ballast is of course discharged under water. I think there is some unnecessary detention and disinfection of vessels. Still, there are so few vessels subjected to this process, owing to lack of tropical commerce, that it does very little harm commercially.

5. State whether the inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.

Treatment of vessels is the same at all seasons save the number of disinfections required.

6 Are vessels from other United States ports inspected?



All foreign vessels coastwise, and all American vessels coastwise from ports south of Port Royal, are inspected. There are very few of the latter; the former make three-fifths of the entries.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection; (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

In inspection, the bill of health, log, articles, etc., are examined; the master is questioned and the crew inspected. If infected, or with sickness aboard or en route, or from a port infected with yellow fever, she is sent to Sapelo quarantine; if from a noninfected port in the Tropics, with no sickness aboard or en route, she will be disinfected at the station. (*a*) Generally but little time if in ballast in the winter, the ballast being discharged first; (*b*) three hours' closure of hatches for each fumigation—there may be one or two fumigations, according to season; (*c*) detention is counted from arrival in quarantine, and is from five to fifteen days.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

Communication with vessels in quarantine is only through the quarantine officer; never two vessels in quarantine at once. Pilots do not board the vessels sent to Sapelo. Upon the others they are directed not to go below deck, and to stay aboard until the quarantine officer gives them permission to go ashore.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

If a vessel has, or has had en route, any of the above diseases aboard, or if from a port infected with such diseases, she would be sent to Sapelo.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage on arrival and during detention.

Such records would be kept in the retained copies of the reports of arrivals and discharges of vessels sent to the board of health of Beaufort.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

Fees are given in the quarantine report for Georgetown. As stated, during the quarantine season, vessels, if fumigated, are fumigated twice; hence charged double the fee there given. No other charges.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(*a*) from foreign ports; (*b*) from foreign ports in yellow-fever latitudes via domestic ports; (*c*) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

Month.	Tropical ports.		Other foreign ports.	Coastwise vessels.
	Empty.	Ballast.		
January .....	1			1
February .....	1			1
March .....		1	1	1
May .....				2
June .....				2
July .....				2
September .....			1	1
October .....		1	2	1
December .....				1
Total .....	2	2	4	12



Vessels from tropical ports are generally, if not universally, regarded as clean by quarantine officers (Point-à-Pitre and St. Lucia). Four of the above were fumigated and two of them were barks from Bahia in sand ballast. Vessels in water ballast are recorded as empty. All the coastwise vessels were steamers, and all but one from the North.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

See above. No immigration bureau; the quarantine part of the entry papers are in good shape.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

Sufficient for an inspection station. There are no facilities for handling vessels which may be infected. An inspection station is all that is needed.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

The interpretation of the regulations and the customs of the station, as explained to me by the quarantine officer, gives vessels pratique from ports infected with yellow fever, "where yellow fever prevails," which have not been disinfected in the way required by the United States quarantine regulations, nor, indeed, disinfected in any efficient way. Under the recent instructions of the Beaufort board of health, all the above regulations are observed for the vessels to which they apply.

16. Does the certificate of inspection or of pratique signed by the quarantine officer state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

Yes. I could get no printed copy of the pratique, but forward a copy of one taken from the entry papers of a vessel coming from a foreign port at the custom-house. (Exhibit D.)

17. What disposition is made of the consular bills of health?

One filed with the entry papers at the custom-house and the other filed at the quarantine station.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

No facts beyond those given in the body of the report seem to need mention. Obviously, the station is an inspection station only, and its safety, should an infected vessel apply for entrance, is in the Sapelo Quarantine, and in this alone.

The commerce at this port, mainly from transatlantic ports, has been considerable, but at present, as the statistics show, is small in amount and is decreasing.

AUGUST 25, 1896.

EXHIBIT D.

QUARANTINE OFFICE,

*St. Helena Sound, S. C., ———, 189—.*

Arrived, ———. Name of vessel, ———. Nationality, ———. Master, ———. Crew, ———. Passengers, ———. Cargo, ———. Ballast, ———. From ———. Sailed, ———. Fumigated, ———. Discharged from quarantine, ———, 189—.

This vessel, showing no indication of having on board any yellow fever, small-pox, or leprosy, or other infectious diseases, has permission to pass up the river and proceed to load, having complied with the quarantine regulations of the United States and State of South Carolina.

—————,  
*Quarantine Officer.*



## PORT ROYAL.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

The station is nearly adjoining the naval reservation on Port Royal Island. The buildings consist of house, hospital, and quarters for men, boathouse, and wharf. The anchorage for vessels is off the station in Beaufort River; vessels believed to be infected are not treated here, but are sent to Sapelo. They are boarded with a yawl boat. There is no apparatus for disinfection of vessels or baggage, except with sulphur pots. Only noncontagious diseases would be treated at this station—these would in general be treated aboard, but could be moved ashore in boats and cared for at the hospital. Suspects (crew) detained aboard vessel—no other arrangements. Mail and telegraph facilities are good.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Allan Stuart, M. D., is quarantine officer. Post-office address, quarantine station, Port Royal, S. C. Three boatmen are employed.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

Copies herewith transmitted with Georgetown report.

The laws and regulations transmitted are not literally carried out here, because they presuppose a provision of adequate means of disinfection at this station which does not exist. Their spirit and the requirements of the Treasury Department, however, are enforced. Vessels are considered here in three classes:

(1) Those with contagious disease aboard, or from ports believed to be infected with yellow fever, are sent to the South Atlantic quarantine for disinfection, observation, and pratique. A port is judged to be infected with yellow fever if that disease be reported on the bill of health, or in the abstract [public health report], or if from any other information the quarantine officer holds the port infected.

(2) Those from tropical ports believed to be free from yellow fever; these, mainly to comply with State regulations, are disinfected by sulphur pots and detained for observation.

(3) Those from other than tropical ports; these are passed in pratique; also from a few tropical ports known to be clean in the winter. No ballast vessels come here.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

All ballast from tropical ports is required to be discharged under water. None has come the past few years. Vessels from tropical ports, save from ports known to be clean, are disinfected in the winter season. All coastwise foreign vessels are inspected; also coastwise American vessels from the south; of the latter there are very few—two or three per annum. There has been no undue or unnecessary detention of vessels that I know of.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

Yes; and vessels from ports suspected of yellow fever are disinfected in the winter season.

6. Are vessels from other United States ports inspected?

Yes; all foreign vessels and American vessels from ports to the south of Port Royal.



7. Describe quarantine procedures in the inspection of vessels, and if inspected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

The log, crew list, and ship's papers generally are examined, the master questioned, crew mustered and examined, and ship gone over. If infected, it is sent to Sapelo. Of such vessels as are disinfected here, no time beyond what is necessary to clean the vessel elapses before disinfection begins. The disinfection takes about twenty-four to thirty-six hours; the time of detention after disinfection is five days.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

Communication with vessels in quarantine is held only through the quarantine officer. Pilots do not board infected vessels, and must stay on the deck of the vessels which they board until the vessel is released by the quarantine officer, and are subject to his order. Intercommunication of vessels is not allowed.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Any such vessel would be sent to the South Atlantic Quarantine; coming from a port infected with any of the above diseases, or conveying persons or cargo capable of carrying infection from such a port, would be regarded as evidence of infection.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Such record would be kept and the report of the arrival of a vessel forwarded to the board of health of Beaufort, S. C., a duplicate being kept on file at the station. (Exhibit A.)

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

Inspection, \$3; disinfecting, not over 100 tons, \$10; over 100 and less than 250 tons, \$14; over 250 and less than 500 tons, \$20; over 500 and less than 750 tons, \$28; over 750 and less than 1,000 tons, \$34; over 1,000 and less than 1,250 tons, \$40; over 1,250, according to tonnage, \$44 to \$68.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months: (*a*) from foreign ports; (*b*) from foreign ports in yellow-fever latitudes via domestic ports; (*c*) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

Month.	Tropical ports.		Other ports.		Total.
	Empty.	Cargo.	Empty.	Cargo.	
January .....			3	1	4
February .....			1	1	2
March .....	1		1		2
April .....					
May .....	1		1		2
June .....			1	1	2
July .....	1	1			2
August .....			1	1	2
September .....					
October .....			1	3	4
November .....				3	3
December .....					
Total .....	3	1	9	10	23



Of these, one vessel came via the South Atlantic station and had been disinfected; she was from an infected Cuban port. Two vessels were disinfected here, coming from tropical ports believed to be clean (the Leeward Islands and the Venezuelan coast). With one exception all the vessels in the above table were steamships, and the trade is peculiar in the entire absence of sailing vessels and ballast from tropical ports, the sanitary importance of which fact is at once seen.

*Coastwise vessels.*

Month.	In cargo.	Empty.	Total.	Month.	In cargo.	Empty.	Total.
January.....		2	2	August.....	1	1	2
February.....		1	1	September.....	1	1	2
March.....	1	1	2	October.....	1	1	2
May.....		2	2	November.....	1	1	2
June.....	1	4	5	Total.....	8	17	25
July.....	2	3	5				

Of these only one was a "via vessel"—from Cienfuegos via Philadelphia. She had, however, been disinfected at Delaware Breakwater.

The imports are materials for fertilizers—sulphur ores, kainite, and one cargo of meat powder (from the Rio Plata), and a few cargoes of salt. The exports are cotton, phosphate, and grain. There are very few sailing vessels engaged in the coastwise trade. It is in the hands of steamships, coming via northern ports, mainly, for cargo.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

The certificates of discharge from quarantine from this station are of the kind required by the act of February 15, 1893. No immigration bureau.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

With Sapelo quarantine; yes. This is simply (so far as United States Quarantine Regulations are concerned) an inspection station. For this purpose its facilities are ample and it is extremely well administered.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

All the regulations in question are enforced, including those regarding inspection. Disinfection and detention of vessels requiring it by the above regulations are not done at this station, such vessels being remanded to South Atlantic Quarantine.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with, as required by section 5, act of February 15, 1893? Transmit copy of certificate.

Yes. (Exhibit B.)

17. What disposition is made of the consular bills of health?

One is kept on file at the quarantine station and one filed with the entry papers at the custom-house.

18. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

There seems little to add to what has been written. The relation of this station and that at Hilton Head (St. Helena, or Coosaw, by all of which names it is known) to the State board of health is the same, or about the same, as that of Charleston. The report of the quarantine officer is made immediately to the health board of Beaufort, which makes a report of transactions—a summary only—to the State



board. So far as the United States quarantine regulations are concerned, this is an inspection station. All vessels requiring it are inspected under United States regulations, and all that require disinfection by said regulations are refused entrance unless they are disinfected as these regulations require, being for this purpose remanded to the South Atlantic Quarantine. This is by custom and to comply with the United States law, as the South Carolina regulations (except for Charleston) do not specify the method of disinfection to be employed.

In addition to this, certain other classes of vessels are disinfected, viz: From such tropical ports as the quarantine officer believes not to be infected, but which he believes requires disinfection by the quarantine code of this State. This disinfection is not of the same nature as that required by the United States quarantine regulations for infected vessels, but as the vessels subjected thereto are not required by these regulations to be disinfected at all, this is simply an added safeguard. I believe the station is conducted with unusual care and conscientiousness, and with good judgment.

JUNE 16, 1896.

EXHIBIT A.

THE STATE OF SOUTH CAROLINA, QUARANTINE STATION,  
Port of \_\_\_\_\_, S. C., \_\_\_\_\_, 189—.

DEAR SIR: I have the honor to report the arrival of \_\_\_\_\_ at this station on \_\_\_\_\_, and submit the following answers of commanding officer, over his signature:

1. From what port did your vessel clear?
2. When did you sail?
3. From what port and when did you clear prior to last clearance?
4. What was your cargo or ballast from that port?
5. Number of your crew?
6. Number of passengers?
7. What ports have you touched at during voyage?
8. Was there any infectious or contagious disease at port from which you cleared? If so, what?
9. Was there any infectious or contagious disease at any port at which you touched? If so, where and what disease?
10. Has there been any infectious or contagious disease on board this vessel during last twelve months? If so, what disease?
11. Have you a bill of health? If not, why?
12. What sickness on board while in port of clearance?
13. What sickness on board during voyage?
14. What sickness on board since arrival here?
15. What cargo?
16. What kind of ballast?
17. Where was this ballast obtained?
18. Have any of your crew or passengers come in contact during the voyage with any vessel having sickness on board, or with any vessel from an infected port?

I certify that I have truthfully answered each and every one of the above questions; also that I have received a copy of the printed quarantine regulations from the quarantine officer.

\_\_\_\_\_,  
Captain of ship \_\_\_\_\_, of \_\_\_\_\_.

Having made a thorough inspection of vessel, cargo, ballast, and log book of the \_\_\_\_\_, I respectfully report \_\_\_\_\_.

\_\_\_\_\_, Quarantine Officer.

EXHIBIT B.

\* \* \* \* \*

12. Discharged from quarantine \_\_\_\_\_, 189—.

I certify that \_\_\_\_\_, of \_\_\_\_\_, from \_\_\_\_\_, has in all respects complied with the quarantine regulations prescribed by the Secretary of the Treasury and the State of South Carolina, and said vessel is this day granted free pratique.

\_\_\_\_\_, Quarantine Officer.



## GEORGIA.

## REPORT OF INSPECTION OF LOCAL QUARANTINES.

By Surg. H. R. CARTER, M. H. S.

## SAVANNAH.

1. Describe the quarantine station, location, buildings, anchorages, etc.; give limits of anchorages for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects, etc.

The station is 11 miles down the Savannah River, near its mouth, on the right bank, just below the old quarantine station. Its buildings consist of quarters for officers and attendants and for seamen during the disinfection of vessels; also long wharves; ballast trestles, engine house, and house over disinfecting plant. The anchorage for vessels coming into quarantine, not in pratique and possibly infected, is between the black buoys off the station. After disinfection the vessels move higher up the river.

Vessels are boarded sometimes in a yawl and sometimes in the tug *Theckla*, belonging to the station; the latter is especially useful in boarding vessels for orders, etc., in Tybee Roads. The plant is modeled on that of Charleston, S. C., save the sulphur furnace, which is different; nor is the steam chamber fitted for the use of a vacuum. Bichloride solution is distributed from tanks by gravity.

Sickness of an infectious character is not treated here; noninfectious disease is treated aboard ship, or, if need be, in the quarters provided for seamen. No arrangements for care of suspects needed, as they would remain aboard ship. Mail is received daily, via Savannah, in a sailboat. There is a telephone line to Savannah, but no telegraph.

2. Give personnel of the station or port; name of quarantine officer or officers; post-office address; total number of officers and subordinates.

Dr. William J. Linley, quarantine officer; post-office address, Savannah Quarantine, Savannah, Ga. Five employees stay at the station. The mail carrier is an employee of the station, but not allowed to land. The crew of the tug, five all told, are also not allowed on the wharf save when absolutely necessary and when no vessels are there.

3. Transmit copies of laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

Copies of the papers required are herewith transmitted.

The customs of the stations are as follows:

*Inspection.*—All vessels from foreign ports, all foreign vessels coastwise, and all American vessels coastwise which were in tropical ports during the preceding voyage are inspected, the pilots having orders to bring them to the quarantine anchorage or fly a signal in Tybee Roads.

*Treatment.*—For treatment vessels are considered in three classes: (a) Those that go to Sapelo quarantine; (b) those that are disinfected here; (c) those that are passed on their inspection. The (a) class at present comprises (1) all vessels with infectious disease aboard, or en route, or in port of departure; disease of uncertain nature from a suspected port is held "infectious;" (2) during the summer season, March 15 to November 1, all vessels from Habana, Rio, and Santos; (3) during the winter season all vessels from these ports in ballast; steamers in water ballast from Habana (there are none from the other two ports) disinfect at the Savannah Station from November 1 to March 15, and at the South Atlantic the remainder of the year. The (b) class, those that are disinfected here, include all (not sent to Sapelo) from ports suspected of infection with yellow fever, which are ruled to



be all ports in the so-called yellow-fever zone not known to be free from that disease. The crews of such vessels as are disinfected here during the winter are not detained, but allowed to go directly up to the city, where the disinfection of the vessel—which is complete, hold, deck houses, and dunnage—is finished. Naturally all not in the preceding two classes are passed, and are in the third (*c*) class. Until this year, 1896, the class sent to Sapelo included more than it does now, i. e., all vessels from any port considered badly infected, whether sail or steam. The quarantine of any vessel is subject to appeal by its consignee to the sanitary board. Vessels from tropical ports via ports of the United States, without disinfection, are considered as if from the tropical port. All ballast of vessels requiring disinfection here is discharged in quarantine, stiffening or ballast logs being sent down to vessels needing ballasting.

4. State what quarantine procedures, either under printed regulations or by customs, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention of vessels.

All foreign vessels, coastwise, are inspected; all vessels from ports suspected of yellow fever are disinfected and detained during the winter season unless the detention caused by disinfection is held unnecessary. There is no undue detention of vessels. The wharf room is ample, the ballast facilities good, and vessels are handled very quickly.

5. State whether inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.

Inspection is maintained the entire year.

6. Are vessels from other United States ports inspected?

Foreign vessels, coastwise, and American vessels, coastwise, from tropical ports the previous voyage are inspected.

7. Describe quarantine procedures in the inspection of vessels, and, if inspected, the treatment. Give time in quarantine—(*a*) between arrival and commencement of disinfection; (*b*) time occupied by disinfection, and (*c*) time after completion of disinfection of vessels to discharge.

Vessels are inspected in the usual way. The answers to the questions on the accompanying paper are filled in by the master; it is signed by him, and the disposition of the vessel having been recorded on it by the quarantine officer, it is forwarded to the health officer at Savannah. Should the quarantine officer be in doubt of what disposition to make of the vessel, he consults the health officer, his immediate superior, by telephone. The disinfection is such as is usual with a plant of the kind here. If the vessel be in ballast, all ballast is removed, and in any case the vessel is cleansed before disinfection begins. The hold and deck houses are subjected to SO<sub>2</sub> by burning sulphur in pots, 25 pounds per 100 tons register being used, and at the same time the effects of the crew are disinfected (by steam for the fabrics, and bichloride for ballast, etc.). At the end of twenty-four hours the deck houses, and after forty-eight hours the hold, is washed down with bichloride solution. The vessel is detained five days after this is done.<sup>1</sup>

8. What communication is held with vessels in quarantine (before quarantine by pilots, etc.) and how regulated? Is there any intercommunication allowed among vessels in quarantine?

No communication is allowed with vessels in quarantine, save by the quarantine officer and his employees. Provisions, ballast logs, stiffening, etc., are brought alongside under his direction. Pilots who board vessels which go to Sapelo must remain aboard and return with the vessel. Other vessels the pilots may board and must remain aboard until allowed to leave by the quarantine officer.

<sup>1</sup>I did not see disinfection performed, but the above is the account of it given to me by the quarantine officer.



They are directed to remain on the bridge, or poop-deck, as the case may be, and not to enter any compartment of the vessel. No intercommunication is allowed among vessels in quarantine.

9. State what would be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessel carrying or not carrying immigrants) and what conditions are regarded as giving evidence of the vessel's infection in each case.

A vessel undoubtedly infected with any of the above diseases would be sent to the South Atlantic Quarantine, whether carrying immigrants or not. If the infection is not certain, the disposition of the vessel would depend, if yellow fever is the disease in question, on the degree of probability of the infection existing. If this be up to a certain degree and the vessel is reasonably supposed to be infected, i. e., from certain ports known to be badly infected, it is sent to South Atlantic Quarantine; if it be less and the suspicion of infection is not great, i. e., from less dangerous ports, it is disinfected here. I think a vessel would be sent to Sapelo with an extremely slight suspicion of cholera. Smallpox is less regarded, and unless the vessel was from a port where this disease prevailed as an epidemic, or had had a case aboard, it would scarcely be considered infected.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Such records are kept at the office of the health officer in Savannah (Exhibit A); no copy is kept at the station.

11. Transmit schedule of quarantine fees, and give fees and other expenses necessarily and usually attendant on quarantine, as tonnage ballast, wharfage charges, etc.

Fee bill is transmitted (Exhibit B). Ballast is 20 cents per ton, the station furnishing a steam hoist and crew for working on the ballast. No other charges.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels came, and whether in cargo, ballast, or empty.

*From foreign ports.*

Month.	Tropical ports.		Other ports.			Total.
	Empty.	Ballast.	Empty.	Cargo.	Ballast.	
January .....	2	4	2	10	20	38
February .....	2	2	1	4	4	13
March .....	2	4	1	6	17	30
April .....	1	2	2	4	3	10
May .....	2	2	1	1	15	18
June .....	1	3	3	3	13	19
July .....	1	1	1	1	7	10
August .....	2	5	1	2	3	13
September .....	2	1	6	6	13	28
October .....	3	3	3	5	19	30
November .....	1	3	4	8	16	32
December .....	2	1	2	1	5	11
Total .....	15	31	20	51	135	252

From ports in yellow-fever latitudes via domestic ports (north): May, 1; July, 1; August, 2; December, 1; total, 5. All of these were disinfected, 3 at South Atlantic and 2 here.

From domestic ports: January, 9; February, 3; March, 3; April, 2; May, 5; June, 5; July, 4; August, 4; September, 6; October, 12; November, 7; December, 3; total, 63.



All of the vessels from tropical ports were disinfected either here or at South Atlantic Quarantine, except a few (7) calling at Tybee for orders only; two were passed, being from clean West Indian ports. Fifteen were disinfected at South Atlantic Quarantine, mainly from Habana, Rio, and Santos, and usually in ballast. Of the vessels marked "empty," practically all were steamships in water ballast.

The export trade of this port is in cotton (by steamer); some phosphate; naval stores (in which this port holds the first place in the world), and lumber. The last three items go by sail or steamer. The imports are mainly materials for fertilizer and salt. The vessels from domestic ports are almost exclusively steamers from northern ports. The direct foreign trade is for nontropical ports, principally from Germany, Great Britain, and the Mediterranean ports, and the tropical trade from Cuban and Brazilian ports, principally Habana, Rio Janeiro, Para, and Santos.

The figures for domestic ports do not show the whole number of vessels coming into Savannah coastwise; only those inspected at the quarantine station. From the books of the customs' officer, I find for 1895 for coastwise vessels:

Month.	Steamships of regular lines.	Other vessels, coastwise.	Month.	Steamships of regular lines.	Other vessels, coastwise.
January .....	33	28	August .....	30	26
February .....	15	10	September .....	31	17
March .....	33	15	October .....	32	25
April .....	36	22	November .....	29	27
May .....	37	9	December .....	34	20
June .....	31	20			
July .....	28	24	Total .....	369	243

13. State results of your visit to the custom-house and immigration bureau.

Vessels from foreign ports had been habitually entered without the certificate of discharge from quarantine required by law. (Act of February 15, 1893.) There is no immigration bureau and no immigrants, save an occasional stowaway.

14. State whether in your opinion the quarantine facilities are ample to care for the shipping entering the port.

As now administered, they are ample. It would be a danger, however, if vessels undoubtedly infected, such as are now remanded to Sapelo, were treated at this station, while the large number of probably clean vessels lie here. Especially would the ballast of these vessels be a danger, as it is near by the other vessels and where their crews must work. As now administered, it is a very safe quarantine, and every exertion is made, with ample facilities, to lessen the delay of vessels stopping here.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection, disinfection, and particularly the period of observation after disinfection of vessels, are observed.

Except that the form of the certificate of pratique is not that required by law and the amount of sulphur consumed is less than that required to furnish 10 per cent (by volume) of SO<sub>2</sub>, all the above regulations are observed. The health officer, when his attention was called to it, promised to have the proper form of certificate issued, and he will increase the amount of sulphur to 35 and 40 pounds per 100 tons, which is about as much as can be burned in this manner.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1895? Transmit copy of certificate.



No. See Exhibits C and D, both of which are issued by the quarantine officer. One (C) is taken up by the harbor master, and is the evidence that the vessel has been through quarantine and can take her berth; the other (D) goes to the customs officer. A proper form of certificate will be issued in future.

17. What disposition is made of consular bills of health?

Both copies are filed in the collector's office with entry papers. One copy will hereafter be kept at the quarantine station.

18. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

There seems to be no recommendations to make and no facts other than those already mentioned. This is an extremely safe station, and vessels are carried through with as much expedition as the regulations will allow. I have never seen a more smoothly working station.

AUGUST 24, 1896.

EXHIBIT A.

QUARANTINE STATION,  
Port of Savannah, Ga., ——— 189—.

———, *Health Officer:*

SIR: I report the arrival of ——— at this station on ———, and submit the following answers of commanding officer, over his signature:

Port of last clearance:

1. From what port did your vessel last clear? ———
2. When did you sail? ———
3. Number of crew — and passengers — from that port? —
4. Is there any change in your crew or passenger list since leaving port of prior clearance? ——— Why the changes? ———
5. What is your present cargo, or ballast? ———
6. Where was this ballast obtained? ———
7. What was the character of this cargo, or ballast? ———
8. Was your vessel fumigated at port of last clearance? ———
9. Have you a bill of health? ——— If not, why? ———
10. What sickness on board while in port of last clearance? ———
11. What sickness on board during voyage to this port, or at present time? ———

Port of prior clearance:

1. From what port did you clear prior to last clearance? ———
2. When did you sail from that port? ———
3. Was there any infectious or contagious disease at that port? ———
4. What sickness on board while in that port? ———
5. What ports have you touched at during voyage from that port? ———
6. Was there any infectious or contagious disease at any of these ports? ———  
If so, where, and what disease? ———
7. What sickness on board during voyage to port of last clearance? ———
8. What cargo or ballast to foreign port of clearance? ——— Where obtained? ———
9. What cargo or ballast from this foreign port to American port? ———  
Where obtained? ———
10. Has there been any infectious or contagious disease on board this vessel during last six months? ———
11. Have any of your crew or passengers come in contact during the voyage with any vessel having sickness on board, or with any vessel from an infected port? ———

I certify that I have truthfully answered each and every one of the above questions.

———, *Captain, of* ———.

<sup>1</sup> Having made a thorough inspection of vessel, cargo, ballast, and log book of the ———, I respectfully report ———.

———, *Quarantine Officer.*



## EXHIBIT B.

*Schedule of charges for vessels at quarantine station, Savannah, Ga.*

[Extract from minutes of council, April 10, 1895.]

Resolution read for the first time March 27, 1895; laid on the table, taken up, and adopted.

By Alderman Carolan:

*Resolved by the mayor and aldermen of the city of Savannah in council assembled, That from and after the 15th day of April, 1895, the following shall be the schedule of charges by the mayor and aldermen of the city of Savannah for vessels at quarantine station:*

For inspection or boarding fees:	
For each steamship.....	\$15.00
For each ship or bark.....	10.00
For each brig or schooner.....	7.50
For fumigating and disinfecting the charges shall be as follows:	
For every vessel of 100 tons or less.....	5.00
For every vessel over 100 tons and not exceeding 500 tons.....	10.00
For every vessel over 500 tons and not exceeding 750 tons.....	15.00
For every vessel over 750 tons and not exceeding 1,000 tons.....	20.00
For every vessel over 1,000 tons and not exceeding 1,250 tons.....	25.00
For every vessel over 1,250 tons and not exceeding 1,500 tons.....	30.00
For every vessel over 1,500 tons and not exceeding 1,750 tons.....	35.00
For every vessel over 1,750 tons and not exceeding 2,000 tons.....	40.00
For every vessel over 2,000 tons.....	45.00
For discharging ballast at quarantine, 20 cents per ton.	

HERMAN MYERS, *Mayor.*

W. F. BRUNNER, *Health Officer.*

Attest:

A. N. MANUCY, *Clerk of Council.*

## EXHIBIT C.

QUARANTINE STATION,  
*Port of Savannah, Ga., ———, 189—.*

———, having complied with the quarantine regulations, is permitted to proceed to the city.

—————  
*Quarantine Officer.*

## EXHIBIT D.

SAVANNAH QUARANTINE STATION, ———, 189—.

This is to certify that no person afflicted with leprosy is, or has been, on board the ———.

—————  
*Quarantine Officer.*

## REPORT OF INSPECTION OF UNITED STATES SOUTH ATLANTIC QUARANTINE.

By Surg. FAIRFAX IRWIN, M. H. S.

The following is a report of my inspection of the United States quarantine station at Blackbeards Island, Sapelo Sound:

The difficulty of reaching this station is well known to you. I, however, reached the place without trouble or delay through the courtesy of Dr. Brunner, who furnished me transportation in the quarantine tug *Theckla*. I reached the station on the afternoon of one day and left on the afternoon of the next, not wishing to detain the tug; hence the time for inspection was shorter than I wished.

I found Acting Assistant Surgeon Geddings at the north end, in the 21-foot launch *Delta*, and we started at once for the south end. Unfortunately, the tide was very low and the boat stuck in the mud of the "cut," and there we remained four hours. Some arrangement to deepen this cut should be made.



The buildings and grounds at the south end are in good condition. The surgeon's quarters are the best I have seen; commodious and well furnished. The executive building is rather small and crowded, and storage room is badly needed. The lazaretto is too distant to be used for this purpose. There are too many cattle and horses at this station; they use a great quantity of forage and take up too much of the time of the attendants for their care. Some of them should be disposed of without delay. The boats of the station seem to be in good condition, but fear is expressed that the launch *Hygieia* will break down again. I do not know enough about launches to express an opinion, but I believe the trouble is faulty construction. At any rate, she has too much power, and, I think, will always give trouble. The 21-foot launch is needed at the station, and should be kept there.

The buildings at the north end are in fair condition. The new wharf is commodious for the treatment of one vessel, but more wharf room is imperative, owing to the number of ships coming to the station.

The machinery is in good condition, and experiment is now being made with the sulphur furnace for washing the gas. The hose for bichloride delivery is bad and the large rubber hose for sulphur worn out; the light hose lately furnished is too thin and kinks. The ideal hose for this work has not yet been found.

The water supply at both ends of the island is ample, and, except that it is very hard, of good quality.

The anchorage at this station has never been marked by quarantine buoys, and it should be done at once. Vessels anchor now too far from the wharf, and it makes the work of inspection very difficult, especially in bad weather. A request to this effect was, I believe, made last year and referred by the Bureau to the Light-House Establishment, but nothing has been done.

#### RECOMMENDATIONS.

A yellow-fever camp at the north end should be arranged for use until a hospital can be built. Five tents, 12 by 14, with flies, should be furnished, and a rough frame house, 16 by 22, constructed for use as a storeroom, and, when camp is opened, as a kitchen; if lumber were furnished, this storeroom could be constructed by the attendants. It is particularly needed because all supplies are brought from the north end, and a good supply of stores should be always on hand.

I think an acting steward should be appointed during the active quarantine season in order that the acting assistant surgeon may give his entire attention to the north end. Of the stock on hand, one horse (old), one colt, one cow, and four yearling calves should be disposed of at public sale.

In order to gain room for storage, I suggest that the old hospital, or lazaretto, be moved up to the station, where it can be used for the purpose. This work can be done by the attendants, and but a small amount of lumber and shingles would be needed for repairs.

A new laundry building is badly needed, with modern equipment. The present building is very old, unsuitable, and badly situated.

Slight repairs to the ballast wharf are needed, owing to the rotting of piles, and arrangements should be made to have this work done when the new wharf now contemplated is erected.

I doubt very much the advisability of building a hospital on land at the north end, owing to the danger of malaria there. It should, if possible, be built on the new wharf.

A blacksmith's outfit or portable forge is needed at this station, as the horses are in bad condition for want of shoeing; a similar forge to that furnished the Delaware Breakwater Quarantine would answer the purpose, and it costs, I think, about \$50.



Finally, I am of opinion that a 40 or 45-foot seagoing naphtha launch should be furnished this station, and the *Hygeia* sent elsewhere. This would probably solve the ever-recurring difficulty of obtaining supplies.

APRIL 1, 1896.

[NOTE.—Material for temporary camp at north end authorized by Bureau; also sale of cattle authorized; blacksmith outfit to be furnished; a larger naphtha launch furnished; *Hygeia* transferred.]

REPORT OF INSPECTION OF UNITED STATES SOUTH ATLANTIC QUARANTINE STATION.

By Surg. H. R. CARTER, M. H. S.

Name of quarantine station: South Atlantic Quarantine.

When was the station last inspected? March 30, 1896.

Name of inspecting officer: Surg. Fairfax Irwin, Marine-Hospital Service.

I. PERSONNEL.

Name of officer in command: P. A. Surg. James A. Nydegger.

Date of assignment to duty: March 7, 1896.

Name and rank of assistants, including acting assistant surgeons; also give number of members in each family: E. F. Geddings, acting assistant surgeon; one member in family.

Name of steward and number of members in family: No steward.

Name and duties of each attendant: Zevaco Dominique, pilot of launch, carpenter, and engineer at south end; A. M. Dominich, engineer of launch, etc.; E. L. Floyd, gardener and cowherd; H. D. Sievers, engineer, north end; J. E. Hutson, nurse, painter, etc.; H. A. Bell, boatman and cook at north end; J. C. Deloach, hostler, etc.; L. F. Hauseman, cook, south end; C. N. Maury, nurse and outside work; Stephen Wylley, mail carrier; Sophie Bell, laundress.

II. GENERAL DESCRIPTION OF STATION.

Number of buildings: Thirteen.

Limit of anchorage for noninfected vessels: No marks for limits; vessels after disinfection dropped to east or west limit of anchorage from the wharf.

Limit of anchorage for infected vessels: Close to disinfecting wharf.

Facilities for inspection of vessels: Yawl and naphtha launch.

Apparatus for disinfection of vessels and of baggage: Steam chamber; tanks and steam force pump for bichloride solution; sulphur furnace and attachments, etc.

Facilities for removal and treatment of sick: Brought ashore in a boat in tow of launch, or in launch, and treated in temporary hospital at north end. Can be taken to the hospital at the south end, but this would not in general be advisable.

Facilities for removal and detention of suspects: No suspects come here save crews of vessels. These are detained aboard. They can, however, be brought ashore and detained in the hospital at the south end or in tents on the beach.

Mail and telegraph facilities: Mail daily except Sunday; telegraph station at Darien, 26 miles distant, reached by launch in three and one-half hours; telegrams come from Darien by mail in about thirty to forty-eight hours.

Give number of wharves: One.

What is the length of the wharf frontage? Two hundred and fifty feet.

Are the wharves in good condition? Only fair.

Are the mooring facilities ample? No; one of the dolphins, 6 piles, put down last fall, is gone, and another washed over by the force of the sea, no vessel being at the wharf; it has been pulled in place again, but is of no use as a mooring.



What is the depth of water at mean low tide along the front of the wharf? Twenty-five feet.

What is the source of water supply? Two artesian wells.

Is it sufficient? Yes.

Is it potable? Yes.

Hard or soft? Hard.

If hard, does it injuriously affect the boilers in use at the station? It is evidently not good water for a boiler.

How is it distributed and stored, if storage is necessary? Distributed direct from well in pipes to where needed.

### III. DISINFECTING MACHINERY.

Enumerate the machinery constituting the disinfecting plant: Sulphur furnace and attachments, steam chamber, steam pump, tanks, etc., for bichloride solution.

What is the general condition of all machinery? Fairly good. The lead joint of the steam chamber is not perfect, but has been upset, and will last through this season. The pump for the bichloride solution is not in order, and is too small for efficient service. Pipe for distribution of  $\text{SO}_2$  is worthless. Bichloride hose worthless.

Does it appear well taken care of, or neglected? It appears well taken care of, save the joint of the steam chambers, which has been badly handled.

Is there a steam hoisting engine for ballast? Yes.

Are there ballast tubs and a ballast car for the distribution of ballast? Yes.

How is ballast disposed of? Dropped through the ballast gangway into deep water.

Is it disinfected prior to being discharged; and what facilities exist for supplying ballast to vessels needing it? Not disinfected prior to discharge. Vessels needing ballast get old ballast by disinfecting it; immersing in bichloride solution.

What are the dimensions of the steam disinfecting chamber? Sixteen by  $7\frac{1}{2}$  by  $7\frac{1}{2}$  feet.

Is it rectangular or cylindrical? Rectangular.

How many cars are provided? One.

Are infected articles put in at one end and brought out at the other after disinfection, or is one end of the chamber used for loading and unloading? Put in at one end and brought out at the other.

Is the chamber provided with thermometers for indicating the temperature during the process of disinfection? Yes.

Is the chamber equipped with any apparatus for the production of a partial vacuum? What is the nature of the appliance? If efficient in operation? Provided with a steam jet for vacuum; it is exceedingly efficient.

What vacuum is produced, and how long does it take to obtain it? Ten inches; less than one minute.

Is a sulphur furnace provided? Yes.

Give a diagram of the method of gas distribution, showing the number of gas outlets: Four 6-inch outlets in a 14-inch pipe, with 16 feet 8 inches between centers.

How many feet of sulphur hose are provided? One hundred feet.

What is its condition? Bad.

What is the condition of the fan and engine? Good.

What is the method of storing bichloride solution? In tanks.

What is the capacity of the tank or tanks? Two tanks of 4,500 gallons each.

Are they of wood or iron? Wood.

What is the elevation of the tanks above the wharf flooring? Twenty-two feet.



Is the solution distributed by gravity, or is there a pump for the purpose? Distributed by a pump.

How many feet of hose are provided for the distribution of the bichloride solution, and what is its size and condition? Two hundred feet of  $\frac{3}{4}$ -inch hose; condition bad.

How many steam boilers are provided? Two.

What is their condition, and do they supply sufficient steam for all purposes? Good; two tubes have given out (and are plugged with cement) in the boiler of the steam chamber; the chance is that others are not good for a long time. It is efficient now, however. It is exceedingly difficult to examine, and I could not do so without taking it partly apart, which was not possible without stopping the work which was going on.

Is the station provided with a steam tug or other steam vessel? No.

Is the station provided with a steam or naphtha launch? Yes; two naphtha launches.

Give dimensions? One 30-foot cabin launch and one 25-foot open.

What is their condition? Open one good; cabin launch out of repair.

Give report of medical officer as to efficiency of the launch: His opinion coincides with that above expressed. Open launch is very useful; cabin launch less so; frequently out of repair.

How many small boats are provided, and what is the condition of them and their equipment? Two; good.

Are more boats necessary or desirable? Another yawl 15 feet long is desirable, and if a small 25-foot launch, with extra free board and 18 inches extra beam, decked over except a small cockpit, were furnished for boarding purposes, instead of one of the large launches, it would be of great advantage, as the two large ones are in the way. This, however, is not absolutely necessary.

Give location of building used as hospital: There are two—one at south end, one-half a mile below the station; one at north end; wood and canvas.

Give general description of the building: South end—pavilion hospital of two compartments, built of dressed pine, ceiled, with hallway which can be used as another ward; north end—wooden floors and frames, with canvas sides and roofs. One erected, and frames for four more ready to be covered, a work of a few hours, when needed.

Dimensions: South end, 72 by 25 by 14 feet; north end, four buildings 12 by 14 feet, one 14 by 16 feet, and one 8 by 10 feet.

Number of beds in each ward: At south end, 6 in each ward; 2 in hallway.

How many beds can be added for emergencies? Six or 10 more.

Cubic air space allowed each patient: With 10 beds in building, about 1,500 cubic feet.

Heating, lighting, and ventilating: Stoves, lamps, and windows, or tent flaps open.

Has the hospital sufficient furniture? Yes.

What kind of bedsteads and what kind of mattresses and bedding? Iron bedsteads and spring mattresses.

Condition of bedding occupied by patients: Bedding good; no patients.

Are the beds clean and free from vermin? Yes.

What is the condition of wards as to general cleanliness? Perfect.

Is the nursing sufficient, and is the nurse immune? Two nurses; both immune.

Does the character of the diet furnished conform to that prescribed in the diet table for marine hospitals? No relation between diet which would be given patients here and the diet table of the Marine-Hospital Service; nor between the diet of the attendants and said diet table.

Is a proper record of the patients under treatment kept? Yes.



## VI. OUTBUILDINGS AND GROUNDS.

Describe general condition of outbuildings: All very good save stable and laundry.

Are the grounds well policed? Yes.

Describe officer's quarters and condition of furniture: Quarters good and furniture good; both in good order.

Describe attendants' quarters and condition of furniture: Quarters good and in good order, save that the gallery is slightly decayed and roof said to be somewhat leaky in a heavy wind and rain; furniture sufficient and in good condition; everything beautifully clean and neat.

Describe dining room, condition of table furniture, and tableware: Fifteen by 12 feet; in good condition; table furniture sufficient and in good condition.

Describe kitchen and furniture: Twelve by 12 feet; good range and fairly sufficient furniture.

Describe dispensary: A room 12 by 15 feet is used as a dispensary and office combined, and is in good order.

Describe laundry: A small building with ordinary tubs and washboards, etc., 15 by 20 feet.

Describe approaches to the station: By land, the approach is by the beach; good in low, bad in high tide; the immediate approach is deep soft sand and bad. By water, approach is by Blackbeard River, and very good at high tide.

Describe condition of fences and grounds: Fencing is good; grounds are good, except sandy; can not prevent sand from drifting, and it is a matter of no moment.

Describe drainage and condition of water-closets: All seem to be good.

Describe disposal of slops: Go by drainage pipe to the water, Blackbeard River.

State whether any animals not authorized by the Department are kept on reservation: None worth mentioning.

## VII. EQUIPMENT.

State, approximately, age and condition of each horse, and how long in service at this station: One 12 years old, in bad condition, stiff and rheumatic; one 6 years old, in fair condition; one 7 years old, in fair condition. All have tender feet from driving on hard beach without shoes. One 2 years old, good colt.

Give number and character of vehicles: Two Dayton wagons, one log wagon, one cart, and one ambulance.

Are they properly cared for? They are, I think, well cared for; not in very good order, but the service is hard.

Are harnesses in good condition? In fair condition only; climate is bad for leather.

Is there a blacksmith's forge provided? No.

Are there farming implements; and if so, are they in good condition? There are gardening tools. Some are and some are not.

Is there a fire apparatus provided; and if so, is there a fire drill organized? Yes; no fire drill to date.

## VIII. DISCIPLINE.

Are officers and employees supplied with uniform in compliance with the revised uniform regulations? All have uniforms, save one attendant recently employed, who has ordered one. The uniforms are not all exactly alike.

Are uniforms properly worn?

I think so.

Give method of granting leaves to officers and employees: Leaves given without any special method, under paragraph 39 of regulations, United States Marine-Hospital Service. Leaves are not given during the quarantine season.



Describe when and how inspection, muster, and fire drills are conducted: Inspection every Sunday morning, and a muster in rank once a month; no fire drills at present.

## IX. GENERAL ADMINISTRATION.

Make a statement showing the number of vessels arriving at the station during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. From what countries chiefly do the vessels come? Are they in cargo, ballast, or empty?

Month.	Foreign ports.		Other ports.		Foreign ports in yellow-fever latitudes, etc.	Domestic ports.
	Ballast.	Empty.	Ballast.	Empty.		
January.....	3	2	6	1		
February.....			2			
March.....	4	1	4			
April.....	1	1	4			
May.....	3	2	5		1	2
June.....	2		1		1	1
July.....	3	1	1		1	
August.....	3	1	2		1	
September.....	1	4	2			
October.....	3		4			
November.....	2	1	7			
December.....			6			
Total.....	25	13	44	1	4	3

No vessel in cargo was inspected in 1895. All of the vessels from tropical ports were disinfected here save 11—3 in January, 3 in March, 1 in April, and 1 in November; 1 in September was sent to the Brunswick Quarantine for disinfection, and 2 schooners from clean West Indian ports were passed. All of the vessels under (b), the "via vessels," were disinfected; 31 vessels were disinfected for yellow fever. One vessel coming with several cases of typhoid had her tanks disinfected and water supply changed. Save 3, all of the vessels recorded as empty were steamships. From present indications the number of vessels for the present season requiring disinfection will be considerably greater than last year.

State whether in your opinion the quarantine facilities are sufficient to care for the shipping arriving at the station: No; with the present facilities and present clientele vessels must be kept waiting longer than is reasonable, and there is undue obstruction to commerce. The accompanying table gives the time spent by each vessel at this station in 1895.

*Time spent in quarantine at the South Atlantic Quarantine by vessels during 1895.*

Description of vessel.	Number of days.	Description of vessel.	Number of days.
Ballast.....	12	320 tons ballast.....	15
200 tons ballast; preliminary disinfection.....	17	Steamship.....	10
Steamship.....	5	Do.....	9
Ballast.....	16	Do.....	6
Schooner.....	7	100 tons ballast.....	12
200 tons sand.....	16	110 tons ballast.....	13
Stone ballast.....	19	Steamship.....	9
Steamship.....	13	90 tons ballast.....	12
207 tons ballast.....	10	Schooner.....	9
Steamship.....	7	500 tons ballast.....	24
Schooner.....	12	400 tons ballast.....	18
Do.....	6	550 tons ballast.....	26
200 tons ballast.....	19	320 tons ballast.....	23
116 tons ballast.....	17	Ballast.....	14
Schooner.....	8	200 tons ballast.....	22



In addition, a steamer (the *Martin Saenz*) after laying a short time for a berth at the wharf here was taken to the Brunswick station for disinfection.

Give annual amount expended at station for last three years. In 1893, \$11,149.49; in 1894, \$11,679.28; in 1895, \$15,904.76.

Give the immediate needs of the station as stated by the commanding officer: New stables should be provided, together with the new work already provided for, viz, extension of wharf, etc. There are needed four dolphins to replace those washed away recently; an additional ballast car and two buckets, wheelbarrows, and rail for ballast track; an additional yawl, boat tackle, and some lumber, etc., hand force pump to use in emergencies; sulphur pots, and new thermometer for the steam chamber.

#### RECOMMENDATIONS.

Processes of disinfection: For the matter of the  $\text{SO}_2$  I would recommend that galvanized pipe be provided for its distribution to the vessel. The cost of this pipe is trifling compared with the sulphur hose, and it is very durable. It is in use at Tortugas, the suction hose there having been discarded. The conditions here are somewhat different, but the cases in which it could not be used would be few. One length of suction hose should be kept on hand, however, in case it is needed, and enough can be cut from the hose (otherwise worthless) now on hand to make a sliding joint with the galvanized pipe. Pots can always be used in an emergency and enable us to disinfect a vessel in the stream when she can not reach or lay at the wharf. From 40 to 45 pounds of sulphur can be burned in them, and while this will not give the percentage of  $\text{SO}_2$  required by regulations, it is, I think, efficient, and in an emergency, I think, should be allowed.

For the bichloride process the only recommendation I would make for the present is that new hose (1-inch) be obtained, and obtained immediately. This is a far more important process than the fumigation, and I doubt if it be safe to take risks on it. I would recommend that later a heavier pump, with  $1\frac{1}{2}$ -inch delivery hose, be provided. This is not too large for easy handling, and is as small as consistent with efficient work on large vessels. The engineer says that the air pump bought for the chamber, but not used, will do for this purpose. I do not know, not knowing if it has any peculiarity of construction. It is brass lined and would not last very long. For the same reason as the sulphur pots—viz, to meet an emergency—a hand force pump, for the use of bichloride, should be furnished the station. A rotary pump is, I think, the best. It is also cheaper and more durable.

In this connection I would suggest, if the plans now under consideration by the Bureau do not give abundant wharf room, that a tank in the hold of the lighter now at this station, and a small boiler and a pump on her deck at one end for the use of bichloride, would enable a vessel to leave the wharf as soon as she was fumigated, instead of having to hold the wharf forty-eight hours longer for washing the hold. It would thus, so far as disinfection is concerned, increase two to four fold the number of vessels which would be handled in a given time. Its cost would be small and in nowise interfere with the present use of the lighter. I do not know if this be needed, because I have only a general knowledge of the plans for the improvement of the station. It is merely suggested.

For the immediate handling of ballast I would recommend the purchase of a small amount of rail for the ballast track, another car, and two more buckets. With two tracks, the ballast of a large vessel will go twice as fast as at present. Wheelbarrows, too, should be provided to carry ballast short distances where it is needed to save the wharf piling and to help out the cars in vessels with large crews. They are cheap and are needed. With these things and \$20 worth of lumber the station force can lay the track and care for all the ballast likely to come this year, as well as save the back and west end of the old wharf, which are



in very a bad condition. After the wharf is secured, the ballast gangway should be extended. In one more year it will probably go as far as it can be carried.

Dolphins for mooring should also be put in place; certainly four, and six would be better. Those put in last year were, I judge, imperfectly driven. One is gone, pushed over by a vessel pressing against it, and one other was capsized by the force of the waves alone, no vessel being against it. It was, however, pulled in place, or nearly in place, with the hoisting engine. Whether the others are reliable is doubtful.

Two mooring buoys should be put in place, so as to facilitate vessels coming in to and leaving the wharf. This is at times by no means easy with the present arrangements.

As to the administration of the station, the proper recommendations therefor are difficult to make, as they involve changes more or less radical. I think that the north end should be counted "the station," and as little done at the south end as it is possible to get on with, and indeed in the future it may be possible and best to abandon it. It is not so now.

As soon as possible, all of the attendants save one man (and such as make the transfer of supplies if the present system, a bad one, be continued) should live at the north end. Several of them could then be dispensed with, together with the horses, cows, etc.

During the summer season the officer in command must also live at the station—the north end. He need not habitually sleep there, but should always be prepared to do so, and if there were work on hand would do so from preference. If Elliotts Cut in Blackbeard River be dredged, he can, when he prefers, sleep at the south end and be at the station by sunrise and stay until sunset. This is no more than was required and done during the fall of 1892 at Cape Charles. It will be better and more convenient, however, when he can live at the north end altogether. For this there should be a room fitted up for the officer in command on the pier head, and quarters and kitchen for the attendants. I believe that this would make the administration so much less laborious, more satisfactory, and efficient that it would much more than offset (for the officer) the inconvenience of this way of living, and I recommend it. There can be no question as to the increased efficiency of the service. P. A. Surgeon Nydegger agrees with me in this statement and recommendation.

I am informed that a small hospital building has already been provided for at the north end. This is needed. Tents will usually do very well to treat yellow fever in and in fine, hot weather are cooler than a house, and consequently, I think, better; but in the fall of the year, when we are most apt to have yellow fever here, the weather is apt to be cold and bad and tents are unsuitable, or less suitable than a house.

I certify that the foregoing is a careful and correct statement of the condition of the service at the South Atlantic Quarantine Station, inspected by me this 27th day of June, 1896.

H. R. CARTER,  
*Surgeon, M. H. S., Inspector.*

#### DARIEN.

1. There is no quarantine station at Darien. All vessels which enter here—loading lumber and timber at Creighton Island (Sapelo Sound), Julienton, Union Island, and Darien—requiring quarantine inspection are inspected and passed on at the United States South Atlantic Quarantine Station.
2. There is no quarantine officer here.
3. There is no local quarantine maintained at Darien.
4. There are no quarantine procedures here; those at the South Atlantic Station have been described in the report of that station.



6. Are vessels from other United States ports inspected?

No; but vessels from tropical ports via United States ports are inspected at the South Atlantic, as are all coastwise vessels with sickness aboard.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

No fees relating to quarantine.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

(a) From foreign ports.

Month.	Tropical ports.		Other ports.		Total.
	Ballast.	Empty.	Ballast.	Empty.	
January .....			3		3
February .....			4		4
March .....	1	1	2	1	5
April .....		1	3		4
May .....	1		6		7
June .....			1		1
July .....			1		1
August .....	1		2		3
September .....		2	2		4
October .....	1		4	1	6
November .....	1		7		8
December .....	1		2		3
Total .....	6	4	37	2	49

(b) There is no record here of vessels in class (b).

(c) There were 131 vessels coastwise; nearly all via Doboy Sound.

The vessels from tropical ports are mainly from Cuban and Brazilian ports, steamships in water ballast being considered empty.

The commerce of the port is in lumber and timber, and mainly, as may be seen, in square-rigged vessels from transatlantic ports in ballast. There are no imports. The coastwise trade is, naturally, entirely with northern ports. The foreign exports are entirely yellow pine, but a large and rapidly increasing amount of cypress is exported coastwise.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

The data in No. 12 are from the custom-house. The deputy collector is Mr. R. W. Grubb, of Darien, a subport of the Brunswick district. He takes much interest in quarantine and has rendered valuable service therein. He keeps a record of all vessels which load in his district, as well as those that make customs entry.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

The present arrangement is fairly good, but it would be better if there was an inspector at Doboy for vessels which may enter there.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection of vessels, are observed.

All regulations of the Treasury Department are carried out for this port.

16. Does the certificate of inspection or of pratique signed by the quarantine



officer state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

Yes. See Exhibit A.

17. What disposition is made of the consular bills of health?

One kept at South Atlantic Quarantine and one filed with the entry papers.

AUGUST 22, 1896.

*INSPECTION REPORT ON THE QUARANTINE OF SAPELO AND DOBOY SOUNDS.*

By Surg. H. R. CARTER, M. H. S.

I beg leave to submit the following report and recommendations on the quarantine of Sapelo and Doboy sounds, which, from the nature of things, can not well be made in the forms provided for quarantine inspection.

At the custom-house at Darien, Ga., a subport of Brunswick, a considerable number of vessels engaged in the timber and lumber trade enter. These vessels load at various places—Darien, Julienton, Creighton Island (Sapelo), and Union Island. None load now at Doboy. They come in from sea by two routes, Sapelo Sound and Doboy Sound, both of which are under the same pilots' association. On the Sapelo bar is 28 feet of water. The Doboy bar has shoaled much of late years, and has now only 16 feet of water on it. Vessels that come over Sapelo bar are inspected at the South Atlantic Quarantine. There is no inspector at Doboy. The large vessels (square riggers) which load in Sapelo Sound can not now enter at Doboy, but there are a large number of vessels of light draft, mainly American schooners, which do enter there and load at Union Island or Darien.

During the calendar year 1895 121 vessels, American schooners, entered by Doboy. Of these, 71 entered during the quarantine season. These vessels were all coastwise. Vessels from foreign ports are, as will be seen, forbidden to enter by Doboy, and except for this prohibition a somewhat larger number would have come in here, it being more convenient generally for vessels to come in over this bar than at Sapelo. The arrangement at present obtaining, and a fairly good one, is this: The pilots are instructed by the collector to bring (1) all vessels from foreign ports, and (2) all vessels coastwise which have been in a foreign port within ninety days, to Sapelo Sound for inspection. Over the first-class vessels from foreign ports, as these must enter at the custom-house, the collector exercises absolute control, and such a vessel coming in by Doboy Sound can not enter the custom-house, but must proceed to the South Atlantic for inspection. Generally this requires her to put to sea again and come in by Sapelo Sound. This has happened in several instances, and has rendered pilots and towboatmen careful. American vessels coastwise do not make customs entry, and thus there is no control over the second class, "via vessels," or rather there would be no control if the collector did not inquire into the history of all vessels loading in the sounds, getting the name of the vessel from the consignees as soon as she is chartered, tracing her up in the Maritime Register, and then notifying the pilots whether she is required to go by Sapelo or not.

This he does, however, and I believe the "via vessels" are under good supervision while the present deputy is in office. It will be seen, however, that the whole arrangement depends on the fidelity and carefulness of the pilots and on the interest which the present deputy collector takes in sanitary matters; but with this there is always the risk that vessels of light draft (from the West Indies or north coast of South America) coming in by Doboy without a pilot will have to wait some time before they can get outside and go to Sapelo. During this time they would almost of necessity be in communication with the shore.

I think, then, it would be a distinct advantage, in addition to the present arrangements, to station during the quarantine season an inspector or sanitary guard at Doboy, simply to see that no vessel passes that place which should go



to Sapelo for inspection. There is no need of this man being a physician. Indeed, there is no need for him to inspect a vessel; simply to determine if she requires inspection, and if so, to send her to Sapelo.

I have therefore to recommend the appointment of P. B. Allston, aged 32 years, born in South Carolina, no service in United States Army or Navy, as sanitary guard (or inspector), at Doboy, Ga., during the quarantine season, at a compensation of \$25 per month, said Allston to furnish his own boat. Mr. Allston is the care taker of the Cane Creek Mills, opposite Doboy, and is a man of intelligence and fair education, having been a shipping clerk, and I believe will make an efficient officer. If this appointment is approved by the Bureau, I would suggest that the instructions sent Mr. Allston be very definite and brief.

AUGUST 29, 1896.

*REPORT OF INSPECTION OF UNITED STATES QUARANTINE STATION AT  
BRUNSWICK.*

By Surg. FAIRFAX IRWIN, M. H. S.

I have the honor to make the following report of my inspection of the national quarantine station at Brunswick, Ga. I found Sanitary Inspector Burford, in charge of station, in Brunswick, where he resides, except during the active quarantine period. There is telephone communication between the city and station, and the place is easy of access. There are at present but two attendants properly uniformed and disciplined, and they show themselves to be familiar with their duties. The machinery is all in first-class condition, newly painted, and evidently well cared for. The steam chamber is the best I have seen anywhere and can be easily operated by one man. The contract for the new ballast wharf has just been concluded, and it is hoped that it will be ready for use by the opening of the quarantine season.

The buildings are clean, but otherwise in bad condition; most of them are old and all unpainted. I recommend that as soon as the state of the quarantine appropriation will allow sufficient paint for painting these buildings be furnished; the work can be done by the attendants of the station.

The building used as quarters for the medical officer is in a dangerous condition, very much out of plumb, and liable to be blown down; an appropriation for its repair should be asked for as soon as convenient.

A small naphtha launch is very much needed at this station for the use of the medical officer, and I recommend that one of the two 21-foot launches now at Key West be sent there.

APRIL 1, 1896.

*REPORT OF INSPECTION OF UNITED STATES QUARANTINE STATION AT  
BRUNSWICK.*

By Surg. H. R. CARTER, M. H. S.

Name of quarantine station: Brunswick Quarantine Station.

When was the station last inspected? March 27, 1896.

Name of inspecting officer: Surg. Fairfax Irwin, Marine-Hospital Service.

I. PERSONNEL.

Name of officer in command: R. E. L. Burford, sanitary inspector, Marine-Hospital Service.

Date of assignment to duty: September 1, 1893.

Name and rank of assistants, including acting assistant surgeons; also give number of members in each family: No assistants.



Name of steward and number of members in family: No steward.

Name and duties of each attendant: Vincent Penebod, engineer and headman; Pascual Salvador, boatman; Alex. Lang, night watchman; E. J. Penebod, cook and laundress.

## II. GENERAL DESCRIPTION OF STATION.

Number of buildings: Four. (1) Shed for disinfecting plant; (2) quarters for officer, attendants, and seamen during disinfection; (3) kitchen and quarters for engineer; (4) shed for storage.

Limit of anchorage for noninfected vessels: Not marked.

Limit of anchorage for infected vessels: Not marked.

Facilities for inspection of vessels: Yawl boat.

Apparatus for disinfection of vessels and of baggage: An excellent plant of modern type for use of steam, bichloride, and sulphur dioxide. Except that at Fernandina (which is modeled after this), it is the best I have seen of its general plan. The ballast plant is also good; with slight expenditure would be perfect.

Facilities for removal and treatment of sick: It is not intended to treat those sick with infectious disease at this station. In such cases the vessel and sick would be sent to South Atlantic Quarantine. The island, however, is sufficiently roomy to treat such cases, in an emergency, in tents, without endangering the crews of vessels at the wharves.

Facilities for removal and detention of suspects: It is not intended, in general, to remove suspects from their vessels here; vessels with many passengers would be sent to South Atlantic Quarantine. Such could, however, be readily accommodated on the island in tents.

Mail and telegraph facilities: Good. Post-office and telegraph office in Brunswick, with which the station has telephonic communication.

Give number of wharves: Three.

What is the length of the wharf frontage? Seventy-two feet, 30 feet, 40 feet; all are 30 feet deep.

Are the wharves in good condition? The 40-foot wharf, built this spring, is in good condition; the others, especially the 30-foot ballast wharf, are not in very good condition; need slight repairs next season.

Are the mooring facilities ample? All the dolphins are new and strong; a few more may be needed.

What is the depth of water at mean low tide along the front of the wharf? Seventeen feet.

What is the source of water supply? Rain water, collected in cisterns; water is bought occasionally from water-boats for boilers; it is from the artesian well in Brunswick.

Is it sufficient? No, so far as rain water is concerned; but an unlimited quantity can be bought, and is very cheap, one-fourth cent per gallon.

Is it potable? Yes.

Hard or soft? The rain water is soft; the artesian is hard.

If hard, does it injuriously affect the boilers in use at the station? It has not so far injured them perceptibly. Generally the artesian water has to be used in the boilers.

How is it distributed and stored, if storage is necessary? Stored in cisterns; a pipe leads from cistern to boilers. Pumped from water boats into a 2,000-gallon tank. To the hoisting engine at the upper ballast wharf it is taken in buckets, generally from the vessels being unballasted.

## III. DISINFECTING MACHINERY.

Enumerate the machinery constituting the disinfecting plant: (1) Sulphur furnace, double, with connections, hose, and engine; (2) steam pump, tank, etc.,



for bichloride solution; (3) steam chamber with vacuum pump, etc., for fabrics; (4) boiler.

What is the general condition of all machinery? Good or fair. The bichloride pump is not in perfect order, but works fairly, and the cars of the steam chamber need overhauling. The pan in one furnace is badly cracked, and leaks sulphur when it is molten, a matter, however, of no importance.

Does it appear well taken care of or neglected? As well taken care of as is possible with the force at the station.

Is there a steam hoisting engine for ballast? Yes, two of them—12 and 8 horse-power.

Are there ballast tubs and a ballast car for the distribution of ballast? Yes; three cars in good order and one which can be repaired; also three tubs; tubs nearly worn out; new tubs advertised for.

How is ballast disposed of? Carried back and deposited on the marsh. The site of the station is ballast.

Is it disinfected prior to being discharged, and what facilities exist for supplying ballast to vessels needing it? It is not disinfected. Very few vessels coming here need ballast when they leave; they use ballast logs; such as do can get stone from the ballast pile and dip it in bichloride solution.

What are the dimensions of the steam disinfecting chamber? Nine feet by 5 feet 3 inches by 4 feet 6 inches.

Is it rectangular or cylindrical? Rectangular.

How many cars are provided? Two.

Are infected articles put in at one end and brought out at the other after disinfection, or is one end of the chamber used for loading and unloading? Put in and brought out of the same end; but the other method can be used, the chamber providing for it.

Is the chamber provided with thermometers for indicating the temperature during the process of disinfection? Yes.

Is the chamber equipped with any apparatus for the production of a partial vacuum? What is the nature of the appliance, if efficient in operation? Yes; vacuum pump; Worthington; 6 by 5½ by 6 inches. It produces a vacuum certainly and quickly.

What vacuum is produced and how long does it take to obtain it? Ten pounds is the usual vacuum and it takes about five minutes to obtain it; five to seven and one-half minutes is better.

Is a sulphur furnace provided? Yes.

Give a diagram of the method of gas distribution, showing the number of gas outlets: One straight outlet pipe, 6-inch galvanized iron, to which wrecking (suction) hose is attached; diagram not needed.

How many feet of sulphur hose are provided? Two sections of 15 feet each of heavy suction hose.

What is its condition? Good; nearly as good as new, although this is the third season of use.

What is the condition of the fan and engine? Good.

What is the method of storing bichloride solution? In a tank.

What is the capacity of the tank or tanks? One thousand five hundred gallons.

Are they of wood or iron? Wood.

What is the elevation of the tank above the wharf flooring? None.

Is the solution distributed by gravity or is there a pump for the purpose? By a steam pump.

How many feet of hose are provided for the distribution of the bichloride solution, and what is its size and condition? One hundred and fifty feet of canvas; 1½-inch; condition is fair; will last this season.



How many steam boilers are provided? Three; one for disinfecting plant and two for ballast engines.

What is their condition, and do they supply sufficient steam for all purposes? Good; yes.

## IV. BOATS.

Is the station provided with a steam tug or other steam vessel? No.

Is the station provided with a steam or naphtha launch? No.

How many small boats are provided, and what is the condition of them and their equipment? One good yawl and one good skiff.

Are more boats necessary or desirable? No; there is no place to keep boats.

## V. HOSPITAL.

Give location of building used as hospital: There is no hospital at present; appropriation has been made for construction of one.

Is the nursing sufficient, and is the nurse immune?

There is no nurse, but every attendant is immune.

## VI. OUTBUILDINGS AND GROUNDS.

Describe general condition of outbuildings: The shed over the plant is good; kitchen and quarters for engineer (one room) good; other two buildings in bad condition.

Are the grounds well policed? As well as need be.

Describe officer's quarters and condition of furniture: One room only, second story; airy and very pleasant, but insecure, would probably go down in a severe gale. Furniture sufficient and good, but should have another table.

Describe steward's and attendants' quarters and condition of furniture: No steward. Attendants' quarters good; under officer's, and will probably blow down when his do. Furniture sufficient.

Describe dining room, condition of table, furniture, and tableware: Fair-sized room; furniture sufficient and good enough.

Describe kitchen and furniture: Small room, 12 by 12 feet; cook stove, with ordinary kitchen utensils; cook stove nearly burned out and needs renewal.

Describe dispensary: None.

Describe laundry: None; washing done out of doors or in kitchen.

Describe approaches to the station: One lands on the rocks; ballast. There are no approaches.

Describe condition of fences and grounds: No fences; grounds mainly covered with good turf and a small garden.

Describe drainage and condition of water-closets: Only one water-closet; used only by laundress; condition good; over the marsh, which is covered by tide daily.

Describe disposal of slops: Thrown overboard.

State whether any animals not authorized by the Department are kept on reservation: One cow. I would recommend that this cow be allowed to stay. She is nowise in the way—indeed keeps the bermuda grass down, and all at the station use the milk.

## VII. EQUIPMENT.

State approximately age and condition of each horse, and how long in service at the station: No horses.

Give number and character of vehicles: No vehicles.

Is there a blacksmith's forge provided? No.

Are there farming implements; and if so, are they in good condition? None provided.

Is there a fire apparatus provided; and if so, is there a fire drill organized? No apparatus provided for that purpose. Bichloride hose could be used on the force pump if steam was up; if not, on the tank spigot.



## VIII. DISCIPLINE.

Are officers and employees supplied with uniforms, in compliance with the revised uniform regulations dated June 20, 1896? Yes.

Are uniforms properly worn? Yes, save blue dungaree is worn instead of white duck when doing dirty work.

Give method of granting leaves to officers and employees: None have ever been granted except by the Department.

Describe when and how inspection, muster, and fire drills are conducted: No regular, special inspection or muster ever held.

## IX. GENERAL ADMINISTRATION.

Make a statement showing the number of vessels arriving at the station during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. From what countries chiefly do the vessels come? Are they in cargo, ballast, or empty?

## (a) From foreign ports.

Month.	Tropical American.				Other ports.				Grand total.
	Cargo.	Ballast.	Empty.	Total.	Cargo.	Ballast.	Empty.	Total.	
January .....		13	12	25	1	4	3	8	33
February .....		6	1	7		4	2	6	13
March .....		5	1	6		2	1	3	9
April .....	2	4	4	10		7	1	8	18
May .....		5		5		4	1	5	10
June .....		9	2	11		5		5	16
July .....		6	1	7		1	1	2	9
August .....		1		1		7	1	8	9
September .....		3	1	4		3	2	5	9
October .....		3	3	6		6	1	7	13
November .....		7		7		9	3	12	19
December .....		5	2	7		2	2	4	11
Total .....	2	67	27	96	1	54	18	73	169

(b) From foreign ports in yellow-fever latitudes via domestic ports: June, 2, via New York; August, 1, via New York.

(c) From domestic ports: January, 1; June, 1; July, 1; foreign steamships coming coastwise.

(a) and (b) show that there were 99 vessels from the so-called "yellow-fever latitudes" inspected at this station, 96 coming directly and 3 via domestic ports. Of these, 37 came during the quarantine season, and 32 were completely disinfected here, as per Treasury regulations. Of the remaining 5, 3 were disinfected at the South Atlantic Quarantine, and 2 were from Kingston, a clean port. In addition, 1 vessel was disinfected, as per Treasury regulations, in December, having had fever aboard in Habana, and 4 other vessels entering here during the closed season were similarly disinfected at the South Atlantic Quarantine, having had fever aboard. In all, 37 were thus disinfected. Thirty of the remaining vessels from these ports coming in the closed season had their ballast discharged here and holds disinfected by bichloride solution, it being held unsafe to allow certain classes of ballast to be discharged in Brunswick, even during the winter season. Sixty-nine vessels, then, were disinfected more or less completely for this port, 62 here and 7 at the South Atlantic Quarantine Station.

(c) does not show the number of United States vessels that come to Brunswick coastwise; only those under foreign register. The books of the harbor master gives, for 1895, exclusive of regular line steamers: Barks, 18; brigs, 3; schooners, 248. Total, 269.

There are some points of special interest to the sanitarian in the commerce of this port: (1) The large proportion of its trade from the "yellow-fever zone."



Of this seven-eighths is from Cuban ports, Rio Janeiro, and Santos, Habana furnishing about one-half. This trade, too, keeps up briskly during the quarantine season, an unusual thing at a Southern port. (2) It is almost exclusively in square-rigged sailing vessels, in ballast. The sanitary import of these facts is obvious. The trade is from the most dangerous ports, in the summer season, and in sailing vessels in ballast—three factors of danger. That they not unfrequently come with yellow fever aboard the records of this station and of the South Atlantic show.

The sanitary significance of the fact that a large proportion of the Cuban trade is in Spanish bottoms—at least three-fourths of the Habana vessels are Spanish—is difficult to estimate. Many, if not most of them, belong to regular lines running from Spain to Habana, in wine, oil, tiles, etc., and thence to Brunswick to load lumber for Spain. These vessels are used to quarantine, are clean and well kept, the clothes being always clean. The masters claim to take some precautions to prevent infection in Habana by keeping the crew aboard, etc. How far this is successful is, I think, a question. Of more advantage to them is the nature of their cargo to Habana. They do not unload at the more dangerous wharves, where sailing vessels in lumber and coal must discharge. They always bring hard-rock ballast, knowing that any other kind goes to the United States quarantine at Sapelo. Taken altogether, I think that these regular liners are now less dangerous than the trade in American schooners, which come into the Gulf, having carried coals and lumber to Habana; at any rate, not more so. The Spanish vessels from Habana, other than those in the regular trade, must be less favorably regarded. They are unfamiliar with maritime sanitation, not having quarantine education, and do not take the same pains about cleanliness or to prevent infection in Habana. These are dangerous vessels, and furnish most of those that go to the Sapelo Quarantine, having fever aboard or with earth ballast, frequently both.

The exports are lumber, timber, naval stores, cotton, and phosphate. Vessels which require quarantine load mainly the first three. There are practically no imports.

State whether in your opinion the quarantine facilities are sufficient to care for the shipping arriving at the station: They are sufficient to care for the shipping, but some increased facilities should be provided for taking ballast, that vessels may be handled more expeditiously.

Give annual amount expended at station for last three years: The station was organized August 1, 1893; the amount expended during the two years to July 1, 1895, is \$14,659.94, of which about \$6,000 is the cost of the plant and the remainder running expenses.

Give the immediate needs of the station, as stated by the commanding officer: A launch is needed in the winter. During this season the commanding officer lives in Brunswick, and time is frequently lost getting to the station to inspect vessels. A flag pole is needed; there is none for the quarantine flag, which, consequently, can not be displayed. A boathouse and quarters for the officer are also needed, the quarters now occupied by him being insecure. Buoys are also needed to mark the quarantine limits.

#### REMARKS AND RECOMMENDATIONS.

When this station was equipped in 1893 it was assumed that the station would shortly be moved from the locality which it then occupied, and on this assumption the plans were based. This is still to be recommended, if a more suitable site is available, although any change would make it less easy to administer. The main disadvantage apparent to me in the present site is its proximity to the main course of traffic between Brunswick and St. Simons Sound. Steamers plying several times a day between Brunswick and St. Simons and numbers of sail and row boats pass within a few fathoms, the latter within a few feet, of vessels not disinfected at



the wharves. The small boats come close enough to expose their occupants to infection, if the vessel can convey it. The wind, however, is nearly always on shore, which greatly lessens the danger from this source, and this can be almost entirely obviated if two buoys are placed to mark the quarantine limits within which craft may not come when vessels are in quarantine. Of course, it would require some official declaration to render this enforceable. I have no chart and can get none here, but am assured and believe that this would in no wise interfere with the proper navigation of the bay.

I do not regard the danger of seamen leaving quarantine and walking to Brunswick through the marsh as a serious one. It is possible enough, but with ordinary care will scarcely happen.

Premising, then, that no immediate change is contemplated in the location of the station, I have to recommend that two buoys be placed in position marking the limits of quarantine on the water. Such work is usually done by the Light-House Establishment without expense to the service for placing.

*Disinfection.*—Sulphur dioxide. Twenty pounds of sulphur for 100 tons register has been the allowance here. This gives between  $2\frac{1}{2}$  and 3 per cent of  $\text{SO}_2$  per volume less than the amount required by the United States Quarantine Regulations. This is burned in the furnace and the gas conveyed aboard the vessel. The sulphur delivery pipe is not long enough to properly convey a large charge of  $\text{SO}_2$  in an ordinary-sized vessel. It reaches only a little way below the hatch, and it is not thus possible to introduce the gas in the amount required, or, indeed, to any considerable amount. The furnace is an excellent one, and the crack in one side, noted before, can be easily repaired. Some changes in the delivery pipe would be an advantage. Its present arrangement renders it difficult to fumigate steamships properly, and it is not the best for sailing vessels. I would therefore recommend a somewhat different arrangement of the sulphur pipe. This will require no more expensive sulphur hose, but about 130 feet of 8-inch galvanized pipe, 20 feet of 6-inch galvanized pipe, and a few T's and L's, and flanges of the two sizes. This pipe is worth about 70 cents per foot for 8-inch and 60 cents for 6-inch. I have given Sanitary Inspector Burford the plan. The two pieces of 6-inch pipe, 10 feet long each, must be furnished immediately if it be desired to use over 5 per cent of  $\text{SO}_2$  with the furnace.

*Bichloride solution.*—The arrangements for the use of the bichloride solution leave nothing to be desired in efficiency; some little change in the piping, however, will be cheaper and more convenient. A  $1\frac{1}{2}$  or 2 inch pipe should be laid from the pump to the face of the wharf (75 or 85 feet). This will save that amount of hose and also save the handling of it. Hose is expensive and fragile, and pipe is cheap and lasts indefinitely.

*The steam chamber.*—One device used here is a distinct advantage over any I have seen elsewhere. The men are made to select a shift of clothing out of their bags before any clothing is put in the chamber; each shift is put up in a loose bundle on the top grating of the car and goes into the chamber with the first charge. It is then given to them to change in a clean place. Thus there is no delay in getting the clothes they have on ready for the second or third charge, and the handling of the clean clothing is avoided while wearing that which has not been sterilized. The saving of time is the main thing, however, and that is considerable.

All portions of the contents of the steam chamber used here did not attain a temperature of  $100^\circ \text{C}$ . The fabrics being stowed and the chamber used as had been habitually done, I found that the whites of eggs did not coagulate and that potatoes did not cook in all parts of it after thirty minutes' exposure to a temperature of  $230^\circ$  to  $242^\circ \text{F}$ . Only one-third of the air in the chamber was removed; this was by the vacuum pump. There was also an unusual amount of precipitation on the clothing, and some—a very little—scorching observed.



These defects can all be remedied by a different method of stowing the contents and of handling the chamber. I have shown the officer here all that I know about it. The vacuum pump works perfectly, getting a vacuum of 10 inches in from four to seven minutes; but from the directions with it we are afraid that it will be injured if it be used to exhaust the steam from the chamber when the process is completed, which would aid materially in drying the clothing. I have written to the Kensington Engine Works about it. In convenience the vacuum pump is inferior to the steam-jet exhaust. There is no difference in efficiency, and it is, I believe, decidedly more economical of steam. It is, of course, more costly and less durable. I have no recommendations to make about the steam chamber or its appurtenances; it is admirably arranged, and properly handled will do efficient, quick work and will be but little injurious to fabrics.

Two reversible-ratchet wrenches to fit the nuts of its doors should be furnished, the one on hand being nearly worn out; two are needed. It would also, I think, be well to furnish several high-register maximum thermometers to this and to every quarantine station, so that the maximum temperature attained in different parts of the chamber, under different conditions of stowing its contents and handling the steam, may be observed by the officer at the station. In no other way (unless electric thermometers be furnished) can he so well learn to efficiently use his chamber.

Let me say here how well the plant has been cared for. The sulphur hose, over two and one-half years' service, is apparently nearly as good as new; the bichloride hose (cotton), of the same age, will last into next summer, and this is used during the winter as well as the summer; the rubber hose purchased from the city of Brunswick in August, 1893, is still good; the engines, two hoisting and one for the sulphur fan, are bright and in perfect order, and, save a leak by a staybolt in one of them, the boilers seem perfectly good. The crack in the sulphur furnace came from an erroneous method of firing, and only the rust on the flat plates of the cars of the chamber can be ascribed to a lack of attention, lack of time, I presume, in this case.

As complementary to the disinfecting plant, I would recommend that a hand force pump for the bichloride solution (an iron rotary pump is probably the best) and some pots for burning sulphur be furnished. There are occasions when much delay can be saved by the use of the former and the latter are needed in the deck houses and in emergencies.

The ballast plant is an excellent one, and with a few additions already provided for will be, for this station, about perfect. There are two ballast wharves, with track, hoisting engine, tubs, and two cars for each wharf. They are separate from the disinfecting wharf, and thus a vessel discharging ballast never interferes with a vessel (steamship or empty vessel) ready for disinfection. This is a most important advantage, and markedly facilitates the work of the station. Its sanitary advantage is also plain. The disinfecting wharf is kept sterile. Nothing is needed save to move the track at the old wharf and put in a switch; this is already provided for. Two 1,000-gallon cisterns, one at each wharf, are needed; these will cost about \$75 to put in place. One wharf uses water in barrels, and the other has an old iron tank which will last a short time longer.

There are a few other minor repairs and alterations needed, but which hardly call for mention in this report; but I can not stop without saying that some lumber should always be furnished a quarantine station, so that minor repairs can be done by the employees.

One more attendant should be allowed at this station during the summer. There are only two men on day duty, and they can not run two hoisting engines and attend to disinfecting a vessel at three different wharves. This extra man is needed, and should be allowed even if he has to be taken away from some other station.



The recommendations made above are to increase the efficiency of the work of the station, either in better disinfection or more rapid handling of vessels.

The buildings here also merit attention. The one over the disinfecting plant was put up as a temporary affair, cheapness being the one thing aimed at; it cost \$687. Still it is good enough, and unless the joists rot will last fifteen years. A house containing two rooms, quarters of engineer and dining room, is in good order. The long building, used as a storeroom, is unfit for any purpose. Its floor is 3 feet below the level of the ground; it should be torn down and a storeroom built. A suitable one could be erected during the winter by the attendants, using the old lumber and about \$30 worth of new stuff. The building the upper story of which is used as quarters for the officer in command is insecure. This was originally a one-story building of four rooms, built for quarters of crews of vessels undergoing disinfection and very cheaply built; it cost \$200. The extra weight of the upper story on one end has twisted and bulged the lower story out of all shape. It will certainly go down if there comes a gale. I believe it can be so braced as to be reasonably safe. It is worth the trial, as the building is needed for many purposes. Unless this can be done, and in any case, if the station is to stay here, quarters should be built for the officer. A four-room house 40 by 50 feet with hall and galleries would be about what is needed. I am informed that this can be built for \$1,000, but judge that it would take nearly as much more including gutters and cisterns.

I know the objection to putting permanent buildings on ground not the property of the United States; yet this building is not safe, and unless it can be rendered so, new quarters must be furnished; and if the station stays here, a good house should be furnished the quarantine officer. The present surgeon's quarters, or a lower room in the same house, would, if it can be rendered safe, make a good hospital for noncontagious cases, which is needed here.

There is no place to keep a boat, and a boathouse is needed. One can be built for about \$60 while other wharf work is going on at the station. The boat lost last winter from not having one cost \$115. If palmetto piling is used, it would cost about \$75, but as it would not be affected by the teredo and would last much longer, it is to be recommended.

None of the buildings, save the engineer's quarters, have ever been painted. In the case of disinfecting house (built by myself) this was judged unnecessary, because it was believed that the station would be moved. This building should now most certainly be painted to preserve it, and as soon as it is found that the house used for quarters can be saved, it should be painted also. This is recommended not for the sake of appearances, but to preserve the buildings.

As the officer in command lives in Brunswick during the winter, it is many times difficult to get to the station promptly, and quite frequently he can only go by means of the steamer which goes down twice a day. A launch during the winter would be a decided convenience, and if one can be conveniently furnished I would recommend it. Not only is a launch not needed during the quarantine season, but, owing to the difficulty or rather impossibility of properly caring for her at the station, it would be in the way.

In addition to inspecting the classes of vessels required by the rules of the Treasury Department the officer here during the quarantine season "speaks" all coastwise vessels, without, in general, boarding them. This is done so as to inspect and, if necessary, disinfect the "via vessels." Also, in addition to the disinfection required by the above-mentioned rules during the quarantine season, all vessels in ballast from ports suspected of infection with yellow fever have their ballast discharged at quarantine and their holds washed down with bichloride solution. There is no detention of these vessels. Pilots have orders not to board vessels which have had sickness aboard, and if one does so he is sent with the vessel to South Atlantic Quarantine. They may board the other vessels, but are directed to remain on deck, and Sanitary Inspector Burford thinks this rule is generally



obeyed. They remain aboard until the vessel is inspected and then, if everything is satisfactory, are released. There seems a certain risk in this, but I have no recommendation to make on the subject. Some of the pilots are immune to yellow fever, but most of them are not.

I certify that the foregoing is a careful and correct statement of the condition of the service at the Brunswick Quarantine Station inspected by me this 11th-18th day of August, 1896.

H. R. CARTER,  
*Surgeon, M. H. S. Inspector.*

## ST. MARYS.

1. No station; all quarantine work done at the United States station at Brunswick, Ga., or occasionally at Cumberland Sound, Florida. Cumberland Sound Station is the official name of the station (State of Florida), near Fernandina.

2. No quarantine officer at St. Marys.

3. No local quarantine maintained here.

4. No local quarantine procedures enforced here; those at Brunswick and Cumberland Sound have been described.

5. No inspection of vessels here at any time; all the year at Brunswick and Cumberland Sound.

6. Vessels from other United States ports are not inspected here. Coastwise vessels with sickness aboard and "via vessels" are inspected at Brunswick Quarantine.

8. No vessels held in quarantine here; hence no intercommunication.

9. Should a vessel infected with cholera, yellow fever, or smallpox apply for entrance she would be remanded to Brunswick. Should the matter be considered doubtful, the Bureau would be wired and the vessel cut off from communication with shore.

10. No records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

11. No fees connected with quarantine.

12. Make a statement, showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

*Vessels entering the port of St. Marys, Ga., during the calendar year 1895.*

Month.	From foreign ports (tropical American).		Coastwise (empty or ballast).
	Ballast.	Empty.	
January.....		3	
February.....	2		3
April.....	1		
May.....		1	1
June.....		1	2
August.....			2
October.....			1
November.....	1		2
December.....		1	3
Total.....	4	6	14

The entries from foreign ports are all from the West Indies, save one bark from Rio de Janeiro (via Sapelo Sound). Those marked as "in ballast" came into the Satilla empty, their ballast being discharged and their holds disinfected at the Brunswick Station. The exports are exclusively pine products—lumber and cross-ties. Of the lumber, much goes to the West Indies; this year to the Rio Plata. The cross-ties go to northern ports of the United States.



13. The above data are from the custom-house. No immigration bureau.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

Yes, with the aid of Brunswick and Cumberland Sound.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state especially whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

The station which inspects for St. Marys has been described. All are observed here.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer state that the Treasury regulations have been complied with, as required by section 5, act of February 15, 1893? Transmit copy of certificate.

Yes. See Exhibit A.

17. What disposition is made of the consular bills of health?

Filed with the entry papers. All are on file and in proper form. All entries during 1895 are via the Brunswick (United States) Station.

18. Mention any facts which, in your opinion, should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

St. Marys, Ga., is a port of customs entry which in its quarantine relations is analogous to Darien, Ga., and to Brunswick, Ga. There are no arrangements for maritime quarantine here, and the quarantine work is done by United States station at Brunswick, Ga. The vessels which enter here load lumber at the mills on the Satilla River. They enter by St. Simons Sound, and are inspected and passed on at the United States quarantine at Brunswick. The entrance by St. Andrews Sound is geographically more convenient to the Satilla, and the bar is perfectly practicable for the class of vessels which load here; but owing to the facts that they all expect to tow up the Satilla and that no towboat lies in St. Andrews Sound, that no pilot boat lays off St. Andrews bar, and some other conditions, practically all of the vessels come as stated. In past years some have come in by St. Andrews Sound, and some even by Cumberland Sound; in both cases mainly from stress of weather. This has not happened in the case of vessels from foreign ports for the last few years, and very rarely, if at all, for vessels coastwise.

The vessels that load on the St. Marys River load almost exclusively from mills on the Florida side, and thus make customs entry at Fernandina, and are passed on by the Cumberland Sound (Florida) Quarantine. It may happen that a vessel loading only on the Georgia side of the St. Marys requires inspection and disinfection. It occurred in 1894, in the case of a "via vessel." This was provided for by a Department order to the collector at St. Marys, directing the vessel to the Cumberland Island Station for inspection and disposition, which order the collector advises me he considers as a general ruling for all such cases. Such cases, however, are extremely rare and do not require that special arrangements be made for them. The pilots of St. Simons Sound have the same orders for the vessels coming in for the Satilla and which enter at St. Marys as for those that enter at Brunswick, i. e., all from foreign ports and all which have been in a foreign port within ninety days and all with sickness aboard come to the Brunswick Quarantine Station for inspection.

The pratique of this station, or that at Cumberland Sound, too, is required at St. Marys custom-house in the case of every foreign entry and was on file in every such case. The Satilla River country then is, so far as the St. Simons entrance is concerned, as well protected as Brunswick is. This also covers, or should cover, all vessels from foreign ports. It is, however, possible enough for "via vessels" to enter by St. Andrews Sound, and while I consider the danger from this source to be extremely slight, yet, such as it is, it can be almost entirely obviated by directing the customs officer at St. Marys to examine into the history of each coastwise



vessel which comes on the Satilla during the quarantine season and see that none are allowed to violate the quarantine regulations of the United States.

I would recommend this. It is probably not absolutely necessary, but it costs nothing, either in time or money, is no annoyance to the vessels, and is an added safeguard. The deputy collector of customs, Mr. McWhirter, I am informed, lives during the summer mainly at Fosters Mill, on the Satilla, where it will be very convenient for him to make this inquiry. I submit a map of this part of the coast which may elucidate this report.

## EXHIBIT A.

BRUNSWICK QUARANTINE, ———, 189—.

I certify that ———, of ———, from ———, has in all respects complied with the quarantine regulations prescribed by the Secretary of the Treasury, and that in my opinion she will not convey quarantinable disease.

Said vessel is this day granted free pratique.

United States Quarantine Officer, Port of Brunswick, Ga.

## FLORIDA.

## REPORT OF INSPECTION OF LOCAL QUARANTINES.

By Surg. H. R. CARTER, M. H. S.

## CUMBERLAND SOUND QUARANTINE—FERNANDINA.

1. Describe the quarantine station, location, buildings, anchorage, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

The station is a pier head off Tiger Island, on the edge of the channel coming into Cumberland Sound, on the western side of the deep water. It is a pier head admirably constructed of palmetto piling below water and yellow pine above, 150 by 50 feet surface. On it are the buildings, a shed for the disinfecting plant and quarters for attendants and for the crew of the vessel in quarantine. The building used for this last purpose is an addition to the main pier head, of which the diagrams are given above, built on palmetto piles. It is about 2 miles from Fernandina. Part of the pier head has sheet palmetto piling for a ballast wharf. The anchorage is to the west of the station. It is not defined by buoys or any other marks, but its limits are generally understood by pilots, etc. There is no division of the anchorage for different classes of vessels and none is needed. There is an abundance of room for keeping infected and noninfected vessels apart. Vessels are inspected in a yawl.

The apparatus for the disinfection of baggage and vessels is extremely good. It is modeled after that at the Brunswick United States Station, save that a horizontal boiler is used in place of a vertical. It consists of a double sulphur furnace with fan, pipe, etc., the  $\text{SO}_2$  finally passing through 6-inch rubber hose, a tank and steam force pump with 1½-inch hose, for the use of the bichloride solution, and a steam chamber with vacuum pump, etc., exactly of the dimensions and pattern of that at Brunswick, Ga.

There are no facilities for the care of such sick men as would require removal from their vessels on account of infectious disease. Others could be treated on the pier head, but would probably, save temporarily, be treated aboard. Infectious disease would not be treated here. No facilities for care of suspects save aboard the vessel. Mail and telegraphic facilities good to Fernandina. Communication to the station would only be by special messenger; but as the quarantine officer lives at Fernandina, such communication can easily be had with him, and through him with the station.



2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. J. L. Horsey, quarantine officer (assistant health officer of the State), Fernandina, Fla. Five subordinates.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

Copies of laws and regulations herewith transmitted. (Exhibit A.)

Inspections as at other Florida ports. Vessels from foreign ports are inspected all the year round; those from domestic ports from May 1 to November 15. The steamer plying daily between Fernandina and Brunswick is excepted. She is under bond to stop at the station if she has any sickness aboard; otherwise is not inspected. The same is true of the steamer plying daily between Fernandina and St. Marys, Ga. All other vessels are inspected between May 1 and November 15.

All vessels coming from the geographical limits laid down in the Florida regulations between May 1 and November 15 are disinfected. During the winter vessels which have had yellow fever or come from specially infected ports are also disinfected. Those ports are designated by the health officer. This disinfection consists of mechanical cleansing, including discharge of ballast, steaming of fabrics, treating vessel with  $\text{SO}_2$  and with bichloride solution in the manner prescribed by the United States and Florida quarantine regulations. I would state, however, that only 3 pounds of sulphur is used to 1,000 cubic feet of space, which of course gives about 4 per cent of  $\text{SO}_2$  only. All ballast is deposited under water.

Detention is five days from the completion of disinfection. It is counted from the completion of disinfection, and not from the next day, as at Mullet Key; neither is a day required to be allowed for the mechanical cleansing, as at Charlotte Harbor.

Vessels with cases of infectious disease aboard would not be treated at this station. Such vessels would be remanded to Sapelo by the pilots before they cross the bar, or by the quarantine officer when he inspected them.

Vessels going coastwise are not, in general, inspected by the quarantine officer personally, who lives in Fernandina, but by his assistant, a nonprofessional man, who lives at the station. "Via" vessels and vessels from foreign ports and all doubtful vessels are inspected by Dr. Horsey. Disinfection is supervised sometimes by Dr. Horsey and sometimes by the assistant.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

Vessels from domestic ports are inspected between May 1 and November 15. Vessels from certain ports, usually considered clean, in suspected latitudes are disinfected and held. Both of these are, I think, unnecessary; but the former is absolutely necessary, at some Florida ports, and the State law allows of no discrimination between ports in its regulations.

5. State whether the inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.

Vessels from foreign ports inspected throughout the year. Certain vessels—those that have had infectious disease aboard or from specially infected ports—are disinfected and held during the entire year.

6. During the quarantine season vessels from other United States ports are inspected.

7. Describe quarantine procedures in the inspection of vessels, and if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection; (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.



The inspection is made by examining papers, crew, and vessel; the statement (oath, if judged necessary) of the master is taken to certain questions, which is subscribed by him. Copy inclosed. (Exhibit B.) (a) Such time as is necessary to get the vessel clear, mechanically. If in ballast, this may take several days for its discharge. It is put in the ballast crib under water, being worked by the crew. (b) Time of disinfection is from twenty-four to forty-eight hours, according to whether it be an iron or wooden vessel. (c) Time of detention is, for yellow fever, five days.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

Communication with vessels in quarantine is held only through the quarantine officer or his employees. Pilots may board vessels which have had no sickness, but must stay on deck and remain aboard until released by the quarantine officer. Two pilots, however, who are not immune to yellow fever, may not go aboard without quarantine.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessel carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Any such vessel, if there were no sick people aboard, would be disinfected here. If there were, she would be sent to Sapelo. Vessels from ports where infectious disease prevails, or which have been in communication with infected places or vessels, would be considered infected. A vessel, however, from a port where smallpox existed in less than an epidemic form would not be quarantined on that account, nor would one from a yellow-fever port during the winter, unless the port were virulently infected or she had had sickness aboard.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Yes; in copies of quarantine declaration and in journal. Quarantine declaration inclosed. (Exhibit B.)

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

Ballast, 25 cents per ton, for use of wharf. Schedule of fees for inspection and disinfection is found on last page of Exhibit A.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

(a) From foreign ports (direct).

Month.	Tropical (American) ports.			Other ports (empty).	Total.
	Ballast.	Empty.	Total.		
January .....	4	4	8	3	11
February .....	2	3	5	1	6
March .....				5	5
April .....	1		1	5	6
May .....		d 1	1	d 4	5
June .....	1	d 1	1	1	2
July .....			1	d 1	1
August .....		d 1	1		1
September .....		d 1	1	1	2
November .....	d 2		2	2	4
December .....		d 2	2	2	4
Total .....	10	13	22	25	47



(b) *From foreign ports in yellow-fever latitudes via domestic ports.*

Month.	Vessels.	Remarks.
May.....	2	1 via New York; 1 via Philadelphia.
June.....	5	4 via New York; 1 via Boston.
July.....	3	2 via New York; 1 via Philadelphia.
August.....	1	Via Salem.
September.....	4	2 via New York; 1 via Boston; 1 via Philadelphia.
October.....	1	Via New York.
November.....	2	1 via Boston; 1 via Philadelphia.
Total.....	18	

(c) *From domestic ports.*

Month.	Vessels.	Month.	Vessels.
January.....	1	August.....	22
March.....	3	September.....	20
April.....	3	October.....	12
May.....	14	November.....	5
June.....	19		
July.....	12	Total.....	111

Of the vessels marked (d) in table (a) 10 were disinfected. The 2 not from tropical America were from St. Vincents, Cape de Verde Islands. The vessel disinfected in December was from Sagua, and had sickness aboard. All of the vessels in table (b), the "via vessels," 16 in number, were disinfected here. Coastwise vessels being inspected only from May 1 to November 15, this table (c) includes only such as enter during that period.

Table (c) gives such coastwise vessels as enter between May 1 and November 15, and which are consequently inspected at this station, together with a few (seven) foreign vessels coming coastwise in the winter season. The customs books give as the total entries of vessels coastwise, 173. This includes Tables (b) and (c), as well as coastwise vessels coming in the winter season. There are no imports. The exports consist of phosphate, of which Fernandina is claimed to ship more than any port in the world, and lumber and timber—lumber mainly. Phosphate goes mainly to transatlantic ports, and in steamers mainly. Lumber goes principally to the smaller West Indian ports, which are in the main considered clean and coastwise. The lumber trade is, I think, increasing, but is less than it was some years ago. The same is true of that in phosphate.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

There is no immigration bureau. Fernandina being the most northern port of entry in the second great customs district and having very few vessels coming in from Georgia, the "adjoining State," or from other ports of the second district, practically all of her coastwise vessels have to enter at the custom-house. The customs books there give the coastwise vessels as well as the foreign. So far as relates to quarantine the office is well kept.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

Yes. There are no means of caring for people sick of contagious disease here, but there is no need of them. Such vessels are sent to Sapelo, and it is perfectly convenient to do so.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, etc.

Every regulation, save that a less percentage of SO<sub>2</sub> than is contemplated in



the Treasury regulations is used, is properly enforced. The period of observation after disinfection is properly observed.

16. Yes; copy of certificates inclosed (Exhibit C).

17. One consular bill of health is retained by the quarantine officer and one filed in the custom-house.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

The large proportion of vessels which are disinfected here which are "via" vessels, two-thirds of all, suggests the advisability of having the national quarantine stations which inspect for Philadelphia and Cape Charles inform such vessels of this class as are liable to go to southern ports that they are liable to quarantine at such ports. These vessels can be disinfected, not detained, at these stations as they leave port, i. e., when empty, pass their quarantine time en route, and thus enter southern ports without detention. A considerable number of vessels would be benefited thereby. Occasionally a vessel entering at St. Marys, Ga., comes in by Cumberland Sound. The Florida State board of health has, of course, no jurisdiction in such cases, but the collector at St. Marys has orders (from the Secretary of the Treasury) to remand such vessels to the Fernandina station for inspection, and if necessary, quarantine. Such cases, however, are rare. Nearly all of the vessels which enter at St. Marys load in the Satilla River, coming in through St. Simons Sound, and being inspected at the United States Quarantine Station at Brunswick.

AUGUST 10, 1896.

#### EXHIBIT A.

See rules and regulations State board of health, under report of Mullet Key station.

#### EXHIBIT B.

*Inspection of vessels arriving at the ——— ———, 18—.*

1. Name and class of vessel? \_\_\_\_\_.
2. Name of captain or master? \_\_\_\_\_.
3. Tonnage of vessel? \_\_\_\_\_.
4. From what port is the vessel you command? \_\_\_\_\_.
5. How many days have you been on the passage? \_\_\_\_\_.
6. Where bound to? \_\_\_\_\_.
7. At what port or ports have you touched within the last ninety days? \_\_\_\_\_.
8. Were any contagious or infectious diseases prevailing at those ports? If so, name the ports and diseases. \_\_\_\_\_.
9. Was any freight, passengers, or ballast received at the ports at which your vessel touched? \_\_\_\_\_.
10. Had you any communication with another vessel on your passage? \_\_\_\_\_.
11. Have you received any passengers, freight, or ballast from any other vessel? \_\_\_\_\_.
12. If so, give particulars. \_\_\_\_\_.
13. Have you a bill of health? \_\_\_\_\_.
14. During the course of your cruise or passage, what cases of disease have occurred on board, and at what date? \_\_\_\_\_.
15. Have any deaths taken place on board of your vessel since you left the last port? If so, what dates and from what causes? \_\_\_\_\_.
16. Are there any sick on your vessel at this time? \_\_\_\_\_.
17. Has yellow fever, smallpox, cholera, plague, leprosy, or other contagious or infectious diseases ever existed on this ship? \_\_\_\_\_.
18. If so, when? \_\_\_\_\_.
19. What is the number of officers and crew? \_\_\_\_\_.
20. What is the number of passengers? \_\_\_\_\_.
21. What is your cargo, and to whom consigned? \_\_\_\_\_.



22. If in ballast, what is the character of the ballast, where was it taken from, and how many tons have you on board? \_\_\_\_\_.

23. What is the present sanitary condition of the vessel, cargo, crew, and passengers? \_\_\_\_\_.

STATE OF FLORIDA, *County of* \_\_\_\_\_:

\_\_\_\_\_, *Master.*

Before me, \_\_\_\_\_, a notary public in and for said county and State, personally came \_\_\_\_\_, master of the \_\_\_\_\_, to me well known as the person named, who, after being duly sworn, deposes and says that the statements made by him in answer to the foregoing interrogatories are true.

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, A. D. 189—.

EXHIBIT C.

*Pratique given to vessels from foreign ports.*

PORT OF FERNANDINA, FLA., \_\_\_\_\_, 189—.

I certify that \_\_\_\_\_, of \_\_\_\_\_, from \_\_\_\_\_, has in all respects complied with the quarantine regulations prescribed by the Secretary of the Treasury, and that in my opinion she will not convey quarantinable disease. Said vessel is this day granted free pratique.

\_\_\_\_\_,  
*Health (Quarantine) Officer, Port of Fernandina, Fla.*

EXHIBIT C.<sup>1</sup>

*Pratique given to vessels from domestic ports.*

STATE BOARD OF HEALTH OF FLORIDA,  
*Port of Fernandina, Fla., \_\_\_\_\_, 189—.*

This certifies that I have carefully examined the passengers and crew of the \_\_\_\_\_, from \_\_\_\_\_, and find no one affected with any quarantinable contagious disease. Permission to discharge passengers and cargo is given for the port of Fernandina, Fla.

\_\_\_\_\_,  
*Port Sanitary Inspector, State Board of Health of Florida.*

MAYPORT.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

The station is off a yellow flag at Mayport, near the mouth of the St. Johns River, on the right bank. No buildings save office of quarantine officer. Mail once a day. No telegraph. Telephone from Pilottown across the river to Jacksonville. It is an inspection station primarily, disinfecting vessels from suspected ports, sending to a more completely equipped station (Fernandina) those that are from ports considered infected, and those with sickness aboard do not cross the bar, being turned back by the pilots. Inspection is made in a small boat. Disinfection is by the "pot method" and vessel washed down with bichloride, pots and force pump and hose being the apparatus. No arrangements made for suspects ashore; they are detained aboard. Noncontagious disease treated aboard.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. George Macaulay, quarantine officer, Mayport, Fla. One boatman.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out

[See Mullet Key report.]



All vessels from foreign ports are inspected without regard to season. Coastwise (domestic) vessels are inspected from May 1 to November 15. The regular line of Clyde steamers from United States ports is not boarded. The master signs a certificate and throws it overboard in a bottle; this is picked up and filed. It ranks as an inspection on the books. No fee is charged vessels from Florida ports. Vessels from ports judged infected with yellow fever, either with a foul bill or the port so adjudged from other evidence (abstract), are sent to Fernandina for disinfection. Vessels from suspected latitudes, with some exceptions (which include nine-tenths of the vessels), not in the above class are disinfected here. Vessels with sick aboard are directed to Sapelo by the pilots, or would be if any came.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

American vessels coastwise are inspected from May 1 to November 15. This seems an unnecessary detention of vessels, but the detention is slight in the case of any one vessel, and it is not without some sanitary value.

State whether the inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.

Inspection of vessels from foreign ports all the year round. Vessels from infected ports refused entrance all the year. Vessels with foul bill or sickness sent to Fernandina at all seasons.

6. Are vessels from other United States ports inspected?

Yes; from May 1 to November 15.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (a) between arrival and commencement of disinfection; (b) the time occupied by disinfection, and (c) time after completion of disinfection of vessels until discharge.

Vessels are inspected by the examination of papers, crew, and vessel. If from infected ports, sent to Fernandina. If from suspected port and in the quarantine season, disinfected here by pots and bichloride; 10 pounds of sulphur is burned per 100 tons (1.3 per cent  $\text{SO}_2$ ), the fabrics being hung up therein and the beds raised in the berths. This is left in thirty-six to forty-eight hours. The vessel is then washed down, the hold and fore-castle with 1 to 800 solution of bichloride of mercury with a force pump and the cabin with carbolic acid (3 per cent) with cloths. The vessel is made mechanically clean before disinfection. Disinfection begins immediately the vessel can be cleansed. Time occupied in disinfection about forty-eight hours, and time after completion of disinfection five days to discharge.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.) and how regulated? Is there any intercommunication allowed among vessels in quarantine?

No communication is held with vessels in quarantine. Vessels believed to be clean are boarded by pilots and brought in. Pilot remains aboard until quarantine officer releases him. Pilots are not allowed to board vessels from certain ports with sickness aboard; they simply go alongside and order her away.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

A vessel in any of the above conditions would be refused entrance to quarantine and ordered to Fernandina or Sapelo. Vessels with a foul bill of health or from a port where, from other evidence, the quarantine officer has reason to believe these diseases prevail would be held infected. A few cases of smallpox in a port would not require a vessel to be pronounced "infected;" an epidemic would.



10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Note would be made on the "record of vessels inspected" of such cases. None have occurred.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

Schedule of fees in Exhibit C; no other charges. Such vessels as arrived in ballast requiring disinfection would make their own arrangements for removing it.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

*Vessels inspected at the State quarantine station at Mayport, Fla., during 1895.*

Month.	From foreign ports.				From domestic ports.		
	Cargo.	Ballast.	Empty.	Total.	Clyde line.	Others.	Total.
January .....	2			2			
February .....	1		1	2			
March .....	2	1		3			
April .....	2		3	5			
May .....	1			1	9	31	40
June .....	2	<i>d</i> 1	1	4	9	7	16
July .....	2			2	9	23	32
August .....					10	18	28
September .....	1		<i>d</i> 1	2	10	21	31
October .....					11	19	30
November .....	2			2	5	12	17
December .....	3			3			
Total .....	18	2	6	26	63	131	194

The vessels marked *d* were disinfected here, as described in preceding paragraph, one (in June) in ballast from Ponce and the other from St. Croix. Both vessels had clean bills, and the ports were not regarded as infected, although now Ponce is listed as an infected port. All the vessels from foreign ports were schooners, save one bark, coming in March with ballast, and a few yachts. The foreign trade is almost entirely from the Bahamas, and the vessels come empty or in fruit and shells. Three vessels were from Puerto Rico, one Ponce, and two Mayaguez (in April).

The exports are yellow-pine lumber and general merchandise, principally to the Bahamas. A considerable amount of cotton and wool from Texas goes coastwise; also much yellow pine.

A glance at the tables will show that a large proportion of the inspections of this station are of coastwise American vessels, sixty-three of which are steamships of the Clyde Line.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

There is no immigration bureau. At the custom-house the certificates of quarantine discharge were all properly made out and filed with the entry papers.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

With the stations at Fernandina and Sapelo Sound they are sufficient.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.



Taking the ports where yellow fever prevails to mean those of the class sent to Fernandina or Sapelo, all the quarantine regulations of the Treasury Department are properly enforced.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

It does. (Exhibit D.)

17. What disposition is made of the consular bills of health?

One retained by quarantine officer, and one filed with the entry papers at the custom-house.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

There seem to be no facts to bring to the notice of the Department other than those mentioned, and I have no recommendation to make. This is, so far as United States quarantine regulations are concerned, simply an inspection station, and is very carefully conducted.

The disinfection done here is not required by United States quarantine regulations, and that it is not the kind which would be required if it were is of no importance.

Should by any chance the vessel disinfected here require it from sanitary reasons, unquestionably the method of handling her would add to her safety very materially, and if 45 pounds of sulphur to the 100 tons were used she would get a pretty fair factor of safety.

JULY 4, 1896.

#### ST. AUGUSTINE.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

Station is at a yellow flag off St. Augustine Inlet; no buildings; no special anchorages marked out; boarding is done in a small boat; no vessels are disinfected, or detained here; simply an inspection station.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. L. S. Alexander, quarantine officer, St. Augustine, Fla.; no subordinates; Dr. Alexander has resigned, per request of the State board of health, to take effect July 1. His successor has not been appointed. Dr. Porter states that his resignation has not been accepted.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

Laws and regulations the same as those transmitted with the report for Mayport; quarantine—no copy obtainable here. No vessels are disinfected here, none requiring it having ever entered. Should such arrive they would be sent to Fernandina for treatment.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

Vessels coastwise inspected from May 1 to November 15. Considering the possible communication of coastwise vessels with Cuba, directly or indirectly, this



year, I think the inspection of such vessels a wise sanitary measure, and that the detention thus caused is not "undue."

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

Inspection for vessels from foreign ports maintained throughout the year; for vessels coastwise from May 1 to November 15. No treatment of any kind here. Vessels from infected ports would be sent to Fernandina. All the year round.

6. Are vessels from other United States ports inspected?

Yes; from May 1 to November 15.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharged.

Vessels inspected by examination of papers and crew. If infected, sent elsewhere.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.) and how regulated? Is there any intercommunication allowed among vessels in quarantine?

No communication with vessels in quarantine is allowed by regulations. Pilot brings such vessels in, and is supposed to remain aboard until they are in pratique.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Any such vessel would be ordered off by the pilots and not allowed to cross the bar; if she did, she would be ordered off by the quarantine officer. By the regulations, a vessel coming with a foul bill of health or from a place reported by any credible authority as infected is adjudged infected. None such have ever come here.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

No such cases have occurred.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

Same as for Mayport. No vessels enter St. Augustine requiring disinfection. Inspection, schooners, \$5 per trip; sloops, \$3; square riggers, \$7.50 and \$10.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(*a*) from foreign ports; (*b*) from foreign ports in yellow-fever latitudes via domestic ports; (*c*) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

Vessels inspected at the State quarantine station at St. Augustine, Fla., during 1895: From foreign ports, 1; coastwise, May, 3; June, 1. These five vessels are all recorded as inspected at this station by the quarantine officer during 1895. One was a British schooner in fruit from Nassau. The three recorded as coming coastwise during May were American schooners, two empty and one in brick, all from New York. The one in June was a tug from Jacksonville. The customs books show, however, that one vessel (British schooner) from the Bahamas entered in December, 1895. She ran by, not knowing there was a quarantine here, and was not discovered by the quarantine officer. There is practically no commerce at this port, and such as there is is from the Bahamas and is in fruit and shells. A few yachts may also be expected. This year (1896) there has been one schooner from foreign port—Nassau—and one yacht, coastwise, inspected.



13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Such vessels as enter from foreign ports are entered without the certificate of the quarantine officer required by the act of February 15, 1893, and the United States quarantine regulations. Also, I find that nearly all of the vessels from foreign ports which are recorded have entered by St. Lucia Inlet (Gilberts Bar) and discharged at Jensen; there were twenty-two of them in 1895, against two at St. Augustine. These had also entered without the certificate mentioned above. All were from the Bahamas, all American schooners of small size, and all in fruit, shells, and pineapple slips.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

They are ample.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection of vessels, are observed.

The entry of vessels from foreign ports is made without the certificate of pratique required by the act of February 15, 1893, section 5.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

No certificate is issued.

17. What disposition is made of the consular bills of health?

One on file at custom-house with the entry papers, and one at the quarantine office. For such vessels as come in at Jensen, both bills are filed with the entry papers.

18. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

That the foreign commerce at this port is insignificant and very safe, from the Bahama Islands altogether. Jensen has been made a subport of entry, and a deputy collector of customs appointed since July 1, 1896. As this place will enter a certain number of vessels from the Bahamas—twenty-two last year—and as there is obviously no quarantine officer, as shown by both bills of health of such vessels as enter here being filed at St. Augustine custom-house, I advised the collector of customs that if any vessel from a foreign port came in while there was no State quarantine officer on duty, as at present, to employ a physician in good standing, preferably the local health officer, and have him inspect the vessel and give the necessary certificate for entry. The chance is extremely slight that any vessel will enter in any short time. I also explained to him that the certificate of quarantine discharge was a necessary prerequisite to legal entry, and that he must require it of the vessel. I explained the same thing to the late quarantine officer, who will tell his successor.

JULY 7, 1896.

#### NEW SMYRNA.

I have the honor to report that I have visited this port to-day. There is no quarantine here. The inspector of customs, Mr. Sands, informs me that no foreign vessels have entered since his appointment, last October. He has no record of any during 1894, and domestic vessels are not required to report to him. New Smyrna is the port of Mosquito Inlet, 5 miles distant. The bar has 10 feet of water at low tide. The proximity of the port to the phosphate region is expected to develop foreign commerce as soon as a projected railroad is finished. I would suggest that the inspector of customs be instructed by the Department to refuse



entry to any vessel from a suspected port, and to order her to a quarantine station.

MAY 14, 1896.

[NOTE.—Inspector of customs instructed as recommended.]

JENSEN.

1. There is no station of any kind here. It is simply a subport of entry in the St. Augustine customs district, where, however, nearly all the vessels from foreign ports enter. There is naturally nothing here, save a deputy collector of customs, Mr. T. V. Moore, who up to July 1 had been customs inspector. Mail and telegraphic facilities good; at Jensen, on the E. C. R. R.

3. No quarantine is maintained here.

5. There is no inspection or treatment at any time.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessel carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

The deputy collector would refuse entry to such a vessel, put a guard over her, and forbid all communication with her. Advise her to go to Fernandina for disinfection. A foul bill of health, no bill of health, or presence of sickness aboard would be regarded as sufficient not to admit a vessel until the Department could be communicated with.

11. No fees.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

Vessels entering the port of Jensen, Fla., from foreign ports in 1895: January, 1; February, 1; March, 2; April, 1; May, 3; June, 3; July, 3; August, 3; September, 3; November, 3; December, 1; total, 24. All of these vessels are American schooners of small size, and they came in cargo, fruit, shells, and pineapple slips, taking out general merchandise and lumber. The trade is entirely with the Bahamas, mainly Green Turtle Cay, Nassau, and Governors Harbor, and, these islands being free from yellow fever, is free from any special sanitary risk. About 25 immigrants came in the last year. Since the port has been made one of entry, the number of vessels will increase. Two with passengers entered at Palm Beach last year on account of the official difficulties of doing so at Jensen.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

The above facts were learned at the custom-house; there is no immigration bureau. Twenty-five immigrants entered last year from the Bahamas.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

No. So far as sanitation is concerned there is but little need of anything more as long as the Bahamas stay healthy, but some one with authority to sign the certificate of discharge should be stationed here, because without it the vessel can not make a legal entry, and some sanitary supervision of the port would be also an advantage.

15. Vessels from foreign ports are not inspected, and hence enter with a certificate of inspection.

16. No certificate of inspection is issued.

17. What disposition is made of the consular bills of health?

Filed (both copies), with the entry papers, at St. Augustine.



18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

There are no facts to mention, but attention is called to the facts set forth in No. 14. I would recommend that the deputy collector of customs, Mr. T. V. Moore, be authorized and directed to exercise the functions of a sanitary inspector until the State board of health appoints some one else, and that he sign the certificate of pratique required for legal entry from a foreign port.

Although I do not apprehend that vessels from infected ports will attempt to enter here, yet I would suggest that if the foregoing recommendation be carried out, that Mr. Moore be given a list of ports from which vessels should not be allowed to enter, remembering that for one of these small vessels to go to Fernandina needlessly would be a great hardship and take the profits of many voyages. He should not go aboard until he examines the bill of health and determines that the vessel can enter. A foul bill or suspicious sickness would of course be cause of forbidding entrance. In short, the rules given him should be clear, short, and not too stringent. There is no physician nearer than Stuart, about 8 or 10 miles off, and he is not practicing (engaged in raising pineapples), and it is not certain that he is a physician, but is called "doctor" and is sent for by some when sick. Mr. Moore is well adapted for this work, and will make an efficient officer if appointed. This recommendation was made by me in the report on the east coast about July 14, 1895, and I simply reiterate it here.

JULY 9, 1896.

[NOTE.—Mr. Moore, deputy collector, has been appointed sanitary inspector, with instructions.]

#### PALM BEACH.

1. There are no buildings, etc.; nor are any limits of anchorage designated. Vessels are inspected in a small (surf) boat off the pier head or in Lake Worth, as they may happen to be. No apparatus for disinfection, nor facilities for care of sick or suspects. It is an inspection station established to inspect such vessels as may enter here from foreign ports, which are practically limited to the excursion steamer *Northumberland*, plying between Palm Beach and Nassau during the winter months. It was made a port of entry January 1, 1896, and the quarantine inspector then appointed.

Mail and telegraph facilities good at Palm Beach.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. R. B. Patten, Palm Beach, Fla. No assistants.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

Same as the other laws and regulations in force for the other Florida ports and already transmitted. No peculiarity of custom noted. The quarantine officer goes aboard the *Northumberland* with the customs officer when she arrives off the pier head; the conditions of weather in general prevent her making a landing; they inspect her together and give pratique.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

None. No unnecessary detention or disinfection.

5. State whether the inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.



No vessels have come or are likely to come save in the winter months, but inspection would be maintained in the summer also if vessels came at that season. No treatment of vessels here at any time.

6. Are vessels from other United States ports inspected?

None have ever come; they would be.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

Described as far as need be in No. 3. No disinfection or detention here.

8. What communication is held with vessels in quarantine (and before quarantine, by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

None; the vessel comes off the pier head, and it is hard for anyone to board her. No pilots at Palm Beach. Only one vessel comes here.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessel carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Such a vessel would be ordered off to Tortugas or Fernandina. Such a case would not occur unless some small vessel from an infected American port ran into Lake Worth. Can not answer the second question. Any evidence which would satisfy the quarantine officer.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Quarantine declaration is kept and would show such cases, should they occur.

11. Transmit schedule of quarantine fees and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

Same as at the other Florida ports and already transmitted; for the *Northumberland*, \$10 per trip; for the two schooners inspected, \$5 per trip; no disinfection.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(*a*) from foreign ports; (*b*) from foreign ports in yellow-fever latitudes via domestic ports; (*c*) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

Vessels from foreign ports inspected at the State quarantine station at Palm Beach, Fla., during 1896: January, 3; February, 9; March, 12; April, 2; total, 26. All of these inspections were of the steamer *Northumberland*, running as an excursion steamer between Palm Beach and Nassau (New Providence), save two. These were two schooners with passengers from the Bahamas, which could not enter at Jensen on account of that port not being a port of entry; they came in in March. There were no entries, coastwise or foreign, at Palm Beach in 1895, and this list in 1896 is given simply to show the class of work done here. No coastwise entries in 1896. There were five immigrants.

13. State results of your visit to (*a*) the custom-house; (*b*) the immigration bureau.

That foreign entries are made without the certificate of pratique required by the act of February 15, 1893. No immigration bureau; five immigrants.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

Yes.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding



inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

Entry of vessels made without the proper certificate; none other.

16. Does the certificate of inspection or of pratique signed by the quarantine officer state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

No; none of any kind issued. Customs officer and quarantine officer board together, and vessel entered on the latter's verbal assurance.

17. What disposition is made of the consular bills of health?

Filed with the entry papers.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

There seem to be none. The State health officer of Florida promised to correct the matter of the certificates. The landing of the steamer is made to a pier extending outside the reef, which is here very close—150 to 200 yards off shore—or rather is intended so to be made, as of twenty-four trips she made she was only able to get to the pier head twice, landing her passengers and baggage in a surf boat. The entrance into Lake Worth is put at 3 feet at high tide, so no vessel can habitually enter it. It is currently believed that the *Northumberland*, or some similar vessel, will run from Miami to Nassau this winter; and that Palm Beach as a port of entry will be abandoned I consider probable. If so, I presume that the customs officer will be transferred to Miami, and Dr. Jackson, the quarantine officer at Miami, who so far has had no functions save to inspect vessels from Key West, will look after the foreign entries. There are no recommendations.

JULY 11, 1896.

#### KEY WEST.

By P. A. Surg. G. M. GUITERAS, M. H. S.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

Inasmuch as infected vessels are not treated at this port, there is no quarantine station properly so called. A buoy with a yellow flag, situated in the channel a short distance from the city front, designates the point at which vessels must lie to or anchor to await the inspection of the sanitary inspector. An employee is kept on duty for the purpose of reporting the arrival of any vessel to the sanitary inspector, who then boards the vessel and determines what action is to be taken with regard to her. Infected vessels, or those having sickness of an infectious character on board, are sent to the national quarantine station, Dry Tortugas, or the State quarantine station on Mullet Key.

The Plant Line steamers coming from Habana are allowed to enter without detention, the baggage of all passengers for Key West being disinfected by twenty-four hours' exposure to sulphur-dioxide gas. For the latter purpose a chamber has been constructed, 42 feet long by 12 feet wide. The roof, sides, and floor of the building are made up of four thicknesses of lumber, the inner two being tongued and grooved ceiling, between which is a layer of building paper. The seams of the inside ceiling are white-leaded. The inner sides of this chamber are fitted up with woven-wire racks, each one numbered and corresponding to the number of a check attached to the trunk or valise. The contents of the trunk are removed and exposed loosely upon the rack. These regular Habana steamers are accorded this special treatment so long as they comply with the provisions required by sections



39 to 43 of the rules and regulations of the State board of health of Florida, a copy of which is transmitted. (See Mullet Key report.) My observation shows that the rules referred to are enforced with the exception of the steam disinfection, in place of which sulphur disinfection is used.

2. Give personnel of the station or port, name of the quarantine officer or officers, post-office address, total number of officers and subordinates, etc.

There is one officer on duty, known as the "sanitary inspector." At present the position is occupied by Dr. Charles B. Sweeting, whose address is Key West, Fla. The total number of officers and subordinates is three.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

See Exhibit A.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

None, as far as I can learn. There is no unnecessary detention or disinfection of vessels.

5. State whether the inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.

Inspection is maintained during the entire year, except that vessels from domestic ports are not inspected from November 15 to May 1. The baggage of passengers from Habana is fumigated during the entire year.

6. Are vessels from other United States ports inspected?

Vessels from United States ports are inspected during the active quarantine season.

7. Describe quarantine procedure in the inspection of vessels and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection; (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

The vessel "lies to" or anchors in the stream and is boarded by the sanitary inspector, who examines the papers and crew and general condition of the vessel. If infected, the vessel is sent to the Key West Quarantine on Tortugas Island, or to Mullet Key Quarantine.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

Vessels subject to quarantine remain in quarantine at this port only when they come for orders and in distress or to coal. In such cases they are permitted to anchor about a mile below the city. There is no communication, except through the sanitary inspector. There is no communication permitted between vessels in quarantine. Pilots are not allowed to board suspected vessels.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessel carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

All such vessels are sent to the national quarantine station, or to the Mullet Key Station.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

A record is kept of diseases that have occurred during the voyage or on arrival.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

The schedules of fees will be found in section 89 of the rules and regulations of



the State board of health of Florida, transmitted herewith (see Mullet Key report). For the fumigation of baggage of passengers from Habana a further fee is charged of 50 cents for each trunk and 25 cents for each valise.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

*Arrivals of vessels during the calendar year 1895.*

Ports.	Cargo.		Ballast.		Remarks.
	No.	Tons.	No.	Tons.	
<i>January.</i>					
Foreign ports:					
Cuba.....	13	10,270			General merchandise.
Honduras.....	2	191			Fruit.
Mexico.....	2	652			Do.
British West Indies.....	4	253	1	268	Assorted merchandise.
Ireland.....			1	639	
Cape Verde Islands.....			1	1,484	
England.....			1	1,167	
Domestic ports.....	23	28,647			
<i>February.</i>					
Foreign ports:					
Cuba.....	12	8,645	3	561	Assorted merchandise.
Honduras.....	2	180			Fruit.
British West Indies.....	2	153			Assorted merchandise.
Domestic ports.....	32	35,715			
<i>March.</i>					
Foreign ports:					
Cuba.....	10	10,168	4	2,223	Assorted merchandise.
Habana.....	3	254			Fruit.
Mexico.....	1	71			Do.
British West Indies.....	4	271			Assorted merchandise.
England.....			1	1,165	
Domestic ports.....	35	39,962			
<i>April.</i>					
Foreign ports:					
Cuba.....	10	8,710	4	1,416	Assorted merchandise.
Honduras.....	2	115			Fruit.
Do.....	2	170			Do.
British West Indies.....	2	84			Do.
France.....			1	772	
England.....			1	1,430	
Mexico.....			1	1,484	
Domestic ports.....	37	39,133			
<i>May.</i>					
Foreign ports:					
British West Indies.....	3	81			Assorted merchandise.
Honduras.....	3	197			Fruit.
Cuba.....	9	5,265	3	2,108	Assorted merchandise.
England.....			1	2,026	
Domestic ports.....	36	38,336			
<i>June.</i>					
Foreign ports:					
Cuba.....	9	4,680	1	1,135	
British West Indies.....	2	119			
Honduras.....	2	126			
Domestic ports.....	24	30,291			
<i>July.</i>					
Foreign ports:					
Cuba.....	9	4,680	3	4,421	Assorted merchandise.
British West Indies.....	3	125	2	98	Do.
Mexico.....	1	71			
Venezuela.....			1	424	
Honduras.....	2	150			
Domestic ports.....	28	30,391			
<i>August.</i>					
Foreign ports:					
Honduras.....	5	374			Fruit.
Cuba.....	9	4,680	3	4,456	Assorted merchandise.
England.....			1	1,363	
Domestic ports.....	31	35,929			



*Arrivals of vessels during the calendar year 1895—Continued.*

Ports.	Cargo.		Ballast.		Remarks.
	No.	Tons.	No.	Tons.	
<i>September.</i>					
Foreign ports:					
Honduras.....	1	74			Fruit.
Mexico.....	1	86			Do.
Cuba.....	8	4,160	2	2,496	Assorted merchandise.
Domestic ports.....	24	28,001			
<i>October.</i>					
Foreign ports:					
British West Indies.....	6	516	1	111	
Cuba.....	9	4,680	1	33	
Domestic ports.....	25	32,495			
<i>November.</i>					
Foreign ports:					
Honduras.....	2	149			Fruit.
British West Indies.....	4	223			Do.
Cuba.....	10	10,220	1	350	Assorted merchandise.
Domestic ports.....	25	32,465			
<i>December.</i>					
Foreign ports:					
British West Indies.....	2	109			
French West Indies.....			1	459	
Cuba.....	12	11,589	1	33	
Honduras.....	2	159			
Mexico.....	1	71			
Domestic ports.....	27	35,717			

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

There is no immigration bureau. There is an immigrant inspector, but no medical inspection of immigrants.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

The quarantine facilities are sufficient for the shipping entering the port, considering this simply as an inspection station.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

The quarantine regulations of the Treasury Department are properly enforced with the exception of Article I, section 2, directing that vessels be inspected by daylight, and Article II, section 2 D, relative to vessels coming from ports where yellow fever prevails. This is not enforced in the case of the Plant Line steamers from Habana, they being operated under Article IX.\*

16. Does the certificate of inspection or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with, as required by section 5, act of February 15, 1893? Transmit copy of certificate.

Two certificates of inspection are given in every case; one of these certifies that the Treasury regulations have been complied with. Copies of both are herewith transmitted. [Exhibits B and C; also see Mullet Key report.]

17. What disposition is made of the consular bill of health?

One copy of consular bill of health is filed at the custom-house, the other by the sanitary inspector.

18. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

The work of this station, considered as an inspection station, appears to be properly and conscientiously carried out. The admission to entry of the passenger

\* NOTE.—See Article IX, U. S. Quar. Reg., page 30.



steamer from Habana without disinfection of the vessel and without detention, I do not believe to be dangerous to the public health so long as the efficient inspection at Habana by the sanitary inspector of the Marine-Hospital Service is maintained and the rules of the Florida State board of health relative to the matter rigidly enforced. However, in view of the fact of the possible infection of the vessel after repeated trips to Habana, or by some violation of the rules escaping the vigilance of the sanitary inspector at Habana, or the quarantine officer at this port, I would consider it a proper precaution to have these steamers thoroughly disinfected at least once a month during the quarantine season.

The violation of Article II, section 2, in the case of the Habana passenger steamers, I do not consider to be a matter of much importance, for the reason that an inspection has been made by the United States sanitary inspector seven or eight hours before the vessel arrives at this port, and the crew and passengers have been certified by him to be immune. The principal safeguards against the introduction of yellow fever from Habana through these steamers are the precautions taken at the port of departure, and, if passenger traffic is to be carried on without serious interruption, the port of departure is the most desirable point for the application of sanitary measures.

MAY 20, 1896.

#### EXHIBIT A.

##### *The Revised Statutes of the State of Florida, 1892.*

[Extract.—Of the State board of health.]

760. *Governor to appoint.*—The governor shall appoint three discreet citizens of the State of Florida, who shall be confirmed by the senate, and who shall, after taking and subscribing an oath before some person competent to administer oaths faithfully to perform the duties of their offices, constitute the State board of health.

761. *Governor may convene board.*—It shall be the duty of members of said board to convene upon the call of the governor at such time and place as he may direct.

762. *Board to elect president and health officer.*—It shall be the duty of said board, at their first meeting, to elect one of their number as president of said board. At the same meeting it shall be the duty of said board to designate and employ a physician, who shall be an expert in the diagnosis of yellow fever, smallpox, cholera, and other infectious diseases, and who must be a person of recognized ability and skilled in hygiene and sanitary science, and a graduate physician of a recognized and reputable medical college, which said person shall be known as the State health officer. The State health officer shall be the executive officer of the board and secretary of the same, and shall hold the office for the term hereinafter specified, unless removed by the board for just cause.

763. *Terms of office.*—The term of office of each member of the board of health shall be four years from the date of his appointment, or until his successor is appointed and qualified, and the term of employment of State health officer shall be for four years from the date of his appointment, or until his successor is appointed and qualified: *Provided*, That should any member of the said board be and remain absent from the State for ten days after any disease has been declared epidemic, the governor may declare his office vacant and proceed to fill the same by appointment, and should the health officer be and remain absent from the State for five days after his attention has been called to the presence of any disease in the State, the board of health may declare the office vacant and proceed to fill the same by designation and employment of a suitable person to perform the duties thereof.

764. *Physicians to make certain reports.*—It shall be the duty of every practicing or licensed physician in the State of Florida to report immediately to the president of the board of health, by telegram or in the most expeditious manner, every case of yellow fever, smallpox, or cholera that comes within his practice, such telegram to be paid for out of the funds to be provided for the expenses of said board of health.

765. *Penalty for failure to report.*—Any practicing or licensed physician who shall fail to report to said president any such case, in the manner provided in the preceding section, shall be guilty of a misdemeanor, and upon conviction thereof



shall be fined in a sum of not less than \$100 nor more than \$1,000, or be imprisoned in the county jail for not less than three nor more than six months.

766. *Penalty for spreading false reports of disease.*—Any person or persons who shall falsely or maliciously disseminate or spread rumors or reports concerning the existence of any infectious or contagious disease shall be guilty of a misdemeanor, and upon conviction thereof shall be punished as provided by section 765.

767. *Charge to grand jury.*—It shall be the duty of the several judges of the circuit courts of this State to give in charge to the grand juries of their respective courts sections 764, 765, and 776 of this act at each term thereof, and it shall be the duty of the grand juries of the said several courts specially to investigate in their respective counties the offences therein specified, and to present impartially all offenders against the same.

768. *Duty of county solicitors.*—In the several counties of this State where county criminal courts of record exist, or may hereafter be established, it shall be the duty of the county solicitor of the said several courts to present and prosecute all offenders under sections 765 and 766.

769. *Duties of president and health officer concerning investigation and quarantine.*—It shall be the duty of the president of the board of health, immediately upon the receipt of information that there is any case of yellow fever, smallpox, or cholera in any portion of this State, to order the State health officer by telegram, if he is not at hand, to proceed immediately to said place, and there investigate the said reported case or cases of yellow fever, smallpox, or cholera, and to report to the said president by telegram the results of his said investigation; and said State health officer shall have power, and it shall be his duty, to declare said infected point to be in quarantine, and to place any and all such restrictions upon ingress or egress thereat as, in his judgment, shall be necessary to prevent a spread of the disease from the infected locality; and it shall be the duty of the said State health officer, when he shall have declared any city, town, or other place to be in quarantine, to so control the population of said city, town, or other place, and to make such disposition of the same as shall, in his judgment, best protect that population, and at the same time prevent a spread of the infection among the same. The sheriffs and constables of the several counties of this State, and the police officers of all the cities and towns of this State, shall be under the control of the said State health officer to enforce and carry out any and all quarantine regulations that he may prescribe, which said regulations shall be immediately published in the most practicable manner in the several counties, cities, towns, or other places where quarantine may be established; and said State health officer shall make immediate report of his actings and doings in the premises to the president of the board of health, and from time to time so long as quarantine shall continue.

770. *Duty of governor to furnish means of enforcing quarantine.*—It shall be the duty of the governor of this State, whenever called upon by the State health officer so to do, to furnish the said officer with all requisite means to enforce whatever quarantine regulations it may be necessary in his judgment to prescribe, including such armed force from the militia of the State as, in the judgment of the governor, may be required, upon information furnished by said officer.

771. *Regulations concerning railways and vessels.*—The board of health shall have power, and it shall be their duty at all times, to impose upon all railway and navigation companies, and upon all individuals who may own or operate steamships or other vessels plying between any of the West Indian, South American, or any other foreign ports and the ports of the State of Florida, such restrictions and regulations as to inspection, quarantine, and sanitary rules as in their judgment may be necessary to protect the health of the people of this State, and which may not be in conflict with the acts of Congress already passed, or that may hereafter be passed, and do not amount to an absolute interruption to commerce with said foreign ports: *Provided*, That whenever any case of yellow fever, smallpox, cholera, or other infectious disease shall appear, or be developed among the passengers, officers, or crew of any such steamship or other vessel, said steamship or other vessel shall be ordered in quarantine for such time and under such regulations as may be prescribed by said board of health: *Provided further*, That should said board of health at any time be convinced that yellow fever, smallpox, cholera, or other infectious disease exists in any foreign port, in such form that landing of any steamship or other vessel hailing from said infected foreign port, at any of the ports of Florida, will put in peril the health of the people of said State, it shall be the duty of said board to put all and any such steamships or vessels, their crew, passengers, and cargo in quarantine for such time and under such rules and regulations as may be prescribed by said board of health: *Provided further*, That said board of health shall charge and receive from such vessels undergoing inspection or sanitation, as provided in this section, such fee or fees as said board may prescribe.



772. *General powers of board.*—The State board of health shall have general supervision of the public health of the State of Florida, and shall have power to make, promulgate, and enforce such rules and regulations as may be necessary for the preservation of the same.

773. *Visits by health officer and condemnation of certain property.*—It shall be the duty of the State health officer, between the first of November and the first of May of each and every year, and oftener if deemed necessary by the board, to visit all the cities and towns, or other points where two or more railroads meet, in the State of Florida, which in the judgment of the board it may be necessary for him to inspect, and to thoroughly investigate the sanitary condition of said cities or towns; and he shall have the power, and it shall be his duty to condemn in any of said cities or towns any sidewalks, pavements, buildings, wharves, or other things that in his judgment shall be likely to produce or cause the spread of epidemic diseases; and he shall give notice to the mayor and council of such city or town, or other authority, to repair, remove, cleanse, or remedy the same within thirty-six hours, and if the same shall not be done as so required, it shall be his duty to have the same done himself, and the expense thereof shall be paid out of the health fund hereinafter provided, and be afterward assessed as a tax upon the assessable property of said city or town, to be assessed by the county assessor upon notification by the health officer of the amount, and collected by the county collector at the annual assessment and collection thereafter, said amount so realized to be replaced in the health fund of the State by the proper authorities: *Provided*, A list and memorandum of property to be condemned shall be made and valuation placed upon the same by three disinterested freeholders, one to be selected by said health officer, one to be selected by the owner of the property or his agent, and the third to be selected by the two freeholders already selected, before being condemned or destroyed, and the value of any private property that may be condemned and ordered to be destroyed by the health officer shall be paid to the owner thereof out of any funds provided and appropriated for the expenses of the State board of health, upon the certificate of said health officer that said property was so destroyed, approved by the board of health and endorsed by the president of the board.

774. *Board to make and publish rules.*—It shall be the duty of said State board of health to formulate such rules and regulations for the preservation of the public health as in their judgment they may deem necessary, and to meet upon the first Monday in May of each year to formulate such additional rules and regulations for the preservation of the public health as their experience may suggest; and they shall have the same published in such place and in such manner as they may deem best to give greatest publicity to the same.

775. *Health officer to act as secretary.*—It shall be the duty of the State health officer to attend all meetings of said board of health, and act as secretary of the same.

776. *President may call meetings.*—The president of said board of health shall have power to call meetings of said board at any time, and at such place as he may designate, to take measures for the public safety.

777. *Board may abrogate quarantine.*—The State board of health shall have the power, after close personal inspection, to modify or abrogate any and all quarantine regulations after they may be established by said State health officer.

778. *With consent of governor may call on General Government.*—The State board of health shall have the power, by and with the consent of the governor, when the occasion demands it, to call upon the General Government for such aid as the necessities arising out of any epidemic may require.

779. *Penalty for violating rules.*—Any person who violates, disobeys, omits, neglects, or refuses to comply with any quarantine regulations which may be established by the State health officer, or any of the rules and regulations which may be adopted by the State board of health, as hereinbefore provided, that may be duly promulgated by said State health officer or the said board of health, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined in a sum not less than \$100 nor more than \$1,000, or be imprisoned in the county jail for not less than one nor more than six months.

780. *Compensation of members of board and health officer.*—The State health officer shall receive a salary of three thousand dollars a year, to be paid quarterly, upon his requisition, approved by the president of the board of health, out of the fund hereinafter provided, together with his actual traveling expenses while engaged in the discharge of his duties as State health officer. The members of the State board of health shall receive a per diem of six dollars for each day of actual session, with mileage to and from their homes to the place of meeting by the nearest and most practicable route, at the rate of ten cents per mile.

781. *Assistant health officer.*—There shall be designated and employed by the



State board of health an assistant State health officer, who must also be a physician of experience and skilled in the diagnosis of infectious and contagious diseases, and who shall be subject to the orders and instructions of the State health officer, and in case of sickness or disability of the State health officer he shall succeed to the duties of the office for the time being of the State health officer. The assistant health officer shall receive fifteen dollars per diem for each day that he is engaged in active service under the direction of the State health officer, and five cents per mile for every mile traveled in the performance of such service, and shall hold the appointment until removed for cause by the State board of health.

782. *Oath and bond of State health officer.*—The State health officer, before entering upon his duties, shall take, before some person competent to administer oaths, an oath to faithfully perform the duties of his office, and enter into a bond, with good and sufficient sureties, in the sum of ten thousand dollars, payable to the president of the board of health, said bond to be approved by the said president, conditioned for the faithful discharge of his duties. Said bond to be prosecuted by the attorney-general for any neglect of duty or abuse of power herein conferred, and if said bond should be forfeited, all amounts collected from such prosecution shall be placed to the credit of the before-named health fund, by said president of the board.

783. *President to certify expenses and report to governor.*—All expenditures of the board of health shall be certified by the president of the board, and he shall make an annual report to the governor of all such expenditures, in a clear and concise statement, together with any special observation, recommendations, or facts that he may present that would be conducive to the health and sanitary conditions of the State, and such annual statements shall finally be submitted by the governor to the State legislature when in regular session convened, and shall be published like other reports of State officers, and the president of said board shall hold for inspection properly certified vouchers for such expenditures, a copy of which shall be furnished the comptroller, who shall not draw his warrant on the treasurer without the proper certificates and vouchers.

784. *Special tax.*—There shall be annually levied and collected upon the assessable property of the State a tax of not more than half a mill, the revenue derived from which assessment and collection shall constitute a special fund to be used for public health purposes of the State.

785. *State board to control county boards.*—The State board of health shall have general supervision and control over such county boards of health as the legislature may establish.

*Laws of Florida, 1895.*

[Extract.—Chapter 4345, No. 24.]

AN ACT to increase the efficiency of the State board of health.

*Be it enacted by the legislature of the State of Florida:*

SEC. 1. The regular meeting of the State board of health shall be on the second Tuesday of February of each year.

SEC. 2. The State health officer, under the direction of the State board of health, shall have the general administrative and executive control of all the maritime and domestic quarantine systems of the State. He shall have the power to make arrests without warrants for any violation of the quarantine rules and regulations of the State board of health after they have been duly promulgated. He shall also have power to deputize sanitary agents for that purpose. In all such cases the person or persons arrested for violating the quarantine and sanitary rules aforesaid shall be surrendered without delay to the custody of the nearest sheriff and formal complaint made against him, her, or them in accordance with law.

SEC. 3. No quarantine regulations of commerce or travel (seacoast or inland) shall be instituted or operated by any port, place, or county of this State against any other port, place, or county in this or any other State or any foreign country except by authority of the State board of health: *Providing*, That nothing contained in this act shall give to the State board of health or to any of its members, or to the State health officers, any other or further powers than they now possess over matters now within the jurisdiction or control of the county board of health of Escambia and Franklin counties.

SEC. 4. All laws and parts of laws in conflict with the provisions hereof be, and are hereby, repealed.

SEC. 5. This act shall take effect from and after its approval by the governor.

Approved, May 31, 1895.



## EXHIBIT B.

[State board of health of Florida.]

## BILL OF HEALTH.

PORT OF ———, OFFICE OF AGENT STATE BOARD OF HEALTH,  
—————, 189—.

This is to certify that the ———, whereof ——— is master, having a crew of ——— and carrying ——— passengers, leaves this port in free pratique for ———. The crew and passengers of the above-named vessel are in good health, and the vessel is clean and in a good sanitary condition. There is no contagious quarantinable disease prevailing at this port or vicinity.

By authority State board of health of Florida.

Port Sanitary Inspector and Agent State Board of Health of Florida.

Fee, \$1.00.

## EXHIBIT C.

Inspection of vessels arriving at the port of ———, Florida.

—————, 189—.

1. Name and class of vessel. ———.
2. Name of captain or master. ———.
3. Tonnage of vessel. ———.
4. From what port is the vessel you command? ———.
5. How many days have you been on the passage? ———.
6. Where bound to? ———.
7. At what port or ports have you touched within the last 90 days? ———.
8. Were any contagious or infectious diseases prevailing at those ports? If so, name ports and diseases. ———.
9. Was any freight, passengers, or ballast received at the ports at which your vessel touched? ———.
10. Had you communication with another vessel on your passage? ———.
11. Have you received any passengers, freight, or ballast from any other vessel? ———.
12. If so, give particulars. ———.
13. Have you a bill of health? ———.
14. During the course of your cruise or passage what cases of disease have occurred on board and at what date? ———.
15. Have any deaths taken place on board of your vessel since you left the last port? If so, what dates and from what causes? ———.
16. Are there any sick on your vessel at this time? ———.
17. Has yellow fever, smallpox, cholera, plague, leprosy, or other contagious or infectious diseases ever existed on this ship? ———.
18. If so, when? ———.
19. What is the number of officers and crew? ———.
20. What is the number of passengers? ———.
21. What is your cargo and to whom consigned? ———.
22. If in ballast, what is the character of the ballast, where was it taken from, and how many tons have you on board? ———.
23. What is the present sanitary condition of the vessel, cargo, crew, and passengers?

—————, Master.

STATE OF FLORIDA, County of ———:

Before me, ———, a notary public in and for said county and State, personally came ———, master of the ———, to me well known as the person named, who, after being duly sworn, deposes and says that the statements made by him in answer to the foregoing interrogatories are true.

Sworn to and subscribed before me this ——— day of ———, A. D. 1892.



## TORTUGAS UNITED STATES QUARANTINE.

By Surg. FAIRFAX IRWIN, M. H. S.

I have to report that I left Key West for this station about 8 p. m. March 13, on a pilot boat, and arrived about dawn March 14. The inspection has taken about two full days for completion. The station is located on Garden Key, one of the Tortugas group. The key referred to consists of about 10 acres. The ground is mostly occupied by Fort Jefferson, formerly an army post. The number of buildings used by the Service, situated on southeast spit, consist of four, viz, coal shed, carpenter shop, dormitory, and buoy shed, the latter belonging to the Light-House Establishment, but with privilege allowed the Service for storage of boats and material.

The coal shed has a capacity of 150 tons, and needs no repairs. The carpenter shop requires weatherboarding on one side and one end. The dormitory is 50 years old and rather too small for the purpose, with no quarters for captains of vessels. It is thought that control of the buoy shed should be secured for the Service, in order that a proper dormitory or sleeping quarters for crews could be constructed, which would in no wise interfere with the use of the shed by the Light-House Board as a place of storage for buoys, chains, sinkers, and lumber.

The buildings inside the fort used by the Service are first officer's quarters and a building 288 by 44 feet, three stories high, containing sixty-nine rooms, used for storerooms, headquarters, and officers' and attendants' rooms. In addition there are eight kitchens, most of which are used as shops, cooking rooms, and storage. Within the parade there is a large building known as the barracks, now unused except for the storage of material belonging to the Engineer Department of the Army. There are three detached kitchens, occupied by the ordnance sergeant. Near the sally port is located the residence of the keeper of the light-house, the only wooden building inside the fort.

The outer anchorage is in extent about 3 by 2 miles, and this anchorage is large enough to accommodate all vessels, leaving a mile distance between noninfected and infected vessels. The holding ground or anchorage in front of the disinfecting wharf is large enough to accommodate several two-masted schooners, two three-masted schooners, but not large enough to safely anchor a 300-foot steamer. Bird Key Harbor is more capacious, but not so easy of access.

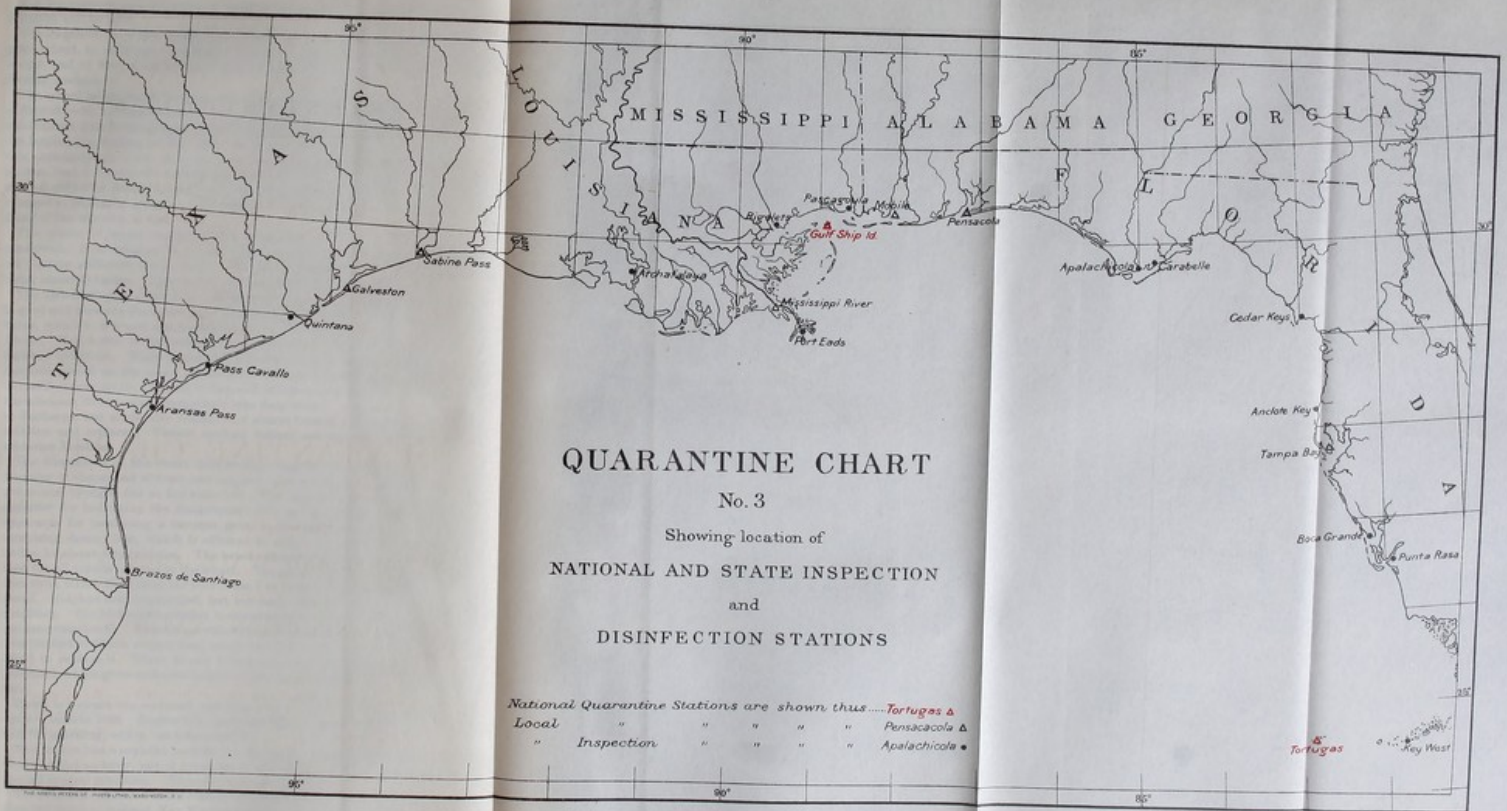
As to facilities for boarding vessels, the station is provided with a naphtha launch (unsuitable for use in rough weather), two Whitehall boats, and a whale-boat, which I regard as ample for the purpose. The steamer *Charles Foster* is a seagoing tug and principally for towing vessels to and from the disinfecting wharf provided with a life raft and rowboat. The schooner *Montross*, 30 tons burden, is provided with two dingies, and is used for unloading and reloading ballast during the quarantine season, and for carrying supplies during the winter season.

The apparatus for the disinfection of vessels consists of sulphur furnace, steam fan, with the necessary piping, and duct ovens for small compartments, all used for the distribution of sulphur dioxide.

There is provided a steam pump for washing down a vessel with salt water and bichloride solution from a 3,000-gallon tank.

There is also a steam chamber of the Kinyoun pattern, made by Valk & Murdock in 1892, for the disinfection of clothing and bedding; size, 15 by 8 by 8. This chamber was put in operation for my observation. The thermometer showed a temperature of 105° C. in a 5-inch vacuum. The facilities for the removal of the sick of contagious disease consist of boats, inasmuch as the transfer is by water to Bird Key, distant three-quarters of a mile. The facilities for treatment consist of a hospital on the key mentioned, which is a building of wood, 30 by 34 feet, with a kitchen 16 by 8 feet, also 10 tents with floorings provided.





**QUARANTINE CHART**  
 No. 3  
 Showing location of  
**NATIONAL AND STATE INSPECTION**  
 and  
**DISINFECTION STATIONS**

*National Quarantine Stations are shown thus*—Tortugas ▲  
 Local " " " " " Pensacola ▲  
 " Inspection " " " " " Apalachicola ●

*Prepared at the Office of the U.S. Coast and Geodetic Survey*







For the removal and detention of suspects at present the main reliance for segregation will be tents.

The length of the wharf frontage is 120 feet, the wharf itself being a patent iron-piled wharf, in excellent condition, 30 feet wide, and covered by a shed its whole length and 24 feet of its width. Under the shed is placed the tanks and disinfecting machinery.

The wharf being placed between two spits and set at a wrong angle, there is not sufficient room to treat vessels of 300 feet length. It is proposed to furnish as a substitute a disinfecting barge, capable of accommodating in the stream vessels of the largest size trading in the Gulf. I can not too strongly urge the necessity of this arrangement; I can only say from my experience and observation of the station that I consider it an absolute necessity. The mooring facilities are considered sufficient, but it is considered advisable that some anchors be placed in the channel to facilitate kedging. The depth of water at mean low tide along the front of the wharf is 17 feet.

The source of water supply is from rain only, and is abundant if properly conserved. It is retained in seven cisterns, and certain repairs now in progress will insure sufficient steam water. The water is potable and soft, the rainfall being about 30 inches. This water does not affect the boilers injuriously.

The disinfecting machinery has already been enumerated; its general condition is good and presents the appearance of care and recent use. The boiler needs new tubes, which it is hoped can be supplied from the discarded tubes of the steamer *Foster*. This boiler is six years old, and needs new stay bolts and other repairs incident to service. There is provided a steam hoisting engine for ballast and ballast tubs placed on the wharf for hoisting ballast into the schooner *Montross*—or out, as the case may be. Ballast is disposed of here at this time by unloading onto the schooner *Montross* and dumping it into deep water. It is not disinfected prior to discharge, but all dipable ballast is of course treated by dipping in bichloride solution and replaced. Vessels needing ballast are supplied with sand by the schooner *Montross*.

The dimensions of the steam disinfecting chamber have been given; it is rectangular in shape, and of iron; one car only is provided, and infected articles are put in and brought out at the same end. The chamber is provided with a thermometer for indicating the temperature during the process of disinfection, an apparatus for producing a vacuum prior to the introduction of steam; and an atomizing steam chest, which is efficient in action and produces a vacuum of 5 inches in about two minutes. The usual sulphur furnace is provided, and it is used for all vessels coming to the wharf. The gas is distributed from a galvanized iron tube, which rises from the floor from 7 to 12 feet, thence over the rail to the vessel. Sulphur hose is provided, but not used. The fan and engine are in good condition. The bichloride solution is stored in wooden tanks, elevated about 1 foot (steam-pump tank). There is provided for the distribution of the bichloride solution 150 feet of 2-inch rubber hose, much worn and too short; 300 feet of hose is asked to replace it. There is one Porter Economic horizontal steam boiler, as described, which gives sufficient steam for the fan and steam chamber at the same time.

There is a steam tug, as stated, the *Chas. Foster*, built of wood, sheathed with copper, built in 1890. Engine is in good condition; boiler needs new tubing and iron for patching, which has been asked for.

The station has a naphtha launch, the *Mary Lee*. Condition is good; can make about 4 miles an hour; not of great use to the station. Three small boats are in use; all in good condition. No more boats are needed.

The officer in command of the station at this time is Surg. R. D. Murray, Marine-Hospital Service; address, Key West Quarantine, via Key West, Fla.; the number of subordinates is 1 steward and 10 attendants.



There are no quarantine procedures enforced at the station in addition to the requirements of the Treasury Department, except disinfection of clothing and bedding for Florida ports. I do not believe there is any undue detention or disinfection of vessels. The inspection is maintained throughout the year. When a vessel arrives in quarantine, she is boarded as soon as possible and disinfection is commenced as soon as she can be brought to the wharf. The time of disinfection is, for iron vessels, one day; wooden vessels, two days. After completion of disinfection vessels are discharged in five days unless there occurs sickness on board. No communication is held between vessels in quarantine. Vessels would be handled as required by the quarantine regulations for each disease. In case of disease occurring during the voyage the record is noted on the boarding book on arrival, and, during detention, in the hospital records.

The number of vessels arriving at this quarantine station during the preceding year was 61; 48 of these foreign and 13 domestic. About six or seven of these came from ports in yellow-fever latitudes via domestic ports. The majority of vessels from foreign ports are from Habana, St. Jago, and other West Indian ports, all in ballast. The quarantine facilities are, in my opinion, not entirely sufficient to care for the shipping coming to the station, but the recommendations to make the station complete have been made at the proper place in the body of this report.

MARCH 15, 1896.

#### TORTUGAS UNITED STATES QUARANTINE.

By P. A. Surg. L. L. WILLIAMS, M. H. S.

Name of quarantine station: Tortugas Quarantine Station.

When was the station last inspected? March 14, 1896.

Name of inspecting officer: Surg. Fairfax Irwin.

#### I. PERSONNEL.

Name of officer in command: P. A. Surg. L. L. Williams.

Date of assignment to duty: February 19, 1896.

Name and rank of assistants, including acting assistant surgeons; also give number of members in each family: Acting Asst. Surg. F. A. Campuzano—number of persons in family of P. A. Surg. L. L. Williams, five; in family of Acting Asst. Surg. F. A. Campuzano, four.

Name of steward and number of members in family: William W. Kolb; has no family.

Name and duties of each attendant: S. L. McDonald, carpenter, boatman, and runs disinfecting machinery and naphtha launch; John Anderson, boatman, sail-maker, and general service; Thomas A. Elvin, carpenter and general service; Calvin Nedson, nurse and general service; Ishmael Curry, cook; Charles Johnsen, general service; Austin Knowles, general service; John Hall, general service.

#### II. GENERAL DESCRIPTION OF STATION.

Number of buildings: Sixteen.

Limit of anchorage for noninfected vessels: Anchorage marked by two quarantine buoys three-fourths of a mile apart.

Limit of anchorage for infected vessels: Separate anchorage for infected vessels not indicated. Such vessels would be anchored not less than three-fourths of a mile from noninfected vessels.

Facilities for inspection of vessels: Naphtha launch, whaleboat, and two dingeys.

Apparatus for disinfection of vessels and of baggage: Jacketed steam chamber; bichloride tank, pump, and hose; sulphur furnace, with steam fan and galvanized-iron delivery pipe; iron pots.



Facilities for removal and treatment of sick: Removal effected in launch or dingey; patients treated in Bird Key Hospital. In heavy weather patients would be treated in tents on Garden Key.

Facilities for removal and detention of suspects: Cases suspected to be contagious are sent to Bird Key. Should cases known to be contagious be under treatment on Bird Key, suspects would be placed in tents on Sand spit at Garden Key.

Mail and telegraph facilities: No telegraph; mail by schooner *Kate* three times a month.

Give number of wharves: One.

What is the length of the wharf frontage? One hundred and twenty feet.

Are the wharves in good condition? Yes.

Are the mooring facilities ample? Yes; for size of wharf.

What is the depth of water at mean low tide along the front of the wharf? Nineteen feet.

What is the source of water supply? Cisterns.

Is it sufficient? Yes.

Is it potable? Yes.

Hard or soft? Soft.

How is it distributed and stored, if storage is necessary? One cistern on wharf and two on southeast spit are available for use at wharf. Four are available for station.

### III. DISINFECTING MACHINERY.

Enumerate the machinery constituting the disinfecting plant: Steam chamber; sulphur furnace, with steam fan; bichloride tank; bichloride pump.

What is the general condition of all machinery? Machinery is in fairly good condition.

Is there a steam hoisting engine for ballast? Yes.

Are there ballast tubs and a ballast car for the distribution of ballast? Ballast tubs; no car track.

How is ballast disposed of? It is placed on schooner *Montross* and dumped on reef or east side of harbor; small quantities (sweepings if rock dipped and retained) are deposited on shoal near wharf.

Is it disinfected prior to being discharged, and what facilities exist for supplying ballast to vessels needing it? Discharged without disinfection. Vessels are rebalasted with coral sand, schooner *Montross* being employed as a ballast lighter.

What are the dimensions of the steam disinfecting chamber? Nine by 9 by 16 feet.

Is it rectangular or cylindrical? Rectangular.

How many cars are provided? One.

Are infected articles put in at one end and brought out at the other after disinfection, or is one end of the chamber used for loading and unloading? One end is used for loading and unloading.

Is the chamber provided with thermometers for indicating the temperature during the process of disinfection? It is provided with one mercurial thermometer.

Is the chamber equipped with any apparatus for the production of a partial vacuum? What is the nature of the appliance? Is it efficient in operation? Vacuum is obtained by steam exhaust. It is efficient in operation.

What vacuum is produced and how long does it take to obtain it? Five pounds; obtained in one minute.

Is a sulphur furnace provided? Yes.

How many feet of sulphur hose are provided? Thirty-five feet; also, 80½ feet galvanized-iron pipe.

What is its condition? Hose in good condition. Galvanized pipe nearly worn out.



What is the condition of the fan and engine? Good.

What is the method of storing bichloride solution? In one wooden tank.

What is the capacity of the tank or tanks? Two thousand five hundred gallons. Are they of wood or iron? Wood.

What is the elevation of the tanks above the wharf flooring? One foot.

Is the solution distributed by gravity or is there a pump for the purpose? There is a pump for the purpose.

How many feet of hose are provided for the distribution of the bichloride solution, and what is its size and condition? Three hundred and forty feet of 1½-inch rubber hose, of which 250 feet are in good condition.

How many steam boilers are provided? One.

What is their condition, and do they supply sufficient steam for all purposes? Condition good; steam barely sufficient for all purposes; will probably be ample after boiler has been covered.

#### IV. BOATS.

Is the station provided with a steam tug or other steam vessel? One steam tug, the *Charles Foster*, 85.89 tons.

If so, is she of wood or iron? Wood.

Give dimensions: Depth, 11 feet; length, 93 feet; beam, 19½ feet; draft forward, 8½ feet; aft, 10½ feet.

If of wood, is the vessel sheathed with metal? Yes.

Are the engines and boiler in good condition? The boiler is in good condition. The engine is in need of repair.

Give engineer's statement as to necessary repairs and renovation: Boring out cylinders and packing for same; new sleeve on shaft; metal for stern bearing; planing off slide valves and seats; true up crossheads; new piping for wrecking; air, feed, and circulator pumps; new oil cup for main engine; new injector; new valve for sea cock; pumps to be repaired, also condenser and shoe; new propeller; new oil cups for all journals, and coppering bottom.

Is the station provided with a steam or naphtha launch? One naphtha launch.

Give dimensions: Length, 30 feet 5 inches; beam, 5 feet 4 inches; engine, 6 horsepower.

What is its condition? Hull, good; engine requires general overhauling and should be sent to makers to be repaired.

Give report of medical officer as to efficiency of the launch: The launch is efficient, except in heavy weather.

How many small boats are provided, and what is the condition of them and their equipment? Three whaleboats, one serviceable; three small boats, two serviceable.

Are more boats necessary or desirable? An able sloop-rigged centerboard boat should be provided for boarding in rough weather.

#### V. HOSPITAL.

Give location of building used as hospital: The hospital is a rough wooden structure located on Bird Key, 1 mile from station.

Give general description of the building: Hospital is rectangular; has a porch on each side; is constructed of rough weatherboarding; not ceiled or plastered; divided into four wards by partial partitions 10 feet high. There is a 6-foot passage between each ward.

Dimensions: Thirty by 34 feet; four porches, 6 by 10 feet; kitchen, 8 by 16 feet. Number of beds in each ward: One.

How many beds can be added for emergencies? One in each ward.

Cubic air space allowed each patient: Three thousand five hundred cubic feet.



Heating, lighting, and ventilating: No heating apparatus; oil lamps for lighting; doors and windows for ventilation.

Has the hospital sufficient furniture? No.

What kind of bedsteads and what kind of mattresses and bedding? Cot bedsteads and moss mattresses.

Is the nursing sufficient and is the nurse immune? Nurse is immune and efficient; is disabled at present.

#### VI. OUTBUILDINGS AND GROUNDS.

Describe general condition of outbuildings: Good, except four kitchens, which require repair.

Describe officer's quarters and condition of furniture: Insufficiently furnished; six rooms in use.

Describe steward's and attendants' quarters and condition of furniture: Insufficiently furnished; one room in use.

Describe dining room, condition of table furniture, and tableware: Insufficiently furnished.

Describe kitchen and furniture: Additional utensils needed.

Describe dispensary: Contains counter, prescription case, instrument case, and shelving; all made at station.

Describe laundry: There is none.

Describe approaches to the station: Inner harbor is approached by a channel on the east and on the southwest. Wharf fronts inner harbor; is connected with sally port of front by a wharf bridge.

Describe disposal of slops: Thrown into sea outside of breakwater.

State whether any animals not authorized by the Department are kept on reservation: No such animals are kept.

#### VII. EQUIPMENT.

Is there a blacksmith's forge provided? Yes.

Are there farming implements; and if so, are they in good condition? There are a few garden tools; condition good.

#### IX. GENERAL ADMINISTRATION.

Make a statement showing the number of vessels arriving at the station during the preceding calendar year, by months: May, 8; June, 12; July, 18; August, 7; September, 3; October, 8; November, 3; December, 2. From foreign ports, 44; from foreign ports in yellow-fever latitudes via domestic ports, none; from domestic ports, 17.

From what countries chiefly do the vessels come? West Indian ports.

Are they in cargo, ballast, or empty? Most of them empty; a few in ballast; none with cargo.

State whether, in your opinion, the quarantine facilities are sufficient to care for the shipping arriving at the station: They are sufficient with the exception of wharf facilities, which are inadequate.

Give annual amount expended at station for last three years: In 1893, \$11,413.16; in 1894, \$15,062.62; in 1895, \$19,090.06.

Give the immediate needs of the station as stated by the commanding officer: Dredging inner harbor and extension of wharf or construction of a floating plant; repair of quarters; roofing portion of wharf bridge; construction of boat-house; equipment of Bird Key Hospital.

OCTOBER 8, 1896.



## PUNTA RASSA.

By Surg. H. R. CARTER, M. H. S.

1. There are no buildings. The anchorage is marked by a yellow flag lashed to a buoy, about one-fourth of a mile below the landing at Punta Rassa. Inspection is sometimes done here and sometimes at the landing (wharf). When done at the buoy, it is done in a small boat. No apparatus for any kind of disinfection or for care of sick, it being an inspection station only. Mail and telegraph facilities good. Here is the landing end of the cable to Habana, and the quarantine officer is telegraph operator and postmaster as well as customs inspector and notary public, and, with his assistant and one cattleman, constitutes the population of Punta Rassa.

2. Give personnel of the station or port, name of the quarantine officer or officers, post-office address, total number of officers and subordinates, etc.

Mr. G. Schulze, Punta Rassa, Fla. No subordinates.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

Same laws and regulations as are common to all Florida ports and which have been sent on with previous reports. There is no peculiarity of custom. All vessels are inspected from May 1 to November 15. Vessels on their first trip stop at the buoy. Regular traders—cattle to Key West, mainly—are inspected at the wharf. The regular line—steamer *Clara*—from Myers to Punta Gorda, is not inspected. Quarantine declaration is not required save when the quarantine officer suspects a vessel.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

All vessels coastwise, the only kind that enter here, are inspected from May 1 to November 15. There is probably no special need of this, but it is common to all Florida ports and causes no trouble to the vessels.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

Inspection from May 1 to November 15; no treatment of vessels at any time.

6. Are vessels from other United States ports inspected?

Yes.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine—(a) between arrival and commencement of disinfection, (b) the time occupied by disinfection, and (c) time after completion of disinfection of vessels until discharge.

Vessels which stop at the buoy—all new vessels do—are there inspected; vessels which come regularly are frequently inspected at the dock. There is no time in quarantine, unless it be awaiting the inspection.

8. What communication is held with vessels in quarantine (and before quarantine, by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

It is ordered that no communication be held with vessels until released by the quarantine officer. There are no pilots taken by the vessels which come here, and, unless someone happens to be boating in the lower bay, nobody to communicate with them.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessel



carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Such a vessel would be refused entrance and doubtless go to Tortugas. Such condition will not arise unless there be some disease of these kinds in neighboring United States ports.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

The quarantine declaration is sometimes, not always, required of masters of vessels, and this would record any case of sickness. If there had been any sickness, the declaration would be required. It is required in all cases where any suspicion is felt of a vessel.

11. The schedule of fees is the same as for other Florida ports, but as all vessels which have ever entered here have been from Florida ports, no fees are collected.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

Number of vessels from foreign ports, none. Number of vessels from foreign ports in yellow-fever latitudes via domestic ports, none. Vessels, coastwise, inspected at the State Quarantine Station at Punta Rassa in 1895: May, 12; June, 13; July, 7; August, 8; September, 13; October, 10; November (to the 15th), 5; total, 68. The trade is practically confined to shipping cattle to Key West; some merchandise comes by schooners from Tampa. Only a small number of vessels are engaged in the cattle trade, but they come quite often, and are thus often recorded.

13. There is no immigration bureau and no custom-house, although the quarantine officer is inspector of customs.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

Yes.

15. The quarantine requirements of the Treasury Department do not apply to the class of vessels which enter here.

16. No vessels from foreign ports enter here, and there is consequently no pratique issued.

17. No consular bills of health received.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

This is simply an inspection station for coastwise vessels, and its work is practically confined to those from Key West. It is of no great importance, but is well conducted, and should there be need, the present quarantine officer would prove a very efficient one; vigilant, conscientious, and intelligent. There are no recommendations.

JULY 25, 1896.

#### CHARLOTTE HARBOR.

By Surg. H. R. CARTER, M. H. S.

1. Describe the quarantine station, location, buildings, anchorage, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.



The station is on the south point of Gasparilla Island, on part of the old light-house reservation, and to the east of the light-house about 300 yards. The only building consists of quarters and for the quarantine officer and boatman, but a landing wharf for small boats is under contract. The quarantine anchorage is not marked by buoys, but is southeast of the station, in the harbor, about three-fourths of a mile to 1 mile therefrom. Vessels do not, in general, change their berths for loading, but load in the berth at which they came to anchor for inspection or quarantine. Vessels which require observation, however—two or three per annum—are laid in the bight to the north of usual place of loading. There is an abundance of room in the harbor for perfect isolation. No disinfecting apparatus, save pots and a hand pump. No facilities for the care of sick or suspects off of the vessel. It is an inspection station only, dependent on Tortugas and Mullet Key for disinfection. Mail and telegraphic facilities very poor. No regular communication; dependent on tugs which bring down tows to the loading vessels, etc., for communication with Punta Gorda, where there is a post-office and telegraph station.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. J. F. Cronin, quarantine officer, Charlotte Harbor Quarantine Station, via Punta Gorda, Fla. One boatman and one cook.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

Same as those previously transmitted for Mullet Key Station and common to all Florida ports. This station in its theory of operation is analogous to that at Mayport, Fla., i. e., it is an inspection station primarily, but disinfects certain vessels or classes of vessels by the "pot plan." All vessels from ports believed to be infected with yellow fever, whether from fever being reported there in the sanitary reports or from other knowledge, common reputation, are refused entry unless they have been disinfected by modern methods; this is done at Tortugas or at Mullet Key. Vessels from ports within the limits prescribed by the Florida board of health, but which are not believed to be infected with yellow fever, are disinfected here. Two were disinfected in 1895, one from St. Vincent (off west coast of Africa), and one from the Venezuelan coast.

All coastwise vessels are inspected here from May 1 to November 15. Vessels from foreign ports are inspected here all the year round, by the quarantine officer in the summer, and by the boatman (assistant quarantine officer) in the winter. Disinfection as above is required only from May 1 to November 15, but if there be special reasons therefor it is also done in the winter—if a vessel has had infectious disease aboard, or by special order of the board of health, if she came from a badly infected port. In fact, however, vessels being aware of the facts as above stated, such as require steam disinfection do not come here directly, but come by Tortugas or go on to Mullet Key, and thus practically none but clean vessels for inspection apply for entrance.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

Coastwise vessels are inspected from May 1 to November 15, and vessels from some ports, as the islands off the west coast of Africa and some others, which do not require quarantine by the Treasury requirements, are quarantined and disinfected. This last seems unnecessary. Very few coastwise vessels enter.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.



Inspection for vessels from foreign ports is maintained all the year; for vessels coastwise from May 1 to November 15. No treatment of vessels in the closed season save in cases where special precaution seems needed.

6. Vessels from other United States ports are inspected.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

Vessel, crew, and papers are examined in the usual way, and the master signs a quarantine clearance common to all Florida ports and previously transmitted. If vessel is believed to be infected, she is at once ordered away for disinfection to Mullet Key or Tortugas. If from an infected port, in the quarantine season she is ordered away at once without inspection. For such vessels as are disinfected here one day is required for mechanical cleansing (more if necessary) twenty-four to forty-eight hours for disinfection, and five days from completion of disinfection to discharge. The boarding for inspection is as prompt as the weather will allow and there is no delay here.

8. What communication is held with vessels in quarantine (and before quarantine, by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

It is ordered that no communication be held with or between vessels in quarantine. Pilots bring vessels in and remain aboard until the quarantine officer boards them, and are subject to his disposition. All pilots claim immunity to yellow fever.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessel carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Such a vessel would be sent off for disinfection. A vessel from a port infected with yellow fever, either reported in the sanitary report or so judged from other data, or with a foul bill, would be held infected with that disease. A vessel from a port where smallpox was epidemic or where any cholera existed would be held infected. A vessel from the territory rated as "suspicious" by the Florida regulations, but of which there was no other cause of suspicion, would be disinfected here by pots.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Yes; on the quarantine declarations.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

Same as those at other Florida quarantines already transmitted. When ballast is discharged here, it is taken on a lighter and thrown overboard in the shallows. The contract for this is made with private parties, and the price varies according to the amount of ballast, etc. The crew works the ballast, no men from shore being allowed.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year by months—(*a*) from foreign ports; (*b*) from foreign ports in yellow-fever latitudes via domestic ports; (*c*) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.



*Vessels inspected at the State quarantine station at Charlotte Harbor, Florida, during 1895.*

Month.	Foreign ports.			Coastwise ports.			
	Tropical (empty).	Other ports.		Total.	Empty.	Cargo.	Total.
		Empty.	Ballast.				
January .....		1		1			
February .....		1		1			
March .....	1	2		3			
April .....		2	1	3			
May .....	2	1		3		1	1
June .....	2	2		4	1		1
July .....	4			4	2		2
August .....	2	1		3	1		1
September .....	1			1			
November .....		1		1			
Total .....	12	11	1	24	4	1	5

Of these, all in the first column between May 1 and November 15 were disinfected at Tortugas save two—one of them (in June) at Mullet Key and one (in July) at this station. This vessel was from the Venezuelan coast. One vessel only in the second column (from St. Vincent) was disinfected. This was done at this station in June. The vessel noted as in cargo was a small schooner from the Florida Keys, in fruit.

The export trade is entirely phosphate. This has decreased from what it was some years ago, but is now on the increase. Especially has the coastwise trade in this article increased. It goes foreign almost exclusively in steamers, mainly Spanish, coming directly from the Cuban coast, Cienfuegos being the last port, and during the time from April to September. The Morgan Line enters this port from New Orleans and Tampa, but is not inspected. No spongers come in here. A few smacks enter for harbor and give considerable annoyance to the quarantine officer from their efforts to communicate with a Spanish fish ranch on an adjoining island—La Costa—and pilot boats.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

No immigration bureau. Such vessels from foreign ports as do not come by Tortugas have been entered without the certificate required by the act of February 15, 1893.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

For an inspection station they are ample. The station is dependent on Tortugas and Mullet Key for its disinfection.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection of vessels, are observed.

Save the matter of the form of the certificate of discharge, there are none.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with, as required by section 5, act of February 15, 1893? Transmit copy of certificate.

No. Copies of the certificate forwarded.<sup>1</sup>

17. What disposition is made of the consular bills of health?

One kept at quarantine station and one with entry papers at the custom-house.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

<sup>1</sup> Collector of customs directed to enforce the regulations concerning certificate.



There seems to be none, and save that the deputy collector of customs should be advised of the certificate required for the entry of a vessel from a foreign port, there seems no recommendation which need be made.

JULY 22-23, 1896.

#### MULLET KEY.

By Surg. H. R. CARTER, M. H. S.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

The station is at Mullet Key, on the west side of the entrance to Tampa Bay, about 21 miles from Port Tampa. The buildings consist of a wharf and a ballast wharf, with a gangway from each to the shore; a shed for the disinfecting plant, large enough to serve as a warehouse; quarters for the quarantine officer and attendants are on the main wharf. There is a hospital on shore about 150 to 200 yards from the shore end of the gangway. This contains a ward for six patients, and rooms for physician, nurse, kitchen, dispensary, etc. Limits of the anchorage not marked; a yellow buoy with a yellow flag gives the place for inspection, and there is an abundance of room for the anchorage of vessels in different sanitary conditions. Vessels are inspected in a yawl. The apparatus for disinfection consists of (a) sulphur furnace (Charleston pattern), furnished this season with light "suction hose;" (b) bichloride solution tank, with steam force pump and hose; (c) steam chamber (Charleston pattern). The sick would be removed in small boats or by bringing the vessel to the wharf, and taken to the hospital on a stretcher. Suspects would be kept on the vessel or removed to the hospital, as might seem advisable. Mail is received three times a week; no telegraph station nearer than Port Tampa or St. Petersburg.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. D. M. Echemendia, quarantine officer; post-office address, Tampa Bay Quarantine via Port Tampa, Fla.; five attendants.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

Copy transmitted (Exhibit A). The customs of the port follow pretty closely the regulations here submitted. All vessels from foreign ports are inspected, and all coastwise vessels from May 1 to November 15. The general regulations of the Florida board of health relative to the passenger traffic from Habana are too clearly set forth and too well known to require comment. During the past winter much Habana baggage has been disinfected here. This was done on account of the large immigration from that city during the winter. The disinfection of fabrics which I saw (baggage of the *Mascotte*) was undoubtedly effective and carefully done. I had no opportunity to see any other disinfection, but judge from the account given me that it all is carefully performed. The quarantine officer states that he was told to use 10 pounds of sulphur per 100 tons register, but that he used much more, venting the vessel's hold until the gas escapes freely and then closing and forcing in gas until the back pressure stops it, using 75 pounds per 100 tons. This should be efficient.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

Coastwise vessels are inspected from May 1 to November 15. During the past



winter certain baggage from Habana was disinfected here. This last is not usually done, but was required on account of the large Cuban immigration from Habana last winter. The baggage to be disinfected was designated by the United States sanitary inspector in Habana. There is no undue or unnecessary detention or disinfection of vessels here. The inspection of coastwise vessels, entirely unnecessary in most ports, is advisable here on account of the number of Spanish fishing smacks on the west coast of Florida and the communication known to exist between them and the small coasting vessels.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

Inspection for vessels from foreign ports is maintained throughout the year. No treatment of vessels, save those known to be infected, during the winter season, except as given in No. 4, during the past winter.

6. Are vessels from other United States ports inspected?

Yes; from May 1 to November 15 all coastwise vessels are inspected.

7. Describe quarantine procedures in the inspection of vessels and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

The papers of the vessel are examined, and then the crew; the examination of the crew is most careful, and a careful and full record is made of it in the journal. The vessel is then gone over and decision reached. The inspection of the *Mascotte* was not very thorough; it was probably well known to the quarantine officer. The treatment of an infected vessel is that required by the United States regulations, except that in iron vessels the use of the bichloride solution precedes the  $\text{SO}_2$ , which is just as efficient and saves time. The crew is inspected each day after disinfection. There is in general no time between arrival and commencement of disinfection, save that due to accident, winds, or weather, unless the vessel has ballast, which is rare. The time occupied by disinfection is from twenty-four to forty-eight hours; the vessel is held six days after completion of disinfection, i. e., five days from the day after disinfection. I saw two vessels, one the *Mascotte*, inspected, but saw none disinfected, save her fabrics, etc.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

No communication is held with vessels in quarantine save by quarantine officer and his employees. Pilots bring vessel in and remain aboard subject to orders of the quarantine officer; all pilots, he states, are immune, and unless there be sickness aboard are not subjected to quarantine. If there is sickness aboard, the pilot is held in quarantine.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Such vessels would be treated here, the sick being removed to hospital ashore and another physician sent down from Tampa to attend them. Only one vessel, the schooner *Eva Douglas*, with yellow fever, has ever been treated here.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Yes; in the journal of the quarantine officer is kept a record, the most complete and systematic that I have seen. It includes the history of the vessel, the sanitary history of the crew (as far as can be ascertained), the disposition of the vessel, and records every incident connected with her while in quarantine—disinfection, results of daily inspection, etc.—so arranged as to be readily looked over.



11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

Schedule of fees and ballast charges submitted. (Exhibit A.)

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

*Arrivals of vessels from foreign ports.*

Month.	Tropical ports.			Other ports (empty).	Total.
	Cargo.	Ballast.	Empty.		
January .....			3	1	4
February .....			3	3	6
March .....			5	3	8
April .....			2		2
May .....	11		3		14
June .....	8		4		12
July .....	9		5	2	16
August .....	10	1	6		17
September .....	11		2		13
October .....	9			1	10
November .....	5	1	3		9
December .....	1		7		8
Total .....	64	2	43	10	119

Of the vessels in the first column, fifty-six were the different entries of the steamer of the Plant Line (the *Mascotte*) from Habana, of which the baggage of the passengers was disinfected here, and six, mainly fruit vessels, from ports adjudged free from yellow fever. Of those in the third column, four were via Tortugas Quarantine and ten from ports considered free from yellow fever, and two were Spanish fishing smacks arrested and brought in from Anclote Key. The remainder, coming from May 1 to November 15, were disinfected, as were two in December.

There is very little trade from infected ports during the quarantine season via this station save the Plant steamship from Habana; such as there is mainly in American schooners for phosphate. There is some fruit trade from healthy ports, and there was one vessel running from Puerto Cortez, in the interests of the lottery there.

From domestic ports: May, 60; June, 52; July, 47; August, 47; September, 35; October, 45; November (to 15th), 18; total, 304. No coastwise vessels are inspected between November 15 and May 1. The great majority of these are small vessels, fishing, etc., plying along the Florida coast. Fifty-two, however, were steamships, plying between Tampa and New Orleans or Mobile. The import trade is almost entirely tobacco, with some fruit in small vessels. The tobacco comes via the Plant line from Habana. The export trade is phosphate, and has been decreasing the past two years.

The records of this station show that in 1895 1,613 pieces of baggage were disinfected and 4,028 passengers and 6,970 crew were inspected.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

I found that until an entry on July 20 (steamer *Kanawah*, from Tampico) the vessels had been entered without the certificate required by section 5, act of February 15, 1893, or, at least, none were on file. These certificates are now being issued, and will be required and filed by the collector of customs with the entry



papers in future. There is no immigration office here. A large number of immigrants come here from Habana, but as the vessels always enter at Key West, they are handled and entered at that port. No immigrants, save an occasional stow-away, appears on the books here. The immigrants that come here officially come coastwise from Key West.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

They are sufficient.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

All except iron vessels have their holds washed with bichloride prior to treatment with  $\text{SO}_2$ . I believe that all the regulations of the Treasury Department are observed. I do not consider this variation of any sanitary importance.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

Yes; I inclose four certificates issued at this station: (I) To all vessels from foreign ports, which is the one required by United States regulations; (II) to such vessels as require disinfection; (III) to vessels from clean ports, foreign or coastwise; (IV) certificate of disinfection of baggage, pasted on container.

17. What disposition is made of the consular bills of health?

One is filed with the entry papers in the custom-house and one kept at quarantine station.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

There seem to be none not covered by the report already made.

JULY 16-17, 1896.

#### EXHIBIT A.

##### *Rules and regulations of the State board of health of Florida.*

[Pursuant to "An act to create and establish a State board of health," approved February 20, 1889.]

APRIL 1, 1896.

#### DIRECTIONS TO MASTERS.

Vessels subject to quarantine restrictions destined to ports on the west coast of the State, between Key West and Cedar Keys, including both of these ports, will report at the Mullet Key Quarantine Station, Tampa Bay, or the United States Quarantine Station, Dry Tortugas, Florida; for points beyond and west of Cedar Keys to the Escambia County Quarantine Station on Santa Rosa Island, or the United States Quarantine Station on Chandeleur Island; for ports on the east coast to the United States Quarantine Station on Blackbeard Island, Sapelo Sound, or the Cumberland Sound Quarantine Station, Fernandina Harbor.

In pursuance of an act of the legislature of the State of Florida entitled "An act to create and establish a State board of health," approved February 20th, 1889, the State board of health hereby announces the following rules and regulations for the preservation of the public health in the State of Florida:

"Any person who violates, disobeys, omits, neglects, or refuses to comply with these rules and regulations of the State board of health is, under the law, guilty of a misdemeanor, and upon conviction thereof shall be fined in a sum not less than one hundred dollars nor more than one thousand dollars, or by imprisonment in the county jail for not less than one nor more than six months." (See section 779, Revised Statutes of Florida.)



## POWERS AND FUNCTIONS OF THE HEALTH OFFICER OF THE BOARD.

SEC. 1. That, whenever the State health officer shall proceed to any portion of the State under section 9 of the act to create and establish a State board of health, he is authorized to make such quarantine and sanitary regulations as may be immediately needed to prevent the spread of the disease there prevailing, not inconsistent with said act or the rules and regulations of this board, and not already provided by this board; and he shall immediately report the same to the president of this board.

SEC. 2. That whenever the State health officer shall visit any city or town under section 12 of the act to create and establish a State board of health, and shall there discover any property or thing necessary to be condemned and destroyed under said section of said act, he is authorized to make such valuation and condemnation as is provided by said act, and shall make immediate report of same to the president of the board, or to the board, if in session, and if approved, the said property or things shall be destroyed as provided in said section of the act, and compensation made for same as provided in said section.

SEC. 3. The State health officer is hereby authorized to appoint and employ, with the approval of the president of this board, such sanitary port inspectors, sanitary guards, county sanitary agents, and such other persons as may be from time to time required for the prevention of the introduction of disease into the State, and for the preservation of the public health, such inspectors, guards, agents, and other persons to be employed only for such time as their services shall be necessary, and to be subject to removal at the pleasure of the State health officer or president of the board, said inspectors, guards, agents, and other persons so employed to be paid, according to their respective capacity and the nature of the service to be rendered, such compensation (to be agreed upon at the time of employment) as the health officer and president of the board consider just and reasonable.

SEC. 4. That whenever the sanitary agent of the State board of health for any county shall report to the State board of health that the municipal authorities of an incorporated city or the county commissioners of any county of the State refuse or fail to abate any nuisance prejudicial to the public health, it shall be the duty of the State health officer, as soon as practicable, to visit said locality and inspect the same, and, after consultation with the president of the board, to take such measures as may in their judgment be necessary either to immediately abate the causes of the trouble or to prosecute, in the proper courts, with the assistance of its prosecuting officers, the municipal or county authorities responsible therefor, and their action shall be reported to this board as promptly as practicable.

SEC. 5. The State health officer shall have the general, administrative, and executive control under the State board of health of all the maritime and domestic quarantine systems of the State.

## MUNICIPAL SANITATION.

SEC. 6. All cities and towns of over 10,000 inhabitants should be provided with a system of sewerage and sufficient means for the proper collection and disposal of the filth, garbage, and refuse of every description in such cities and towns, and all cities, towns, or villages under 10,000 inhabitants having no system of sewerage shall be provided with sufficient means for the prompt, frequent, and sanitary collection and disposal of all filth, refuse, and garbage of every description in such cities, towns, and villages. The proper municipal authorities of incorporated cities and towns, or in cases of unincorporated towns and villages, the county commissioners, shall see that such system of sewerage and means of collecting and disposing of filth, refuse, and garbage are so provided, under penalties prescribed in section 15 of said act creating and establishing a State board of health above referred to.

SEC. 7. The city council, board of aldermen, or municipal authorities, charged by law with such duties, of all incorporated cities and towns in this State, or, in cases of unincorporated towns, the county commissioners, shall provide for house-to-house inspections of all such cities and towns at least once a month, between the first day of May and the first day of November of each year, and that it may be done efficiently, it is also ordered by the State board that blanks for this purpose, as prescribed by this board, shall be used, setting forth the number of inmates of the house of each sex and color, whether any sickness exists in the house at the date of inspections, or has existed since last inspected, and the nature of such sickness in either case, and the general sanitary condition of the interior of the house



and premises, especial note being made of the condition of the water-closets, cess-pools, sinks, or private vaults; and the mayors of all incorporated cities and towns, and the presidents of boards of county commissioners in those towns not incorporated, are especially charged with the enforcement of this rule.

SEC. 8. That no dumping ground for refuse of any description shall be maintained at or near any city, town, or settlement in this State; and it is hereby made the duty of every mayor of a city or president of the board of county commissioners to promptly abate such a nuisance by fire (if any now exist) in cities, towns, or settlements under their jurisdiction, and to prevent the accumulation of refuse and garbage in such quantities as will threaten the health and lives of the citizens thereof.

SEC. 9. No decayed or tainted meat, fish, fruit, or vegetables will be permitted to be brought into or landed, kept, sold, or offered for sale at any of the ports, harbors, cities, or towns in the State of Florida at any season of the year; and any attempt to do so will subject such meat, fish, fruit, or vegetables to destruction, and the master of any vessel, company, corporation, or individual violating this rule to prosecution in the courts of the State thereof.

SEC. 10. No cargo consisting of green salted hides, bones, bone dust, or guano, or fertilizers of any kind that have become damaged by water so as to be offensive and detrimental to the public health, shall be permitted to be discharged or landed on any wharf or dock of any city or town in the State, or any settled port thereof.

SEC. 11. No one shall create, contribute to, or maintain a nuisance which is prejudicial to the public health, or which tends to injure the health of the citizens of this State.

SEC. 12. No draining of low lands or excavations of whatever character or grading of streets shall be made between May 1st and the 15th of November of any year, in any incorporated city or town, nor in any unincorporated town or settlement without the permission of the State board of health: *Provided*, That this is not intended to interfere with the ordinary cultivation of land in farming, the burial of the dead, nor the digging of wells, where necessary and there is no water system.

SEC. 13. No human remains shall be disinterred or removed from any place of interment in this State or brought into or carried through this State for burial without permission of the State board of health.

SEC. 14. It shall be the duty of the county sanitary agents of this board to report all nuisances or causes which threaten to create nuisances prejudicial to the public health, or infractions of the rules of this board, to the municipal authorities of any incorporated city within which the same may be located, or to the county commissioners if not within an incorporated city but within the county boundaries, and urge that the said municipal or county authorities take immediate measures to abate the same, and in case the said municipal or county authorities refuse or fail to remedy the evil within a reasonable time, or in case the danger to the public health is in the judgment of the county sanitary agent imminent, he shall report the facts at once to this board.

#### COMMUNICABLE DISEASES OF AN EPIDEMIC, INFECTIOUS, OR CONTAGIOUS NATURE.

SEC. 15. Whenever any physician shall know or apprehend that any person whom he is called to visit, or who is brought to him for examination, is infected with yellow fever, smallpox, cholera, diphtheria, scarlet fever, or any other disease dangerous to the public health, he shall immediately give notice thereof, in the manner provided by the statute, to the president of this board of health and to the health authorities of the city, town, or settlement in which the sick person may be; and it shall be the duty of any health officer or person acting as such, or the president of any board of health, or mayor of a city or town, to whom any disease dangerous to the public health is reported, to take such precautions, before the arrival of the State health officer, as shall be judged best for the safety of the inhabitants.

SEC. 16. It is hereby made the duty of the common council, board of aldermen, or other officers of a chartered city or town in this State, to provide for the vaccination and revaccination of the citizens residing in their several cities and towns. And it is also made the duty of every parent, guardian, or other person charged with the care of or responsibility for any child to see that said child is vaccinated, and to have said child or children vaccinated as often as the health authorities of a city, town, or county may direct: *Provided*, That the requirements of this section need not be enforced in sparsely settled communities in this State, except in a threatened epidemic from smallpox: *And provided further*, In any case, in the judgment of a reputable physician expressed in writing, such vaccination would be dangerous to the health of the person required to be vaccinated, such



vaccination will not be required to be made. Fresh bovine virus only should be used in vaccinating in this State.

SEC. 17. Superintendents of all institutions of learning, and all school boards and principals of schools in this State in incorporated cities and towns of over 2,000 inhabitants, are forbidden to admit as a pupil any child or person who can not produce satisfactory evidence of having been successfully vaccinated.

SEC. 18. No owner or manager of any manufactory in this State shall admit for employment any person who can not produce satisfactory evidence of having been successfully vaccinated.

SEC. 19. It is hereby made the duty of all mayors of towns and cities in this State, and of the boards of county commissioners, to enforce the observance of all the foregoing rules and regulations of the State board of health in the several cities, towns, and counties under their control.

#### COLLECTION OF VITAL STATISTICS.

SEC. 20. The State board of health of Florida shall compile accurate vital statistics of marriages, births, and deaths occurring within the State, arranged by counties and incorporated cities, with statements of the prevailing diseases and all information of a medical or sanitary nature that may be of value in the preservation of the public health, and for this purpose a State bureau of vital statistics is created, to be under the supervision of the State health officer, as registrar of said bureau, with office at the office of the State board of health. The said registrar of vital statistics shall formulate, print, and furnish suitable blanks for collecting and compiling such statistics, and he shall, as often as once a month, tabulate and publish such statistics and furnish copies of the same to the incorporated cities within the State and gratuitously distribute copies to persons and to other States of the Union, as may be deemed advisable by the State board of health.

SEC. 21. Every birth and death occurring in this State shall be reported by the attending physician, midwife, nurse, or head of family, to the State board of health, as soon thereafter as possible, on blanks furnished free and in accordance with the forms prescribed by the State board of health.

#### PUBLIC INSTITUTIONS.

SEC. 22. The superintendents of all State institutions of learning, or for the care of the afflicted; sheriffs of counties; the superintendent of the State prison or penitentiary, or other persons having the care or custody of prisoners or convicts, shall report to the secretary of the State board of health on the first day of each month, on blanks to be furnished, such information of a medical or sanitary nature as may be of value in the preservation of the public health.

#### QUARANTINE AND MARITIME MEDICAL INSPECTION.

##### GENERAL PROVISIONS.

SEC. 23. No quarantine regulations of commerce or travel (seacoast or inland) shall be instituted or operated by any port, place, or county of this State against any other port, place, or county in this or any other State or any foreign country, except by authority of the State board of health.

SEC. 24. The quarantine system over travel and commercial intercourse between any of the ports of the State of Florida and other ports shall be established and maintained from the first day of May to the fifteenth day of November, inclusive, of each year; except as hereinafter provided, or as may be otherwise ordered.

SEC. 25. No vessel shall be permitted to enter any of the ports, harbors, or inlets of the State of Florida, except under such restrictions and regulations as to medical and sanitary inspection as the State board of health may hereinafter and from time to time prescribe; and every master or person in charge of any such vessel violating the regulations of this board shall be subject to the penalties of section 779 of the Revised Statutes of the State of Florida.

SEC. 26. Pilots are hereby required in each case before boarding a vessel desiring to enter any of the ports, harbors, or inlets of the State of Florida, to make inquiry as to the sanitary condition of the vessel, and in no case must they "board" if the vessel has contagious or infectious sickness on board, or has had the same during the voyage. In all such cases the pilot must direct said vessel to the nearest United States quarantine or refuge station, except where it is impracticable by reason of sickness of the crew, or otherwise, for said vessel to go to such



quarantine or refuge station; then to such point as the State health officer or the port sanitary inspector of the State board of health may designate. And pilots are forbidden to leave any vessel which they have boarded until permission is granted by the port sanitary inspector, acting under authority of the State board of health.

## INSPECTION.

SEC. 27. All vessels arriving at any of the ports of the State of Florida between the first of May and the fifteenth of November, inclusive, of each year, must "lie to" or anchor at a point to be designated in each harbor as the inspecting point, and marked by a buoy with a yellow flag thereon, and there remain until inspected by the sanitary inspector of the port, acting under authority of the State board of health.

SEC. 28. Vessels of the following classes arriving at any of the ports, harbors, or inlets of the State of Florida between the fifteenth day of November and the first day of May shall be subject to inspection as specified in sections 30 and 31:

(a) Any vessel with sickness on board at arrival or upon which sickness shall appear while in port.

(b) All vessels from foreign ports.

(c) Vessels from foreign ports having entered a port of the United States without complete discharge of passengers and cargo.

(d) Vessels from ports suspected of infection with yellow fever, having entered a port of the United States north of the southern boundary of Maryland without disinfection, shall be subjected to disinfection before entering any port of the State of Florida during the quarantine season.

SEC. 29. The inspection of vessels required by these regulations shall be made, as far as possible, between sunrise and sunset, except in case of vessels in distress.

(a) No person except the State health officer, the port sanitary inspector, and his employees shall be permitted to board or leave any vessel subject to quarantine inspection until after the vessel has been inspected by the port sanitary inspector (quarantine officer), and, if said vessel is ordered into quarantine for detention or disinfection, until after the period of detention or completion of disinfection and the discharge of said vessel: *Provided*, That after inspection and before final discharge opportunity shall be given to the official representative of the United States Marine-Hospital Service to examine the said vessel for the purpose of ascertaining whether the quarantine regulations prescribed by the Secretary of the Treasury have been or are being complied with.

(b) No person shall trespass upon or enter without permission of the State health officer, or attempt so to enter or trespass upon, any vessel, docks, buildings, or enclosed premises of any kind of the State board of health used by said board for disinfecting or purifying infected goods or materials of any kind.

SEC. 30. The quarantine officer shall at once demand from the master his bill of health, which in case of vessels hailing from a foreign port shall be signed by the consul, vice-consul, or medical officer properly detailed for that purpose, in the form prescribed by the Secretary of the Treasury, setting forth the sanitary history and condition of said vessel and that it has in all respects complied with the rules and regulations in such cases prescribed for securing the best sanitary condition of said vessel, its cargo, passengers, and crew; and which in case of vessels from domestic ports where cholera, yellow fever, smallpox, typhus fever, leprosy, or other quarantinable contagious or infectious disease may prevail shall be signed by the proper medical authorities of said port to a similar effect.

SEC. 31. In making an inspection of a vessel the bill of health and the crew and passenger lists and manifests, and, when necessary, the ship's log, shall be examined, together with the clinical record of all cases treated in hospital during the voyage. The crew and passengers shall be mustered and examined and compared with the lists and manifests and any discrepancies investigated.

SEC. 32. Whenever upon inspection the sanitary inspector shall find that any vessel having a proper bill of health, as specified in section 30, is free from sickness of every kind whatsoever, and has had no contagious or infectious disease on board during any part of the voyage subsequent to leaving the last port, or for three months prior thereto; and furthermore, that the vessel is in a cleanly and sanitary condition, then the said sanitary inspector shall give permission for said vessel to enter said harbor and proceed to an anchorage or dock, except as provided for in section 34: *Provided, however*, That county boards of health, appointed by the governor, may adopt rules and regulations subject to the approval of the State board of health, for the control and government of pilot boats, fishing smacks, wrecking boats, wood boats, and vessels engaged in the sponge business.



## QUARANTINE.

SEC. 33. For the purpose of these regulations the quarantinable diseases are cholera (cholerae), yellow fever, smallpox, typhus fever, and leprosy, and "suspicious ports," or places suspected of being infected, are all ports in the West Indies, on the east coast of America between 23° 30' north and 32° south latitude, and from west coast of Africa between 23° 30' north and 10° south, except such as are known and declared by the Supervising Surgeon-General of the Marine-Hospital Service to be free from infection.

SEC. 34. Vessels under the following classifications arriving at any of the ports of the State of Florida between May first and November fifteenth, inclusive, of each year, shall be directed by the State sanitary inspector to the nearest State or United States quarantine or refuge station to undergo quarantine and disinfection:

(a) All vessels directly or indirectly from foreign or domestic ports where yellow fever may prevail; and

(b) All vessels arriving from foreign or domestic ports where cholera, smallpox, leprosy, or other contagious or infectious disease may prevail at any season of the year; and

(c) Any vessels in port at any season of the year upon which yellow fever, cholera, smallpox, leprosy, or other contagious or infectious disease may be developed after arrival; and

(d) All vessels in an unsanitary condition when inspected, or upon which there shall be sickness of an infectious or contagious nature; and

(e) All vessels without the required bill of health: *Provided, however,* That permission may be given to enter harbor and proceed to an anchorage at the discretion of the State sanitary inspector, when in good sanitary condition and free from sickness, and having a certificate from the medical officer in charge of the nearest quarantine or refuge station that said vessel and cargo and effects of passengers and crew have been thoroughly cleansed and disinfected according to the rules and regulations of this board, that said vessel has been detained at said quarantine or refuge station for a term of not less than five days after such disinfection, and that no case of yellow fever, cholera, smallpox, leprosy, or other contagious or infectious disease has within that time developed among any of the crew or passengers, and that the ballast of said vessel was discharged at said quarantine or refuge station before disinfection, and clean ballast, if necessary, taken at said station in lieu of the ballast discharged, which certificate shall be of a date subsequent to the leaving of said vessel from any foreign or domestic port infected with any contagious or infectious disease.

SEC. 35. A vessel from a foreign port calling at any port in the State of Florida for orders, supplies, or coaling, *only*, may be allowed to proceed, unless there is a quarantinable disease on board at the time, or such disease has been on board at ports *en route* or at ports of departure, and when she is believed to be infected, in which case coal or supplies by barge can be towed to her, and she can take the coal and supplies from the barge with her own crew; but the port sanitary inspector at the port shall allow no person or dunnage from such vessel to go ashore.

SEC. 36. Vessels engaged in the fruit trade, not carrying passengers nor having carried passengers from one port to another and having held no communication with any other vessel, carrying only fruit, unwrapped rubber, or specie from ports known to be healthy and so declared by the Supervising Surgeon-General of the Marine-Hospital Service, may be admitted to entry without detention, provided they have complied in every respect with the rules and regulations made by the Secretary of the Treasury for such ports and with the regulations of this board.

## BALLAST.

SEC. 37. All vessels plying between foreign or domestic ports of the United States (declared by the Supervising Surgeon-General of the United States Marine-Hospital Service or by the State board of health of Florida as infected by yellow fever, cholera, smallpox, leprosy, or other contagious or infectious disease) and any of the ports, harbors, or inlets of the State of Florida must carry as ballast either water or clean rock or stone. If water ballast is used, it must not be changed either in any foreign port or any port in the State of Florida, but in the open sea. If rock or stone ballast is used, it must be procured from some noninfected port or place.

SEC. 38. No ballast brought to any port of the State of Florida shall be discharged in any such port except at such point as may be designated in a permit granted by the port sanitary inspector of the respective port; and in case this board or its port



inspector deem it expedient for the preservation of the public health to require fumigation and disinfection of vessels or discharge of ballast at quarantine station, the same shall be done at the expense of the vessel and in accordance with the rules and regulations of this board.

REGULATIONS APPLYING TO VESSELS IN REGULAR TRADE WITH FOREIGN PORTS.

SEC. 39. All vessels plying between foreign ports and the ports, harbors, or inlets of the State of Florida must be provided with crews acclimated to yellow fever; and between the first of May and the fifteenth of November, inclusive, of each year, such vessels plying as aforementioned, and especially between any of the ports of the Island of Cuba and the ports of Florida, must not enter any of the ports of the Island of Cuba before sunrise and must depart therefrom before sunset of the same day, and must not remain over night in any harbor of the Island of Cuba, otherwise they will be subjected to detention in quarantine at any of the ports of the State of Florida for fifteen days. Such vessels must not anchor, but may moor, in the open harbor of any of the ports of the Island of Cuba, and as far as possible from any other vessel; and while in said harbors must not, between the dates before mentioned, hold communication with the shore except under conditions and restrictions imposed by an agent of this board in said port or harbor.

SEC. 40. Steamships or other vessels plying between the ports of the State of Florida and any West Indian, South American, or other foreign port, must be kept in a cleanly and sanitary state at all times, and be subject to inspection by this board of health, and must have their bilges pumped out and thoroughly washed and cleaned at least twice a week with some powerful germicide and disinfectant (which will be designated by the health officer of this board), and it is hereby made the duty of all port sanitary inspectors of this board, or by authority of this board, to pay especial attention to this requirement and to observe on the arrival of any steamship or other vessel of any line, operating or plying between the ports as before mentioned, the condition of the cabins, staterooms, the steerage, fore-castle, and water-closets, and to promptly report to the health officer of this board any deviation from perfect cleanliness as exacted by this rule, and also to promptly place in quarantine for the purpose of being disinfected and cleaned, any steamship or other vessel whose sanitary condition is not good and does not fulfill the requirements as established by the State board of health, and said steamship or vessel shall not be released from quarantine until she has been placed by her officers in a cleanly and sanitary state.

SEC. 41. Steamships or other vessels plying between any West Indian, South American, or other foreign port and any ports in the State of Florida, between the first day of May and the fifteenth day of November, inclusive, of each year, shall not be permitted to bring as passengers from any such ports where endemic or epidemic contagious or infectious diseases exist, to any port of the State of Florida, any person who is not acclimated to yellow fever by having had an attack of the disease, or by continuous residence in cities and towns, for a period of ten years or over, where such disease is endemic, and has not had smallpox or been successfully vaccinated; and masters of such steamships or vessels shall not receive for transportation any passenger without a certificate from an agent of this board in said port, stating the exemption of said passenger from contracting or developing yellow fever, cholera, or smallpox, which certificate, together with another setting forth the freedom of baggage from infection, must be produced to the port sanitary inspector at the port of arrival in this State before *pratique* can be given to said vessel or passenger. And the master of any steamship or vessel failing to observe this rule, and who shall attempt to transport passengers in defiance thereto, will subject himself, ship or vessel, crew, or passengers to quarantine and to such requirements of detention and disinfection as this State board may direct, and, in addition to the foregoing, every master of steamships or other vessels violating this rule will be prosecuted in the courts of the State, as specified in section 779 of the Revised Statutes of the State of Florida: *Provided*, That nothing in this section shall be construed as prohibiting an agent of this board of health in any foreign town or place where infectious or contagious disease exists from giving permission to anyone coming from a healthy district outside of said town or place, and who has not been acclimated to yellow fever, to pass through said town or place, if said individual does not remain over night in said town or place: *And provided further*, That the immediate destination of said individual is north of 38° 54' north latitude.

SEC. 42. No bedding or household effects shall be brought from any port of the West Indies, South America, or other foreign port that may be infected with an epidemic contagious or infectious disease, or from any infected port or place in the United States to any port or place in the State of Florida at any season of the



year; and the master of any steamship or other vessel or any transportation company who disobeys this regulation shall be deemed guilty of violating this rule, and shall be dealt with as contemplated by section 779 of the Revised Statutes of the State of Florida.

SEC. 43. No personal baggage of the description usually carried in trunks, satchels, or handbags shall be landed at any of the ports or harbors or places in the State of Florida from any port of the West Indies, South America, or any foreign port, or any port or place in the United States where yellow fever, cholera, or smallpox prevails, between the dates of May 1st and November 15th, inclusive, of each year, without being subjected to thorough disinfection by superheated steam or dry heat of high temperature or medicated vapor, according to the nature of the fabric, or to be permitted to be transported into the State of Florida unless it has been properly and sufficiently disinfected according to these rules and regulations. Such personal baggage after being disinfected must have attached a certificate from the port sanitary inspector performing the service that such disinfection has been properly and amply performed: *Provided*, That disinfection and fumigation of all baggage arriving from infected ports or places may be ordered at all seasons of the year whenever the State health officer has reason to believe from the health condition of the port or place from which such baggage is brought, the appearance of said baggage, or from other circumstances that said baggage threatens contagion or infection: *And provided further*, That the baggage of passengers for points north of 38° 54' north latitude (Washington, D. C.) may, at the discretion of the State health officer, be permitted to pass through the State without disinfection or fumigation when checked through according to the regulations prescribed by this board.

#### INTERSTATE QUARANTINE AND MEDICAL INSPECTION.

SEC. 44. Whenever yellow fever, cholera, smallpox, or any other contagious or infectious disease shall exist or prevail in any city or town of any State of the United States, Mexico, or Canada to such an extent as may be adjudged by the State health officer to endanger the health of the inhabitants of the State of Florida, through railway, stage, steamboat, or other medium of intercommunication, then all individuals entering the State of Florida from such infected locality by means of such railway, stage, and inland water navigation companies shall be detained at such points on or near the border line of Florida as may be selected by the State health officer, for observation of passengers and treatment and isolation of sick, and for fumigation of baggage, freight, and mails.

SEC. 45. Any individual or individuals found upon any railway train, stagecoach, steamboat, or other conveyance, from any city, town, or place of any other State of the United States, Mexico, or Canada, suffering from any epidemic, contagious, or infectious disease, and all such persons who, in the opinion of the medical inspector at any quarantine station, may reasonably be suspected of having been subject to infection or contagion from such individual or individuals, shall be detained for treatment and observation as specified in section 46.

SEC. 46. All passengers detained under provisions of sections 44 and 45 will be detained for such treatment and observation not less than ten days, or for such further time as the State health officer shall deem necessary for the safety of the public health.

SEC. 47. No railway or stage line, or any person, company, or corporation shall be permitted to bring any passengers from any city, town, or place in any other State of the United States, Mexico, or Canada, where epidemic, contagious, or infectious disease exists, to any city, town, or place in the State of Florida, without undergoing such detention as is specified in section 46.

SEC. 48. Persons desiring to enter the State of Florida on any railroad, steamboat, or stagecoach, or otherwise, passing any quarantine station, will be required to produce to the inspecting officer, duly appointed by the State health officer, a certificate, signed by the mayor, under the corporate seal, if the person is from a municipal corporation, and if not from a municipal corporation, then a certificate from a justice of the peace, that said person has not been exposed, either in person or baggage, to infection or contagion within fifteen days before the date of said certificate: *Provided*, Said certificate shall bear date not more than five days prior to such presentation; otherwise said person or persons and his or her baggage will be detained at such quarantine station as provided for in section 47.

SEC. 49. No bedding, household goods, or rags shall be brought from any city, town, or place of any other State or country where epidemic, contagious, or infectious disease exists into the State of Florida.

SEC. 50. No personal baggage of the description usually carried in trunks shall



be brought into this State from any city, town, or place of any other State of the United States, Mexico, or Canada where any epidemic, contagious, or infectious disease exists, without first being subjected to thorough disinfection by an agent of this board by superheated steam, dry heat of high temperature, or medicated vapor, according to the nature of the article.

SEC. 51. All day, sleeping, or other railroad cars, stage coaches or other conveyances, steamboats or other craft on which any epidemic, contagious, or infectious disease is found to exist, and all through sleeping cars coming from infected points, shall be detained and thoroughly disinfected by an agent of this board before being allowed to enter the State of Florida.

SEC. 52. No freight, mail, or other goods, not heretofore provided for, shall be brought into the State from any city, town, or place of any other State of the United States, Mexico, or Canada where epidemic, contagious, or infectious disease exists, without first being thoroughly disinfected by an agent of this board, except such freight as may in the opinion of the State health officer be deemed free from danger of infection or contagion.

#### TREATMENT OF VESSELS.

The following treatment in quarantine of cholera, yellow fever, and smallpox infected vessels prescribed by the United States Treasury Department is adopted and ordered enforced at all ports in the State of Florida:

#### FOR CHOLERA-INFECTED VESSELS.

SEC. 53. Remove all persons from the vessel (if cholera has occurred on board) save those necessary to care for her. Place the sick in hospital and carefully isolate those specially suspected. Segregate the remainder in small groups wherever it is practicable. Those believed to be especially capable of conveying infection must not enter the barracks until they are bathed and furnished with sterile clothing; nor should any material capable of conveying infection be taken into the barracks, especially food.

SEC. 54. At once proceed with the disinfection of the hand baggage, and, where practicable, bathe those detained.

SEC. 55. If cholera has occurred in the steerage, all occupants thereof must be bathed.

SEC. 56. All baggage and effects accompanying steerage passengers, and any baggage or effects that may have been exposed to infection, must be disinfected.

SEC. 57. Such articles of cargo as are liable to convey infection must be disinfected.

SEC. 58. All living apartments and furniture and such other portions of a vessel as are able to convey infection shall be disinfected.

SEC. 59. On cholera-infected vessels the water supply must be changed without delay, the casks or tanks disinfected by steam or 10 per cent solution of potassium permanganate, and after thorough rinsing refilled from a source of undoubted purity, or the water supplied be recently boiled.

SEC. 60. Nothing shall be thrown overboard from a cholera-infected vessel, not even deck sweepings. Such things shall be burned in the furnace or in a place specially designated, but not in the galley.

SEC. 61. No communication shall be allowed between any vessel in quarantine and the shore or any other vessel, except through the quarantine officer, or by his order, through his agents.

SEC. 62. The disinfection of iron vessels shall be as follows:

(a) *Holds*.—After mechanical cleansing, the hold to be thoroughly washed with an acid solution of bichloride of mercury 1 to 800 (mercury 1 part, hydrochloric acid 2 parts, water 800 parts), applied to all surfaces by means of a hose. If danger is apprehended from the poisonous effects of the mercury deposited on the surfaces, they can be subsequently washed down with clean water.

(b) *Steerage*.—The same treatment should be given the steerage as the hold, but when there are steam pipes provided for each compartment (for the prevention of fire), steam disinfection of the steerage should be practiced; the temperature in all parts of the compartments to be not less than 212° F.

(c) *The forecabin or apartment for crew*.—After mechanical cleansing, the application of bichloride of mercury in the manner heretofore prescribed, or steam disinfection, if facilities are provided for the same.

(d) *Officers' quarters, cabin, staterooms, etc.*—All compartments thereof to receive the same treatment coming under the same conditions as heretofore specified, with the following exceptions: The decorative and metal work in cabin,



saloons, etc., should, after mechanical cleansing, have an application made of 3 per cent solution of pure carbolic acid, applied by means of a brush or cloths. After remaining for two hours, wipe off with dry cloths.

(e) Disinfection by twenty-four hours' exposure to 10 per cent volume of sulphur dioxide, after mechanical cleansing, may be substituted in each of the above, *a, b, c, and d.*

SEC. 63. Leather cushions shall be wetted with 3 per cent solution of pure carbolic acid, and upholstered goods may be treated in the same way, or by steam.

SEC. 64. The water ballast of a vessel coming from a cholera-infected port should be discharged at sea, or, if discharged in fresh or brackish water, must be previously disinfected, the tanks to be refilled with sea water or disinfected.

SEC. 65. For a wooden vessel the treatment is as above, except that fumigation of the hold and living apartments with sulphur dioxide, 10 per cent volume, must precede the other treatment for the hold forty-eight to seventy-two hours; for the living apartments, twelve hours.

SEC. 66. All solid ballast should be discharged or disinfected previously to disinfection of hold. All ballast discharged ashore or in fresh water to be disinfected. Only clear, hard, close-grained rock may be permitted to remain on board after disinfection by dipping (immersing) in an acid solution, 1 to 800, of bichloride of mercury. Ballast removed from vessels must not be taken from the quarantine station.

#### DETENTION OF PASSENGERS ON ACCOUNT OF CHOLERA.

SEC. 67. The people detained shall be inspected by the physician twice daily, and be under constant surveillance, and no intercourse will be allowed between different groups while in quarantine.

SEC. 68. The water and food supply will be strictly guarded to prevent contamination.

SEC. 69. In any group in which cholera appears the sick will be immediately isolated in hospital, and the remaining persons in the group shall again undergo disinfection and be detained not less than five days thereafter.

SEC. 70. After five days from last exposure to infection, any group among which no choleraic disease has developed may be released from quarantine after a final disinfection of clothing.

SEC. 71. Food of a simple character, sufficient in quantity, thoroughly cooked, shall be issued to those detained in quarantine. No fruit shall be permitted.

SEC. 72. Cleanliness and disinfection of quarters and cleanliness of person shall be enjoined and enforced daily. Disinfectants shall be used where there is any possibility of infection.

SEC. 73. Water-closets, urinals, privies, or troughs shall be provided, and means used for their disinfection before their contents are discharged into pits of unslaked lime.

SEC. 74. The body of no person dead of cholera shall be allowed to pass through quarantine. The body should be cremated if practicable. If not, it should be wrapped without preliminary washing in a sheet saturated with a solution of bichloride of mercury, 1 to 500, and buried, surrounded by caustic lime.

#### DISINFECTION OF CARGO OF CHOLERA-INFECTED VESSELS.

SEC. 75. Articles of cargo requiring it will be disinfected by—

(a) Steam heat of 212° F. for not less than thirty minutes after such temperature is reached, or by boiling the same length of time.

(b) Wetting thoroughly with bichloride solution, 1 to 800, or with three per cent solution of pure carbolic acid.

(c) Exposure to sulphur dioxide, volume 10 per cent, for not less than twelve hours.

Clothing and bedding will be disinfected by—

(a) Exposure to steam from 212° to 220° F. for thirty minutes after such temperature is reached, or by boiling for thirty minutes.

(b) Immersing in bichloride solution, 1 to 800, or solution of pure carbolic acid, 3 per cent, until thoroughly wetted, and allowed to dry before washing.

This last process (b) to be used only for articles that will be injured by steam or boiling.

#### RAGS.

SEC. 76. All rags and old textile fabrics used in the manufacture of paper, and all old gunny, old jute, etc., fit only for remanufacture, gathered, collected, packed, or shipped from or via any port or place where cholera (cholerae), yellow



fever, or plague exists, or where smallpox or typhus fever prevails in epidemic form, and for thirty days after such port or place shall be officially declared free from such diseases or epidemic, shall be denied entry into any port of the State of Florida.

TREATMENT OF VESSELS INFECTED OR SUSPECTED OF BEING INFECTED WITH YELLOW FEVER.

SEC. 77. Where practicable, at once remove the sick to hospital and remove and isolate all persons not required for the care of the vessel.

SEC. 78. If the hold is deemed infected, there shall be a preliminary disinfection of the same with sulphur dioxide and bichloride solution.

SEC. 79. All ballast except close-grained hard rock must be discharged. This may be retained aboard if disinfected by dipping (immersion) in an acid solution of bichloride of mercury, 1 to 800.

SEC. 80. The bilge should be cleansed with sea water, if possible, before disinfection and the hold rendered mechanically clean.

SEC. 81. After discharge or disinfection of ballast the vessel should be disinfected as provided in section 62, paragraphs *a*, *b*, *c*, and *d*, of these regulations, treating living rooms in addition with fumigation with sulphur dioxide, 4 per cent, twenty-four hours' exposure.

SEC. 82. All baggage and clothing, bedding, hangings, etc., shall be disinfected by steam at 212° to 220° F. for thirty minutes after such temperature is reached, or boiling thirty minutes. Articles liable to injury by steam or boiling should be disinfected by immersion in solution of bichloride of mercury, 1 to 800, or solution of pure carbolic acid, 3 per cent, all articles to be wholly submerged and thoroughly wetted.

SEC. 83. Cargo shall be disinfected *in situ*, if possible, by thorough aeration, followed by fumigation with sulphur dioxide, 10 per cent strength, forty-eight hours' exposure. Where it is impossible to disinfect *in situ*, the cargo should be removed and disinfected.

SEC. 84. The personnel of the vessel shall be detained *five* days from completion of the disinfection.

SEC. 85. Persons arriving on a vessel upon which yellow fever has occurred at port of departure, on the voyage, or on arrival shall be detained not less than five days from the completion of disinfection.

SEC. 86. If disinfected under the supervision of an accredited medical officer of the United States at the port of departure, the period of quarantine may date from completion of such disinfection, and shall not be less than five days.

TREATMENT OF SMALLPOX PATIENTS.

SEC. 87. Persons who arrive on vessels coming from any port or place where smallpox is prevailing in an epidemic form, or having had smallpox on board, must be vaccinated or show satisfactory evidence of recent vaccination or of having had smallpox, or be detained in quarantine not less than fourteen days, and all effects and compartments liable to convey infection disinfected.

SEC. 88. All passengers occupying apartments other than first or second cabin shall be vaccinated prior to entry, unless they can show that they have had smallpox or have been recently successfully vaccinated, or be detained in quarantine fourteen days.

SEC. 89. Fee bill. Classification of inspection and disinfection fees to be charged at all ports in the State of Florida:

INSPECTION.

Steamships and ships .....	\$10.00
Tugs, brigs, barks, barkentines, and three and four masted schooners .....	7.50
Two-masted schooners and other vessels, except sloops .....	5.00
All vessels making regular trips from noninfected domestic ports, except sloops .....	5.00
Sloops .....	3.00

DISINFECTION.

By steam sterilization, sulphur fumigation, and mercuric washing:	
Steamships and ships .....	\$60.00
Barks and four-masted schooners .....	50.00
Tugs, brigs, and two and three masted schooners .....	40.00
Smacks and other vessels .....	25.00



By pot sulphur fumigation and mercuric washing, for vessels from "suspicious" ports only, and at ports at which no steam disinfecting plant is located:

Steamships and ships.....	\$45.00
Barks and four-masted schooners.....	35.00
Brigs and two and three masted schooners.....	25.00
Smacks and all other vessels.....	20.00
Tug boats.....	20.00
Discharge of ballast twenty-five cents (25c.) per ton.	

## EXCEPTIONS.

SEC. 90. All vessels under section 39 of these regulations, making at least one regular trip per week, shall pay twelve hundred dollars (\$1,200) per annum in lieu of all charges for inspection and disinfection.

SEC. 91. And it is hereby ordered that no fees shall be charged at any port in this State for inspection of vessels from any ports of the State of Florida, unless such port or ports shall have been first declared infected by this State board of health.

JACKSONVILLE, FLA., April 1, 1896.

The foregoing is a correct copy of the rules and regulations adopted from time to time by the State board of health of Florida and ordered printed.

WM. B. HENDERSON,  
President State Board of Health.

JOSEPH Y. PORTER, M. D.,  
Secretary and Health Officer of the Board.

## I.

PORT OF \_\_\_\_\_, \_\_\_\_\_, 189—.

I certify that \_\_\_\_\_, of \_\_\_\_\_, from \_\_\_\_\_, has in all respects complied with the quarantine regulations prescribed by the Secretary of the Treasury, and that in my opinion she will not convey quarantinable disease. Said vessel is this day granted free pratique.

\_\_\_\_\_  
Health (Quarantine) Officer.

[To all vessels from foreign ports.]

## II.

STATE BOARD OF HEALTH OF FLORIDA,  
TAMPA BAY QUARANTINE STATION,  
Tampa Bay, \_\_\_\_\_, 189—.

This certifies that the \_\_\_\_\_, Captain \_\_\_\_\_, from \_\_\_\_\_, has been thoroughly cleansed and disinfected according to the rules and regulations of the State board of health of Florida; kept for observation \_\_\_\_\_ days after disinfection, her ballast discharged, and that her sanitary condition to-day is good; that her crew and passengers are all healthy, and her present ballast is clean.

Permission is therefore granted to said vessel to proceed to the port of \_\_\_\_\_, and discharge and load cargo and land and take passengers in the said port of \_\_\_\_\_.

\_\_\_\_\_  
M. D.,  
Physician in Charge.

[To all vessels which have been disinfected.]

## III.

STATE BOARD OF HEALTH OF FLORIDA,  
Port of \_\_\_\_\_, Florida, \_\_\_\_\_, 189—.

This certifies that I have carefully examined the passengers and crew of the \_\_\_\_\_, from \_\_\_\_\_, and find no one affected with any quarantinable contagious disease. Permission to discharge passengers and cargo is given for the port of \_\_\_\_\_.

\_\_\_\_\_  
Port Sanitary Inspector, State Board of Health of Florida.

[Clean ports, foreign and coastwise.]



## IV.

*For baggage from infected ports.*

I certify that the contents of this ——— have been thoroughly disinfected under my supervision.

*Port Sanitary Inspector, ——— Board of Health.*

## ANCLOTE KEY.

By Surg. H. R. CARTER, M. H. S.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

A pier head and room thereon on piles near the mouth of Anclote River, on said river. Here is a yellow flag, and all vessels of any size—smacks, sponge schooners, etc., indeed all save yawls and dingeys—are required to await inspection. The inspector lives ashore at Anclote, I judge about 3 or 4 miles from the station, to which he goes in a large catboat when he sees a vessel coming in or waiting. His house is in sight of the pier head. Nothing else at this station, it being an inspection station to watch the sponge fleet. Mail daily. No telegraph nearer than Tarpon Springs.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Mr. Robert W. Clark, quarantine inspector, Anclote, Fla.; no subordinates.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

Laws and regulations the same as for other Florida ports already transmitted. The station is intended to guard against the intercommunication between the Spanish smacks and the vessels, mainly spongers, which legitimately enter Anclote River, and the crews of which live ashore. Some spongers are from Key West. The Inspector has no authority to prevent this intercommunication, nor has he any control over a vessel outside of Anclote River or Harbor (inside the keys); but if he knows of such intercommunication he has a right to prevent the vessel (American vessel, of course) from entry into the river and order her to Mullet Key Quarantine Station. He boards all vessels that stop at the quarantine (pier head) and inspects them. Rowboats from spongers he inspects at a small wharf off the house of the customs officer. These boats frequently contain six to eight men and are disinclined to stop, he having, he tells me, fired on several of them to bring them to, and has to threaten nearly all with a Winchester rifle. The inclosed declaration (Exhibit A) is required to be subscribed to, generally by the witnessed mark, by the master of each incoming vessel, and in addition to the questions therein the inspector inquires carefully if they have been aboard a Spanish (or Key West) smack, or if any of the crew of such smack has been aboard them. But save the answer and the search of the customs officer for contraband goods, he has no means of finding out. He can, however, in general, see that no member of the crew of such smack comes ashore, as none of the crew of the Anclote smacks are Spanish or Cuban. A Key West sponger can, however, bring a Cuban or Spaniard ashore, and he could not find it out, they carrying occasionally Cubans in their crew.

4. The inspection of domestic vessels, which is all that this station does, is not required by the regulations of the Treasury Department. Owing to having only



a sailboat (no yawl is furnished), there is frequently considerable delay in boarding; but time is a matter of small moment to the class of vessels boarded; and the last question is answered in the negative.

5. Inspection only from May 1 to November 15. No treatment of any kind.

6. Are vessels from other United States ports inspected?

Yes; no foreign vessels and indeed none save Florida vessels enter here.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

Vessels are boarded; the statement of the master taken; intercommunication with Spanish smacks inquired into, and the vessel passed. There is no treatment in quarantine. Should the inspector not be satisfied with the answers received, he could send the vessel to Mullet Key.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.) and how regulated? Is there any intercommunication allowed among vessels in quarantine?

No communication held; no pilots at Anclote; no vessels in quarantine.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

Any such vessel would be sent to Mullet Key Quarantine or ordered out of Anclote River. The presence of a disease which the inspector regarded as such, or which he did not believe to be something else, would be the evidence on which he would regard her infected. If the captain of the vessel objected, he would keep her in the open harbor until a doctor could be procured who would determine the matter.

10. The only records kept are the inspection report and a transcript from it in book form.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

The fees would be the same as for any other Florida port, but in fact only vessels from Florida ports have been inspected here, and consequently there are no fees.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months (*a*) from foreign ports; (*b*) from foreign ports in yellow-fever latitudes via domestic ports; (*c*) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

No vessels are inspected which fall in class (*a*) or class (*b*). Vessels from domestic ports: May, 8, all from Anclote, 1 in fruit, 7 spongers; June, 14, 8 from Key West, others Anclote, 1 from Nassau; July, 10, 5 from Key West; August, 5, all Anclote; September, 12, 1 Tampa, 11 Anclote; October, 4, all Anclote. The books of the customs officer are somewhat different, and I think show that all do not stop at the pierhead, doubtless coming in at night, when the inspector can not see them. He gives June, 16, 11 from Key West; August, 12, 3 from Key West. Otherwise they are the same. It will be observed that the Key West vessels only come in June and July and leave the early part of August. They claim that the water then loses its clearness and go farther up the gulf for clear water. They left Key West before smallpox became epidemic. The only business of these vessels, of course, is sponging.

13. State results of your visit to (*a*) the custom-house; (*b*) the immigration bureau.



There is no custom-house or immigration bureau. There is a customs inspector here, S. E. Hope, who was quarantine inspector last year, who inspects vessels when they come in for contraband articles, and who also keeps a lookout for men aboard other than their legitimate crew. He has no boat, and generally goes with the quarantine officer, and they are of mutual assistance to each other. He, however, need only board vessels at the end of his wharf, and frequently does so.

14. State whether, in your opinion, the quarantine facilities are sufficient to care for the shipping entering the port.

So far as the United States quarantine regulations are concerned, no quarantine of any kind is required at this port, but the facilities are not adequate to prevent the entrance into Anclote River of vessels which have been in communication with smacks from Habana, the purpose for which it was established. The inspector has no certain means of knowing whether the vessel he inspects has been in communication with such a smack or not; he simply takes the master's word for it, which is naturally worth little. This is slightly supplemented by the customs officer's search for contraband aguardiente, and these two men work in perfect accord, and are of considerable help to each other. A certain amount of deterrent effect may result from the knowledge that no considerable amount of aguardiente can be carried ashore, but as these vessels, especially those from Key West, are out several weeks at a time, they can use up a large amount of this without fear of the customs officer.

15. No regulations of the Treasury Department apply to this station.

16. This is not a port of entry, hence no certificate of inspection is required or issued.

17. No consular bill of health ever received.

18. Mention any facts which, in your opinion, should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

It is generally admitted that there is some danger in the intercommunication of Habana smacks and American spongers. The facts seem about as follows: The smacks are manned almost exclusively by Spaniards, not Cubans. Most of them, however, are old residents of Habana or discharged man-of-war's men, and are immune to yellow fever by previous attack. Still, newly arrived Spaniards are shipped, and these are not immune, and the smack itself may also be infected by fomites. That spongers and pilot boats habitually trade with them is an open secret. I have seen it off Tortugas. The articles taken aboard—cigars and aqua diente—are probably incapable of acting as fomites, and probably seldom reach shore. The crews of the Key West boats are nearly or quite all immune, and from them there is probably no danger. This is not true of the Anclote spongers, and I believe a slight but real danger exists in the condition of things described above.

I see no way to absolutely prevent this; but it will be lessened, and very much lessened, if the inspector can come out where he can see the fleet off Anclote. He need not be out there continuously. If he comes occasionally and is liable to come at any time, it will be sufficient. If he can get evidence to send one or two spongers to Mullet Key, the example would be very deterrent. I see no way to do this save to furnish him with a naphtha launch, in which he could get out to the fleet at any time, especially in calm weather. Most of the trading takes place, I am informed, just outside of North Anclote Key and to the north of it, out of sight of the residences of the inspector and customs officer.

I would suggest, if it be practicable, that one of the launches now at Key West and not in use be assigned the inspector of customs. He and the quarantine inspector could use this to cruise around where the fleet would be well in view, and could readily so manage it that the Anclote spongers would be afraid to go aboard the Spanish vessels. The quarantine inspector understands steam machinery and can run a launch.



I do not know that these precautions are very necessary, but if it be desired to prevent the crews of Anclote spongers from boarding Habana smacks I know of no other way to prevent them. I was told by the customs officer that 43 sail were in the sponging grounds on the 17th—23 smacks and 20 spongers.

JULY 18, 1896.

[NOTE.—A naphtha launch has been furnished by the Marine-Hospital Bureau to the deputy collector of customs, and the latter directed to assist the local quarantine officer.]

#### CEDAR KEYS.

By Surg. H. R. CARTER M. H. S.

1. There are no buildings. The station marked for the inspection of vessels is about 2 miles off shore, designated by yellow flags set on the shoal. Vessels are inspected in a small boat. No apparatus for disinfection of vessels, baggage, etc., nor for handling the sick or suspects. It is an inspection station only, especially designed for the supervision of the sponging fleet, from Key West and Anclote mainly, which plies its vocation off this town. Mail and telegraph facilities good at the town of Cedar Keys.

2. The personnel of the station consists in the quarantine officer, Dr. Richard T. Walker, of Cedar Keys, Fla., and one boatman.

3. The law and regulations of the station are the same as for all the other Florida ports, and have been transmitted. All vessels, save some to which special licenses are issued, are required to "come to" at the quarantine flag, about 2 miles off shore. Here they are boarded by the boatman, who, if there be any sickness aboard, directs them to stay there until they are visited by the quarantine officer. If there be no sickness aboard, they come into the harbor and are inspected there by the quarantine officer. No one is allowed to leave the vessel until the quarantine officer has inspected her, and no one but the boatman is allowed to go aboard or communicate with the vessel. A number of vessels belonging to Cedar Keys, engaged in fishing and catching turtle, receive a license to go in and out without inspection from the quarantine officer. These do not stop at the flag. There are no spongers belonging to Cedar Keys, though a fleet visits the coast.

4. All vessels coastwise, save those given license, are inspected on entry. Owing to the intercommunication believed to frequently exist amongst the Spanish fishing smacks and the sponge fleet, inspection here is necessary.

5. Inspection is from May 1 to November 15. There is no treatment of vessels at any time.

6. Vessels from other United States ports are inspected from May 1 to November 15.

7. The inspection of vessels has been described under No. 3. The master, if judged necessary by the quarantine officer, swears to a statement relative to his vessel and crew, the same as is required from all vessels entering ports of Florida, laws and regulations for which have been previously forwarded. From time of arrival at the buoy to inspection may be some hours; no other time is lost.

8. No communication is allowed to be held with a vessel, save by the boatman, until she is released from quarantine. These vessels take no pilots. That communication may take place with a vessel before inspection is, of course, possible.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessel carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.



Any vessel infected with cholera, yellow fever, or smallpox would be ordered off to Mullet Key Station, as would any vessel suspected of such infection. No infected vessel has ever applied here.

10. Cases of disease that have occurred during the voyage, on arrival, and during detention would be recorded in the quarantine declaration, which the master signs on entering.

11. Quarantine fees are the same as at other Florida ports; none others. As practically all of the vessels which are inspected here are from Florida ports, very few of them pay any fees.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

No vessels from foreign ports; no vessels from foreign ports in yellow-fever latitudes via domestic ports; vessels from domestic ports inspected at Cedar Keys Quarantine Station during the calendar year 1895 are as follows: May, 38; June, 36; July, 49; August, 26; September, 15; October, 43; November (to the 15th), 9; total, 216. The majority of these vessels are spongers from Key West. There are also many vessels of the same kind from Anclote. The remainder is made up of fishing vessels from various points along the coast. A few are Cedar Keys vessels, but many of them have licenses and are not inspected.

13. No immigration bureau. No foreign entries at custom-house for some years. The deputy collector thinks that there is considerable intercommunication between the sponge fleet and the Spanish smacks.

14. In my opinion the quarantine facilities are sufficient to care for the shipping entering the port.

15. No quarantine requirements of the Treasury Department apply to the class of vessels entering this port.

16. As no vessels come here from foreign ports, no certificate of inspection is issued.

17. No consular bills of health are received.

18. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

The object of this station is to prevent the entrance into Cedar Keys of such coastwise vessels as may have been in communication with the Spanish smacks which fish off Cedar Keys. The same is true of the station at Anclote Key. The vessels which do this are those of the sponging fleet from Key West and Anclote, which come into Cedar Keys to spend Sunday, get water, etc. There seems no way practicable to prevent this communication and the inspection of these vessels, when they enter, and especially the examination of their stores for aguardiente, for which they mainly visit the smacks, seems about the only thing possible under the present regulations. This, by preventing the bringing of aguardiente ashore in salable quantity, materially lessens the temptation to trade with the smacks. Nor can any vessel come in which actually has sickness aboard, as they are at sea much and ashore but a short time, thus giving a considerable measure of protection.

A change (additional to the present regulations of the Treasury Department in accordance with the terms of the act of February 15, 1893) might be made which would have a deterrent effect to a considerable extent. While there is unquestionably a real danger in this intercommunication of smacks and spongers, yet to me it does not appear a very grave one, and it is to some extent met by the inspection service as now organized on this coast.

JULY 29, 1896.



## ST. MARKS AND CARRABELLE.

By Surg. H. R. CARTER, M. H. S.

I would respectfully state that I inspected the ports of St. Marks and Carrabelle, Fla., and see no reason for making a report on either of these places. Indeed, had I known how they were situated as regards quarantine, I would not have visited them.

At the former there is nothing save a customs inspector. It is not a port of entry. No vessels enter there and there is no quarantine station or officer, and none is needed.

Carrabelle is in the same condition except that it has a representative of the State board of health (Dr. Anderson), who is authorized to enforce quarantine, but who does not do so; nor is it necessary. There are no entries of vessels. It is about to be made a port of entry, but the quarantine of the port will be nowise affected thereby, as the quarantine inspection will be then, as now, performed by the quarantine officer of the Apalachicola Station, which has recently come under the State board of health of Florida. Carrabelle and St. Marks really belong to the Apalachicola district.

AUGUST 10, 1896.

[NOTE.—The collector of customs at St. Marks was instructed (June 15, 1895) to send any infected vessel coming in, through stress of weather or otherwise, to the Gulf Quarantine.]

## APALACHICOLA.

By Surg. R. D. MURRAY, M. H. S.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick; and for the removal and detention of suspects; mail and telegraph facilities, etc.

I think it advisable to preface my report with a short history and description of the towns comprising the port, as it is probable that few quarantine officials will ever have the opportunity to visit the locality.

Apalachicola is situated at the mouth of the river of the same name, on the north shore of St. George Sound. It is the capital of Franklin County, and has a population of 4,000. There having been no yellow fever in the place since 1854, the population should be considered nonimmune, and this idea has aided in keeping up a strict surveillance over vessels. In 1860, and for some years previous, the place was of much commercial importance, due partly to the destruction by a hurricane of St. Joseph on the bay of the same name, about 30 miles west, and chiefly, to the good draft of water and the large navigable river, which gave it a traffic of \$15,000,000 per year. The war interfered with prosperity, and commerce sought deeper water ports. In 1865 over 150,000 bales of cotton were shipped. The decline has continued until no cotton is shipped, and the sole commerce is in lumber and naval stores. For the year ending June 30, 1896, the export value was \$1,745,000. Vessels entered, 140; tonnage, 71,049; traffic vessels, 150; 54,220,000 feet of cypress and pine timber, lumber, ties, and shingles were shipped, with about 600,000 pounds of rosin and 65,600 gallons of turpentine. There were also shipments of lumber, shingles, fish, and oysters to inland and domestic ports of perhaps \$500,000 in value. Duties paid in 1865 and 1866 amounted to about \$70,000 per year, and from fifty to eighty vessels could be seen at one time. In 1895 the custom-house receipts amounted to \$3,145, and but thirteen vessels, all told, were in the harbor at the time of my inspection, May, 1896. The port is the natural outlet for



a vast region of west Georgia, east Alabama, and the middle of west Florida via the Chattahoochee and Flint rivers and their combination, the Apalachicola, but modern railways, deeper water, and wharf accommodations have given other ports supreme advantages.

Eighteen miles east by north from Apalachicola lies the town of Carrabelle, at the mouth of the Crooked River. In 1894, when the Carrabelle, Tallahassee and Georgia Railroad connected it with Tallahassee, there was a population of about 300. At the present time there are about 1,400 inhabitants, practically all non-immune.

There are several settlements up the streams and some summer resorts along the coast and on adjacent islands, and eight or ten sawmills are located at most advantageous points for safety and shipment of products.

"The description of the quarantine station" is an easy matter; there is none. The entrance to St. George Sound is called East Pass, and is between Dog Island on the east and St. George Island on the west. It is  $2\frac{1}{2}$  miles wide, with a bar of 20 feet depth. Dog Island lies from about east to west, is 7 miles long; slightly curved, with two coves in the north line. It lies about  $4\frac{1}{2}$  miles off from Carrabelle, and forms a fine harbor. St. George Island lies nearly from northeast to southwest, extending from East Pass, 28 miles, to West Pass, which latter is formed by St. Vincent Island, and has 13 feet of water. St. George Sound is thus formed by Dog and St. George islands, and is about 4 miles wide opposite Carrabelle, expanding to 6 miles opposite Apalachicola, having a length of about 35 miles.

Inside of the west end of Dog Island is the cove of the same name, where square-rigged and deeper-draft vessels are loaded. The dimensions of the harbor are about 1 mile from east to west and  $1\frac{1}{2}$  miles from north to south, extensible in any direction at the will of the harbor master or the requirements of the shipping. Inside of the east end of St. George Island, and about 1 mile to the north and west, is the upper anchorage, where schooners and light-draft vessels are loaded; sometimes called Pilot Cove. The two loading anchorages are about 4 miles apart. The former is safer for the large rafts of timber, while the latter permits a less towage for the lumber barges. There are 5 fathoms in the former and 3 to 4 in the latter, the holding ground being mud and excellent.

The Eastern Cove of Dog Island is the quarantine anchorage, where vessels discharge ballast and undergo such treatment as is decided upon. "The limits of this anchorage" are ample, say,  $1\frac{1}{2}$  miles north to south by 2 miles from east to west, leaving a long mile open to the nearest loading vessel. This is the safer of the two coves, having wider island protection and some woods protection, necessary points when the conditions of a vessel without ballast are considered. Vessels usually sail to their ballast berth; sometimes are towed to the loading cove or berth.

"The facilities for the inspection of vessels" consist of a sloop boat. Vessels arrive off the bar and are questioned by the pilots as to sailing port and condition. If hailing from an infected port, they are directed to go to Ship Island Quarantine for treatment. In former years only vessels from, say, Habana, Colon, Vera Cruz, etc., were thus warned off. If there are no reasons for the vessel to go to an equipped station, the vessel is brought in and anchored; if a schooner, at any place inside; if a ballast vessel, she is taken to the quarantine anchorage—in both cases to await the arrival of the quarantine officer, who lives in Apalachicola, a distance of 17 to 23 miles.

Flags: (1) One on trees on Dog Island, 1 mile east of channel; (2) one on pole one-half mile west of channel on St. George Island; (3) one on pole at the mouth of river, 2 miles from Apalachicola; (4) one at West Pass, 10 miles from Apalachicola.

There is no "apparatus for disinfection of vessels and baggage" except shallow



galvanized-iron pans and a small hand force pump, with sulphur and solution of mercuric bichloride.

There are no "facilities whatever for the removal and treatment of the sick or for the removal and detention of suspects."

"The mail and telegraph facilities" are: Carrabelle, daily mail from Tallahassee, 50 miles northeast, by the Carrabelle, Tallahassee and Georgia Railroad; Apalachicola, daily mail from Carrabelle, 28 miles off, sailing distance, and three times a week by steamer from Chattahoochee, Fla., 150 miles north. Telegraph lines at both places.

2. Give personnel of the station or port, name of the quarantine officer or officers, post-office address, total number of officers and subordinates, etc.

When, in 1893, the Florida county boards of health were abolished, Escambia (Pensacola) and Franklin (Apalachicola) were excepted, as it was claimed that State supervision would injure the ports, and also that the quarantines were self-supporting. The Franklin County board of health consisted of Dr. J. D. Rush, president; John G. Ruge, secretary, and J. H. Lockwood. Charles H. Lind was the quarantine officer, who furnished a boat and a boatman. Owing to the gradual lowering of the fees by the dominant State board, and the increased amount of disinfecting done by equipped quarantines, through the operations of the act of Congress of 1893, the income fell off materially. The board feared that the fees would still further be lessened and about April 1, 1896, dissolved and called on the State to assume control. The board before closing up spent about \$800 to make some ditches in the city, and also to make a clean balance sheet. The following is from the Apalachicola Times of May 26, 1896:

As much criticism has been made, and justly so, upon the action of our county board of health in surrendering their functions and powers to the State board without consulting the people, it is well enough that the public know the facts and see how the people's money has been squandered.

In 1893 an attempt was made by the State board of health to gain control of the boards of health of Franklin and Escambia counties, and also in 1895, but the need and value of these two local boards to the counties named were so plainly shown, and also that they were more than financially able to take care of themselves, that the legislature refused to take away the control of health matters from Escambia and Franklin counties.

In April, 1893, when the first attempt was made, the county board of Franklin had on hand in cash \$1,388, and has since collected up to November, 1895, \$3,700, making in all over \$5,000, which is a large sum of money. Of this sum of money the county board, without a right, spent on the city \$1,000, of which the city refunded them \$240, and but for this unlawful extravagance \$760 on this matter alone should now be in the treasury. Then, again, over \$800 was paid out as salaries to the members of the board of health, of which the secretary alone received \$500 or more. The records show that the secretary and treasurer charged \$10 to \$12 per month for every month for his salary; also \$2 for every meeting; \$20 at times for clerical services, and \$25 to \$40 for making up reports.

Please note that all these charges are in addition to his salary, and it is no wonder that the finances were wrecked. \* \* \*

The personnel of the port at present is as follows: J. D. Rush, M. D., agent of the State board of health, has supervision of the inspection service, under the direction of the State health officer, at a salary of \$10 per month (J. D. Rush, M. D., aged 49, Mobile Medical College 1873, born in Alabama, nonimmune); T. S. Anderson, M. D., at Carrabelle, is to be made a subagent of State board of health to serve under Dr. Rush; Charles H. Lind, quarantine officer, born in Florida, aged 45, nonimmune, salary \$60 per month for the season, he furnishing a boat, a 4-ton sloop. He employs a man to assist in managing the boat, who gets shares from extra duties performed for vessels in the fleets. Mr. Lind receives 50 cents for inspection of small crafts near the town, \$2 for inspections at the channel flag, about 2 miles from town, \$4 for same at upper anchorage, and \$5 for same at Dog Island or at quarantine anchorage, in addition to his regular summer pay. John



R. Blocker, aged 50, Florida, nonimmune, customs inspector, with quarters at Carrabelle, at \$3 per day for himself and boat, is instructed by the collector of customs to aid and assist the quarantine officer in all ways possible, which good scheme, so far as it goes, is an additional safeguard.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

The rules and regulations of the Franklin County board, the fee bill of the State board of health, the "interrogatories" to be answered by masters, the certificate of pratique, and the rules and regulations of the State board are inclosed. It will be observed that the ordered fees are reduced by State board rules to three-fourths their amounts, and that the fee for ballast discharge is reduced from 75 to 25 cents. It will be noticed also that the county board gave prominence to the use by vessels of United States quarantines; in fact, Apalachicola was a patron of Ship Island Quarantine as long ago as 1884. The pratique is formally correct. It is not possible to properly describe "the quarantine proceedings," as changes are being made at the present time. But, in short, Mr. Lind goes on board as soon as he can after the vessel anchors and makes a careful search for sickness in the crew and dirt in the vessel. If he finds sickness in any of the crew that is not supposedly quarantinable, he either conveys the patient to town or sends for Dr. Rush. If the case is suspicious, or if any cases have occurred on the voyage from an infected port, he orders the vessel to Ship Island Quarantine. Under the orders of the Treasury Department all vessels from infected ports have for two summers been required to first go to an equipped quarantine. Now vessels from south of 25° north latitude are given pan fumigation and hand-pump sprinkling, even if the ports are reported as clean. It is apparent that the quarantine officer makes a ship clean, although it is necessary for him to be watchful and alert. This cleaning up of vessels is not quarantine, but may serve a good purpose in marine æsthetics.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

The discharge of all ballast from whatever place into the sea by means of barges or schooners and the cleaning and fumigation of all "below the line" vessels are "requirements," perhaps, "in addition to the Treasury regulations." Sand-ballast vessels must "discharge all and whitewash hold before taking cargo." The "detention" is due to the care and time needed to clean up. It appears to me that much of the formality and sulphuring, with the consequent detention, could be omitted, to no prejudice to the port. The vessels are about 4 miles from any settlement, in any case, but the stevedores' crews must live aboard most of the time while loading. The American schooner *Edna*, Kelly, from Habana, with a clean bill of health (for a few weeks last winter it was possible to give clean bills in Habana), arrived April 13, 1896, was quarantined, fumigated, etc., and held a total of sixteen days, at a cost of \$42.50.

5. State whether the inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.

Inspections have been maintained by the county board for only the Florida board of health rule, i. e., from May 1 to November 15. During the past winter, the county board having ceased to make inspections, the collector of customs, by direction of the Surgeon-General Marine-Hospital Service, instituted an inspection service, employing Mr. Lind for the duty. Thus, in all, twelve inspections were made of vessels from foreign ports at a cost to the United States of \$120. That this action was proper is shown by two instances, viz:

First. The Swedish bark *Maria Margaretha*, from Para, arrived March 25, 1896.



At Para two of the crew and the captain's wife died with yellow fever and two men were left in hospital. The bill of health states that "yellow fever prevails in a mild form, but is not contagious—four or five cases per week and two or three deaths." She had two or three men sick on the voyage up and one man yet very feeble, which the master thought had been a case of yellow fever. She was sent to Pensacola Quarantine (the nearest equipped station), and returned to Apalachicola April-10. The vessel paid a total of \$388 for pilotage, ballast discharge, disinfection, and towing, besides being liable for double pilotage at Apalachicola. This vessel lost about two weeks in time over what she would have lost had she stopped at Tortugas.

Second. The Norwegian bark *Linnea* left Para on March 12. The consular bill of health states: "A few cases of yellow fever and smallpox; yellow-fever cases, 20 or 30 per week; deaths, 4 or 5; smallpox, a few cases. Remarks: Fever mild; not contagious." The vessel put into Barbadoes, having lost two men with fever (one of them a son of the master), and having on board four sick men, who were suffering, according to the health officer's (Dr. Thomas Bowen's) statement, "one with rheumatism, one with diarrhea, and two with fever." In four days the diarrhea and fever cases were quite well, "and the man with rheumatism improving." The quarantine period would be up on the 6th of April, and on the 2d she sailed with a bill of health stating in full the ship's history. She arrived at Apalachicola on April 17. By the local law the vessel was not subject to inspection and, moreover, the county board had disbanded. The collector of customs, acting under Article II of the United States regulations, ordered her to the nearest equipped quarantine (Pensacola) to be "satisfactorily disinfected," from which station she returned on May 13, having paid \$345 for pilotage, ballast discharge, disinfection, and towing, besides losing about three weeks in time. The quarantine officer at Pensacola did not give a certificate of pratique, and the vessel was only admitted on the proof shown by bills for pilotage, towing, and disinfection.

The consul at Para seems to have tried in both instances to give a clean bill of health. Such efforts in the past have made consular bills ridiculous. Every man on board the *Linnea*, except the master (whose son died), had the fever, and the vessel put into Barbadoes in distress, where, presumably—but the bill of health does not say so—more men were shipped. The consul at Barbadoes should have directed the captain to stop at Tortugas or Ship Island, Tampa, or Pensacola. Stopping at Tortugas would have cost him about three days in time only, in the winter season; Ship Island, a longer time with pilotage. By going direct to Tampa or Pensacola there would have been a saving of about two weeks in time; not much in money.

The "treatment" common throughout the year is: All ballast is discharged in Upper Dog Island Cove, and so far none is permitted to come into Apalachicola or Carrabelle. This rule is uselessly strict, and I am aware that good rock or rubble is needed in both places, and its entry would be a benefit if transportation was reasonable.

6. Are vessels from other United States ports inspected?

Vessels from all United States ports are inspected during the quarantine season only. Note the scheme for inspections at four different points in the sound.

7. Describe quarantine procedures in the inspection of vessels and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

The quarantine procedure in the inspection of vessels has been given, but in case the pilot or quarantine officer suspects the vessel is infected, she is ordered to a State or United States quarantine, where there is a fully equipped plant. It is the intention of the community to permit noninfected vessels to enter within



thirty days after infection. For ordinary ballast vessels the time is consumed in getting rid of ballast which must be sailed or towed to sea, and usually takes a week. The vessel is then washed by the crew, and a ten or twelve hour fumigation with sulphur in flat pans is given. The vessels are held five days after the fumigation, during which time she is sprinkled in cabin and fore-castle with mercuric solution. If the ballast was sand, she must have the hold whitewashed.

8. What communication is held with vessels in quarantine (and before quarantine, by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

The communication held with vessels in quarantine is solely through the quarantine officer and his boatman. The pilots generally guide vessels from "south of the line" into the harbors. They are prohibited from going on board any suspicious vessels. Violations are looked after by pilots, the inspector of customs, and stevedore bosses, and are punished by the justice's court quite promptly and efficiently. No intercommunication of any sort, except through the quarantine officer, is permitted between vessels in quarantine. The quarantine officer remains in the fleet about all the time while vessels are undergoing treatment.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

A vessel infected with yellow fever, smallpox, or cholera would be ordered to a State or United States quarantine, all relief being absolutely refused. It is rather difficult to say what would be the condition as to evidence in either case, as neither pilot, quarantine officer, nor port physician would go aboard, and no one who had gone aboard would be allowed to publicly leave the vessel, except, perhaps, the quarantine officer.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

The only records kept of the cases of disease that have occurred during the voyage or on arrival are the "interrogations" which are answered by the master. These have been filed with the secretary of the county board. At present they are filed by the agent of the State board. Hereafter, when the new residence is built on Dog Island, there will be complete records kept. Heretofore there has been no disease on vessels during detention.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

The schedule of State board fees is inclosed, which see. The charges for carrying mails, provisions, etc., to vessels in quarantine are arranged between the quarantine officer's boatman and the master. The vessels pay for removal of ballast such sum as is agreed upon between masters and owners of vessels and ballast schooners in addition to the tax of 25 cents, as allowed in the State board of health regulations. It is thought a change will be made in this matter when the State health board gets properly in charge of the station.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

I find it of no service to make a table showing the arrivals from foreign ports in yellow-fever latitudes via domestic ports, as there were none, except those via United States quarantines. I have made instead a table showing arrivals from clean foreign ports, i. e., Europe; yellow-fever latitude ports, i. e., south of 25° 30'



north latitude, and domestic, i. e., United States ports, and a subtable dividing the first class into Cuba, West Indies, and Brazil; the second into United Kingdom and Continent, and the third into New England and New York and Galveston. Also a table showing that 50 vessels carried ballast and 79 came with swept holds. Except coasters which did not enter at the custom-house, no vessel brought cargo. Apalachicola has a ballast quarantine, and is exclusively a lumber exporting port, and it is probable that the character of its commerce will not change for a hundred years.

*Arrival of vessels at Apalachicola during the year 1895.*

Month.	Clean foreign ports.	Yellow-fever ports.	Domestic ports.	Ballast.	Empty.
January .....	8	10	3	9	12
February .....	7	9	2	7	11
March .....	5	8	3	8	8
April .....	2	8	4	6	8
May .....	1	1	4	2	4
June .....	1	3	4	2	6
July .....	0	3	3	2	4
August .....	0	0	2	0	2
September .....	2	0	4	2	4
October .....	2	0	6	2	6
November .....	1	5	3	3	6
December .....	4	8	3	7	8
Total .....	33	55	41	50	79

*Arrivals of vessels by countries.*

Month.	Cuba.	West Indies and Spanish main.	Brazil.	United Kingdom.	Continent.	New England and New York.	Galveston.
January .....	5	4	1	5	3	1	2
February .....	7	2	0	5	2	1	1
March .....	5	2	1	2	3	2	1
April .....	5	3	0	2	0	2	2
May .....	0	0	1	0	1	2	2
June .....	2	0	1	1	0	1	3
July .....	1	2	0	0	0	3	0
August .....	0	0	0	0	0	2	0
September .....	0	0	0	1	1	0	4
October .....	0	0	0	2	0	1	5
November .....	3	2	0	1	0	0	3
December .....	5	1	2	3	1	2	1
Total .....	33	16	6	22	11	17	24

Small schooners were inspected between May 1 and November 1, 1895, viz: Mobile, 14; Pensacola, 2; St. Andrews, 11; Cedar Keys, 4; Tarpon Springs, 13; Tampa, 6; Key West, 2; New Orleans, 1—a total of 53. The 88 foreign-port vessels had a tonnage of 43,912, and crews, 869. The 41 domestic-port vessels (all United States bottoms) had a tonnage of 19,898, and crews, 326. The flags of the foreign-port vessels were: United States, 27; Norwegian, 19; Swedish, 3; Italian, 2; British, 18; Russian, 17; Danish, 1; German, 1.

The 33 clean foreign-port vessels all carried ballast, as follows: Gravel and sand, 845 tons; stone, 1,065 tons; sand, 4,145 tons; "rubbish," 1,285 tons—a total of 7,340 tons. Of the 55 yellow-fever latitude vessels, 40 had no ballast; 15 carried "rubbish," 150 tons; stone, 470 tons; and sand, 1,490 tons—a total of 2,110 tons. Some trimming and stiffening ballast (all rock) was carried in some of the yellow-fever latitude vessels, which was not put out and is not reported here. One Norwegian bark brought 250 tons of stone and "rubbish" from Habana. It is presumed that the "rubbish" was from old buildings; the stone might have been



dipped in safety. One Norwegian bark brought 170 tons of sand from Matanzas; this could properly have been called suspicious ballast. One Swedish bark brought 180 tons sand from Bahia; suspicious only. A German bark brought 258 tons sand from Para, fully suspicious.

There are in ordinary no good reasons for living in dread of ballast from Guatemala, Venezuela, Guadeloupe, Jamaica, and some other of the "under the line" countries, but owing to the difficulty of immersing sand, as well as injury to the vessel, it is better in general to put it out and reballast or tow to the loading berth. Just what is meant by "rubbish" is difficult to say; in propriety, the word means the useless bricks, mortar, etc., from old buildings. Frequently ballast is taken in Bristol, Greenock, Liverpool, and other United Kingdom ports, which is city garbage from the dumping scows. I believe I was the first quarantine officer to insist on all such filth being put out in quarantine; perhaps I made a precedent that has been too irksomely followed. It is proper to state that the British board of trade has a rule advising against the practice, not so much in the interest of outland ports as in favor of the vessels and their crews.

The first vessel quarantined during the year was a Norwegian bark from Matanzas, which arrived April 24, 1895, with 170 tons sand ballast; schooners with swept holds at the same time were passed. Two vessels were admitted from Habana which had cases of yellow fever at Tortugas United States Quarantine. The American schooner *Nimrod*, which arrived on July 12, having had two cases and spent twenty-three days at Tortugas, was only admitted after telegraphic consultation with the State health officer, Dr. Porter. The second arrived November 11, and perhaps would have been pratiqued in case a long trip had given the 3 sick men a chance to recover. Eight vessels were fumigated in addition to those which discharged ballast and whitewashed holds—1 from Matanzas, 1 from Bahia, 2 from Sagua, 1 from Ceara, 2 from La Guayra, 1 from Pointe a Pitre. It will be observed that the only vessels arriving from Habana in the Florida quarantine season had luckily passed their days at Tortugas.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

The results of my visit to the custom-house convinced me that the collector is a zealous conservator of the public health, and that the sanitary interests of the port might well be left in his hands. There being no immigration through the port, there is no immigration bureau.

14. State whether, in your opinion, the quarantine facilities are sufficient to care for the shipping entering the port.

In my opinion the quarantine facilities are sufficient to care for the shipping of the port. Mr. Lind is an earnest, sober, and observant officer. It would be better if the quarantine officer were a medical man, with Mr. Lind's zeal. It is proposed now by the State health board, which since May 1 has had charge of the port, to erect a dwelling on the eastern and wooded portion of Dog Island, and to have a medical inspector live there during the active season. This will be more formal, and will look better, but I doubt if the income from inspection fees will pay the necessary cost. There will be some additional income from pot fumigations of vessels from south of 25° and from discharge of ballast, under restrictions. I think it possible for all the work necessary to be done by the custom-house officials.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

The Treasury regulations which have not been properly enforced were those relating to inspection of vessels from foreign ports in the winter season. This was corrected by orders from Washington to the collector of customs and the



employment of a temporary sanitary inspector, as before stated. At present, however, the State board has full control and will, in my opinion, properly carry out the United States and State laws throughout the year. The disinfection procedures are not worthy of commendation, but as they have been enforced against practically safe vessels, they constitute "additional rules," and therefore are beyond comment, except, as a hint, there is too much routine quarantining done in all ports. The period of observation is kept to the Treasury Department minimum and frequently runs over. There have been no special examinations for leprosy in winter or summer.

16. Does the certificate of inspection or of pratique signed by the quarantine officer state that the Treasury regulations have been complied with, as required by section 5, act of February 15, 1893? Transmit copy of certificate.

The certificate of pratique conforms to the act of February, 1893. (Copy inclosed.)

17. What disposition is made of the consular bills of health?

One copy has been filed with the secretary of the county board. Hereafter it will be filed with the agent of the State board of health. The other copy is filed by the customs collector as a part of the vessel's entry record. No notes are set in the entry book as to whether a bill was presented or not.

18. Mention any facts which, in your opinion, should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

I have stated all the facts which, in my opinion, should be known to the Department, bearing directly or indirectly upon the quarantine service at Apalachicola. The shifting of the port from the county board to the State board control will result in some changes and will give definiteness to the work performed. I can only recommend that an inspection be again made in August or September, in order that the methods of the State health officer may be reported upon. That all vessels from actually infected ports should call at Tortugas is, however, patent to anyone; but as to whether all vessels carrying sand ballast could be satisfactorily treated at Tortugas or not is a question. My opinion is that sand and earth can be successfully treated without removing all of it, and that efforts in that direction should be made.

MAY 14-16, 1896.

PENSACOLA.

By Surg. R. D. MURRAY, M. H. S.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

Pensacola Quarantine Station consists of a shore station, a crib for noninfected and one for infected vessels. The shore portion is located on a narrow spit of sand and marsh between Little Sabine Bayou, to the south and east, and Santa Rosa Sound, to the north, on Santa Rosa Island. The island is 35 miles in length and runs from west to east, beginning at the mouth of Pensacola Bay. The island consists of silex blown into dunes, partially covered with scrubby live oaks and pines, bay cedar, and other low growths; there are numerous marshy spots on it besides the salt-water indentations. The sound is about 1 mile wide at narrowest place, widening to 2 miles to the east of the station. From southerly points the protection is as perfect as possible. The mainland of Escambia County gives good protection from the north and is about  $1\frac{1}{2}$  miles from the shore and 1 mile from the fleet. The quarantine has been called Leonard Quarantine Station, in honor of Dr. Leonard, who for several years had charge of it and Santa Rosa Island



Quarantine, but the proper title is Pensacola, which is geographical and will lead to no blunders on the part of masters. It is situated 7 miles east of Fort Pickens, which is located on the west end of Santa Rosa Island. Pensacola is 5 miles (air line) distant to the northwest, the sailing distance being 7 miles.

The shore buildings are seven in number. Three were built by the National Board of Health in 1881. Prior to this date the crib for ballast was on north side of the sound and the employees lived in small shanties on the mainland, but in 1882 the physician and assistants moved to the island and rowed across to attend to vessels. One of the buildings is used as an office; one as quarantine officer's residence, four rooms; one as employees' quarters, 20 by 50 feet (former National Board of Health Hospital); one as pilot's and customs officer's quarters; one as engineer's residence; one as hospital, 35 by 80 feet, and one as smallpox hospital. The hospital was built in 1893 and will accommodate twenty patients and the necessary attendants. The smallpox hospital is to be moved farther back from the water's edge, as the washing makes it insecure, or perhaps it will be torn down and replaced by a larger one to the east of the station. It is a single room suitable for six to ten patients. The station is inclosed by a low board fence, and narrow walks connect all the buildings. The irregular group of buildings and the natural tree growth make a pretty picture, but the comforts dreamed of are disturbed by the intense glare of the sun and the reflection from white sand and water and the buzzing of mosquitoes. Prior to 1882 the shore station was on the north side of the sound near where a crib was filled with ballast; the working force moved to the new buildings in 1882, continuing the use of the imperfect north-side crib. In 1883 the Marine-Hospital Service constructed a new and improved crib of 400 by 300 feet, about a half mile from the south shore; this crib had a large area inclosed with sheet piling surrounded by a 20-foot fender. Rock was carefully thrown outside of the sheet piling to protect it, and rock, sand, rubbish, and garbage were thrown inside to fill up the entire area. Here many thousand tons of ballast have been thrown and by judicious additions the pile has increased in size and solidity until the north face has a length of 1,500 feet and the ends are about 500 feet long. Five vessels can discharge at once from the front and one at the east end, leaving the west end for use of vessels desiring fumigation only. Seven vessels can be accommodated at one time. Considering the method of construction of the original crib of 1883 and the additions to it, it is safe to assume that the new island will remain as long as the adjacent island. The first movers in the plan had experience in tumbledown cribs and builded well—I think for all time.

On the west end of this ballast pile is located the boiler house and machinery; toward the east end are the stables and quarters for the ballast crew. This season a dormitory has been built on the west end, south of the boiler house, for accommodation of crews while vessels are undergoing sulphur burning. The ballast is hoisted by the vessels' winches or by horsepower, thrown into carts, and hauled away and dumped to the best advantage for island building, i. e., rock on the margins, sand inside. At present the old and newly arriving rock is being laid in parallel rows from the ends of the crib inshore, so as to make bulkheads for the retention of earth, general rubbish, sand, and garbage in the central portion. This is a scheme for the discharge of countless tons of the land and trash of other portions of the globe.

Inshore are two short landing wharves, opposite the officer's office; the longer one has a launch house on the outer end; the other has a sailboat house. In 1883 and 1884 there was an isolated pier head with a small house on it for deposit of mail and provisions; now there is a larger pier head with a house on it located nearly one-half the distance from the west end of the crib and the shore, where landings are made by the mail launch and where mails and supplies are left to be distributed to station and vessels. A short mile to the east of the main crib is a new crib, 300 by 200 feet, built in 1893, for infected port or ship ballast. This crib gives



excellent chance to separate the dangerous vessels and ballast from healthy vessels without detention or risk to either class.

The limits of anchorage for noninfected vessels are 1 mile or more from east to west and a half mile from south to north. The limits for infected vessels are of the same dimensions to the east, leaving a good mile between the classes. A mile between vessels at sea is greater than necessary for actual safety if nonintercourse is assured. The holding ground is good through the whole area of the sound, and vessels of 20 feet draft can be cared for.

The facilities for inspection of vessels are a naphtha launch, *Uncle Dan* (named in honor of the late secretary of the board, now collector of customs), 27 feet long, which is used for visiting vessels and visiting the storehouse and crib. A good sailboat and several small boats are also at hand—the former in case of very rough weather, the latter in case the launch should be out of order.

The apparatus for disinfection of vessels consists of 5 and 10 gallon pots, in which sulphur is burned, and a hand force pump for such vessels as do not come to the wharf. Those that do come to the wharf are treated with salt water from a steam pump and the solution of bichloride from a tank elevated about 30 feet from the ground.

The apparatus for the disinfection of baggage consists of a Valk & Murdoch steam chamber, cylindrical, 8 by 30 feet, and a hand sprinkler for baggage that can not be put into the steam chest. There is no vacuum gauge or apparatus for making a vacuum in the steam chest. The steam chest has a high-degree thermometer for noting the temperature, located at the closed and hot end of the cylinder. The steam cylinder is five years old, and somewhat rusty. The boiler is of same age, and, although in good condition, can not last much longer without extensive repairs. There is no clock or timepiece for noting the time after reaching the proper temperatures. There is no chamber for sulphur dioxide for treating such containers as are brought to the boiler house or for treating articles from on board that should have such treatment.

The facilities for removal and treatment of the sick consist of numerous boats, already referred to, and a hospital capable of accommodating twenty patients. At present the hospital is not furnished, but I gave advice as to where and what to purchase.

The facilities for removal and detention of suspects are none. Suspects will be kept on board. The managers of the station have never considered the subject of cholera or passengers, as has been done at New York and Delaware Breakwater.

The mail facilities are daily from Pensacola by means of the cabin launch (naphtha) *Genevieve*, about 40 feet long, which leaves Pensacola every morning, except Sunday, at 7 o'clock, bringing mail and supplies to the station. Extra trips are made when necessary. The telegraph facilities are by the same means, extra trips of the launch being paid for by the party favored. The launch is well suited for the purpose, being capable of carrying a large load, as the cabin is strong and the room ample.

The water supply is from the roofs of buildings, saved in wood cisterns; sufficient for station. At times it is necessary to send for a Pensacola water boat to supply vessels and to replenish the cistern on the crib. In 1882 on shore and in 1883 at the crib ineffectual efforts were made to drive wells. A local supply of potable and boiler water would be a great convenience.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

When the county boards of health were abolished by State law in 1891, Escambia and Franklin counties were exempted by a proviso permitting ports that had 100 sail vessels in the preceding year to continue to have local boards and to conduct their own quarantines, only being subject to the State board laws as to fees and general regulations. The Escambia County board of health consists of B. R.



Pitt, president, at \$100 per month; Alexander Grant, secretary and treasurer, at \$75 per month, and F. G. Renshaw, member, all appointed by the governor. Extract from a special to the Citizen (newspaper) of June 8, 1896: "The Escambia County board of health is composed of three members, B. R. Pitt, Capt. Alexander Grant, and Dr. F. G. Renshaw. Mr. Pitt is president and Captain Grant is the secretary and treasurer. The annual meeting and election of officers was held yesterday. All of the members were present, but when the election of officers was declared to be in order, Dr. Renshaw's request to be excused was granted, and he retired. Captain Grant then nominated Mr. Pitt as president for the ensuing year. Mr. Pitt seconded the nomination and declared himself elected. Captain Grant then took the chair, and Mr. Pitt nominated him for secretary and treasurer. Captain Grant seconded the nomination, and then declared himself elected." This body has an office and a force of clerks, and sanitary inspectors to attend to the quarantine records and vital statistics and the condition of the city. The expenses are borne by the surplus receipts from the quarantine and ballast cribs. Using the receipts from the vessels for the sustenance of the local board and for the sanitation of the city has been a cause of outside criticism and local wrangling for years. The policy is doubtful, even if the justice of the practice can be maintained. It is hardly probable that so thriving a place as Pensacola gets her prosperity from the \$4,000 to \$7,000 profits of quarantine fees, and it is fair to believe that if the proceeds had been annually applied to the improvement of the station the fame of the port would be worldwide as having a cheap, expeditious, and perfect system of maritime sanitation.

R. C. White, M. D. (Kentucky, aged 64, immune, University of Louisville, at \$225 per month, with subsistence during season), is quarantine officer. He lives at the station during the six and one-half months and visits vessels from the city during the winter. E. S. Buckingham (New York, aged 55, immune, at \$50 per month, without subsistence) is the engineer of the disinfecting plant. A competent man. He lives at the station the year round, and has his wife and two children with him, who cook for other employees. The board of health allows him \$10 per month for subsistence for each of five employees. Henry Phillips (Florida, aged 23, nonimmune, at \$30 per month for season and subsistence) serves as captain of station launch and is foreman of the fumigation and cleaning of vessels. Charles Harris (Florida, aged 23, nonimmune, at \$35 per month, with subsistence) serves as engineer of the station launch. Frank Phillips (Florida, aged 21, nonimmune, at \$30 and subsistence) is boatman and assistant in fumigation. John Ketchum (Florida, aged 22, nonimmune, at \$30 per month, with subsistence) is fireman. Frank Pericola (Italy, aged 38, immune, at \$30 per month, with subsistence) is boatman and ballastman; has wife and child at station. Baldore Landseller (Louisiana, aged 50, immune, at \$10 per month, with subsistence) is quarantine officer's orderly. Two colored women are at the station, one of whom cooks for the quarantine officer and customs inspector; the other does washing for all who wish it done, including masters of vessels, on her own account. At present two men are employed in shifting rock from the crib to extend the ends inshore. These do other station work when they are so directed. Antony Riera (Florida, aged 50, immune, at \$50) is captain of the cabin launch *Genevieve*, which makes the trip from Pensacola. Richard Guino (Florida, aged 40, immune, at \$75 per month) is engineer of the *Genevieve*, and also, on occasion, repairs the launch *Uncle Dan*. All employees except Buckingham are discharged at close of the season. Ballast shifters: Russell Robinson has charge of Wood & Northrup's contract at, \$45 per month, for discharging ballast from vessels. He has seven men employed now, with eleven horses and ten or twelve serviceable carts. The men are colored boys, picked up anywhere, and are well off employed on the crib, but are frequently dissatisfied with the isolation. They are supposed to be nonimmune. They get \$25 per month and "chip in" for their food. The total



number of officers and employees at this date is twenty, including the very necessary ballast shifters.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

Inclosed are the rules and regulations of the Escambia County board of health and of the State board of health, with the master's declaration. The quarantine customs of the port as they are carried out are that every vessel which arrives must in summer go to the station for inspection. If from an infected port, or from south of 25° 30' north latitude, or has been in an infected port within sixty days, the vessel must be disinfected. If unclean or garbage ballast is carried it must be put out in quarantine even if the vessel is from the United Kingdom or Continent. All ballast of whatever kind from "south of the line" must be put out at quarantine the year round, as a rule. During the winter all foreign port vessels are inspected from the city wharves. Vessels with offensive ballast or from infected ports are remanded to the station to be put in good sanitary condition. The quarantine officer is given almost complete authority as to the disposition of a vessel, and he is exceedingly strict in his notions of what constitutes a "clean" vessel.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

The discharge of ballast from many noninfected southern ports in wintertime in quarantine; the holding in quarantine of vessels from South Africa; the discharge of sand ballast from vessels from continental ports which suffered with cholera three years ago; the remanding to quarantine or holding of vessels from northern European ports carrying garbage ballast, and the requirement of lime washing of all wooden holds and most of the iron holds are procedures enforced at the port in addition to the requirements of the Treasury Department. It is not always a hardship for a vessel to go to the ballast crib, even in winter, as there the vessel can be discharged of ballast and cleaned up quickly, and usually at lower price than in the city. The crew is compelled to remain with the vessel, and there are no delays attributable to the desire of the merchant to delay the vessel for his own convenience. In fact, many masters request to be "sent over," being willing to pay the towage in order to gain dispatch. It must be noted, however, that it is to the advantage of the local board to have vessels discharge at the crib, as thereby the receipts are increased and the crib island is made larger.

I think there is undue and unnecessary detention and disinfection of vessels in many instances, but it would require a long residence at the port to state the full reasons for my belief. Whether there is an average of needless "detention" or not is doubtful, for consignees are not given to hastening the preparation of a vessel for a cargo when said cargo is not in sight. The cost of towage from the city to quarantine varies with competition, but will average \$25 per vessel.

5. State whether the inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.

Inspection of vessels is maintained throughout the year, except that those from United States ports are exempted during the winter (five and one-half months), unless they have been in an infected port within ninety days. The treatment of vessels enforced throughout the year has been answered under No. 4. The ballast disposition is in the greatest measure left to the discretion of the quarantine officer, in summer at the station and in winter at the city; but his actions are subject to the approval or dissent of the board of health.



6. Are vessels from other United States ports inspected?

Vessels from other United States ports are inspected during the quarantine season. Those from Florida pay no fee if one has previously been paid in the State.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection; (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

The quarantine procedure in the inspection of a vessel consists of a careful examination of the vessel (the doctor goes through all parts of a ship) and a view of everyone on board. The bill of health is read, the crew list read, and compared with bill of health as to number of men. The mate's and the official logs are glanced over for the past sixty days to verify master's statements as to ports visited and cases of sickness which may have occurred. All this is very complete and should give the best results; unfortunately no notes are made and subsequent disputes must be settled by memory—which is not always a good dependence. If the vessel is infected the vessel will be sent to the upper crib for discharge of ballast, if she has any, or near there, if she has no ballast, for separation from the fleet. The sick will be carefully carried ashore to the yellow-fever hospital. As late as 1893 such vessels were ordered to Ship Island, and it is probable that public commotion will compel such action now in case more than one or two men are sick or more than one infected vessel arrives. The time in quarantine between arrival and disinfection for ordinary vessels is from arrival until next morning, the quarantine officer disliking to put in the pots in the afternoon; but a ballast vessel is put to the wharf at once, or as soon as possible for discharge of ballast, which will take more or less time, varying with the character of the flags and mates. If infected and with ballast, after the sick men are removed a preliminary fumigation will be given; the clothing and bedding will be put in the steam chest at the first chance to stop work on the vessels that are discharging ballast, so as to have all men away from the boiler house or to insist on no loafing around the crib during the steam process.

The time occupied by disinfection is, for clothing and bedding, about three hours for each vessel; generally for square riggers 2 chestfuls will suffice, but for steamers with crews of 25 to 40, always 3, sometimes 4, steam charges are necessary. The burning of sulphur in the pots is begun as early in the morning as possible, generally by 7 o'clock, and is kept up till sundown. If infected, the hatches will be kept on until the expiration of the time prescribed in the Treasury regulations. The time after completion of disinfection until discharge is strictly five full days after, and discharges are given for the very hour the time is up. For other suspected diseases than yellow fever the times prescribed in the Treasury regulations will be given. The chief work is done early in the morning, so that the men may have plenty of time to spray the containers and articles that will not bear steam or sulphur dioxide during the afternoon. It will be noticed that the available station force consists of but five men, and of these the engineer and fireman must remain in the boiler house. The excellent arrangements for ballast discharge enable from five to seven vessels to unload at one time. There is rarely more than a half a day lost to any vessel after arrival, and that will be on account of her arrival too late for treatment that day.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

The communication held with vessels in quarantine is solely through the quarantine officer or his boatmen. Persons of one vessel are prohibited from visiting any other vessel. Masters of vessels which have been treated are allowed to visit



the office to procure their mail and telegrams. The matter is regulated by definite orders and close watching. The communication of pilots before quarantine is prohibited if the vessel has sickness on board, the pilot guiding the vessel in. Nearly if not all the Pensacola pilots are immune, and if one goes on board he is detained at the station until his clothing has been disinfected. If perchance he is nonimmune, he will be detained from five to seven days at the expense of the vessel. There is no intercommunication allowed among vessels in quarantine except that masters may meet on shore after their vessels have been treated.

Every morning when the mail and supplies arrive on the launch *Genevieve* the mail is assorted by the quarantine officer; that for vessels not disinfected is given to men on the launch *Uncle Dan*, who take it and the supplies and deliver the same to the proper vessels. In case of vessels undergoing detention, the vessels' boats go to the supply pier head for the respective supplies, and the masters go to the office for mail and orders. Crews are forbidden to get in each other's boats. If a crew is given permission to stroll on the beach, no other crew can go at the same time.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

A vessel infected with cholera would be treated in accordance with the Treasury regulations, but it is probable that public clamor would compel a resort to a Government station. A vessel infected with yellow fever would have her sick men taken ashore and cared for in the yellow-fever hospital, and the vessel would be sent to the upper ballast crib, where she would receive a preliminary fumigation. Suspects or nonimmunes would be left on board. After the ballast was put out the vessel would be thoroughly washed, refumigated, and have her hold lime washed. At a convenient time the clothing would be disinfected with steam. A vessel infected with smallpox would be treated in a similar manner, with the addition of vaccination of crew, as soon as virus could be obtained, and an increased detention. The conditions regarded as giving evidence of the vessel's infection in each case would be the existence of sickness on board at the time, or that such sickness had occurred on board in the last port or on the voyage since the last quarantine treatment. But vessels are held coming from ports where yellow fever at least has not been known.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

No records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention. The declarations of masters as to circumstances occurring on the voyage are sent to the office at Pensacola. No medical officer's journal is kept, and the only records at all are the daily reports of the quarantine officer to the board of health. When the new yellow-fever hospital is fully furnished it is probable that a system of records will be instituted. The quarantine officer has, however, a wonderful memory and can quite accurately recount the disabilities of a vessel for several years after. The records in the office of the county board are admirably kept, and transcripts of the work of the quarantine are sent monthly to the State board as a compliment to that body.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

The schedule of fees as allowed by the State board of health is inclosed. In addition, vessels pay 8 cents per ton for hoisting ballast, if a horse is preferred to making the crew work on winches. About three-fifths of the vessels hire the hoisting done. A charge of 17 cents per ton is made for hauling the ballast from the ship's



side to the south side of the crib; this is compulsory, as no master could afford to have his crew carry off the ballast in baskets or wheelbarrows. This ballast money goes to Wood & Northrup, who got the privilege under proposals, and keep the men, horses, and carts at the crib. Three years ago the rates were 10 cents for hoisting and 15 cents for cartage. The vessel is required to pay for a barrel of lime with which to lime wash the hold. All supplies brought out by the launch *Genevieve* have freight charged to the vessel for which they are destined. Extra trips of the launch are charged for, but I did not learn the amount.

Vessels requiring part of their cargo as stiffening must pay for the towage of the lumber from the city to the quarantine and for return of the barge. Vessels requiring ballast logs must pay from \$10 to \$15 for the use of the logs. The station and board have nothing to do with the last two items. There are no harbor dues for vessels coming for quarantine treatment only. The charge for towing a vessel from the city to quarantine in winter is from \$20 to \$40, but the quick handling generally compensates the owners. There are no tonnage dues or wharfage charges per se. Vessels which go to the upper crib do not pay for hoisting or hauling, but are charged as the others, 25 cents per ton for the privilege of discharging ballast.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

I find it useless to make a statement giving only the three classes mentioned, as Pensacola has few vessels from yellow-fever latitudes via domestic ports. I have, therefore, made a table showing the number of vessels from Europe, i. e., clean foreign; from the Mexican Gulf, South America, and Africa, i. e., yellow-fever latitudes, and from United States ports, i. e., domestic; and another table subdividing the clean foreign into United Kingdom and Europe; the yellow-fever latitudes into Cuba, West Indies, and Spanish Main, or the west and south shores of the Gulf of Mexico and the Caribbean Sea, Brazil and below, and Africa. Other tables are given, showing the flags, rigs, crews, and tonnage, to indicate in a poor way the character of the commerce. As footnotes to the tables I give a résumé of each month's quarantine work, which should be read in connection with the tables.

TABLE 1.

1895.	Clean foreign.	Yellow fever.	Domestic.	Ballast.	Cargo and empty.
January.....	38	9	12	48	11
February.....	22	18	9	34	15
March.....	17	20	9	33	13
April.....	14	8	17	27	12
May.....	17	20	17	39	15
June.....	19	17	17	40	13
July.....	8	12	9	22	7
August.....	5	11	5	19	2
September.....	12	4	11	20	7
October.....	18	7	10	28	7
November.....	19	13	14	36	10
December.....	19	19	10	34	14
Total.....	208	158	140	380	126

NOTE.—The domestic port entries exceed the domestic entries of United States bottoms by 26, that number of foreign vessels having called to complete cargo or to procure bunker coal. "Cargo and empty" column is given to show the quarantine work. All steamships (97) had water ballast, but are classed as ballast vessels.



TABLE 2.

1895.	Cuba.	West Indies and Spanish Main.	Brazil and below.	Africa.	Continent.	United Kingdom.	Domestic.	Total.
January .....	3	3	4	1	15	21	12	59
February .....	6	7	4	2	4	17	9	49
March .....	8	9	2	1	9	8	9	46
April .....	3	1	4	0	13	1	17	39
May .....	2	10	3	5	10	7	17	54
June .....	1	7	4	5	11	8	17	53
July .....	3	2	3	4	2	6	9	29
August .....	3	1	6	1	3	2	5	21
September .....	1	1	1	1	7	5	11	27
October .....	1	3	3	0	7	11	10	35
November .....	2	5	6	0	4	15	14	46
December .....	5	6	7	1	8	11	10	48
Total .....	38	55	47	21	93	112	140	506

TABLE 3.

1895.	Steamships.	Ships.	Barks.	Schooners.	Tugs and barges.	Passengers.	Crews.	Tonnage.
January .....	6	1	41	9	2	5	772	44,114
February .....	4	6	26	12	1	8	651	34,379
March .....	4	2	29	10	1	12	609	31,961
April .....	10	2	20	6	1	3	615	34,434
May .....	10	4	22	14	4	16	750	44,268
June .....	15	2	27	9	0	7	780	51,796
July .....	8	4	15	2	0	7	530	31,503
August .....	8	2	9	2	0	2	364	19,843
September .....	9	2	12	2	2	3	440	26,416
October .....	8	2	19	6	0	28	514	30,265
November .....	8	4	27	7	0	3	690	33,831
December .....	7	2	28	11	0	5	627	35,066
Total .....	97	33	275	90	11	99	7,342	417,876

NOTE.—It is worthy of notice that nineteen-twentieths of the vessels, crews, and tonnage of this table represent original work, but few vessels returning the same year. Pensacola has no regular lines to give frequent inspections to and thus increase the number of crews and tons, as is done at stations where there can be frequent duplication with little anxiety or care on the part of the officer. The passengers listed were nearly all the wives and children of masters.

TABLE 4.

1895.	United States.	British.	Norwegian.	Swedish.	Danish.	Russian.	German.	Italian.	Spanish.	Austrian.	Others.	Total.
January .....	9	10	13	1	1	8	1	13	0	2	1	59
February .....	12	7	16	1	4	2	0	5	1	1	0	49
March .....	12	5	10	4	2	6	1	1	2	3	0	46
April .....	8	8	5	0	1	1	0	11	2	3	0	39
May .....	19	12	12	2	0	1	0	7	0	1	0	54
June .....	8	21	7	2	0	2	1	9	1	1	1	53
July .....	7	14	2	1	0	1	0	2	0	0	2	29
August .....	3	2	10	0	0	0	1	2	0	0	0	21
September .....	5	2	11	0	2	0	0	3	0	0	0	27
October .....	7	7	13	0	0	2	1	3	0	2	0	35
November .....	11	13	11	0	0	2	0	9	0	0	0	46
December .....	15	5	7	0	0	4	0	16	1	0	0	48
Total .....	116	111	117	11	10	29	5	78	10	15	4	506



## QUARANTINING AND BALLAST, 1895.

*January.*—23 vessels brought 2,255 tons stone ballast, 28 vessels brought 6,656 tons earth and sand ballast, 12 vessels brought 3,100 tons rubbish and garbage ballast, 5 vessels put out 1,500 tons rubbish and garbage ballast from the United Kingdom, in quarantine; 1 vessel put out 330 tons sand from Vera Cruz, in quarantine; 3 vessels from Rio discharged ballast in quarantine and were fumigated. Steamers all came with water ballast or transit cargo.

*February.*—17 vessels brought 2,718 tons stone ballast, 20 vessels brought 4,804 tons earth and sand ballast, 8 vessels brought 2,250 tons rubbish and garbage ballast, 7 vessels put out 2,000 tons rubbish and garbage ballast from the United Kingdom and Continent in quarantine; 1 vessel had to put out 100 tons Bahia sand in quarantine, although she hailed from the United Kingdom; 2 vessels from Cuba were disinfected.

*March.*—17 vessels brought 1,800 tons stone ballast, 24 vessels brought 4,000 tons earth and sand ballast, 6 vessels brought 1,180 tons rubbish and garbage ballast, 6 vessels put out 1,180 tons rubbish and garbage ballast in quarantine, 5 vessels put out 830 tons earth and sand ballast in quarantine, 5 vessels put out 305 tons stone ballast in quarantine, 8 vessels were disinfected in quarantine; 1 vessel from St. Thomas was put in quarantine.

*April.*—13 vessels brought 1,891 tons stone ballast, 12 vessels brought 3,080 tons earth and sand ballast, 4 vessels brought 760 tons rubbish and garbage ballast, 7 vessels put out in quarantine 810 tons rock, 300 tons earth and sand, and 760 tons rubbish and garbage; 9 vessels were subjected to quarantine; 3 steamships called for bunker coal.

*May.*—17 vessels brought 2,160 tons stone ballast, 12 vessels brought 2,616 tons earth and sand ballast, 13 vessels brought 3,220 tons rubbish and garbage ballast. All the ballast vessels except 3 from the Baltic put ballast out in quarantine; 5 vessels from the United Kingdom put out rubbish and garbage in quarantine; 1 vessel from Rio via Tortugas Quarantine, with 500 tons of rock which had been immersed in regulation bichloride solution, had to put the rock out in quarantine; 29 vessels were subjected to quarantine.

*June.*—8 vessels brought 1,620 tons stone ballast, 7 vessels brought 1,532 tons earth and sand ballast, 14 vessels brought 4,693 tons rubbish and garbage ballast; all the ballast vessels put ballast out in quarantine except 2 from the United Kingdom with stone and earth; 6 vessels were held to discharge ballast and clean up; 1 vessel which had been disinfected at Tortugas Quarantine was pratique; 33 vessels were subjected to a quarantine.

*July.*—6 vessels brought 1,276 tons stone ballast, 7 vessels brought 2,040 tons earth and sand ballast, 6 vessels brought 1,895 tons rubbish and garbage ballast, 1 vessel with 196 tons stone from United Kingdom was pratique, 6 vessels with rubbish and garbage from United Kingdom, Continent, and Boston were required to discharge in quarantine; all ballast except 196 tons was discharged in quarantine; 19 vessels were subjected to quarantine, including 1 which had been to Ship Island Quarantine.

*August.*—5 vessels brought 1,125 tons stone ballast, 7 vessels brought 1,976 tons earth and sand ballast, 1 vessel brought 5 tons rubbish and garbage ballast, 1 vessel from Cuba, via Tortugas Quarantine, was pratique; 18 vessels were subjected to quarantine.

*September.*—5 vessels brought 435 tons stone ballast, 9 vessels brought 2,210 tons earth and sand ballast, 3 vessels brought 960 tons rubbish and garbage ballast; all ballast, whether from United Kingdom, or Continent, or yellow-fever latitude, was put out in quarantine; 14 vessels were subjected to quarantine.

*October.*—8 vessels brought 510 tons stone ballast, 15 vessels brought 3,800 tons earth and sand ballast, 6 vessels brought 1,590 tons rubbish and garbage ballast. All the ballast was discharged in quarantine except 40 tons stone and 260 tons earth and sand from Norway and Germany; 23 vessels were subjected to quarantine treatment.

*November.*—14 vessels brought 2,194 tons stone ballast, 15 vessels brought 4,010 tons earth and sand ballast, 10 vessels brought 3,136 tons rubbish and garbage ballast, 6 vessels discharged 1,305 tons stone in quarantine, 6 vessels discharged 1,685 tons earth and sand in quarantine, 9 vessels discharged 2,716 tons rubbish and garbage ballast in quarantine, all of which came from the United Kingdom and Continent; 20 vessels were subjected to treatment in quarantine.

*December.*—15 vessels brought 3,120 tons stone ballast, 9 vessels brought 1,630 tons earth and sand ballast, 10 vessels brought 2,080 tons rubbish and garbage ballast, 7 vessels, 5 from the United Kingdom and 2 from the Continent, put out 1,720 tons rubbish and garbage in quarantine; all vessels from Cuba and Brazil were fully treated in quarantine; 19 vessels were subjected to treatment in quarantine.

I have made an effort to class and distinguish ballast, but have not succeeded as well as I hoped to. In fact, it is uncommon for quarantine officers to give good descriptions of it. Dr. White does better than some others, but his habit of calling almost everything he don't like "rubbish" evidently prevents an estimate of the actual rubbish and makes a seeming increase of the garbage and city offal frequently brought from United Kingdom ports. Ballast should be clearly described, and the amounts of each sort should be recorded. The classes are water; stone and rock, including rubble and large gravel, and the kind should be noted; earth, i. e., soil dug expressly for ballast purposes, which usually has an admixture of sand and rock; sand, taken from sea or shore; rubbish, the bricks, stones, mortar, cement, etc., from torn-down buildings; broken tiles, either old or new, may in fairness be called rubbish, but it is not easy to get enough at one time for full ballasting; slag from furnaces, and garbage, or the city offal taken from scavenger scows is clearly rubbish.

It is well enough to be certain of the origin of the sand ballast, but ordinarily it is harmless. Garbage should always be sent to quarantine and vessels should always be required to pay for putting it out, as the original cost is always a shilling or less per ton. Rio rock costs now \$1.75 per ton; the cheapest it has ever



been was \$1.50; sometimes \$2.50 is paid. Habana rock costs over \$2 per ton. Sand and earth cost from 50 cents to \$1 per ton.

The claim or fear that garbage ballast will cause yellow fever is untenable, but I have known crews to suffer pretty generally with nausea and diarrhea when on board with it, and have often seen men sicken while discharging it. The British Board of Trade some years ago advised against the use of garbage as ballast, but rather in the interest of shipowners than for the benefit of the crews or the people of the United States or Canadian ports, to which the vessels were bound. But the fact that the nastiest ballast comes from a noninfected country does not warrant its free pratique; neither that because some ballast is bad in itself should all ballast be put out under surveillance. The ballast business should be simplified or reduced to some system.

An "empty" or "swept hold" vessel is not "in ballast," even if the custom-house clerks do record them so. The small quantity of wood which has been used as dunnage for a previous cargo is not ballast, and can be effectually and quickly disinfected with the hose.

Of the foreign-port vessels entering for 1895, 16 had part cargoes chiefly as ballast, viz, 4 brought cement, 2 shells, 1 mahogany, 6 salt, 1 lime, 1 brick, and 1 sugar.

Pensacola has a ballast quarantine and receives empty vessels as a rule. Her exports of coal promise to be a feature of commerce in the near future. Perhaps some compromising with shippers and some loosening of restrictions against several Gulf and West Indian ports would develop a respectable coal trade. The importance of the port depends on her enormous shipments of lumber and timber, and in consequence it is rare that a vessel goes away empty.

During the year 1895 17 sailing vessels stopped at Barbadoes "for orders." Fifteen of these were from lower South America and Africa, where the actual clearances of the vessels were procured. It will be interesting to inquire if the proper tonnage tax of 6 cents was collected in these cases. It is a rule for vessels to call at Barbadoes "for orders" only, pay a small sum for entry and a clean bill of health, and then proceed to the United States, hoping to evade quarantine, in which they always fail, and to save 3 cents per ton at the custom-house, in which they often succeed.

13. State results of your visits to (a) the custom-house; (b) the immigration bureau.

I found the collector of customs very desirous to aid the quarantine and to do all in his power to protect the health of his people. His long experience as secretary of the county board has made him a much-interested and very able aid to the maritime sanitation procedures. In fact, it would be better for the peace of the city and the authority of the quarantine officer if he, and not the local board, should be the final arbiter on quarantine matters. There is no immigration bureau, nearly all vessels coming in ballast or empty.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

In my opinion the quarantine facilities are sufficient to care for the shipping of the port, and to care for twice as many vessels as have come to it. The location is safe, easy of access, and far enough from the mainland for absolute safety, even if a variety of pests were present. The port being a ballast port, there is need for a large ballast wharf; it is difficult to conceive of a station where both classes of vessels can discharge at one time; eight in all.

With some concessions on the part of the pilots (they should charge but one rate in such cases) and the tugboats, the station could do the disinfection work of Mobile and Apalachicola. During last March and April two vessels were ordered here from Apalachicola, but the loss of time and extra charges ran the expenses to a high figure in each case.



15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

The quarantine regulations of the Treasury Department which are not properly enforced include the nonuse of the acid solution of bichloride of mercury; the bichloride is dissolved in salt water at about 1 to 1,000; it is doubtful if it is so strong, but a large quantity is used, which may answer for strength. The time of keeping the cabins and forecastles and holds closed for the different classes of vessels is not observed. Twenty pounds of sulphur to the 100 tons is placed in the vessel in pots. At the end of from nine to twelve hours the vessel is opened up. The sulphur is burned, but the gas escapes freely when the hatches are removed. But the vessels thus treated were not infected. An infected vessel would get a longer time. The retention of clothing and bedding in the steam chamber for thirty minutes after 105° C. is reached; the custom seems to be to throw in the steam when the chamber is at 200° F., and when the valve opens, to open the chamber at once. In two instances the time from closing to opening was but twenty minutes. It may be claimed in answer that the articles were not from an infected ship, and that the ship was not from an infected port, and that the process was in addition to the minimum of the United States regulations. If so, why treat the vessel at all? But I have reason to believe that a vessel in a condition to be actually dangerous would be effectually treated.

The period of observation after disinfection of vessels is observed very strictly for all vessels. It has been the custom at Pensacola to hold vessels "full ten days," and a few years ago twenty-five days after discharge of ballast was insisted on for all vessels from south of 25° 30' north latitude. Public sentiment in Pensacola would compel the board to hold the vessels the minimum period of observation if there was no other power which it held in awe.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

No. Copy inclosed.

The certificate of the quarantine officer states that the vessel's condition is good, crew healthy, no one has leprosy, and the ballast is clean, and that he "recommends" that the vessel be given pratique. The actual pratique is given by the president of the board. In view of this form, the quarantine officer considered it to be the duty of the board to make any changes in the blanks. He would have used the official certificates if they had been supplied to him. How much the collector of customs is to blame for this oversight I do not know, but I do know that more attention is paid to the rules and edicts of the local board than to the Treasury regulations.

17. What disposition is made of the consular bills of health?

One is filed by the board of health; the other filed with the ship's papers in the custom-house.

18. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

The facts which in my opinion should be known to the Department bearing directly or indirectly on the quarantine service must be given in some comments, viz: In May, 1895, I thoroughly cleaned up the British ship *Jennie Burrill*, which arrived at Tortugas Quarantine with a convalescent case of smallpox. On her arrival at Pensacola she was again quarantined because the officer did not believe 580 tons of granite ballast had been or could be dipped. But I know the rock was immersed, piece after piece, and know, what is the better to know, that the vessel, crew, and ballast were absolutely free from danger to any port or people.



The Norwegian bark *Lucy Rippon* arrived at Ship Island April 28, 1896, from Buenos Ayres with stone and sand ballast and clean bills. She was by law, rule, and custom duly inspected and given an official "certificate of pratique." The vessel went to Pensacola and was the first vessel of the season to be sent to quarantine and detained; there the ballast was designated as "rubbish." It is pertinent to ask the meaning of the paragraph in section 6 of the act of 1893, which says, "and after certificate shall have been given by the United States quarantine officer at said station that the vessel, etc., are free, etc., said vessel shall be admitted to entry to any port of the United States named within the certificate." The fact is that the quarantine officer, as well as the local board, distrusts the work of the United States quarantines, and they feel it incumbent upon them to do better, even if more fees do accrue. The frequent instances of disrespect to other local and to United States quarantines should be checked. A careful reading of the law of February 15, 1893, and the United States Treasury regulations relating to quarantine will be productive of more respect for other people's feelings than anything I can suggest.

The presence of a customs inspector at the station has been a feature of this quarantine for fifteen or more years. As the inspector is not empowered or able to expedite a vessel's progress and can serve her in no wise and his inspections are not given full credence at this port of entry his presence seems unnecessary. The duties on all the smuggling in quarantine possible in ten years will not amount to a month's pay of an inspector. The cost of the whole business finally falls on the people. Long ago I knew of the wastefulness and uselessness of having a customs inspector in a ballast quarantine, but until now have had no opportunity to say a word against the practice. It is a simple matter to have the quarantine officers sworn to observe and obey the customs regulations. It is inconceivable that any medical officer will engage in smuggling or permit it to be done. The customs inspector now on duty at Pensacola Quarantine is a gentleman and a good officer.

Pensacola has good reasons to be proud of the success of her quarantine service since 1883, but it is my conviction that too much attention has been given to its workings by the people on the sidewalks, and that the frequent allusions to the work and methods have tended to disturb and fret the people to such a degree as to make the local control a public nuisance. It is impossible for the profits of the inspection fees and ballast dues spent in the city and for the city to compensate for the strifes, doubts, fears, and contentions which are sure to come from local control. The ridiculous scare of 1893 is easily reduced to a doubt of the efficiency of the quarantine; the city lost in that year as much as the profits of ten years could amount to; the General Government lost enough to conduct the station a year; the worry of the fear stricken and baggage losers and hastily absented householders might be estimated in damages, but not in money. The less that pests, fevers, and other outside or inside diseases are talked or written about by the public, the less will the timid and excitable suffer and the less will public confidence and business be disturbed. It is not well for a community to go into the quarantine business for revenue.

The quarantine officer is very energetic and does what he thinks to be his duty with a zeal worthy of imitation. Were he under the pay of a body removed some distance from him and able to release as well as to confine a vessel, he would do as good work as now. An efficient quarantine officer is not easily procured. The position is no sinecure if duty is done and the results of safety and confidence are obtained.

*Recommendations.*—(1) The Pensacola Quarantine should, at present, be placed under the control of the Florida State board of health; finally under control of the Treasury Department. (2) There should be inspections at or near Fort Pickens to enable vessels to go direct to the city instead of going 7 miles out of their course; but when there is no charge for towage this improvement is practically



useless. (3) The quarantine officer should have a medical assistant, as the duties are too onerous for one man. The assistant should be capable of keeping the accounts of the station. No sick or disabled seamen should be permitted to go to Pensacola. (4) The customs inspector should be transferred to Pensacola. (5) The collector of customs should be instructed to honor United States quarantine officer's pratiques, and to insist on the prescribed certificate. (6) The weekly transactions should be published in the public health reports. (7) The station should be inspected in midseason.

NOTE.—The variations between the printed laws and rules and this paper have been considered. I have tried to describe the present procedures.

JULY 10, 1896.

[Board of health of the county of Escambia, State of Florida.]

#### QUARANTINE RULES AND REGULATIONS.

*Be it resolved by the board of health of the county of Escambia, State of Florida:*

First. From and after the 1st of May, 1891, and until the 15th day of November, 1891, no vessel of any class or description having epidemic, contagious or infectious diseases on board, or having had such during any portion of the voyage, or for three months prior thereto, and seeking to enter the harbor of Pensacola, shall be permitted to land any passengers or crew, or discharge ballast or cargo, or to load cargo in the Bay of Pensacola, or to hold any communication with any other vessel or person or the shore.

Pilots must, and hereby are required, in each case before boarding a vessel desiring to enter the Bay of Pensacola, to make inquiry as to the sanitary condition of the vessel, and in no case must they board if the vessel has contagious or infectious diseases aboard, or has had the same during the voyage. In all such cases the pilot must direct said vessel to the nearest United States quarantine or refuge station.

Second. Between the 1st day of May and the 15th day of November, 1891, all vessels of whatsoever class or description, arriving from foreign or domestic ports (directly or indirectly) where yellow fever, cholera, or smallpox prevailed at the time of the vessel's departure, and seeking to enter the harbor of Pensacola, are required to have crews acclimated to yellow fever; are also required, if in ballast, that the ballast shall be clean rock taken in at a noninfected port, or water ballast fresh from the open sea; are also required, should said vessels be from any port of the Island of Cuba, that said vessel should have entered and departed from said port on the Island of Cuba between sunrise and sunset of the same day. Vessels which do not comply with above requirements will be refused pratique between the dates specified. If above requirements are complied with, vessels will, upon crossing the bar, proceed to the quarantine station, hereinafter designated, to be inspected and disinfected.

Third. Between the 1st day of May and the 15th day of November, 1891, all other vessels seeking to enter the harbor of Pensacola shall immediately, upon crossing the bar, proceed to the quarantine station, hereinafter designated, to a point designated by a yellow flag, to be inspected, and, if deemed necessary by the quarantine physician, discharge ballast or cargo, and be submitted to a cleansing and disinfecting process.

Fourth. No person, boat, or goods from any vessel arriving in the harbor of Pensacola between said dates shall be permitted to leave or be removed from such vessel until she shall have performed quarantine in accordance with the rules and regulations of this board of health.

Fifth. The quarantine station shall be on Santa Rosa Island, just west of Little Sabine Inlet. The boundaries of the quarantine ground shall be as follows: Beginning at the point on the low-tide line of the Gulf shore of Santa Rosa Island three-quarters of a mile east of the eastern limit of the Little Sabine Inlet; thence across Santa Rosa Island and into Santa Rosa Sound on a line bearing north by west from the point of beginning to the middle of the channel of Santa Rosa Sound; thence westerly along the middle line of said channel to a point in said channel bearing southwest by south, one-half south from Deer Point; thence on a line bearing southwest by south, one-half south from Deer Point to the north shore of Santa Rosa Island; thence on a line bearing south by east to a point on the low-tide line of Gulf shore of Santa Rosa Island; thence along the low-tide line of said Gulf shore



of Santa Rosa Island to the point of beginning. The points above described as being in the water to be designated by buoys bearing yellow flags, and those on land to be designated by yellow flags fixed on substantial poles.

Sixth. The quarantine physician shall, as soon as quarantine is established, proceed to the quarantine station and remain within the quarantine limits until the quarantine is removed, unless by special permit of the board. He shall at all times, between sunrise and sunset, be ready to visit and board all vessels immediately upon their arrival in the Bay of Pensacola, off Deer Point, at a point to be designated by a buoy, upon which shall be erected a flagstaff showing a yellow flag. He shall show a yellow flag conspicuously in his boat to designate her character. No one shall take, sail, or steer a vessel so as to pass the quarantine boat or buoy, or refuse to obey the captain of the guard or quarantine physician.

Seventh. The quarantine physician shall charge a visiting fee in all cases where he attends patients, either on board ship or in the quarantine hospital, and for all medicines and supplies furnished, such fees to be collected from the master of the vessel to which said patient belongs, and to be paid to the secretary and treasurer of the board.

Eighth. The quarantine physician shall examine into the condition of every vessel entering the port, and the health of the persons on board, and shall not permit any vessel or person to leave the limits of the quarantine station until all the requirements of the board of health have been fulfilled and he is satisfied that the public health shall not be endangered thereby, and said permit is countersigned by the president of the board of health.

Ninth. The master or other person in command of any vessel entering the Bay of Pensacola between the above dates shall proceed with her directly to the quarantine station above designated.

Tenth. It shall be the duty of pilots or other persons bringing vessels into the Bay of Pensacola to hoist a flag at half-mast at the fore and not to pass the quarantine buoy until the vessel has been visited by the quarantine physician; and it shall not be lawful for any person to visit or communicate with any vessel being taken to the quarantine station, or in quarantine, until said vessel has been visited by the quarantine physician and relieved from quarantine.

Eleventh. No pilot or other person shall leave a vessel after coming into Pensacola Bay without a permit to do so by the quarantine physician.

Twelfth. All vessels at quarantine shall keep a flag at half-mast at the fore during the day, and a lantern in the same position at night.

Thirteenth. It shall be the duty of the quarantine physician during quarantine to cause any vessel having sickness on board to be anchored at least three-quarters of a mile from vessels having no sickness on board; and it shall be his duty to prohibit any intercourse between any vessels so anchored and others, and no person shall visit such vessel, under any circumstances, without the permission of the quarantine physician. Any vessel having any intercourse with a vessel from an infected port, or port suspected to be infected, shall in all things be treated as a vessel from an infected port; any such intercourse shall be at once reported by the quarantine physician to the board of health.

Fourteenth. No person shall visit or attempt to visit the quarantine station between said dates without the permission of the quarantine physician and the board of health. Persons at quarantine station requiring anything from beyond the limits of the station may obtain the same only by orders forwarded through the quarantine physician and this board of health. Employes of this board, or other persons within quarantine limits, are prohibited from soliciting business of any kind whatever for ships or persons within the limits of the station.

Fifteenth. The port inspector shall visit and inspect every vessel entering the Bay of Pensacola and ascertain and report her sanitary condition, and until such inspection and report and the release of such vessel by said officer no person shall visit her, and no person from her shall visit any other vessel or the shore. The master or owner of each vessel so inspected shall pay this board for such service as follows, to wit:

Steamships.....	\$15.00
Ships.....	15.00
Barks and three and four masted schooners.....	10.00
Brigs.....	5.00
Two-masted schooners.....	5.00

Sixteenth. Vessels in quarantine may be discharged at the crib therein by paying twenty-five cents per ton for so discharging to the quarantine physician, who shall forthwith send the money so collected to the secretary and treasurer of this board, to be by him disbursed or used as ordered by the board.



Seventeenth. The master of every vessel cleansed or fumigated at the quarantine station shall pay for such cleansing and fumigation by the quarantine physician the fees named, as follows:

Steamships.....	\$75.00
Ships.....	50.00
Barks and other vessels other than brigs and two-masted schooners.....	40.00
Brigs.....	20.00
Two-masted schooners.....	15.00

Funds so collected must be forwarded by the quarantine physician, and disposed of as moneys collected for discharging vessels at the crib.

Eighteenth. The quarantine physician shall make a weekly report to the board of health, showing the number and class of vessels visited by him, amount of fees collected, number of patients and diseases treated, and the quantity of ballast discharged, and any other matter which may be of interest, and with such report remit all moneys or orders for money received by him during the week.

Nineteenth. Every pilot and pilot boat on the bar of Pensacola and masters of tow boats shall be supplied with copies of these rules and regulations, and it shall be the duty of every pilot to furnish a copy thereof to the master of every vessel which he may speak or board immediately upon such communication.

Twentieth. Every violation of the foregoing rules will be punished as prescribed by law.

Twenty-first. All tugs (except when taking vessels into quarantine station) and all crafts of every character going into, coming out of, or passing through quarantine lines shall lay to off and as near the guard station as practicable, designated by a yellow flag, and remain there until visited by the officer in charge of the guard and permitted by him to pass.

ROBT. W. HARGIS, M. D.,  
*President.*

D. G. BRENT,  
*Secretary and Treasurer, Board of Health.*

PENSACOLA, FLA., *March 31, 1891.*

PENSACOLA, FLA., *November 10, 1891.*

*Be it resolved by the board of health of the county of Escambia, State of Florida:*

First. That the port inspector shall visit and inspect every vessel entering the bay of Pensacola and ascertain and report her sanitary condition; and until such inspection and report and the release of such vessel by said officer, no person shall visit her, and no person from her shall visit any other vessel or the shore. The master or owner of each vessel so inspected shall pay to this board for such service as follows, to wit:

Steamships.....	\$15.00
Ships.....	15.00
Barks and 3 and 4 masted schooners.....	10.00
Brigs.....	5.00
Schooners, 2-masted.....	5.00

Second. No vessel coming into the port of Pensacola having on board any contagious or infectious disease, or from a port where any such disease prevails, shall remain within the territory under the jurisdiction of this board, except at a point designated and under restrictions imposed by this board, according to the exigencies of each case.

Third. It shall be the duty of any person coming into the county of Escambia or port of Pensacola from any locality where any disease in an epidemic form prevails to report at once to this board, or some officer thereof, and no person coming from any such locality shall remain in said county without the permit of this board, and then only at such points as may be designated, and under such restrictions as may be imposed by this board, according to the exigencies in each case.

Fourth. Ballast brought into this port shall be discharged in accordance with the rules and regulations of the State board of health and at the expense of the vessel to the extent that said rules and regulations of the State board of health provide for the same.

Fifth. All pilots and towboats of the port of Pensacola shall be supplied with copies of these rules, and every pilot or towboat master speaking or boarding a vessel coming into said port shall hand a copy thereof to the master of said vessel. Pilots must, and hereby are required, in each case before boarding a vessel



desiring to enter the bay of Pensacola, to make inquiry as to the sanitary condition of the vessel, and in no case must they board if the vessel has contagious or infectious diseases aboard, or has had the same during the voyage. In all such cases the pilot must direct said vessel to the nearest United States quarantine or refuge station.

Sixth. That in case any vessel shall be required by authority of law to discharge ballast at quarantine station, or be fumigated, she shall pay 25 cents per ton for the ballast discharged, and for maritime sanitation as follows, to wit:

Steamships .....	\$75.00
Ships .....	50.00
Barks and other vessels, other than brigs and 2-masted schooners.....	40.00
Brigs .....	20.00
Two-masted schooners.....	15.00

Seventh. That no pilot, towboatman, or other person shall remove, transfer, or receive, or assist in removing, transferring, or receiving, any person from any vessel entering the bay of Pensacola until such vessel shall have been inspected and released by the port inspector.

Eighth. Every violation of the foregoing rules will be punished as prescribed by law.

ROBT. W. HARGIS,  
*President.*

R. P. DANIELS,  
*President State Board of Health.*

D. G. BRENT,  
*Secretary and Treasurer.*

Approved November 10, 1891.

First. That all future actions taken by this board at any period during the year shall be in accord with the rules and regulations of the State board of health in so far as they are consistent with the rules and regulations of this board heretofore and hereafter to be enacted by this board and approved by the State board of health.

Second. The rules and regulations of this board which were adopted March 31st, 1891, for the summer of that year, and approved by the State board of health April 13th, 1891, and the rules and regulations of this board which were adopted November 10th, 1891, and approved by the State board of health November 12th, 1891, are hereby adopted and will remain in force from season to season and from year to year until changed by legal action of this board or the State board of health.

Third. That the said rules and regulations of said State board of health and the said rules and regulations of this board shall be those under which this board shall act until changed by competent authority, and they shall be printed together.

ROBT. W. HARGIS,  
*President.*

D. G. BRENT,  
*Secretary and Treasurer.*

Adopted at Pensacola, Fla., April 6, 1892.

Approved by direction of the president of the State board of health.

JOSEPH Y. PORTER,  
*State Health Officer.*

#### INSPECTION REPORT ON THE EAST COAST OF FLORIDA.

By Surg. H. R. CARTER, M. H. S.

As directed by Bureau letter of June 12, 1896, relative to the need of sanitary inspectors on the Florida coast, I have the honor to make the following report on the east coast. The following are the inlets on the east coast of Florida, with their respective depths of water at mean high tide, as given to me by the United States engineers at St. Augustine and confirmed by local inquiry: St. Augustine, 14 feet 2 inches; Matanzas, 6 feet 6 inches; Mosquito, 9 feet; Indian River, 7 feet 5 inches on the inside bar; St. Lucia, 7 feet, recently deepened; Jupiter, closed up; Lake Worth, 3 feet 6 inches; Hillsboro, 3 feet; New River, 4 feet; Norris Cut, 3 feet; Beans Cut, 5 feet; Cape Florida, 12 feet, of which about 8 feet can be brought to Miami.



At St. Augustine is a State quarantine station and United States customs officer, and that place should need no further guard. The entrance in plain sight.

Matanos Inlet, 18 miles below the city at the south end of Anastasia Island, has so little depth of water that it seems unreasonable that a vessel from a foreign port, Cuba especially, should pass by the deeper inlets to the south and enter this one, for a vessel which should enter this inlet must be but a poor sea boat. I think, then, that it needs no special guard.

Mosquito Inlet, opposite New Smyrna, has the deepest water of any between St. Augustine and Cape Florida, but the bar has a bad reputation as a dangerous one, and in point of fact no foreign vessel has entered here for the past five years, and very few coastwise vessels pass through, mainly yachts bound into the Indian River. There is only one pilot here. There is a customs inspector, Mr. Charles Délser, stationed here—at New Smyrna—and I would recommend that he be directed to exercise the functions of a sanitary inspector should a vessel from a foreign port or coastwise enter this inlet. The necessary instructions contingent on the entry of a vessel should be sent him. His present instructions, in case a vessel from a foreign port enters, is to hold her and telegraph the collector at St. Augustine for orders. I gave him such information and advice in reference to inspection of vessels as I thought he could profit by, and especially on the subject of allowing no communication with shore if he was in any doubt, and directing vessels with foul bills not to enter the inlet. I have no idea that any occasion for the exercise of this function will arise, or that any vessel save yachts from the north will enter Mosquito Inlet.

Indian River Inlet is opposite St. Lucie, a flag station on the East Coast Railroad. Although its depth is given at 7 feet, yet there is a bar inside of 5 feet, on which a dredge under United States Engineer Corps is now working and will be working until December. There was formerly a customs inspector here, but he has been discontinued, and I find that there is no record of any vessel from a foreign port ever having entered at this inlet. The same is nearly true of vessels coastwise, save yachts, and while the dredge boat is in the channel no vessel would attempt to run in to land illegitimately, and there is generally no other reason to land here. I see no reason to recommend the appointment of a sanitary inspector here.

St. Lucie Inlet is opposite Junsen (better known as Gilberts Bar). A considerable number of small American schooners enter here from the Bahamas, bringing fruit, pineapple slips, and shells—twenty-two last year—and about twenty-five Bahamans as immigrants. This place was made a port of entry July 1, 1896. This will somewhat increase the number of entries.

These vessels have all entered without the certificate of the quarantine officer, required by section 2, act of February 15, 1893. I think some provision should be made for inspecting these vessels, mainly to comply with the above act. I would recommend that Mr. T. V. Moore, the deputy collector of customs at this place, be directed to exercise the functions of a quarantine officer and inspect these vessels and sign the certificate required by law. Mr. Moore is unquestionably the man best fitted for this, even if he were not in the customs service. He is a man of unusual intelligence, highly esteemed in the community, with such vested interests that it is all important to himself to prevent the introduction of yellow fever. There is no physician obtainable within any reasonable distance, although there is one at Stuart, who could be called on for professional advice should it be necessary, but it would probably be of no assistance. I would therefore suggest that Mr. Moore be given such instructions as are proper, and be directed to make the above inspection. While at New Smyrna I talked the matter over with him, and gave him all the information and advice that I could, telling him what I would recommend. I think he will make an efficient inspector.

[NOTE.—Action taken as above indicated.]



At Lake Worth and Palm Beach there is a customs officer, a State quarantine officer, Dr. Potter, and as it is not possible for a vessel to enter, physically, save under the most unusual circumstances, I think no extra guard is needed. The inlet between Palm Beach and Cape Florida seemed too shoal to merit investigation, Beans Cut having mainly filled up.

Cape Florida Inlet, opposite Miami: This is not a port of entry, but there is a quarantine officer of the State board, Dr. Jackson, stationed here. Vessels of considerable draft can enter the reef at this place, but can not come up to Miami with more than 5 or 6 feet of water. Not being a port of entry, no vessels from foreign ports have ever entered here. Some few vessels from the Keys come here in fruit for Key West. Unquestionably a vessel could come in by this entrance, but I think the Florida quarantine officer is a sufficient guard and I have no recommendation to make for this port.

In reviewing the whole matter I would say that at present it is believed that there are very few people coming back as returned filibusters; that these do not come through the cities or towns of Cuba, but from the open country, which is reasonably free from yellow fever. They are probably also all immune to that disease and carry no baggage, save the clothes they have on, and some papers. Also the vessels on which these expeditions are now made are steamers of good draft and will enter at recognized ports. Add to this that there is usually no communication between Cuba and any part of the coast east of Key West, that Cuban smacks have never frequented this coast and are unacquainted with its reefs and inlets, and that inhabitants of this coast are neither Cubans nor descendants of Cubans. I think, therefore, that at present there is very little danger of the introduction of yellow fever on the east coast in this manner. Should the insurgents be hard pressed, however, this condition of things may be altered. There is probably rather more danger of introducing smallpox, said to be epidemic in the insurgent camp, than yellow fever.

Should the conditions change so that Cubans in large numbers would be leaving their country, the place on the east coast where they would be most apt to land, and the only place, I think, where a special guard might be needed, is through Cape Florida Inlet, either in the neighborhood of Miami or on the keys across Biscayne Bay. To prevent a landing on the keys by any reasonable number of inspectors, under these circumstances, would be difficult, and should it in future be judged desirable to guard this entrance (it is not necessary now), it could best be done by an inspector with a boat or launch on the upper part of Biscayne Bay. It is likely that Miami will be made a port of entry in place of Palm Beach this winter, in which case matters will be simplified.

JULY 15, 1896.

#### ALABAMA.

##### MOBILE BAY QUARANTINE.

By Surg. R. D. MURRAY, M. H. S.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

Mobile Bay Quarantine is situated  $1\frac{1}{2}$  miles east of Fort Morgan, on the peninsula of Baldwin County, Ala., which curves from the mainland to the west to form Bon Secour Bay and the eastern shore of the pass into Mobile Bay. The west side of the pass is formed by the eastern end of Dauphin Island, on which Fort Gaines is situated. Sand Island light-house is on Sand Island, on the left of the



pass and to seaward. Mobile Point light is on an angle of Fort Morgan to the right of the pass.

The station consists of a wharf and bridge and houses on the shore. The land consists of silex blown into quite high dunes and small hills, covered with a growth of pine, scrub live oak, saw palmetto, and various weeds and grasses. Between the dunes is much marshy ground, but the security against high water is sufficient. It is exactly on the eighty-eighth degree of west longitude.

The quarantine establishment owns 10 acres of land, with a frontage to the north of 5 acres and a depth of 2 acres. This was purchased about six years ago from a settler. It adjoins the United States fort reservation and at present there is some question with the United States engineers as to ownership, but I think the title is secured to the quarantine authorities.

The buildings are two in number: One, 200 feet to the west from the main building, is intended for quarters for the employees, and is 36 by 45 feet with a piazza on the front and rear; it has a lengthwise hall, with seven rooms in all on the two sides, and another room on the rear piazza. Two 5,000-gallon cisterns are placed on the rear piazza, protected by the roof. The main building is 36 by 45 feet, with a piazza on three sides and a hall; this is divided into five rooms—parlor, office, and bedrooms. In rear, attached to it, is a kitchen and dining room 18 by 32 feet. There are two 5,000-gallon cisterns, which are supplied by the roof. The houses are low, single stories, substantially built and ceiled. They are placed on too low ground and too near the ground for comfort and for needful views of the wharf and fleet. Proper outhouses are in rear of each building. These structures are five years old, having been built in 1891.

The wharf is rhomboidal in shape, with a longer side of 320 feet facing due north, and the depth is 150 feet, the angled ends being faced northwesterly and southeasterly. It is connected with the shore by a bridge one-third of a mile long. The wharf and bridge are decked with 2-inch planks, the piling being separate and creosoted. There is no sheet piling and there are no bulkheads for retention of ballast; the piling is much eaten by the teredo, having been in the water for five years; the bracing is diagonal, and the lower fastenings are in many places rusted or eaten loose. The condition of the wharf and bridge is fair at present, but piles are dropping or washing out betimes, in which case green-pine poles are substituted; in another year the concern will be quite a wreck.

Back from the wharf about 400 feet on the south side of the bridge on independent piles is a boathouse 30 by 40 feet, with four rooms for watchman, boatmen, customs inspector, etc. Hoists for two Whitehall boats are placed underneath, the landing being reached by an inner stairway. A semicircle of pine sheet piling is placed off the northwest aspect to serve as a breakwater. The piling and breakwater are much worm-eaten. Some ballast has been thrown about the breakwater in the hope of protecting it, but it sinks out of sight in a few months. A 4,000-gallon cistern is placed at the corner of this house, supplied by the roof.

About 900 feet from the shore off from the east side of the bridge is a hospital building situated on creosoted piling. It is 550 feet from the wharf bridge at a right angle and connected with it by a bridge nearly as strong as the main bridge. The building is 42 by 75 feet, with a 10-foot hall running lengthwise. On the sides of the hall are two wards, capable of accommodating ten to sixteen patients, and five smaller rooms for kitchen, dining room, dispensary, and quarters. A 5,000-gallon cistern occupies one corner of the building. There are four beds set up and a few small tables are at hand, but otherwise the building is unfurnished. The kitchen chimney is of terra cotta, and having no flashing, the roof leaks around it. The sea breaks near by, and the spray falls on the roof so as to make the water in the cistern salty. The same influence has rusted out the gutters, and on one side the gutter has fallen down. The teredo has not eaten the piles much,



as the water is shallow, but the affair is unsafe, or soon will be, and is not commended as a place for sick men. The hospital is well constructed, and if it had been placed on shore would be a great addition to the plant.

About a half mile north and to the east of the wharf is a sunken ballast pile which was the accumulation of years of discharging ballast. It was at one time above water and shanties were built on it. While it was in use the quarantine physician and his aids lived in two small houses built on the United States Fort Reservation by the national board of health in 1880. These houses remain, but in a fearfully dilapidated condition, the Mobile authorities having declined to do any repairs, although using them for about twelve years. The ballast pile and all on it have sunk below the water. Had the crib been properly started with sheet piling and carefully watched while ballast was thrown out, there would now be an artificial island much better suited for the duties required than the expensive arrangement now in use.

Off from the front of the wharf head and about 800 feet north is a 600 feet in length curved row of piles, with top planks like a fence and vertical slats at intervals on the planks, which was intended as a breakwater. The piles are placed 10 feet apart, and already the work of the teredo is recorded. No account was taken of the ground swell made on a sloping beach by 40 miles of northerly winds, and so the invention fails entirely to check the force of either water or wind. It in no way prevents the waves from crowding the vessels against the end of the wharf; sometimes they rise and sink as much as 5 feet, and the signs of the crunching and pounding are visible on the wharf and have been on the sides of many vessels. One vessel spent \$400 to repair damages done to her sides and rigging. It is plain that no man acquainted with the sea planned and built this fence. If this station is to be a safe one for vessels, a wave break at least 1,500 feet long and straight must be built from the bottom up to 6 feet above ordinary tide, strong and long enough to withstand the great ground swell of the water during northerly winds. It is necessary to haul a vessel off from the wharf at night from 10 to 20 feet by means of side lines, leaving her attached to the wharf by the lines on the other side. Not a simple thing to do with a ballast-tired crew. Dolphins have been placed, but were pulled out the first time they were tied to. Two 2,400-pound mushroom anchors were put in position, but they slipped home quite easily. Now three 1,200-pound anchors have been sunk. They will do well until a good surge affects them, when they, too, will fail. Not less than a 3-ton anchor should be thought of for the duty expected. Generally the so-called breakwater serves a good purpose for making the hauling-out lines fast to, but when a pile will give way no one knows. But one vessel can discharge ballast at one time, as the face of the wharf is only about the length of a ballast-carrying vessel. While one vessel is discharging, a no-ballast vessel can lie at the west end of the wharf and be sulphured, washed, and have clothing steamed. "The anchorages" are ample to the northwest, north, and northeast of the wharf, but the holding ground is poor; the bottom is soft mud, and there is frequent dragging.

The entire plant, i. e., storehouses, hospital, wharf, bridges, and houses thereon, with the boiler, sulphur furnace and pan, and steam chest, including the so-called breakwater, cost, up to April, 1892, the sum of \$62,677.16. The addition of hoister, windmill, and cable, and repairs have run the cost up to near \$70,000.

The limits of anchorage for noninfected vessels to the northwest and north are easily 1 mile by 1 mile—room enough for all vessels that may call. The limits for infected vessels are equal in area, permitting the regulation mile between the two classes.

The facilities for inspection of vessels consist of two Whitehall boats and two to four men to row them. A larger boat should be provided for heavy seas, to be rowed by the entire crew; but at present there is no place to store it.



The apparatus for disinfection of vessels and baggage consists of a shed 30 by 70 feet, located on the west half of the wharf, and houses a boiler (a large one), the steam chest, sulphur fan, and furnace, all Valk & Murdoch patterns. The boiler has been retubed once. The frequent use of salt water for four years has injured it much, and now several tubes are plugged. Wood is burned in it. The steam chest is cylindrical, 8 by 30 feet, and heated with a coil. A temperature of 221° F. can be reached in fifty minutes with 40 pounds of steam pressure. The heating coil is much rusted, is repaired with clamps in many places, and should be replaced by a new one. There is no vacuum apparatus attached and no vacuum gauge. A high-degree Fahrenheit thermometer is attached.

The sulphur fan is situated about 120 feet of piping from the side of the vessel which is to receive the gas, and the 12-inch galvanized-iron pipe is contracted at the outer end to fit a 6-inch rubber hose. I think this contraction of the pipe prevents the rapid discharge of the gas and perhaps causes the Sturtevant fan to become hot. It is to be noted that the fan requires from two to four new sets of blades every year, and that a perforated pipe is placed over it with a constant flow of water through it to keep the fan cool.

A 4,000-gallon iron tank for the mercuric chloride solution is placed on a tower, elevated 30 feet from the deck of the wharf, which gives sufficient pressure for washing vessels. This tower is connected with the corner of the boiler house and is a menace when the wind is high and a vessel is thumping against the wharf. Some time it will fall down. Also, the dripping of the solution injures the galvanized iron roof.

To save the water from the roof, two 5,000-gallon cisterns are provided. As the rain supply was not sufficient, at times salt water had to be used. To give a constant supply of good steam water, a windmill (Marseilles Steel Queen) was put up last year on the shore in front of the physician's house and connected by a pump to a dug well. Over a third of a mile of pipe conducts water to the cisterns to fill them. It works well and the water supplied is quite fresh. The mill needs painting. There are two salt-water pumps for filling the bichloride tank. In addition to the sulphur furnace and fan, dutch ovens are provided for fumigating cabins, staterooms, extra holds, etc. There is no sleeping place for crews, but frequently they use the boiler house.

For discharge of ballast there is at the end of the boiler house nearest to the vessel a large double steam hoister. The ballast is hoisted and chuted into 2-ton cars (of which there are four) and then run on a track back to the shore, where the ballast is dumped into shallow water, the object being to build out and protect the bridge. For three years the cars were pushed by the men. Now there is an engine at the wharf front, in a separate shanty, which runs an endless cable to the shore, the cars being provided with grips. Two cars are dumped while two are being filled. By good work 100 tons of ballast can be discharged per day, but this above the average. To discharge any ballast two engines must be run and the large boiler kept supplying steam. Usually all the cars are filled and are carried out at once, in which case the donkey man can also attend to the cable engine. The sills of the car rails are laid lengthwise of the iron and across the deck of the wharf and bridge. They are in need of much renewing, as the water settles in the center of the square top face and rots them rapidly. The iron rails are strangely curved and bulged by the pressure of vessels on the wharf. This may be a good scheme for getting rid of ballast, but seems to be expensive and tedious.

The facilities for removal and treatment of the sick consist of the two Whitehall boats mentioned, and ships' boats on occasion, and the hospital which has been alluded to. The facilities for removal and detention of suspects are nothing. Suspects will be watched on board.

The mail arrives three times a week overland; quite frequently tugboats bring



news from the city, 30 miles away. The supplies are brought monthly by the Fort Morgan supply boat; the freight, amounting to from \$2 to \$5 per month, is paid by the quarantine physician. But for supplies procured from vessels, the station would frequently be on short commons.

The telegraph facilities are a telephone to Fort Morgan, 1½ miles distant, where there is a telegraph office. The company keeps up the telephone, hoping to be repaid by messages to and from vessels in quarantine.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

George H. Fowler, M. D., is quarantine physician (born in Alabama; University of Pennsylvania, 1861; immuned in 1878; employed consecutively for eighteen years; previously sanitary inspector in Mobile; surgeon in Confederate army for four years); compensation, \$100 per month, without subsistence. Harry Savage (Alabama, aged 25, nonimmune), first engineer, \$60 per month and \$15 for subsistence. Samuel Dodge (Mississippi, aged 28, nonimmune), second engineer, \$40 per month and \$15 for subsistence. Sidney Poniatowski (Brazil, aged 24, immune), fireman, \$30 per month and \$15 for subsistence. Richard Trott (England, aged 69, immune), watchman, \$30 per month and \$15 for subsistence. Edward Ladnier (Alabama, aged 30, nonimmune), boatman, \$45 per month and no subsistence. Dennis Smith (Alabama, aged 22, nonimmune), boatman, \$45 per month and no subsistence. Mrs. M. J. Allen, cook, \$15 per month and no subsistence. Jacob Kosminski, customs inspector, messes with the quarantine physician. Total, 1 physician, 1 customs inspector, 7 employees—9 in all; no others at the station. The post-office address is Herndon, Baldwin County, Ala.

The authority for the quarantine is given in an act of the legislature of Alabama, approved February 15, 1891, which states:

That the probate judge of Baldwin County, the president of the board of road and revenue commissioners of Mobile County, the mayor of Mobile, the health officer of the city of Mobile, the president of the medical association of Mobile, the president of the chamber of commerce of Mobile, and a person to be selected by the county commissioners of Baldwin County as health officer of that county, and their successors in office, shall *virtute officii* constitute a quarantine and health board, to be known as the Quarantine Board of Mobile Bay; and in case any of said offices shall become vacant by any cause, or shall be abolished, the remaining officers so designated shall constitute such board and exercise all the powers thereof.

The same act appropriated \$25,000, payable during four years, to aid in construction of an "improved" plant for doing quarantine work, and required the county of Mobile to bear all other expenses and to sustain any expenses for maintenance above the receipts. Subsequently the city of Mobile was required to bear an equal share of any deficit with the county.

The personnel of the quarantine board at present is: (1) Charles Hall, judge of probate of Baldwin County; (2) George E. Sage, president of board of revenue and road commissioners of Mobile County; (3) C. L. Laverata, mayor of Mobile; (4) J. A. Abrahams, M. D., health officer of the city of Mobile (elected for two years by the committee of public health, which consists of five medical men elected by the Medical Association of Mobile County); (5) E. L. Marechal, M. D., president of the Medical Association of Mobile County; (6) A. C. Danner, president of the Chamber of Commerce of Mobile; (7) no one, as the "person to be selected by the county commissioners of Baldwin County as health officer of that county" has ever been selected. No compensation is allowed to any member for personal services, but the members from Baldwin County may be reimbursed for actual expenses incurred in attending meetings of the board. A. C. Danner is president; no salary. T. S. Scales, M. D., is health and chief executive officer, at \$1,800 per year. Hon. R. B. Owen is secretary and treasurer, at \$960 per year. An office is kept open in the city.



3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

Inclosed are (1) laws and regulations relating to quarantine in Mobile Bay, a pamphlet printed in English, French, Spanish, and German, the four languages being required by statute law (Exhibit A); (2) questions to be answered by masters, printed in the four languages (Exhibit B); (3) questions in English with place for list of passengers (Exhibit C); (4) notice relating to local rules (Exhibit D); (5) certificate of pratique (Exhibit E), and (6) release for smacks, etc. (Exhibit F).

The quarantine customs as they are carried out are about as follows: A small number of locally owned vessels and coast traders and fishing smacks receive permits from the president and secretary of the quarantine board which exempt them from all inspections and fees. All other vessels are inspected the year round. By the proclamation of the president of the board quarantine is declared for seven months—from sunrise May 1 to December 1. Vessels are divided into four classes, viz: (1) from infected ports; (2) from suspected ports; (3) infected vessels, and (4) vessels that have visited infected ports and come via clean foreign or domestic ports without having been disinfected subsequent to departure from the infected port. This is a new rule this year, but the principles of it were practiced two or three years ago. The infected ports are named; suspected ports are all others, about south of  $25^{\circ} 30'$ , except some fruit ports, and these become suspected if the vessels bring passengers. Infected port vessels are subjected to thorough maritime sanitation and then detained five full days. Vessels from suspected ports will be subjected to thorough maritime sanitation and then be detained three full days. But in case of fruit vessels with passengers the board in Mobile will prescribe as the occasion requires.

Vessels infected or with a history of infection during the present year will not be allowed in the lower bay until the vessel and contents have been subjected to thorough disinfection by the improved method. Vessels from Northern ports may be sent to quarantine if they have called at a suspicious or infected port or have fruit or passengers from there. Vessels from ports known not to be infected and not heretofore provided for will only be detained at quarantine a sufficient length of time to be placed in proper sanitary condition; this provision is the only scheme for detaining bad ballast or ballast that may be considered bad.

Even after a vessel has been properly treated and received her pratique, or in case of an infected port or suspected port, a vessel which has been to any other "improved-method" station, she "will be carefully inspected and detained only for cause."

The inspections are made from the station from May 1 till December 1. Last winter, to please the shipping interests, the inspections were made from the city wharf in the custom-house boat. For a time a special physician was employed, but as he declined to work for small fees the regular quarantine physician was transferred to the city.

4. State what quarantine procedure, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

The quarantine procedures, either under printed regulations or by custom, enforced at the port in addition to the requirements of the Treasury Department, are: (1) The inspection of vessels from United States ports after the 1st of November and until the 1st of May; (2) the detention of vessels from ports known not to be infected. Presumably this is a regulation to prevent the introduction of garbage ballast, but if such ballast is a menace the rule should say so.



Vessels with "swept holds" and steamers usually get "pratiqned" in the time prescribed, i. e., seven days for one and six for the other. There is undue detention for vessels in ballast, due to the meager facilities for discharging ballast. The British bark *Jeannie Woodside* took six full days at the wharf to do three and one-half days' work, bad weather intervening, while three other vessels were waiting. \* \* \*

It will thus be seen that the wharf as a ballast-discharging point is not a success, with room for but one vessel, which when alongside is in jeopardy from northerly winds, and which can not get away in similar wind. Had the wharf been a pier head about 800 feet to the north, vessels could have gone to the lea side, or had it been placed so that vessels could head to the north or northwest, it would have been of vastly greater service. The insistence on constructing the station after the plan of a river station cost extra money and resulted in a practical failure, if expedition, economy, and permanence are of value.

5. State whether the inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.

Inspections are maintained throughout the year of all vessels except towboats, smacks, etc., which have received permits to go free. During the period from December 1 to May 1 vessels from ports which are infected must discharge ballast in quarantine, and ballast that is foul, such as garbage or mixed with garbage, must be put out in quarantine.

6. Are vessels from other United States ports inspected?

Yes; the year round.

7. Describe quarantine procedures in the inspection of vessels; and if infected, the treatment. Give time in quarantine (a) between arrival and commencement of disinfection, (b) the time occupied by disinfection, and (c) time after completion of disinfection of vessels until discharge.

The quarantine procedure in the inspection of a vessel is always by daylight and thorough; a critical examination of the crew and all passengers, the vessel's cabins, holds, ballast, etc., and mate's and official logs for hints of illness on board. The quarantine physician does not drink spirits or smoke and never is in a hurry to get off the vessel. If infected, the vessel will be sent to Ship Island Quarantine, as per proclamation of the board. If not infected, but from an infected port, if the vessel has no ballast, she is brought to the wharf and given sulphur gas, and the clothing, etc., is put in the steam chest for the prescribed period. The time required for this is half a day, four to six hours. The detention period for such a vessel will be five full days. If there is greater detention it will be due to inability to get a tugboat, except in case of steamers. If the vessel is from a suspected port she will get the same treatment with three full days' detention. If the vessel is in ballast it must be discharged before the fumigation will be done; if from an infected or a suspected port, separation of earth, sand, and rubbish from rock and immersing the rock is unknown. Some rock is retained on the wharf from past years to stiffen vessels which may need it.

Some notion of delay when two or more ballast vessels arrive at the same time may be gotten from answers under No. 4. The expedition of the vessel will depend much on the crew and their manner of working. As the charge for hoisting and cars is \$15 per day, masters are urged to hasten in order to save expenses.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

The communication between vessels in quarantine is practically nothing. The quarantine physician visits every vessel daily, but does not go on board unless called. The communication is regulated by threats of increased detention or prosecution under the statutes. Communication before quarantine by pilots is



prohibited in case of vessels from infected ports, the pilots being directed to guide or "wave" the vessel into harbor. In case a pilot has to go on board he is held at the station until considered safe. There is no intercommunication between vessels in quarantine, except that masters may meet each other at the physician's office or on the wharf bridge. After a vessel is disinfected there must be no communication with vessels that are not finished.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

A vessel infected with cholera would be sent to Ship Island United States Quarantine without delay or recourse, and all persons who had been associated with her would go, too. A vessel infected with yellow fever would be sent to Ship Island Quarantine, notwithstanding the fact that an isolated high-out-of-the-water yellow-fever hospital has been built for patients suffering with such a disease. A vessel infected with smallpox would be sent to Ship Island Quarantine whether there were cases on board or not. It will be observed that under the third class of the rating by the quarantine board, located 30 miles away, no chances are to be taken of any sort with actual or indirect causes of disease that is quarantinable. This rule puts the station in the class of inspection stations, and practically absolves it from actual quarantine functions.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Records are made and kept of all cases as shown by the official list of questions. As no cases of quarantinable disease can be kept at the station, there are no records of such, but all other diseases occurring are recorded at the station. Weekly and monthly reports of all transactions at the station are mailed to the quarantine board at Mobile.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

Inspections: Steamships, \$15; ships, \$15; barks and four-mast schooners, \$10; brigs and three-mast schooners, \$7.50; tugs and two-mast schooners, \$5; other vessels, \$3. Special rates are made for lines or regular traders; thus the Plant Line, which runs a weekly steamer to and from Port Tampa, pays \$15 the first of every month, and thus is relieved from paying for forty trips per year.

To continue the fruit traffic a medical-agency service has been established at Honduras, Nicaragua, and Colombia ports, as Balize, Ceiba, Bluefields, Bocas del Toro, etc. The agents are chosen by the board and paid by the fruit importers and are required to certify as to the condition of each steamer when she is ready to sail. They may pratique passengers if satisfied that they have had no contact with possible infection for ten days or more.

Disinfection: Steamships, \$75; ships, \$50; barks and four-masted schooners, \$40; brigs and three-masted schooners, \$20; two-masted schooners, \$10; other vessels, \$10. Treatment of sick on board or in hospital, \$1 per day. Use of ballast hoist and cable cars for ballast, \$15 per day. The above moneys to be paid into the treasury of the quarantine board. From \$10 to \$20 must be paid by sailing vessels to tug-boats for being put to and taken from the wharf. There are no tonnage, ballast, or wharf charges per se. It will be seen that the ballast charges are very reasonable, as 100 tons should be put out per day, which will make the rate at about 15 cents per ton instead of 25 cents, as at some ports, and 25 cents and trimming of the ballast amounting to 17 cents and more per ton extra.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign



ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

I find it impracticable or impossible to give the vessels under class (b), and therefore have given, at some trouble, a table showing the clean foreign ports, meaning Europe when free from cholera; yellow-fever latitude ports, meaning all ports south of 25° 30' north latitude (which limit was lately placed on all pratiques), and domestic ports.

I have given another table subdividing the first table into Cuba (from which yellow fever is generally expected), Brazil (next in point of danger), West Indies, etc., Spanish Main, meaning all the Mexican Gulf except Cuba, and other distinctions which will explain themselves to persons acquainted with quarantining. For Mobile, which has a large trade with fruit islands and ports, it is necessary to give a column to them to show the easing up of the quarantine physician's duties as to detention of vessels from an old-time infected region or a region always suspicious to south-coast health officials. To show the character of the commerce, I have also given tables of the flags and rigs of vessels. As to purely local traffic I have cared little, but the quarantine work in that regard is given in a note.

*Custom-house entries.*

1895.	Clean foreign ports.	Yellow-fever latitude ports.	Ballast.	Cargo or empty.	Domestic port entries.		Vessels entered.
					United States.	Foreign.	
January .....	14	38	21	31	7	3	62
February .....	3	22	8	17	1	2	28
March .....	11	36	18	29	1	0	48
April .....	4	39	9	34	4	0	47
May .....	3	39	4	38	4	0	46
June .....	2	29	4	27	5	3	39
July .....	4	28	5	27	4	5	41
August .....	7	18	8	17	2	4	31
September .....	7	21	6	22	3	0	31
October .....	6	38	12	22	4	3	41
November .....	17	34	24	27	8	4	63
December .....	11	34	13	32	4	2	51
Total .....	89	366	132	323	47	26	528

*Arrivals by countries.*

1895.	Cuba.	Brazil and below.	West Indies and Spanish Main.		United Kingdom.	European Continent.	Africa.	Domestic.
			Islands, Mexico, and Northern South America.	Free fruit ports.				
January .....	4	3	14	16	11	3	1	10
February .....	1	0	8	12	3	0	1	3
March .....	6	0	6	22	10	1	2	1
April .....	3	2	7	25	2	2	2	4
May .....	1	1	4	33	1	2	0	4
June .....	1	2	3	22	1	1	1	8
July .....	3	1	2	21	1	3	1	9
August .....	0	1	4	13	2	5	0	6
September .....	1	1	4	14	4	3	1	3
October .....	0	1	4	19	3	3	4	7
November .....	5	5	9	14	13	4	1	12
December .....	7	2	9	15	9	2	1	6
Total .....	32	19	74	226	60	29	15	73



## Flags.

1895.	United States.	British.	Norwegian.	Swedish.	Danish.	Russian.	German.	Italian.	Others.	Total.
January .....	17	17	16	2	1	3	1	3	2	62
February .....	4	5	15	1	0	0	2	1	0	28
March .....	4	12	26	0	1	2	2	0	1	48
April .....	8	9	24	1	0	0	3	1	1	47
May .....	10	7	23	0	2	0	0	2	2	46
June .....	6	9	21	0	0	0	2	0	1	39
July .....	6	15	17	0	1	1	1	0	0	41
August .....	3	6	18	0	0	0	2	2	0	31
September .....	2	10	16	0	0	0	1	1	1	31
October .....	6	10	23	0	0	0	2	0	0	41
November .....	13	11	29	0	0	4	1	4	1	63
December .....	10	12	26	1	0	0	0	2	0	51
Total .....	89	123	254	5	5	10	17	16	9	528

## Rigs, tons, and crews of 528 "entered" vessels.

1895.	Steamships.	Ships.	Barks.	Schooners.	Tons.	Crews.
January .....	20	6	14	22	39,156	860
February .....	13	2	7	6	17,382	421
March .....	22	3	9	14	27,902	684
April .....	32	1	5	9	25,733	701
May .....	31	1	3	11	20,240	777
June .....	27	1	3	8	22,787	674
July .....	27	2	5	7	27,420	665
August .....	17	1	8	5	16,518	468
September .....	21	0	7	3	22,288	534
October .....	24	2	9	6	24,482	638
November .....	26	4	23	10	45,597	968
December .....	21	3	13	14	32,421	735
Total .....	281	26	106	115	321,926	8,125

NOTE.—The Plant steamship *Florida* made weekly trips with tonnage of 1,307 and crew of 32, and was "entered" 13 times when she had foreign products on board. Forty trips are not counted, but the vessel was inspected each trip. During the year 118 inspections were made of coasters and vessels within the Great District which did not have to enter in the custom-house, not counting various tugs and smacks that held "releases" from the quarantine board, making the total of inspections 528 plus 118—646. One American ship from Rio was sent to Ship Island Quarantine in April, and 1 Norwegian steamer in September. Nine vessels were admitted from Ship Island Quarantine and 7 from Tortugas Quarantine. Forty-one vessels were subjected to full treatment in quarantine from May to October.

The character of Mobile's commerce used to be exports of cotton and lumber. For many years lighter-draft vessels loaded in the lower bay and deeper vessels were loaded at Horn and Ship Island, but the cutting out of a channel of about 28 miles in length has enabled the entrance of vessels of 22 feet draft to the city wharves. The nearness of the Alabama coal fields has given opportunity for the shipping and exportation of considerable coal, particularly during the winter. The great scope of yellow-pine timber land, the outlet of which is the Alabama River, which is formed by the Tombigbee and Warrior, will give lumber supply for many years. The inauguration of the Central American fruit trade and its continued development has enormously increased the tonnage entrances and clearances, as may be judged by the entries from the "free fruit ports" alone. The eight or ten steamers engaged in the fruit business carry back broken cargoes of flour, hay, corn, and various United States productions. Unfortunately this trade is in foreign bottoms exclusively. Lately some cotton is being exported, as improvement of the rivers and low river rates enable the vessels to receive it at lower rates than possible on the Atlantic Seaboard. The establishment of a weekly steamer to Tampa by the Plant Steamship Company has also materially increased the domestic movement of Western products.

In 1886-87 the entrance tonnage was 54,500, the clearance tonnage 64,500. This has increased from 30 to 50 per cent per year, until in 1895-96 the entrance tonnage



was 306,000 and the outgoing tonnage 308,000. No account is made here of the local domestic tonnage, which has increased in a like proportion.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

My visit to the custom-house showed that the records of arriving vessels are properly kept and that the duplicate bills of health with certificate of pratique are filed as part of the vessel's papers. The custom-house is the immigration bureau. During the year 1895, 122 immigrants were admitted, chiefly from the Central American fruit ports, Mexico, and the United States of Colombia. The pratique of the vessels bringing them was considered as sufficient medical examination.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

As to "swept-hold" vessels, the facilities are ample, but for ballast vessels the facilities are meager, but one vessel being able to discharge at one time. Ballast vessels are, except rarely, sailing vessels, and they come in on good winds. Thus two to four are liable to come near at one time; thus a jam and ruinous delays for the later arrivals. Again, the wharf is viciously situated, being a risky place to lie at except in fine weather.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

The acid solution of mercuric chloride is not used. It would quickly corrode the iron tank. The fact that few vessels come which seriously need thorough treatment may render this failure of no moment. The regulations regarding inspection are fully complied with.

The regulations regarding disinfection are faultily observed as to the Treasury Department periods for fumigation. The period of observation after disinfection is fully observed as to vessels from infected ports, but not as to vessels from suspected ports, which are given "three full days." The query arises as to the possibility of obeying the amended paragraph 11, with a practically nonimmune crew—and, by the way, in any case—and also as to the practical benefit to follow from doing anything at all to such vessels. Five days is a short enough period of detention if any at all is needed to insure safety.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

Yes. A copy inclosed.

17. What disposition is made of the consular bills of health.

One is kept at the station; one is given to the master for filing in the custom-house.

18. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

Most of the facts which in my opinion should be known to the Department bearing directly or indirectly upon the quarantine service have been set forth under the different questions, but, in addition, I may say that the rapid decay of the wharf, bridge, and fence will soon render it necessary to make extensive repairs, which the relatively small income will not bear.

*Recommendations.*—(1) The quarantine physician should have an assistant who should be a medical man and capable of keeping the station records and accounts. Over 600 vessels per year are too many for one man to care for. (2) Arrangements for treatment of sick and disabled seamen should be made, particularly for



malarial cases, of which Mobile has an extra number. No sick seaman should go from quarantine to the city. (3) The customs inspector is not needed at the station and should be transferred to the city. (4) A dormitory should be built for crews of vessels that undergo full time of fumigation—to sleep in and for protection in wet weather. (5) In future repairs to the wharf it will be well to consider the project of building a crib around the old ballast pile or in a favorable place and the abandonment of the bridge to the shore; boats will be cheaper. (6) The Mobile Lower Bay seems to offer a good site for a barge disinfecting plant (motive power not needed), to which vessels could sail or haul and receive treatment. With some sheet piling and with holes made in the deck the wharf might be utilized for ballast for a time, but I would like to observe further before advising such a change.

JUNE 6-7, 1896.

#### EXHIBIT A.

##### QUARANTINE PROCLAMATION.

OFFICE OF QUARANTINE BOARD OF MOBILE BAY,  
*Mobile, Ala., April 4, 1896.*

In accordance with law, and by virtue of authority vested in me by the quarantine board of Mobile Bay, I, A. C. Danner, president of said board, do hereby declare that from and after sunrise on the 1st day of May, 1896, and until the 1st day of December, 1896, unless sooner revoked, quarantine shall be enforced against all vessels entering lower Mobile Bay, as follows:

First. Against all vessels, with their ballast, crews, passengers, baggage, and freight, coming from ports regarded by the board as infected.

Second. Against all vessels, with their cargoes, ballast, crews, passengers, baggage, and freight, coming from ports regarded by the board as suspected.

Third. Against all vessels and their contents which are infected, or with a history of infection during the present year, and have not subsequently been subjected to improved maritime sanitation.

Fourth. Against all vessels and their contents that during the quarantine season have visited ports declared by this board to be infected and subsequently arrive in our bay from foreign or domestic ports where no disinfection by the improved process is practiced.

Ports now regarded as infected are all the ports of Cuba, Rio de Janeiro, Para, Bahia, Pernambuco, Santos, Ceara, San Juan (Puerto Rico), Puntas Arenas, Guayaquil, and Vera Cruz, and vessels coming from ports hereafter becoming infected will be treated in same manner as those from ports named. Ports regarded as suspected are all other South American and West Indian ports, as well as those of Central America and Mexico, with the exception of the following, to wit: Ruatan, Bonacco, Utila, Truxillo, Swan Island, Grand Cayman, and Cayman Brac; but vessels from these especially named with passengers aboard will be subjected to such detention and disinfection of vessels and contents as the quarantine board or executive officer may prescribe on arrival at quarantine station.

All vessels and contents, under the first class, will be subjected to thorough maritime sanitation, and then detained five full days from completion of process. Pilots will not board such vessels unless it is absolutely necessary, but will wave them to the proper quarantine anchorage. Pilots violating this provision will, at the option of the board, or its executive officer, be subjected to same treatment as other persons on board said vessels.

All vessels under the second class will be subjected to thorough maritime sanitation and then be detained three full days from completion of process.

No vessel under the third class will be allowed in the lower bay until master produces a certificate that his vessel and contents have been subjected to thorough disinfection by the improved method, after which the vessel will be carefully inspected and detained only for cause. Vessels under this class, without certificates here referred to, will be spoken off the bar and directed to the Ship Island Refuge Station, and pilots and other persons are not allowed to board such vessels.

Vessels under the fourth class—that is, those visiting ports declared by this board infected, and subsequently visiting New York, Philadelphia, Baltimore, or other ports, will not be allowed to come to the city without thorough maritime sanitation is undergone subsequent to departure from infected port and certificate to that effect from the official having so treated the vessel.



Any vessel not from an infected place, but bringing ballast, crew, passengers, baggage, or freight from an infected place, will be included in the first class, and treated accordingly, unless the master can produce a certificate that said ballast, crew, passengers, baggage, and freight have been subjected to disinfection and detention prescribed for vessels under the first class.

Vessels from ports known not to be infected, and not heretofore provided for, will only be detained at quarantine station a sufficient length of time to be placed in proper sanitary condition. All vessels, however, entering the bay, except those holding release certificates, must be inspected by the quarantine physician and procure pratique before coming to the city, or communicating with other vessels or persons.

Regular lines engaged in fruit traffic from ports included as suspected, but not declared infected, may be continued during the quarantine season under special provisions and agreements similar to those formulated and adopted last season.

The restrictions herein proclaimed are subject to change, at the option of the quarantine board, to meet particular cases.

The rules and regulations in force in 1892, except when in conflict with the provisions of this proclamation, as well as regulations for the government of the station employees and all those having business with the same, issued by the executive officer April 15, 1895, will remain in full force and effect during 1896, and all parties interested can procure copies of the same by calling at the office of the quarantine board.

Notice is hereby also given that, notwithstanding the summer quarantine will not take effect until May 1, inspections of vessels now made by the quarantine physician in the stream in front of the city will, on and after April 15, be rigidly conducted at the quarantine station, and pilots and masters of vessels will be governed accordingly, or incur the penalty.

The following-named persons are the duly authorized active officers of the board for the coming season, and must be respected accordingly: Dr. T. S. Scales, health and chief executive officer; Dr. George H. Fowler, quarantine physician; Mr. R. B. Owen, secretary and treasurer.

For the information of all interested, an ordinance in relation to quarantine, adopted by the honorable general council of the city, is published, as follows:

“An ordinance to prevent violations of quarantine.

“SECTION 1. *Be it ordained by the mayor and general council*, That any person who shall violate or escape from quarantine, lawfully established by any authority, and enter the city of Mobile, shall be arrested by the police and conducted out of the city to the nearest quarantine station, and may, in the discretion of the mayor, be fined not exceeding \$50 for each offense.

“SEC. 2. *Be it further ordained*, That any person who shall bring, or cause to be brought, into the city of Mobile any article or merchandise in violation of any quarantine regulation of this city, county, State, or the quarantine board of Mobile Bay, shall, on conviction, be fined not exceeding \$50 for each offense, and such article or merchandise shall, in the discretion of the mayor, be removed, disinfected, or destroyed, at the expense of the offender.

“SEC. 3. *Be it further ordained*, That any person who shall aid or instigate any other in committing any offense above described or shall in any way be instrumental or concerned in such offense shall, on conviction before the mayor, be fined not exceeding \$50.”

A. C. DANNER,  
*President Quarantine Board of Mobile Bay.*

OFFICE OF QUARANTINE BOARD OF MOBILE BAY,  
*Mobile, Ala., April 15, 1895.*

Dr. George H. Fowler, quarantine physician, will have full charge of the quarantine station, under the direction and supervision of the health officer, and will be held responsible for the management of the same and for the conduct of the employees, with power to discharge for drunkenness or insubordination.

All employees at the station will be expected and required to perform the duties for which they are employed, and drumming, or soliciting trade for anyone, is strictly forbidden.

Complaints arising at the quarantine station must be forwarded, in writing, to the health officer, through the quarantine physician, and all other complaints must



be submitted in writing, together with such evidence as may be in hand, direct to the health officer.

Runners, or persons soliciting trade for merchants in this city, or elsewhere, will not be allowed to board vessels until the same have been granted free pratique by the quarantine physician, and are beyond or out of the quarantine anchorage. Except those required by law to enter the quarantine anchorage, no other persons will be allowed within said anchorage or to visit the station, unless by special permission of the quarantine physician. Violations of these provisions will be prosecuted in courts of competent jurisdiction.

These regulations are not to be construed as substituted for, but supplementary to, the rules and regulations already adopted by the board for the coming quarantine season, commencing May 1 proximo.

By order of the quarantine board of Mobile Bay.

T. S. SCALES, M. D., *Health Officer.*

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IMPORTANT QUARANTINE NOTICE.

OFFICE OF QUARANTINE BOARD OF MOBILE BAY,  
*Mobile, Ala., April 11, 1896.*

Official notice is hereby given that the medical agents of the board in Central American ports will be instructed to issue certificates to vessels only chartered by the merchants of this city defraying the expense of this agency service, and said merchants are requested to furnish this office with a list of all said vessels and to promptly notify us of any additions to or subtractions from said list. All other persons desiring to participate in the benefit of said service will be required to defray their pro rata of the expense of said medical service, and all vessels from Central American ports, without said certificates, except as provided for in the proclamation, will, on arrival at our quarantine station, be required to lighter perishable cargoes, and then undergo thorough disinfection and detention as prescribed in the proclamation.

Rules and regulations governing the fruit traffic vessels otherwise in force in 1895 will be rigidly enforced during the summer quarantine season of 1896, and medical agents will not certify passengers unless satisfied that said passengers and baggage have not been exposed to infectious diseases for at least ten days prior to contemplated departure.

By order of quarantine board of Mobile Bay.

T. S. SCALES, M. D.,  
*Health Officer.*

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OFFICE OF QUARANTINE BOARD OF MOBILE BAY,  
*Mobile, Ala., April 24, 1895.*

For the purpose of continuing the fruit traffic with the various ports of the West Indies, Central and South America, not known to be infected, and visited by steamers coming to this city, during the quarantine season medical agents shall be stationed at said ports, and shall report by each and every vessel on the sanitary condition of their respective districts, on compliance by vessels with the regulations issued herein for their guidance, and shall perform such other duties as may from time to time be required of them. Said medical agents shall be appointed, or elected, by this board, and shall be accountable and report direct to this board or its authorized agent, and shall receive such monthly salaries as may be determined upon by the quarantine board.

All vessels engaged in the tropical fruit trade, in accordance with these provisions, will be required to be provided with the certificate of our medical agents of strict compliance with the rules and regulations governing said traffic, and will be detained at the Mobile Bay Quarantine Station sufficiently long to insure a most searching daylight inspection.

These vessels, whenever practicable, should be manned by acclimated crews, and will be required each trip to furnish the quarantine physician the certificate of the medical agent that the ports and places visited by said vessels are free from contagious and infectious disease, and passengers, if any, are also free from, and have not recently been exposed to, such disease. Passengers only allowed their personal baggage, and, in all instances, the names of passengers to be incorporated in the certificate.



Household effects, hides, bones, and fertilizers are rigidly prohibited, and under no circumstances will be allowed as a part of the cargo.

These vessels shall not touch at any port not included in their schedule, and communicate with no vessel during the voyage, except in case of distress. They shall be required to make a full disclosure to the medical agents at scheduled ports and at the Mobile Quarantine Station of all the ports and places they have visited on the voyage, together with such other pertinent information as may be required by the medical agents of this board.

Should infectious disease appear at any of the scheduled ports herein provided for, then these privileges will at once terminate, and any violation of the letter or spirit of the above-mentioned conditions will be taken by the quarantine board as a forfeiture by the vessel in default of all privileges granted them under said conditions.

By order of the quarantine board of Mobile Bay.

T. S. SCALES, M. D., *Health Officer.*

*Extracts from the act entitled "An act to establish and provide for the maintenance of a quarantine by improved methods against the introduction of yellow fever and other infectious and contagious diseases in the State of Alabama."*

\* \* \* \* \*

SEC. 5. *Be it further enacted*, That the said board (quarantine board of Mobile Bay) may, from time to time, prescribe the observance of quarantine by all vessels arriving within the bay or harbor of Mobile, or the vicinity thereof, and make regulations therefor, which may be necessary or desirable to insure the preservation of the public health and not contrary to law, such regulations to extend to all persons, goods, and effects arriving in such vessels, and to all persons going on board of same, as well as to the vessels themselves; and may require such vessels to be unladen, and the same to be cleansed, and the said vessel and its cargo and ballast and the clothing and effects of all passengers to be thoroughly fumigated and disinfected, or such clothing and personal effects to be destroyed where necessary.

SEC. 6. *Be it further enacted*, That all vessels entering Mobile Bay shall heave to, or come to anchor, as soon as a safe berth can be reached, as close to said quarantine as may be practicable or as may be required by the regulations of said board, and shall display a signal for the quarantine officer, and shall not leave said berth until such quarantine officer has duly boarded and inspected such vessel and its passengers and crew and has licensed said vessel to go on her way or has directed her to quarantine station; and if such vessel shall, under the rules and regulations and proclamations in existence, be required to go into or observe quarantine, it shall be the duty of the master or other person in charge of said vessel, and the passengers and crews thereof, to promptly conform to the orders and direction of such quarantine officer, and when in quarantine to strictly observe all the rules and regulations in force in reference thereto. And it shall be the duty of said board to supply the lower-bar pilots and the masters of all tugboats with a sufficient number of copies of directions printed in English, Spanish, French, and German of the rules required to be observed by the masters of such vessels in coming to anchor, displaying signal, and awaiting and submitting to the inspection of the boarding quarantine officer, and as to the duty of such master or person in charge of such vessel in answering all questions that may be propounded to him by such officer, and of the penalties for his failure to fully and truly make answer thereto, and it shall be the duty of lower-bar pilots and masters of tugs engaged in towing vessels across the lower bar to furnish the master of such vessels with such printed directions and conduct such vessel to the place designated for anchorage prior to boarding, and to explain or otherwise instruct the master of such vessel as to the nature and kind of quarantine signal to be displayed by him; and any person violating any of the provisions of this section shall be guilty of a misdemeanor.

SEC. 7. *Be it further enacted*, That the said quarantine board shall also have authority, and it is made its duty, to adopt such rules and regulations for the conduct of the master and crew of tugs, and of pilots, who shall be required to or shall perform any service for any vessel entering the said bay of Mobile, and is authorized to require any such person coming in contact with any such vessel, cargo, or person infected or supposed to be infected to observe such reasonable quarantine as may, in the judgment of said board, be necessary under the circumstances.

SEC. 9. *Be it further enacted*, That the said board may establish and collect fees for the inspection of all steamships and other vessels coming into the Bay of



Mobile not to exceed the following sums, respectively: For steamships, twenty-five dollars; sailing ships, twenty dollars; barks and four-masted schooners, fifteen dollars; brigs and three-masted schooners, ten dollars; tugs and two-masted schooners, seven and one-half dollars; other vessels, three dollars: *Provided*, That said board may relieve fishing, oyster, pleasure, pilot, and other small boats and tugs regularly engaged in towing across the bar of Mobile Bay, and small craft regularly plying in the Mobile Bay, and all vessels under five tons, from inspection or payment of the inspection fee; but said board may, in its discretion, from time to time, require such vessels to be inspected and to pay the fees as above provided.

All such fees herein authorized so to be charged are payable on demand, by the master or other person in charge of such boat or vessel, and shall be a lien upon such boat or vessel.

SEC. 10. *Be it further enacted*, That in addition to the inspection fees above authorized to be charged, said board is hereby authorized to charge and collect from the officers in charge of each vessel the actual or estimated cost for all services performed, including material furnished for said vessel in cleaning and fumigating such vessel, cargo, or ballast, and unloading and loading the same, and in addition may charge a quarantine fee for the maintenance and operation of the plant, of not exceeding seventy-five dollars in any one case; they shall also be authorized to charge medicines, board, and hospital attendance furnished to passengers and crew an amount fixed by said board to cover the actual expenses and costs of such medicines, board, and hospital attendance, all of which charged for shall be settled on demand by the master of such vessel, and shall be a lien on such vessel, and said board, in the charging of any such fees and expenses, may discriminate in favor of vessels which are, by themselves or with other vessels, running as regular lines or which have to observe quarantine more than once during the same year.

\* \* \* \* \*

SEC. 13. *Be it further enacted*, That if the master or person in charge of any vessel, or any other person, while in quarantine, shall remove or take such vessel from quarantine before she is given pratique, or shall procure or aid such vessel to be removed from quarantine, shall be guilty of a misdemeanor, and shall be punished accordingly; and every person ordered to remain in quarantine who shall escape or depart before being discharged therefrom shall be guilty of a misdemeanor, and shall be punished accordingly, and any justice of the peace or mayor of any city, on complaint thereof, may issue his warrant to a sheriff or constable or other lawful officer to arrest and deliver such person to the custody of the officers of quarantine, and any such person so attempting to escape may forcibly be detained or placed in quarantine by such officer.

SEC. 14. *Be it further enacted*, That any master of a vessel, or other person therein who is suspected of having come in contact therewith, may be sworn by the inspecting, boarding, or health officer touching his previous history or that of his ship, cargo, ballast, crew, or passengers for such length of time and in reference to such matters as may be necessary to enable such officers to determine whether or not it is proper for such vessel, passengers, or crew to observe quarantine; and any refusal to answer a proper question, or any false swearing on the part of any such person, shall be guilty of a misdemeanor, and punishable as such; *Provided*, That nothing in this act shall be so construed as to take away from the Mobile board of health any of the powers or duties not in conflict with the provisions of this act in regard to the actual administration of quarantine devolved upon said board of health by the existing quarantine and health laws of this State.

Approved February 16, 1891.

*Extracts from the civil and criminal code of 1886.*

FROM CIVIL CODE.

1266 (1510). *Vessels quarantined*.—The health officer of a town, city, or county may, under the direction of the corporate authorities or the court of county commissioners, cause any vessel arriving therein, or in the vicinity, if the vessel or cargo is, in his opinion, so foul or infected as to endanger the public health, to be removed to the quarantine ground, or other proper place, to be purified.

1267 (1511). *Escapes from quarantine*.—If any person ordered to remain in quarantine escapes, any justice of the peace, on complaint thereof, on oath, must issue his warrant to the sheriff, or to a constable, or other lawful officer, to arrest and deliver such person to the custody of the officers of the quarantine; and any such person attempting to escape may be forcibly detained at the place of quarantine by such officers.



1268 (1512). *Quarantine of travellers.*—Any person coming into a town, city, or county by land, from a place infected with a contagious disease, may be compelled to perform quarantine by a health officer, and restrained from traveling until discharged.

## CRIMINAL CODE.

4089 (4224). *Refusal of information to health officer—Penalty.*—Any master, seaman, or passenger belonging to any vessel supposed to have any infection on board, or from a port where any dangerous infectious disease prevails, who refuses to answer on oath such inquiries as are made by any health officer relating to any infection or disease, must, on conviction, be fined not less than one hundred dollars.

4090 (4225). *Breach of quarantine; penalty.*—The master of any vessel ordered to perform quarantine must deliver to the officer appointed to see it performed his bill of health, and manifest, log book, and journal; and if he fails to do so, or to repair in proper time after notice to the quarantine ground, or departs thence without authority, he must, on conviction, be fined not less than two hundred dollars.

4091 (4226). *Travelers from infected district compelled to perform quarantine; breach and penalty.*—Any person coming into a city or town by land from a place infected with a contagious disease may be compelled to perform quarantine by the health officer and restrained from traveling until discharged, and any person, thus restrained, traveling before he is discharged must, on conviction, be fined not less than one hundred dollars.

## QUARANTINE PROCLAMATION.

OFFICE OF QUARANTINE BOARD OF MOBILE BAY,  
Mobile, Ala., April 15th, 1892.

In accordance with law and by authority vested in me by the quarantine board of Mobile Bay, I, T. S. Scales, president of said board, do hereby declare that from and after the 1st day of May, 1892, and until the 1st day of December, 1892, unless sooner revoked, a rigid quarantine shall be enforced against all vessels entering lower Mobile Bay, as follows:

First. Against vessels, with their ballast, crews, passengers, baggage, and freight, coming from ports regarded as infected.

Second. Against vessels, together with their ballast, crews, passengers, baggage, and freight, coming from ports regarded as suspected.

Third. Against vessels and their contents which are infected, or with a history of infection during the present year.

Ports now regarded as infected are Rio de Janeiro, Para, Bahia, Pernambuco, Santos, Ceara, Puntas Arenas, Guayaquil, Habana, Matanzas, Cienfuegos, Cardenas, Santiago de Cuba, Kingston, and Vera Cruz, and vessels arriving from ports hereafter becoming infected will be treated in the same manner as those from ports named.

Ports regarded as suspected are all other South American and West Indian ports, as well as those of Central America and Mexico, with the exception of the following, to wit: Ruatan, Bonacco, Utila, Truxillo, and Swan Island; but vessels from these five named with passengers aboard will be subjected to such detention and disinfection of vessels and contents as the quarantine board may prescribe in each case on arrival at quarantine station.

All vessels, together with their ballast, crews, cargoes, passengers, baggage, and freight, under the first class, will, on arrival at quarantine station, be subjected to thorough disinfection by the improved method of maritime sanitation, and then detained five full days.

All vessels, together with their ballast, crews, cargoes, passengers, baggage, and freight, under the second class, will, on arrival at quarantine station, be subjected to thorough maritime sanitation, and then detained three full days.

No vessel under the third class will be allowed in the lower bay until the master produces a certificate that his vessel, together with ballast, crew, cargo, passengers, baggage, and freight, have been subjected to improved maritime sanitation, after which they will be detained at quarantine station for such length of time as the quarantine board may prescribe in each case.

Any vessel not from an infected place, but bringing ballast, crew, passengers, baggage, and freight from an infected place, will be included with those of the second class, and will be treated accordingly, unless the master can produce certificate that said ballast, crew, passengers, baggage, and freight have undergone quarantine restrictions in accordance with the improved method.



Vessels from ports known to be noninfected, and not already provided for, will only be detained at quarantine station a sufficient length of time to be placed in proper sanitary condition.

The restrictions herein proclaimed are subject to change at the option of the quarantine board, to meet particular cases.

T. S. SCALES, *President.*

RULES AND REGULATIONS OF THE QUARANTINE BOARD.

The quarantine ground shall be designated by buoys bearing yellow flags.

The quarantine physician shall attend at the station and not depart thence except by permission of the quarantine board. He shall board all vessels entering the bay or harbor of Mobile, as soon as practicable after their arrival, between the hours of sunrise and sunset, and examine into the condition of vessels and cargoes and the health of all persons therein, including the examination of as many of such persons under oath as he may deem necessary.

He shall direct such measures to be taken as may be necessary to purify the vessel, and supervise the same; shall sign all permits for vessels and persons to pass the quarantine and all discharges for vessels and persons to leave the quarantine, without which no vessel or person shall leave or pass the quarantine station; nor shall any vessel or person visit the quarantine station without having first obtained permission to do so from the quarantine physician. The quarantine physician shall cause to be displayed, near the pierhead, at a suitable elevation, a yellow flag from sunrise until sunset each day, and a red light in the same position during the night. The quarantine physician shall make to the quarantine board weekly reports showing the number and class of vessels inspected as well as quarantined, disinfected, discharged, etc., and he shall also forward a monthly report on the first of every month, which shall embrace the substance of his weekly reports, and in addition shall forward at this time all moneys collected, with a statement showing the various sources and amounts.

The inspection fees for all vessels entering lower Mobile Bay shall be as follows:

Steamships .....	\$15.00
Sailing ships .....	15.00
Barks and four-masted schooners .....	10.00
Brigs and three-masted schooners .....	7.50
Tugs and two-masted schooners .....	5.00
Other vessels .....	3.00

The fees for the disinfection of vessels shall be as follows:

Steamships .....	\$75.00
Sailing ships .....	50.00
Barks and four-masted schooners .....	40.00
Brigs and three-masted schooners .....	20.00
Two-masted schooners .....	15.00
Other vessels .....	10.00

In addition to these charges, there shall also be charged and collected for the treatment of the sick, either in hospital or on board vessels, at the rate of \$1 per day for each person so treated, and the handling of cargoes and ballast shall in all instances be done at the expense of the vessels interested.

Pilots and captains and crews of towboats are required not to board infected vessels, but to speak them off the bar and direct them to the Gulf Quarantine Station, on North Chandeleur Island. They will furnish all other vessels, that is to say, those entering lower Mobile Bay, with a copy of these regulations. During the existence of quarantine all pilots and other persons having charge of vessels entering Mobile Bay shall cause such vessels to heave to or come to anchor at or near the quarantine station, and such vessels shall there remain until they shall have been boarded by the quarantine physician and shall have received permission from him to proceed, and no pilots or other persons boarding such vessels will be allowed to leave the same until permission to do so shall have been given by the quarantine physician. It shall also be the duty of pilots or other persons bringing a vessel into the bay of Mobile to hoist a flag at half-mast at the fore until the vessel has been visited by the quarantine physician; and all vessels required to perform quarantine shall keep a flag at half-mast at the fore during the day and a lighted lantern in the same position at night, and no person shall leave a vessel nor visit a vessel at quarantine without a written permit to do so from the quarantine physician.



## NOTICE TO MASTERS OF QUARANTINABLE VESSELS ON ARRIVAL AT QUARANTINE STATION.

1. All bedding, ship's linen, cushions (except leather-covered or bound), mattresses, flags, mosquito nets, curtains, carpets, rugs, and all personal baggage and wearing apparel of whatever description shall immediately, on landing at the wharf, be put off for disinfection.

2. All leather-covered or bound cushions, oilskins, boots, shoes, hats, caps, furs, skins, umbrellas, etc., should be placed on deck; also all sails that may be in the sail room or hold.

3. A few hatches should be removed from each hatchway to facilitate the work of fumigation.

4. Captains will inform the superintendent of amount and character of cargo, where placed, and if the same is damaged or not; and whether the decks over cargo are water-tight or not.

5. Captains will describe the character of ballast, if any, and where taken on board.

6. Captains will inform all passengers of the above instructions.

Failure to comply with these orders will entail a penalty.

Fishing, tow, and pleasure boats regularly engaged in navigating the waters of Mobile Bay and Mississippi Sound may be relieved of the restrictions herein imposed as to inspection and payment of fees on application at the office of the quarantine board.

Adopted April 13, 1892.

## EXHIBIT B.

*Questions to be propounded by the quarantine physician to the masters and captains of vessels at the quarantine stations in Mobile Bay, and to be answered under oath.*

From whence is this vessel you command? \_\_\_\_\_.

How many days have you been on the passage? \_\_\_\_\_.

At what port or ports have you touched? \_\_\_\_\_.

Were any contagious or infectious diseases prevailing at the port from whence your vessel sailed? \_\_\_\_\_.

If so, name the diseases. \_\_\_\_\_.

Were any contagious or infectious diseases prevailing at port or ports at which you touched? \_\_\_\_\_.

If so, name the diseases. \_\_\_\_\_.

Was any freight or passengers received at the ports at which your vessel touched? \_\_\_\_\_.

If so, give particulars. \_\_\_\_\_.

Have you any bills of health? \_\_\_\_\_.

If so, produce them. \_\_\_\_\_.

During the course of your cruise or passage what cases of disease have occurred on board? \_\_\_\_\_.

At what dates? \_\_\_\_\_.

Have any deaths taken place on board your vessel since you left last port? \_\_\_\_\_.

If so, what date and from what causes? \_\_\_\_\_.

Are there any sick on your vessel at this time? \_\_\_\_\_.

Has the yellow fever, smallpox, cholera or plague ever existed in this ship? \_\_\_\_\_.

If so, when? \_\_\_\_\_.

Signature of master or captain. \_\_\_\_\_.

Subscribed before me \_\_\_\_\_.

Witness: \_\_\_\_\_.

## BAGGAGE CERTIFICATE.

I, \_\_\_\_\_, master of \_\_\_\_\_, solemnly swear that I have caused to be pointed out to the quarantine physician, and to be placed at the point directed by him, all the baggage, wearing apparel, cargo, and other effects liable to quarantine inspection, and that I have made a full exhibit of all such goods and effects, within my knowledge, and have secreted and concealed nothing, nor do I know of any such concealment or any other evasion of the quarantine law by the officers, passengers, or crew of this vessel.

Subscribed before me. \_\_\_\_\_.

Witness: \_\_\_\_\_.

\_\_\_\_\_, Captain.



## EXHIBIT C.

Questions to be propounded by the quarantine physician to the masters and captains of vessels at the quarantine station at \_\_\_\_\_, on Mobile Bay, in the State of Alabama, and to be answered under oath.

Port or station, \_\_\_\_\_.

Date of inspection, \_\_\_\_\_, 18—.

1. Name of vessel. \_\_\_\_\_.
2. Name of captain or master. \_\_\_\_\_.
3. Tonnage of vessel. \_\_\_\_\_.
4. Class of vessel. \_\_\_\_\_.
5. From what port did your vessel clear? \_\_\_\_\_.
6. When did you sail? \_\_\_\_\_.
7. From what port did you clear prior to last clearance? \_\_\_\_\_.
8. What was your cargo or ballast from that port? \_\_\_\_\_.
9. What is the number of officers? \_\_\_\_\_.
10. What is the number of the crew? White, —; colored, —; total, —.
11. What is the number of passengers? White, —; colored, —; total, —.
12. What ports have you touched at during voyage? \_\_\_\_\_.
13. Was there any infectious or contagious disease at port from which you cleared? If so, what? \_\_\_\_\_.
14. Was there any infectious or contagious disease at any port at which you touched? If so, where and what disease? \_\_\_\_\_.
15. Has there been any infectious or contagious disease on board this vessel during the last twelve months? If so, what disease? \_\_\_\_\_.
16. Have you a bill of health? If not, why? \_\_\_\_\_.
17. What sickness on board or sent to hospital while in port of clearance? \_\_\_\_\_.
18. What sickness on board during voyage? \_\_\_\_\_.
19. What sickness on board since arrival here? \_\_\_\_\_.
20. Have any deaths taken place on board your vessel since you left port of clearance? \_\_\_\_\_. If so, at what dates and from what causes? \_\_\_\_\_.
21. What is your cargo? \_\_\_\_\_. Where was it obtained? \_\_\_\_\_.
22. What kind of ballast? \_\_\_\_\_.
23. Where was this ballast obtained? \_\_\_\_\_.
24. Have any of your crew or passengers come in contact during the voyage with any vessel having sickness on board, or with any vessel from an infected port? \_\_\_\_\_.
25. Has any steam tug, or other vessel, or any person, except the pilot, boarded your vessel outside the bar? \_\_\_\_\_.

I, \_\_\_\_\_, do solemnly swear that I have truthfully answered each and every one of the above questions to the best of my knowledge and belief. So help me God.

\_\_\_\_\_,  
Captain of \_\_\_\_\_, of \_\_\_\_\_.

Witness:

\_\_\_\_\_, Quarantine Physician.

## EXHIBIT D.

## NOTICE.

Tugs will not be allowed to cross the line when vessels sail into the quarantine ground.

Tugs will not be allowed to hang around vessels in the quarantine ground.

Tugs will not be allowed to bring any person not of her regular crew, except pilots, into the quarantine ground.

Tugs are warned against coming too near vessels that require moving to or from the wharf.

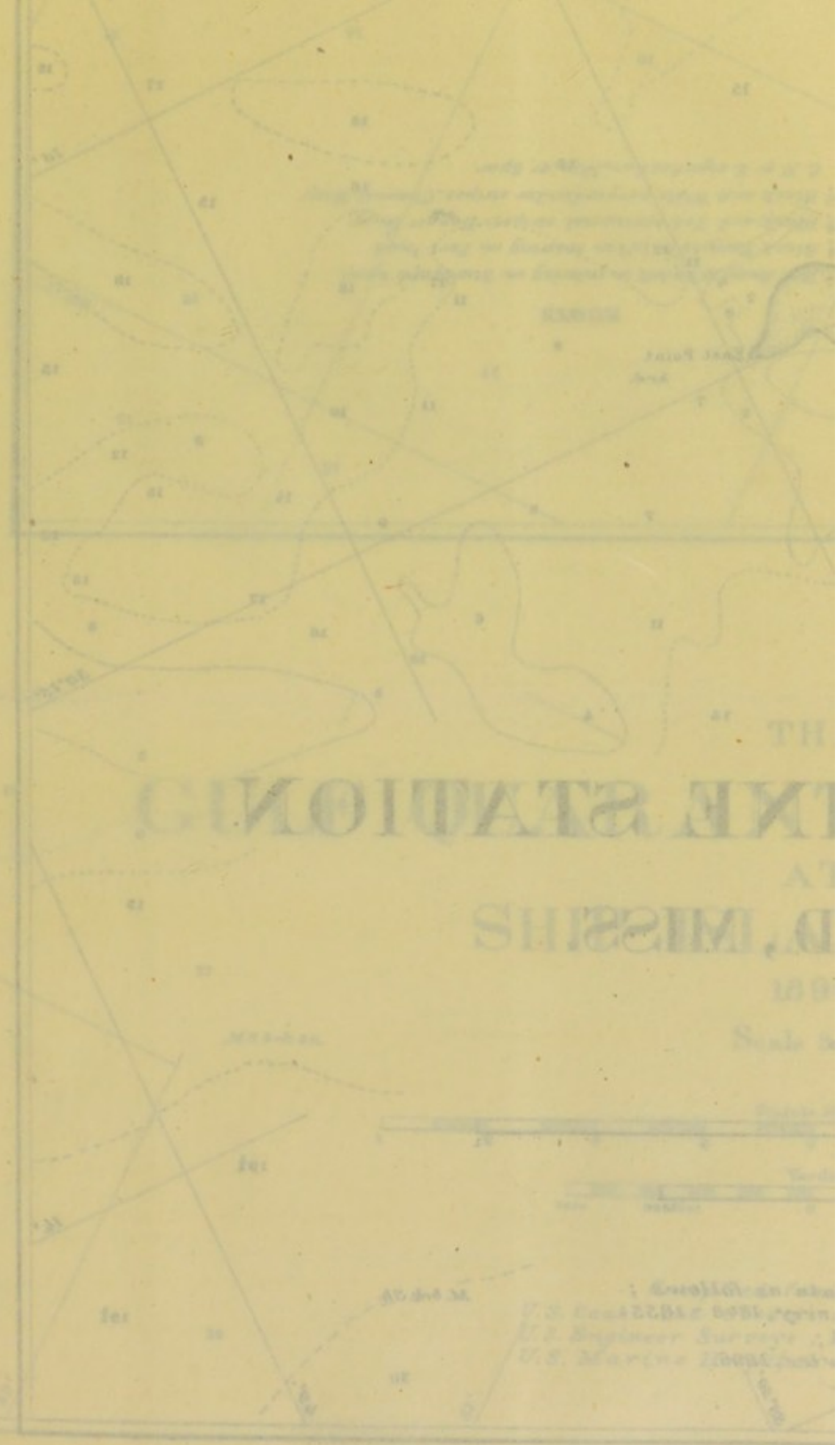
Tugs bringing vessels into the quarantine ground are expected to leave them at once after the vessel is cast loose.

Tugs are expected to move their own vessels to and from the wharf. Signal for steam, two flags, and if they are not available, the first tug that is available will be used.

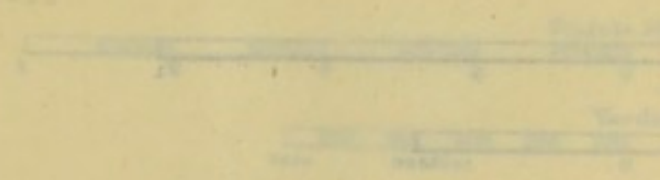
Tugs having freight for vessels in quarantine are expected to place the same on the breakwater platform and depart therefrom without unnecessary delay.

Vessels that have been released from quarantine will display two flags for their





THE STATIONERS  
AT  
MISSISSIPPI



U.S. GEOLOGICAL SURVEY  
WASHINGTON, D.C.







tugs to take them out. Under no circumstances will tugs or other vessels be allowed to go around promiscuously among vessels undergoing quarantine.

For further information in regard to penalties, please see the United States laws and regulations on quarantine matters.

*Special notice to captains.*—Giving or selling intoxicating liquors to the employees at the quarantine station is strictly forbidden, and the vessel will be held responsible for any damage for the violation of this notice.

*Day signals* (for tugs and sailing vessels desiring to enter the quarantine ground between sunrise and sunset).—Tugs will blow three long and three short blasts on the whistle. Sailing vessels will display a flag at half-mast at the fore. Station day signal: The quarantine flag on the tower, lowered about 4 feet from the top of the flagstaff, gives permission to enter.

*Night signals* (between sunset and sunrise).—Tugs will use the day signal. Sailing vessels will display a red light at half-mast at the fore, and give three long and three short blasts on the fog horn. Station night signal: A red light displayed on the wharf gives permission to enter.

GEO. H. FOWLER, M. D.,  
*Quarantine Physician.*

MAY 1, 1895.

EXHIBIT E.

QUARANTINE STATION, *Mobile Bay*, ———, 189—.

I certify that ———, of ———, from ———, has, in all respects, complied with the quarantine regulations prescribed by the Secretary of the Treasury, and that, in my opinion, she will not convey quarantinable disease. Said vessel is this day granted free pratique.

—————, *Health (Quarantine) Officer, Port of Mobile.*

EXHIBIT F.

OFFICE OF QUARANTINE BOARD OF MOBILE BAY,  
*Mobile, Ala.*, ———, 189—.

The ———, of which vessel ——— ——— is master, is, until further notice to the quarantine physician, hereby relieved of all quarantine inspections and payment of quarantine fees. This permit is invalid unless reported to the quarantine physician, and expires on change of master unless otherwise ordered by indorsement hereon.

—————, *President.*

Attest:

—————, *Secretary.*

MISSISSIPPI.

UNITED STATES QUARANTINE STATION, SHIP ISLAND, GULF OF MEXICO.

By Surg. R. D. MURRAY, M. H. S.

Name of quarantine station: Gulf.

When was the station last inspected? March 24, 1896.

Name of inspecting officer: Surg. Fairfax Irwin, M. H. S.

I. PERSONNEL.

Name of officer in command: A. C. Smith, passed assistant surgeon, Marine-Hospital Service.

Date of assignment to duty: March 10, 1896.

Name and rank of assistants, including acting assistant surgeons; also give number of members in each family: J. A. Moncure, M. D., acting assistant surgeon; immune; aged 52; Virginia Medical College, 1877; married; no family at station.

Name of steward and number of members in family: F. H. Peck, Ph. G.; non-immune; unmarried.



Name and duties of each attendant: Oscar Frantzen, aged 36, immune, Norway, declared intentions, head boatman; Alfred Johansen, aged 43, immune, Norway, citizen, carpenter and nurse; Judson C. Batton, aged 27, nonimmune, Mississippi, citizen, boatman and nurse; Edwin Batton, aged 21, nonimmune, Mississippi, citizen, boatman; W. S. Johnson, aged 24, immune, Mississippi, citizen, cook; John Williams, aged 23, immune, England, citizen, boatman and ballastman; Amanda Underwood, immune, Mississippi, citizen, laundress. Steamer *Welch*: Joseph C. Delmas, aged 46, immune, Mississippi, citizen, master and pilot; J. J. O'Connor, aged 43, immune, Illinois, citizen, engineer; Harry Nelson, aged 25, nonimmune, Norway, citizen, cook; D. G. Mitchell, aged 34, immune, Nova Scotia, citizen, fireman; Barth. Larsen, aged 22, immune, Mississippi, citizen, deck hand; Irving Delmas, aged 19, immune, Mississippi, citizen, deck hand.

## II. GENERAL DESCRIPTION OF STATION.

Number of buildings: Two east of lagoon; surgeon's house and yellow-fever hospital; five west of lagoon, (1) executive building, (2) storeroom, (3) crew dormitory, (4) laundry and carpenter shop, (5) boat house.

Limit of anchorage for noninfected vessels: One mile northeast to southwest by 1 or more miles northwest to southeast.

Limit of anchorage for infected vessels: Similar-sized area to northeast and east, with room to obey the Mississippi law to keep infected vessels 1 mile from healthy ones.

Facilities for inspection of vessels: One 25-foot naphtha launch, *Aimee*; one 27-foot whaleboat, *New Karlie*; one 17-foot Whitehall and two yawls, all fit for sea work; one small yawl and two skiffs for carrying messages, etc., in calm weather and for use in lagoon.

Apparatus for disinfection of vessels and of baggage: Steamer *Welch*, with boiler and tanks and pump; schooner *Zamora*, with boiler, steam chest, tank, sulphur fan, steam and hand pumps; Dutch ovens for cabins and forecastles.

Facilities for removal and treatment of sick: Boats, as described; one hospital, as described. No facilities for convalescents. Hospital should be rearranged.

Facilities for removal and detention of suspects: Could be removed by the described boats, but there is no place for detention. There should be a building set apart for them. At present they must stay on board.

Mail and telegraph facilities: Mail three times a week by steamer to Biloxi. In emergency the whaleboat may be sent; four hours beating or rowing; one and one-half to two hours in full wind. Telegraph facilities same as for mail.

Give number of wharves: There are no working wharves. The two bridges, 700 and 900 feet long, are boat landings.

What is the length of the wharf frontage? None, except for small boats.

Are the wharves in good condition? Pine piles, which need protection by metal or iron boxing. Built in 1894. Good for one year more; decks good. Heads should be covered.

Are the mooring facilities ample? Anchor mooring exclusively. The holding ground is good. No vessel properly anchored ever dragged.

What is the depth of water at mean low tide along the front of the wharf? No working wharf; 4 to 5 feet at heads of the boat landings.

What is the source of water supply? From station cisterns; 3 at executive building, 3 at surgeon's quarters, 2 at yellow-fever hospital.

Is it sufficient? Yes, with economy in early summer. Water from boats must be bought for boiler use.

Is it potable? Yes; sweet and pure in old cisterns.

Hard or soft? Soft from cisterns; somewhat hard from water boats.



If hard, does it injuriously affect the boilers in use at the station? The engineer says the boat water from Biloxi is not hurtful to the boilers.

How is it distributed and stored, if storage is necessary? Station, shore water in 8 cisterns; steamer and schooner, in tanks on board. One cent per gallon. There is no distribution.

### III. DISINFECTING MACHINERY.

Enumerate the machinery constituting the disinfecting plant: Steamer *Welch* with boiler, bichloride tanks and pump, and salt-water pump. Schooner *Zamora*, disinfecting steam chamber, sulphur furnace, and fan with pipes, boiler, bichloride and salt-water pump. Hand pump for spraying floors and containers. Dutch ovens.

What is the general condition of all machinery? Old-style furnace for sulphur on *Welch* burned out. Hot well in steamer *Welch* is broken, being clamped. Some boiler and condenser tubes leak and are plugged. Machinery is clean and bright. Boiler on schooner *Zamora* is too small; needs a new injector. Steam chest and furnace in good condition.

Does it appear well taken care of or neglected? It is evident that every effort is made to keep the machinery in working order, but the distance from a supply store and lack of a station shop cause delays in repairs.

Is there a steam hoisting engine for ballast? No.

Are there ballast tubs and a ballast car for the distribution of ballast? No.

How is ballast disposed of? It is placed on a 35-ton station barge by the vessels' crews, and, if rock, is placed inshore to make a small-boat breakwater. If sand or rubbish, it is thrown in shallow water. A station man watches the discharge.

Is it disinfected prior to being discharged, and what facilities exist for supplying ballast to vessels needing it? Not unless the vessel is infected. There are no facilities for supplying ballast except to order ballast logs or order part of cargo to use as stiffening. No scheme for saving rock.

What are the dimensions of the steam disinfecting chamber? Eight by 8 by 15 feet. Francis Bros., Philadelphia, Pa.

Is it rectangular or cylindrical? Rectangular. One end opens. The deck house should extend 20 feet forward.

How many cars are provided? Two; but there is room for use of but one.

Are infected articles put in at one end and brought out at the other after disinfection, or is one end of the chamber used for loading and unloading? One end is used for loading and unloading.

Is the chamber provided with thermometers for indicating the temperature during the process of disinfection? Yes; placed in the door which opens.

Is the chamber equipped with any apparatus for the production of a partial vacuum? What is the nature of the appliance? If efficient in operation? No; a steam atomizing jet might be attached, but the *Zamora's* boiler is not large enough to supply sufficient steam.

What vacuum is produced and how long does it take to obtain it? There is no vacuum gauge to measure even that made by steam.

Is a sulphur furnace provided? Yes; that on the steamer *Welch* is worthless. That on the schooner is a Valk & Murdoch double.

Give a diagram of the method of gas distribution, showing the number of gas outlets: There is but one outlet, 10-inch. In case of iron-bulkhead vessels the pipe is shifted to different holds by moving the schooner when pots are not used. Not possible to make a diagram, as the pipes run around the house on stern of schooner.



How many feet of sulphur hose are provided? Two sections of 20 feet, 6-inch, 40 feet; 70 feet of galvanized iron, 10-inch, spiral.

What is its condition? Good, almost new, seldom used. Galvanized pipe also good.

What is the condition of the fan and engine? That on schooner *Zamora* is in perfect condition. The fan on *Welch* perhaps rusted out.

What is the method of storing bichloride solution? On *Welch* in two iron tanks of 600 gallons each. On *Zamora* 1,200-gallon wood tank.

What is the capacity of the tank or tanks? Steamer *Welch*, two 600-gallon, iron; schooner *Zamora*, one 1,200-gallon, wood.

Are they wood or iron? Those on *Welch* being scraped, should be painted with graphite.

What is the elevation of the tanks above the wharf flooring? None; steam pumps are used.

Is the solution distributed by gravity or is there a pump for the purpose? Steam is now given by steamer *Welch*, if she runs, or by boiler on schooner *Zamora* to a Deane duplex pump. Condition good.

How many feet of hose are provided for the distribution of the bichloride solution, and what is its size and condition? Twenty-five feet assorted hose; 100 feet 1-inch hose; 200 feet 1½-inch hose; all in good condition.

How many steam boilers are provided? One small upright on schooner *Zamora*; one tubular on steamer *Welch*.

What is their condition and do they supply sufficient steam for all purposes? That on *Zamora* is too small for quick work; needs an injector; that on *Welch* is large enough for all purposes. Both in good condition.

#### IV. BOATS.

Is the station provided with a steam tug or other steam vessel? Yes; the United States quarantine steamer *Welch*.

If so, is she of wood or iron? Iron to the bulwarks.

Give dimensions? Length, 104 feet; beam, 16½ feet; draft, 5 feet.

If of wood, is the vessel sheathed with metal? Iron hull.

Are the engines and boiler in good condition? Yes; boiler works well and engine is as clean as possible.

Give engineer's statement as to necessary repairs and renovation? Condenser needs some new tubes; hot well was cracked by freezing last winter; is now being clamped; minor articles are frequently needed, which should be provided in advance.

NOTE.—I think it would be better to lay the *Welch* up in the lagoon, and thus permit the engineer to work on her the whole winter. For this tools will be needed.

Is the station provided with a steam or naphtha launch? A naphtha launch, *Aimee*.

Give dimensions: Twenty-five feet 4 inches, 7 feet beam; bought in 1891.

What is its condition? Good; clean and bright; makes about 4 miles an hour.

Give report of medical officer as to efficiency of the launch: Very useful for boarding in calm weather.

How many small boats are provided and what is the condition of them and their equipment? One excellent sloop whaleboat, 3 yawls, 1 lifeboat, 1 new Whitehall, 2 skiffs, 1 lifeboat on *Welch*.

Are more boats necessary or desirable? A new whaleboat should be provided or arranged for, in case an accident occurs to the one in use, which is 6 years old. A whaleboat is invaluable, and of more use than a naphtha launch.



## V. HOSPITAL.

Give location of building used as hospital: About 100 yards east of lagoon on site of former yellow-fever hospital.

Give general description of the building: Rectangular, with piazza all around, a corner of south-end piazza being inclosed for bathroom. One ward on west side of 8-foot hall. Four rooms on east side for surgeon, kitchen, nurse, and dining. A very faulty plan.

Dimensions: Forty by 50 feet; 56 by 66 feet over all.

Number of beds in each ward: One ward, eight beds.

How many beds can be added for emergencies? Three or four.

Cubic air space allowed each patient: Nine hundred and seventy-five; but windows will be open.

Heating, lighting, and ventilating: Stoves, lamps, air; all good.

Has the hospital sufficient furniture? Yes.

What kind of bedsteads and what kind of mattresses and bedding? Iron beds; moss mattresses; service pattern.

Condition of bedding used by patients: Good; never used.

Are the beds clean and free from vermin? Yes; never used.

What is the condition of wards as to general cleanliness? Very clean; never used; new.

Is the nursing sufficient and is the nurse immune? No; to be employed on occasions; one man, a good nurse—Johansen.

Does the character of the diet furnished conform to that prescribed in the diet table for marine hospitals? As near as situation permits.

Is a proper record of the patients under treatment kept? Records will be kept on "A B C" plan.

## VI.—OUTBUILDINGS AND GROUNDS.

Describe general condition of outbuildings: West side good; east side needs walks.

Are the grounds well policed? As well as possible; some lumber to be gathered up.

Describe officer's quarters and condition of furniture: Eight rooms and cross hall; too low in the ground; clean and sufficient; east side.

Describe steward's and attendants' quarters, and condition of furniture: Small; clean; furniture for steward and acting assistant surgeon good; double beds a mistake.

Describe dining room, condition of table furniture, and tableware: In surgeon's house, 10 by 12; in executive building, 8 by 10; close and hot; furniture ample.

Describe kitchen and furniture: Ten by 16 in executive building; comfortable; sufficient appliances. In surgeon's house, 10 by 12; good; airy.

Describe dispensary: A 10-by-19 room in northeast corner of executive building; carpet on floor; too small; should be on east side.

Describe laundry: Large; 10 by 20; cool; in outhouse, under roof, is carpenter shop and sulphur-gas closet.

Describe approaches to the station: West wharf, 900 feet to executive building; east wharf, 700 feet to surgeon's house.

Describe condition of fences and grounds: A board fence around west side reservation of old lumber; good walks of old flooring saved from old lazaretto; east side, no fence yet; grounds incapable of being put in good shape.

Describe drainage and condition of water-closets: Drainage natural, silex and marsh; water-closets are pits; some bricked; some over marsh; safe at all times.

Describe disposal of slops: Fed to hogs or thrown into the sea.



State whether any animals not authorized by the Department are kept on reservation: Some owned cattle and hogs on the island; none on the 10-acre reservation.

## VII. EQUIPMENT.

State approximately age and condition of each horse, and how long in service at this station: No horses.

Give number and character of vehicles: No vehicles.

Is there a blacksmith's forge provided? No; but one is frequently needed, as in olden time.

Are there farming implements; and if so, are they in good condition? None.

Is there a fire apparatus provided; and if so, is there a fire drill organized? Ten Babcock fire extinguishers and buckets. No time for drill since March 10, but men are instructed.

## VIII. DISCIPLINE.

Are officers and employees supplied with uniform in compliance with the revised uniform regulations dated June 20, 1896? Uniforms of July 3, 1893, are in use by all employees who are over one month in service.

Are uniforms properly worn? Yes.

Give method of granting leaves to officers and employees: The Marine-Hospital Service regulations are followed.

Describe when and how inspection, muster, and fire drills are conducted: Inspection of quarters and muster of men every Sunday morning when work is not compelled on vessels. I had no time to observe the method; fire drill to be taken up soon.

## IX. GENERAL ADMINISTRATION.

Make a statement showing the number of vessels arriving at the station during the preceding calendar year, by months:

1895.	From foreign ports.	From foreign via domestic ports.	From domestic ports.	Cargoes.	
				Ballast.	Empty.
January.....	4	0	0	4	0
February.....	8	0	0	8	0
March.....	4	0	0	4	0
April.....	5	0	0	4	1
May.....	12	1	0	8	5
June.....	6	0	2	5	3
July.....	8	0	0	5	3
August.....	15	0	1	10	6
September.....	8	1	2	5	6
October.....	8	1	2	6	5
November.....	6	0	1	7	0
December.....	4	1	0	4	1
Total.....	88	4	8	70	30

From what countries chiefly do the vessels come? Of these 100 vessels, 19 came from England, 15 from Brazil, 17 from Mexico, 14 from Cuba, 8 from West Indies, and 27 from home and other ports.

Are they in cargo, ballast, or empty? Seventy were in ballast, 30 had swept holds; no cargoes.

State whether in your opinion the quarantine facilities are sufficient to care for the shipping arriving at the station? The facilities for discharging ballast are insufficient, and that expense should not be met by the station. Privileges for hiring lighters at vessels' expense should be given. The disinfecting means are sufficient for two ships per day, but a convenient dormitory for crews in bad weather is a great want. Hospital chances are meager.



*Treatment of vessels and cargoes.*

1895.	In- spect- ed and passed.	Dis- charged ballast.	Disin- fected.	Character of ballast.				
				Water.	Sand.	Earth.	Stone.	Rub- bish.
January .....	4	0	0	0	1	0	1	2
February .....	7	1	1	1	6	0	0	1
March .....	2	2	2	1	0	0	2	1
April .....	2	3	3	1	0	0	3	0
May .....	6	3	7	2	4	0	2	0
June .....	2	2	6	2	2	0	1	0
July .....	3	3	5	1	2	0	1	1
August .....	7	4	9	0	3	0	7	0
September .....	3	4	8	1	2	0	2	0
October .....	4	3	7	1	3	1	1	0
November .....	6	2	1	2	2	1	0	2
December .....	3	2	2	0	4	0	0	0
Total .....	49	29	51	12	29	2	20	7

This report has been delayed in order to procure extended information in regard to ballast. The first half of this year having passed, Dr. Smith very kindly sends me details up to June 30, 1896, as follows:

*Arrivals for the six months ended June 30, 1896.*

Month.	From foreign ports.	From yellow- fever ports via domestic ports.	From domestic ports.	Cargoes.	
				Ballast.	Empty.
January .....	7	0	0	7	0
February .....	17	0	1	15 a 1	2
March .....	7	0	0	6	1
April .....	13	0	3	15	1
May .....	19	0	0	13	6
June .....	9	1	4	10	4
Total .....	72	1	8	67	14

a Lumber.

Of these 81 vessels arriving during the first half of 1896, 20 came from England, 10 from Mexico, 7 from the West Indies, 6 from Cuba, 8 from United States ports, with 19 from scattering ports.

*Treatment of vessels.*

Month.	In- spect- ed and passed.	Dis- charged ballast.	Disin- fected.	Character of ballast.				
				Water.	Sand.	Earth.	Stone.	Rub- bish.
January .....	7	0	0	2	4	0	0	1
February .....	18	0	0	0	6	0	8	1
March .....	5	2	2	2	0	1	2	1
April .....	15	1	1	5	4	0	5	1
May .....	10	5	9	5	3	1	3	1
June .....	12	1	2	1	5	0	4	0
Total .....	67	9	14	15	22	2	22	5

It will be understood that the water ballast was carried by steamships. I have not time to analyze the sources of the ballast, but the subject is interesting; also, what is actually meant by "rubbish."

The following questions were submitted to Passed Assistant Surgeon Smith: Q. Have you sufficient facilities for discharging ballast?—A. The facilities are only moderate and might fail us entirely if the barges in use for that purpose should



spring a leak. Q. Would you like to hire lighters at vessel's expense to take out ballast under your direction?—A. Yes.

In June one vessel was considerably delayed because the barge was being used by a preceding vessel. I advise that P. A. Surgeon Smith be authorized to permit a vessel to hire a schooner lighter to take out ballast, the vessel to pay the cost if the master prefers to pay rather than to wait. There are several schooners that can be got on a day's notice. It will be necessary to wash the schooner after completion of each vessel. A schooner can be hired for time by the Service. There is an effort being made by the Ship Island harbor master to place a man at the station to supervise the discharge of ballast. This will cost each vessel from \$2.50 to \$4 per day while ballast is being put out, and will put an extra resident at the station. I think the ballast control can well and safely be left in the hands of the officer in command.

Give annual amount expended at station for last three years: In 1893, \$15,647.76; in 1894, \$16,506.81; in 1895, \$17,959.52; total, \$50,114.09.

Give the immediate needs of the station as stated by the commanding officer: Forge and blacksmith tools; artesian well; telephone from surgeon's house to executive building; lagoon bridge (or removal of station, all to east side); at surgeon's house, new quarters for attendants; heating executive building better; requiring new chimneys and stoves; more employees to police grounds and erect fences from old lumber.

Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

#### REMARKS AND RECOMMENDATIONS.

The writer served at Ship Island Quarantine from November 1, 1883, till February 27, 1888. His service at Chandeleur for four and one-half months in 1891 added to his favorable impressions as to the appropriateness of Ship Island as the proper location. This prelude seems necessary to what remarks he may make as to the needs of the station.

Ship Island is a safe harbor, and the holding ground is excellent. There is room for all possible loading, and any reasonable number of quarantined vessels of both suspected and infected classes. The distance from the mainland and from the loading harbor is sufficient for all safety—no distance will obviate insensate fears or the bogy stories of unfriendly critics.

In 1879 the National Board of Health proposed to absorb the whole island, and this idea was carried out in some measure until I took charge. I at once forsook control of the west end, except as custodian and health officer, permitting all vessels in the loading harbor to have free access to the island and the mainland, but keeping the quarantine anchorage always subject to my personal oversight and control. Now that the warehouse has been destroyed and the large wharf is a ruin, the west end is of no interest to the quarantine commandant. But the loading fleet should yet and always be under his control in order that he may be the first to know of any sickness in the vessels and also that no vessel may come into the harbor without his permit.

JUNE 4, 1896.

*UNITED STATES QUARANTINE STATION, SHIP ISLAND, AND ITS RELATION TO THE PORTS IN THE SHIELDSBORO COLLECTION DISTRICT.*

By Surg. R. D. MURRAY, M. H. S.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and baggage; facilities for



removal and treatment of the sick, and for removal and detention of suspects mail and telegraph facilities, etc.

In order to properly comprehend the quarantine service on the coast of Mississippi, it is necessary to take a view of Mississippi Sound and the ports on the coast which have any foreign traffic or trade with infected ports.

In my report on Round Island Quarantine, the sound, islands, and passes were briefly described, and inquirers are referred to that report for information not found in this. But to make the matter clear, Ship Island Quarantine must be described, as it is the only safeguard from Tampa to New Orleans, after which notice may be taken of the loading berths and lumber points on the coast.

Ship Island was chosen as the best location for a middle gulf station by a committee of the National Board of Health in 1879, after a careful examination of the entire coast from Apalachicola to Southwest Pass. It is fair to infer that if the uselessness of the Tortugas as a military menace had been appreciated, the committee, having means and time unlimited, would have thought of the useless group of islands and have proposed to turn them and Fort Jefferson to some advantage. A full knowledge of gulf commerce, always keeping in mind the ability of New Orleans and Galveston quarantines to take care of all infected or suspected vessels that would or might come to them, would have resulted in the selection of Tortugas as the chief, or maybe only, quarantine for the eastern and middle gulf.

Ship Island having been selected in 1879, a quarantine was proclaimed and \$35,000 was expended in building a wharf and warehouse (useless from the first), a hospital, lazaretto, and quarters. A fine steamer was purchased to serve as a station while construction was going on. That the steamer was unfit for the duty may be shown by the fact that she had been a private yacht. In 1880 the station was opened from the island with the steamer as an aid, and thus the quarantine was conducted until 1884, when the steamer was condemned as useless and was finally sold as old iron.

The National Board abandoned the station in mid season of 1883, and the Marine-Hospital Service was compelled by every interest to assume charge. Quarantine duties were performed by officials of the Marine-Hospital Service to the satisfaction of all related ports until 1886, when the New Orleans board of health came to the conclusion that their substation at Pass a L'oultre was too costly, and that expenses might be saved by getting the General Government to take charge of the affair; this idea brought about scares, canards, local quarantining, and public turmoil in regard to the nearness of Ship Island to the mainland, and the strife was kept up until the General Government was apparently forced to get away from there and make a faulty move to Chandeleur. Although the Chandeleur Islands had been condemned, both by a committee of the National Board of Health in 1879 and a commission appointed by the Treasury Department in 1883, as a suitable location, a new commission was formed by the Marine-Hospital Service, which in 1888 advised the removal of the United States station to that point. Large sums were expended in putting up beautiful structures, and in 1889 they were occupied, resulting in the loss of half a dozen vessels by wrecking, and in 1893 of the whole business and five lives in a hurricane. Thus in the autumn of 1893 the station was removed to Ship Island, which so far, in spite of force of wind and water, presents the appearance of being solid. Ship Island offers the triple advantage of being easily reached and of harbors deep and large enough for both quarantine and loading purposes. Fifteen to twenty-five vessels may be quarantined at the same time that as many may be loaded 3 miles away. Ship Island is 8 miles long and curves from northeast to west; it is 8 miles distant from Horn Island, on the east, and between lie Dog Keys, which are only good for wrecking purposes. Cat Island is larger in area; lies to the west 6 miles distant; it is about 5 miles long from east to west, and has a spithead of 4 miles running north and south, making



the shape like a rude letter T. There is a 12-mile light on the west end of Ship Island, and an 11-mile light on the west end of Cat Island, and 6 miles west of the latter is the Merrill Shell Bank light.

The Ship Island loading berth is under the west end of the island, protected by the fort and the light-house dunes. The Cat Island loading berth is south of and between the last-named lights; the former has 25 feet or more of water; the latter from 14 to 16 feet.

The Ship Island Quarantine—officially known as "Gulf"—is located on two sides of the lagoon, 5 miles east of Fort Massachusetts, which is on the west extremity of the island. On the west side of the lagoon are a small hospital—too small—for noninfected, quarters for steward, assistant to the medical officer, and storerooms, five structures in all. On the east side are the medical officer's residence and a large hospital for quarantinable diseases. Some additional buildings are needed to make the shore part of the station complete for the comfort of the workers and the safety of those who must seek its shelter. Good landing wharves run out from each side of the lagoon to about 4 feet of water at lowest tide, for communication with the quarters.

The anchorages are ample to accommodate a reasonable number of both infected and noninfected vessels, and permit the required mile of the Mississippi statute to be between the different classes. The holding ground is the very best, and vessels of 20 to 22 feet can be cared for. The facilities for inspection of vessels consist of a 25-foot naphtha launch and an excellent water-boarded whaleboat.

The apparatus for disinfection of vessels and of baggage consists of dutch ovens for staterooms, hand pumps for carbolic solution, and steam pumps for salt water and bichloride solutions, and two vessels—a steamer, the *Welch*, with a large boiler and bichloride pump and tanks and a sulphur furnace and fan, and a schooner, the *Zamora*, with boiler, steam pumps, sulphur furnace and fan, and an 8 by 15 feet rectangular steam chamber. For ballast, two scows are at hand with which the crews carry ballast to the shoal water. The steamer *Welch*, on occasion, tows vessels and the ballast barges.

The facilities for removal and treatment of sick consist of the launch and whaleboat and a hospital for each class of troubles; for noninfected on west side; for infected on the east side; also two physicians and a steward, and a liberal supply of medicines and hospital furniture.

There are facilities for removal of suspects as noted above, but there are no facilities for their detention. There is space on the island for sufficient structures, and in time it is probable that good counsel will prevail, and that the station will be outfitted to a point beyond cavil.

The mail facilities are per a boat three times a week from Biloxi, 13 miles north. There is a telegraph office at Biloxi, and in case of necessity the whaleboat can be sent over at any time, or in greater urgency the steamer *Welch* may be dispatched.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

The station is under the command of a medical officer of the Marine-Hospital Service, who has a steward and an acting assistant surgeon of the same Service to give all necessary assistance. At present there are seven employees serving as carpenter, boatmen, cook, and laundress, who are of the shore crew, making ten on shore. The force in charge of the steamer *Welch* and schooner *Zamora* consists of six, all of whom live on the steamer, but work as occasion requires. Thus the total personnel consists of sixteen. The post-office address is Ship Island Quarantine, Biloxi, Miss.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.



The regulations of the Treasury Department approved April 26, 1894, and subsequent additions are strictly followed. The quarantine customs of the port are to strive to carry out the letter of the local laws of the port to which the vessel is bound. The majority of the vessels are to load at Ship Island Harbor, at the west end of the island. These receive regular treatment and detention. Some vessels are ordered to the station from Apalachicola, Mobile, and Round Island. Such vessels would, or should, receive such treatment as would be requested by the quarantine officer sending them for treatment.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

Practically none, but on request the detention would be increased. There is some tardiness in case two or more vessels arrive with ballast, as the ballast barges are not large enough to permit a full day's work, and of course a later vessel will have to wait on a previous arrival. The subsequent inspection of vessels by a Mississippi State board of health agent, who lives at Biloxi, is a cause of useless delay in the forwarding of the business of local vessels.

5. State whether the inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.

All vessels coming into the harbor are inspected, foreign vessels the year round and domestic-port vessels in summer. It would be well if the Mississippi extra inspections were discontinued and that the medical officer had absolute control first and last of all arrivals.

6. Are vessels from other United States ports inspected?

Yes; in summer.

7. Describe quarantine procedures in inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessel until discharge.

The United States Treasury regulations are followed throughout.

8. What communication is held with vessels in quarantine (and before quarantine, by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

None. Masters may meet on shore, by getting permission, after their vessels are disinfected. Pilots do not go on infected vessels in ordinary; if they do, they are treated in quarantine. No intercommunication is allowed between vessels in quarantine except by permission of the medical officer, to be obtained in each case.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

In each case the Treasury regulations will be carried out to the letter.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Complete records are kept, as prescribed by the Marine-Hospital Service.

11. Transmit schedule of quarantine fees and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

There are no fees directly consequent on the quarantine process. Sick foreign seamen are charged at the rate of \$1 per day for care and attendance. United States seamen are treated at United States marine hospitals. The subsequent inspection fee assessed by a Mississippi board of health inspector for vessels that load in Mississippi waters is \$5, but this is useless. There may be some cost to



the vessel for pilots who are detained in quarantine, but this is unusual, and if pilots are immune should never occur.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

1895.	Foreign ports.	Foreign ports via domestic ports.	Domestic ports.	Cargoes.	
				Ballast.	Empty.
January .....	4	0	0	4	0
February .....	8	0	0	8	0
March .....	4	0	0	4	0
April .....	5	0	0	4	1
May .....	12	1	0	8	5
June .....	6	0	2	5	3
July .....	8	0	0	5	3
August .....	15	0	1	10	6
September .....	8	1	2	5	6
October .....	8	1	2	6	5
November .....	6	0	1	7	0
December .....	4	1	0	4	1
Total .....	88	4	8	70	30

Of these 100 vessels, 70 carried ballast and 30 had swept holds; 19 came from England, 14 from Cuba, 17 from Mexico, 8 from West Indies, 15 from Brazil, and 27 from Europe and domestic ports; 49 were inspected and passed, 29 discharged ballast, and 51 were disinfected. The destinations of these vessels were: Fifty-eight for Ship Island loading berth, 35 for Pascagoula (Horn and Round islands), 1 for Shieldsboro (Pearlington), 1 for Moss Point (Pascagoula), and 5 for Mobile; 95 per cent for the Shieldsboro district.

*Arrivals for the six months ended June 30, 1896.*

Month.	From foreign ports.	From yellow-fever ports via domestic ports.	From domestic ports.	Cargoes.	
				Ballast.	Empty.
January .....	7	0	0	7	0
February .....	17	0	1	a 1 } 15 }	2
March .....	7	0	0	6	1
April .....	13	0	3	15	1
May .....	19	0	0	13	6
June .....	9	1	4	10	4
Total .....	72	1	8	67	14

a Lumber.

Of these 81 vessels, 66 carried ballast, 14 had swept holds, and 1 was lumber loaded, in distress; 20 were from England, 6 from Cuba, 10 from Mexico, 7 from West Indies, and 27 from Europe and domestic ports; 67 were inspected and passed, 9 discharged ballast, and 14 were disinfected. The destinations were as follows: Sixty-one for Ship Island loading berth, 14 for Pascagoula, (Horn and Round islands), 2 for Shieldsboro (Pearlington), 1 for Biloxi, 1 for Handsboro, 2 for Mobile; 79 out of 81 for the Shieldsboro district.

Having in a too rapid manner given a hint of the principal quarantine on the



coast, it is necessary to state that vessels from infected ports intended to load at Horn or Round island are always sent to it for treatment. In case sickness should occur on a vessel after she had left Tortugas for Apalachicola it is probable that she would prefer to go to Ship Island than to return to Tortugas; it is certain that an infected vessel for Mobile would be sent there and probable that a badly infected vessel for Pensacola would also have to seek shelter and relief there.

At this point I must allude to the towns on the coast that have relations and proximity to the station. Scranton and Pascagoula on the east have been included in the report on Round Island. Biloxi is a thriving town of 5,000 inhabitants, lying 13 miles north of the island. It is prosperous owing to its canning factories, and is a noted summer resort. There is a deputy collector of customs here. The Seashore Camp Ground is 2 miles west, and the gathering every summer for three weeks or a month of thousands of up-country people in sight of the tree tops and mastheads of Ship Island gives rise to a lot of useless talk and more foolish dread of quarantine failures. Biloxi has no interest in the quarantine except that the mail and supplies come through there; but the village gets all the rumors and more than the possible truth from pilots, stevedores, sailors, and visitors. There is another relation, as will be seen under Handsboro. The town had three cases of smallpox in July, 1895, introduced from New Orleans, but they were so well handled that there was no spread.

Mississippi City lies west of Biloxi and 16 miles west of north of the station. It is the capital of Harrison County; a small place, whose chief business is in summer and at court sessions.

Handsboro is located on Biloxi River, about 4 miles overland back (north) of Mississippi City. The place has a population of about 600, and has three large sawmills, one of which does an exporting trade in addition to a large domestic business. The lumber is carried out the Biloxi River to the Gulf, a distance of 13 miles. In 1895 one vessel was loaded at the mills for Cuba. In the six months ending June 30 two vessels were loaded for Cuba at the mills and one at Ship Island. About 1,000,000 feet were delivered to other parties at Ship Island. About 5,000,000 feet of lumber are shipped annually, the greater portion to near-by ports, in schooners that will carry from 25,000 to 40,000 feet.

Gulf Port is a new village located about 2 miles west of Mississippi City, which it is proposed to make a shipping point, and a wharf of a mile or more in length is being constructed out into deep water in the direction of Ship Island. It was intended ten years ago to use the island for the practical terminus of the railroad, and this gave some argument for the discontinuance of the United States quarantine at that point. I have reason to believe that both interests can be served without injury to either and to the great advantage of the railroad, and so expressed myself in 1885, when the project was first broached. However, it is necessary to think of Gulf Port and the railroad when planning improvements for the quarantine.

Pass Christian lies about 10 miles northwest of Cat Island light and 8 miles northeast of Merrill Shell Bank light. It is an important summer resort, and has no relations with the quarantine except that light-draft vessels lie off from it between, but south of, the lights, and load lumber which is towed from Pearlinton. Four vessels were loaded here in 1895, and every year as many or more are loaded. Vessels pass through here into the Rigolets to Lake Pontchartrain drawing 6 feet. There are 8 feet of water at high tide through the Rigolets Channel. This is also the route to Pearlinton.

Bay St. Louis (Shieldsboro in custom-house parlance) is about 8 miles west of Pass Christian and on the west side of Bay St. Louis. Some lumber, ties, and timber are produced on Wolf River, back of it, and brought down in small schooners and rafts, but the quantity is limited. The custom-house of the



district is located there, but at present neither the collector nor the deputy lives in the town. It should be remembered that the two other custom-houses are at Biloxi and Pascagoula.

Pearlington is a lumber town of 2,000 inhabitants, located 12 miles up Pearl River from English Lookout, where the river joins the Rigolets Channel to flow into the Gulf. From this point 26 vessels were loaded at Ship Island with 13,000,000 feet of lumber in 1895 for foreign ports and 443 small vessels were loaded with 16,000,000 feet of lumber for domestic ports in the same year. Four vessels were loaded at Pass Christian.

In March, this year, a schooner from New Orleans introduced smallpox into the village, and as a result there were 9 cases at a total cost of \$800.35.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

The customs officer acts as immigration agent, but as all vessels come in without cargoes, the only immigration consists of discharged or runaway sailors, of whom no count can be made. There were for the district during the fiscal year 1895, 194 foreign-port entries, 204 foreign-port clearances, 36 domestic-port entries, and 59 domestic-port clearances.

At Ship Island and Cat Island loading berths there were loaded for foreign ports during the eighteen months ending June 30, 1896, 116 vessels and 8 vessels for domestic ports, with a total of 50,500,000 feet of lumber and 750,000 cubic feet of timber. At Horn Island and Cat Island loading berths there were loaded during the calendar year 1895, 169 vessels for foreign ports and 43 vessels for domestic ports. I have been unable to get the quantity of pine that was shipped.

At the custom-house I found that from December 1, 1893, to April, 1896, there had been eighteen cases of failure on the part of masters to procure duplicate bills of health at the foreign port, as required by the act of February, 1893. The fines in nine of the cases were remitted; in nine cases fines were assessed, viz, two at \$10; one at \$15; two at \$20; three at \$25, and one at \$50. The case in which the fifty dollar fine was assessed was peculiarly aggravated, and it is to be regretted that the fine was so small. The Russian bark *Paul* left Limerick without the two bills, although the master was notified by Consul Ashby of the requirements of the law. The consul notified the Department of the case, which made the fourth similar one from that port, and the Department before the arrival of the vessel ordered proceedings to be instituted against the vessel. On arrival the master made an affidavit utterly denying the consul's statement as to notification, etc. The vessel was finally entered on the payment of \$50.

It has come to my knowledge very often that foreign masters care very little for our laws and methods, and fancy that by some good lying the faults of which they are guilty will be pardoned. It is a common custom for vessels to get the crew or a considerable part thereof after being ready for sea. Under such circumstances a master can afford to pay a pittance as a fine, or, better yet, swear to a lie. Except from ports where there is no consular officer within 20 miles, there should be no leniency shown.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port?

The facilities are ample for the shipping. More buildings are needed for sick men and as quarters for the shore force. A ballast crib to expedite the discharge of ballast is worthy of consideration, or the substitution of copper-sheathed schooners for the ballast barges.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.



The United States Treasury regulations are fully observed as to disinfection and detention.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

Yes; official forms are used. (Copy inclosed.)

17. What disposition is made of the consular bills of health?

One is retained and the original given to the vessel for deposit in the custom-house. A better plan is to indorse both on the day of arrival and return them to the vessel when she is discharged; thus an extra inspector at a final port may keep one and the custom-house get the other. All essential facts in the bill of health can be put in the declaration or inspection book, where they are more quickly found than if stowed away in a bundle or file book.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

I have been compelled in the hurry of preparing this paper to insert some remarks that properly should come under this paragraph, but there are additional comments which are worthy of expression. It is plain to anyone conversant with the coast that the United States quarantine is properly placed on Ship Island as long as sand and earth ballast vessels are in existence. It would be well to direct all steamers, rock-ballast or rubble-ballast vessels and all swept-hold vessels to Tortugas, which should be made the chief station of the east half of the Gulf. Tortugas can never be an acceptable place for vessels carrying ballast which should be discharged as a part of the cleansing process, but Tortugas will always be preferable for no-ballast vessels and vessels with quarantinable diseases on board.

With comparatively few additions to Ship Island Station and some modification of the rules there will be no need for the Mississippi inspector at Round Island or at Biloxi.

It is a fact that Ship Island Quarantine has saved the country many lives and vastly more dollars, even including the cross purposes and bad judgments which built the immense wharf and warehouse at the west end, and the blunder at Chandeleur. For the past seventeen years, including four years' work at Chandeleur, the station has cared for all the infection from Apalachicola to English Lookout, except the work done at Tortugas in 1894 and 1895. Tortugas might have done more and done it earlier if the pest ships had stopped there. It is worth noting that there were 19 cases of yellow fever at Ship Island in 1886, with 1 death (which can be explained without blame to the station), and 26 cases at Chandeleur in 1891, with no deaths. The cholera and smallpox work done at Ship Island and Chandeleur have been sufficient to atone for much money expenditure. The proposed revival of the canard that there was yellow fever at Biloxi in 1886 as a result of the existence of the same disease at Ship Island should shame the parties interested, as I have reason to believe it will shame the original panic shrieker. It is not true that Government officers are inimical toward the localities in which they serve, either permanently or temporarily, and that the interests of the people are jeopardized by them. A man charged to protect the whole coast will have more communities in his mind and on his heart than a local official who only cares to be free from the charge that the disease got in through his port.

I served as commissioned and sworn health officer of Harrison and Hancock counties for four years, and as deputy health officer for Jackson County for over two years, when there was no United States law to compel obedience to quarantine rules, and even yet at Ship Island it is needful that the medical officer have practical police powers.



To properly notify interested and sometimes suffering and angry parties, and to accent the necessity of inspection of foreign-port and infected-port vessels during the entire year, I subjoin certain documents and recommendations made last month, viz:

TREASURY DEPARTMENT, OFFICE OF THE SECRETARY,  
*Washington, D. C., May 11, 1895.*

SIR: The following telegram was sent you to-day: "You are directed hereafter, until further direction, to admit no vessel from infected ports to entry without a certificate of free pratique from United States quarantine officer at Ship Island."

This action is taken on the recommendation of the Supervising Surgeon-General of the Marine-Hospital Service, who reports no facilities for the care of suspected or dangerous vessels coming from infected ports by the local quarantine officer.

Respectfully, yours,

S. WIKE, *Acting Secretary.*

COLLECTOR OF CUSTOMS, *Shieldsboro, Miss.*

TREASURY DEPARTMENT, OFFICE OF THE SECRETARY,  
*Washington, D. C., May 11, 1895.*

SIR: Referring to Department telegram and letter of the 11th instant, directing you to require certificates of free pratique from the United States quarantine officer at Ship Island before admitting to entry vessels from infected or suspected ports, you are further advised that this certificate should be required from all vessels seeking entry at your port until November 1, 1895.

I have further to state, in answer to your inquiry, that the certificate of free pratique from the United States quarantine officer at the Dry Tortugas Quarantine Station may be accepted as well as that of the quarantine officer at Ship Island.

Respectfully, yours,

S. WIKE, *Acting Secretary.*

COLLECTOR OF CUSTOMS, *Shieldsboro, Miss.*

NOTE.—"All" vessels were considered to mean all vessels from south of the twenty-fifth degree, north latitude.

R. D. M.

TREASURY DEPARTMENT, OFFICE OF THE SECRETARY,  
*Washington, D. C., July 6, 1895.*

SIR: Referring to Department letter of May 23, 1895, in which you are directed to require a certificate of free pratique from the United States quarantine officer at Ship Island or Dry Tortugas to be produced by all vessels seeking entry at your port until November 1, 1895, you are further advised that the certificate of pratique should not hereafter be required from vessels arriving from noninfected European ports.

Respectfully, yours,

S. WIKE, *Acting Secretary.*

COLLECTOR OF CUSTOMS, *Shieldsboro, Miss.*

NOTICE.

UNITED STATES CUSTOM-HOUSE,  
*Pascagoula, Miss., April 30, 1896.*

On and after the 1st of May, 1896, the quarantine regulations of the past season will be enforced. All vessels coming from foreign ports will be required to have certificates from United States Marine-Hospital Service before entering at the custom-house.

A. E. KREBS, *Deputy Collector.*

JULY 20, 1896.



## INSPECTION OF ROUND ISLAND QUARANTINE.

By Surg. R. D. MURRAY, M. H. S.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels, facilities for inspection of vessels, apparatus for disinfection of vessels and of baggage, facilities for removal and treatment of the sick and for the removal and detention of suspects, mail and telegraph facilities, etc.

Mississippi Sound is a body of shoal water lying south of Mobile County, Ala., three counties of Mississippi, and a small portion of the eastern swamp region of Louisiana. It extends from Grant Pass (the western outlet of Mobile Bay) to Grand Island (the eastern margin of Lake Borgne), a distance of 75 miles. It is formed by the mainland on the north and islands on the south, viz, Dauphin, Petit Bois, Horn, Dog, Ship, Cat, and Au Pitre (the latter being a Mississippi River Delta marsh island), and the shoals that lie between the islands. It has an average width of 10 miles, being widened to 13 opposite Ship Island and narrowed to 6 opposite the west end of Horn Island. The depth varies from nothing to 5 fathoms. An 11-foot vessel can be towed from Cat Island to (not through) Grant Pass.

The seacoast of Mississippi is divided into three counties—Jackson, Harrison, and Hancock—and extends from the west line of Alabama to Pearl River. The towns of importance on the coast are Scranton (Pascagoula), Biloxi, Gulf Port, Pass Christian, Bay St. Louis (Shieldsboro), and Pearlinton (the latter being on Pearl River). These towns and others on the line of the Louisville and Nashville Railroad are all summer resorts, and the annual influx of sojourners, most of whom own their own houses or rent and keep house, gives an excuse for trepidation, foolish rumors, and petty scares, and general dread that something will go wrong in the two quarantines located in the sound. Here is the only instance in the South where the local population increases in the region of quarantines during the active season.

The islands which form the sound consist of silex and mica blown into dunes and small hills, covered with a scrubby growth of live oak and pine and bay cedar, saw palmetto, yaupon, and various grasses. They are separated from each other by spaces of varying widths and depths.

There are two passes from the Gulf into the sound. Ship Island Pass, at the west end of Ship Island, is the largest and safest. It is broad and permanent and roomy enough to permit of comparatively safe beating in or out for vessels of from 10 to 16 feet draft. Thus it can be entered in bad weather, and if the north winds are too severe safe anchorage can be found 14 miles below, behind the Chandeaur. The channel has 22 feet of water.

Horn Island Pass is between Petit Bois on the east and Horn Island on the west. The islands are each 12 miles in length. The pass is  $1\frac{1}{2}$  miles in width, but the 19-foot channel is crooked and it shifts frequently, so that entrance without a pilot is risky and inadvisable, but inside of Horn Island there is a safe and ample harbor for 20-foot vessels. Horn Island light is on the east end of Horn Island and about a mile west of the channel. Grant Pass (a private cut in the mud) has 6 feet of water and permits small vessels to reach Mobile without an exposure to the sea, and through it lumber on barges and timber in rafts have for years been towed from Mobile to Horn and Ship islands for loading into deep-draft vessels. The cutting of the Mobile Bay channel so that vessels can go to Mobile wharves has diminished this traffic, and in time it will cease altogether, of course, to the detriment of both the sound loading berths.

The mouth of East Pascagoula River is 10 miles north by west from the pass. On the beach to the eastward is the town of Pascagoula (or Seashore); 4 miles up



the river is the town of Scranton, at the crossing of the Louisville and Nashville Railroad; 4 miles farther up the river is the sawmill town of Moss Point, where the lumber is prepared for shipment.

#### ROUND ISLAND.

Round Island is 7 miles northwest of the pass and  $3\frac{1}{2}$  miles south of the mouth of the East Pascagoula River; it is also  $3\frac{1}{2}$  miles south one-half west from the village of Pascagoula. It has an area of about 400 acres; is covered with a growth of large pines and saw palmetto, and on the southwestern extremity has some beautiful live oaks. Round Island light is situated on the south shore and has a range of 11 miles. Round Island is beautiful to look upon; being at sea, it is hot in the sun in summer, but is made grateful by the almost constant breeze. For several years it was thought of as the proper site for a United States soldiers' home, being clean and easily kept so, and is healthful and cheaply guarded. Four or five guard posts would effectually corral it, and proper buildings with appropriate grounds would make it next to a paradise.

In 1879 the National Board of Health, in aid of the local quarantine, built three small houses on the southwest angle—one 16 by 30 feet with two rooms for officer's residence, one of same size for kitchen and dining room, and one 30 by 50 feet for hospital and quarters. During my service at Ship Island, from 1883 to 1888, I was custodian of the buildings and inclosed grounds, and every year gave a revocable lease to the Jackson County board of health, permitting the use of the buildings for quarantine purposes only. Under my supervision the buildings were cared for in some manner, and a friend of mine warned off all marooning and picnic parties during the winter season, when the quarantine officer was not living on the grounds. Last winter the house used as kitchen and dining room was burned down. At present the building intended as hospital is partitioned into rooms and is used as kitchen, dining room, and quarters for all the quarantine employees.

Practically no care has been taken of the buildings since 1888, and the grounds, capable of being made almost enchanting, have received no attention at all. The station is abandoned during the winter.

Thus the station consists of two buildings. One, 16 by 30 feet, two rooms, is occupied by the quarantine physician and his family; the other, 30 by 50 feet, is partitioned off into kitchen, dining room, and quarters for the employees and servants.

A 1,300-foot bridge was built out from the north side toward Pascagoula, for landing provisions and mails from Scranton and Seashore. Much of this is gone and the remainder is a wreck. What remains is used at which to land small boats from a launch and sailboat that lie some distance out. A small landing is projected from the south side nearly in front of the station, which is used sometimes by ships' boats, not by the station force, as the station boats are reached from the rear or north side of the island.

#### ANCHORAGES.

The anchorage for steamships and square-rigged vessels to load is inside of Horn Island, west of the pass, where there is a space of 6 miles by one-fourth to one-half mile, with 20 to 24 feet of water. The south protection is perfect. Schooners and light-draft vessels load to the east of Round Island, about  $3\frac{1}{2}$  miles from Pascagoula, in 14 to 18 feet of water. The official quarantine ground is a rectangle, lying north and south, with sides of 3 miles and ends the length of the island, and vessels will come as near to "Round Island as the depth of water will permit." As 12 feet is the deepest water within this limit, vessels generally lie to the east of the official limit and wait for the doctor.

The limits of anchorage for infected and noninfected vessels is ample if the draft is not over 13 feet, but as infected vessels have not been allowed to remain in the



harbor at all, but have been remanded to special quarantine grounds ever since Ship Island Quarantine was inaugurated, there need be no disputation about the Mississippi statute-mile limit of distance between the classes of vessels.

The facilities for inspection of vessels consist of a naphtha launch in good order and a sloop sailboat. Apparatus for the disinfection of vessels and baggage consists of iron pots and sulphur; no pump, no tubs for bichloride solution, no bichloride, and no carbolic acid provided. In fact, there is nothing at hand except a few pots and a few barrels of sulphur.

The facilities for the removal and treatment of the sick are nothing, for there is no place to lodge the sick and no medicines to treat them with. For removal and detention of suspects, nothing. It is expected there will be no suspects.

The mail and telegraph facilities are the naphtha launch or the sailboat to Pascagoula, where there is a post-office and a telegraph office, distant  $3\frac{1}{2}$  miles from the north side of the island.

2. Give personnel of the station or port, name of the quarantine officer or officers, post-office address, total number of officers and subordinates, etc.

B. F. Duke is quarantine physician, at \$250 per month without subsistence, non-immune; lately a member of the State board of health; lately established his residence at Moss Point, 8 miles from the mouth of East Pascagoula River; at present vice-president of Mississippi Medical Association; lives during the quarantine season at the station with wife and three children. ————, captain of launch, at \$25 per month and subsistence. ————, engineer of launch, at \$25 per month and subsistence. ————, cook of station, at \$15 per month and subsistence.

The Jackson County board of health consists of Ed. Bloomfield, president (lawyer, Moss Point); J. Ira Ford, secretary and treasurer (lawyer, Scranton); P. K. Meyers (editor, Scranton); Volney Brown (merchant, Scranton); E. R. Bragg, M. D. (Ocean Springs). The members of this board are appointed by the governor of the State on the recommendation of the State board of health, to hold office for two years. The quarantine physician is appointed in like manner. Total number of officers and subordinates, including the board of health, is nine.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

A copy of the quarantine rules and regulations of the port of Pascagoula, Miss., is inclosed. The quarantine law is an enactment of the Mississippi legislature, approved in February, 1880, setting forth the organization of the local board and prescribing that the quarantine physician should visit in daylight all vessels from suspected or infected ports; also prescribing the hoisting and carrying of flags, the assessing of fines for transgressions, the not going ashore without written permits, the hanging of lanterns, and limiting charges. The act particularly compels the supervisors of the county to levy a tax equal to 25 per cent of the State tax for support of the quarantine, and also compels the State board of health to assist the local board when necessary. The act is very pointed as to taxes, flags, and fines, but the question of quarantining is left entirely to the local board.

The local board in its regulations practically restrict all vessels "from south of the twenty-fifth degree of north latitude," and divide such vessels into four classes, i. e., (1) noninfected ports, (2) suspected ports, (3) infected ports, and (4) ports not considered infected, but with infectious or contagious diseases on board or during the voyage.

It must be noticed that no law is in the statute or subsequent regulations for ever visiting a vessel from north of the twenty-fifth degree of north latitude. Vessels from noninfected ports are to be subjected to thorough sanitation, but not to be detained. Vessels from suspected ports to be subjected to thorough sanitation with "detention of persons for a period of five days from the hour of



arrival in quarantine." Vessels from infected ports "to be subjected to thorough sanitation, with detention of seven days from the hour of arrival in quarantine." Vessels of the fourth class, that is, with sickness on board or on the voyage, "shall be remanded to special quarantine grounds and there undergo thorough sanitation and detention of vessel and persons such length of time as the board of health may order." "All vessels from Mediterranean ports known or suspected to be infected shall be subjected to the same conditions as above." But which "above" is not stated. "The health officer is instructed to use his judgment as to the time of detention of all vessels, provided that none be discharged sooner than five full days." Subsequent rules permit the quarantine physician to appoint a substitute, to abstain from soliciting business, and to come ashore, but to prevent anyone connected with the vessel to do so. Pilots are put under strict discipline.

There is no law for boarding or inspecting any vessel from north of 25° north latitude or from healthy Mediterranean ports, and all fees collected in the past in summer or winter from ports other than those mentioned were collected without form of law.

As an addendum, vessels were allowed to "load in quarantine," in which case the quarantine physician could allow the captain to come ashore and clear his vessel, but in no other case except permission be granted by the board of health.

It is within my personal knowledge that the law and about every regulation has been broken till there is nothing left of it but a memory.

4. State what quarantine procedure, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department.

The quarantine rules require (1) "vessels from noninfected ports to be subjected to thorough sanitation without detention;" (2) "vessels arriving from infected ports to be subjected to thorough sanitation with detention for seven days from hour of arrival in quarantine." As there are no appliances for putting a vessel in much better condition than time alone would do, these provisions are dead letters. By an order of the Secretary of the Treasury, dated May 11, 1895, requiring certificates of pratique for all vessels from infected ports to be given by the United States quarantine officer at Ship Island, there have been no occasions for enforcing the second rule "in addition to the requirements of the Treasury Department."

5. State whether the inspection is maintained throughout the year, or for what period, and what treatment is enforced during the entire year.

Vessels are inspected the year round; from Round Island during the summer and from Moss Point, 12 miles off (8 miles up the river), during the winter. The position of quarantine physician has been held by a physician living at Moss Point for the past eighteen years, Dr. Duke being the third incumbent in that time. No treatment is given in the winter season, but vessels may be sent to Ship Island. Ballast is discharged by means of hired schooners, under the direction of the harbor master. In the summer the schooner is washed and fumigated and by law released when the vessel is. (Some variations as to this rule in past time.)

6. Are vessels from other United States ports inspected?

Yes; vessels from all ports are inspected for the fee. Local schooners, tugboats, and barges are not always inspected.

7. Describe quarantine procedures in the inspection of vessels and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

If infected, or deemed to be so, the vessel would be remanded to special quarantine grounds, and there undergo thorough sanitation and detention of vessel and persons such length of time as the board of health may order. This means that the vessel would be sent to Ship Island at her own cost, but in quick time.



The time in quarantine between arrival and commencement of disinfection will depend on the ballast. If no ballast, pots will be put in as soon as they can be gotten. If ballast is on board, it will be put out in quarantine as soon as the crew can put it into a lighter and carry it to the ballast grounds.

The time occupied by disinfection is about eight hours, one day having been the rule, the pots being lighted in the morning and opened up in the evening. The time after disinfection until discharge is five days. Treasury Department order causes vessels from infected ports to go to Ship Island or Tortugas.

There is no unnecessary delay in doing the work deemed necessary, except, perhaps, the time consumed by the burning of sulphur and the detention of five days. The need of anything whatever to the class of vessels permitted to be treated at the quarantine raises the serious question of *cui bono*.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

There can never be but two to four vessels in quarantine at one time, and all communication is through the quarantine physician, who is by law required to not even suggest a merchant to the masters. A pilot who goes aboard a vessel which subsequently gets into quarantine must stay on board till the vessel is released, whether he is immune or not. No intercommunication is allowed among vessels in quarantine. The matter of communication is regulated by threats of the law, which places the fine for disobedience at from \$25 to \$300.

Sometimes vessels have been permitted to "load in quarantine," in which case the master is given permission to go ashore to clear his vessel. The stevedore crews in such cases have camped on Round Island or remained on a lumber schooner till the quarantine officer thought fit to let them go to the mainland.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

A vessel infected with cholera, or suspected of being infected with the same, would be sent to Ship Island at once, without a chance to get provisions or medical assistance, at any time of the year. A vessel infected with yellow fever would be sent to Ship Island, but the Treasury Department order of May 11, 1895, would perhaps supersede any local regulations. A vessel infected with smallpox would be sent to Ship Island, and any pilot on board would go in the vessel unless he got off in the night. It will be noticed that the Treasury Department order does not provide for cholera, smallpox, leprosy, or typhus on board.

The conditions regarded as giving evidence of the vessel's infection in each case would be a hasty survey of the situation and circumstances and a hasty departure of the quarantine physician with a peremptory order to "go to Ship Island."

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

No records of any kind are kept at the station. The station is practically barren in summer, and actually so in winter. Reports are sent to Mr. Ford, a lawyer in Scranton, Miss., and some memoranda are kept by the quarantine physician for his personal use.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

The fee bill in the quarantine rules and regulations is inclosed. The inspection fee is made by statute at \$5, but it may be reduced by the local board. "The charges for fumigation shall be the cost of material, and \$2.50 on vessels of 60 tons and under; \$5 from 60 to 150 tons; \$7.50 from 150 tons to 250 tons; \$10 from 250



tons to 500 tons, and \$12.50 on all over 500 tons." The cost of material is an indefinite sum, but for the labor performed the charges are ridiculously small. There is no means of finding out the cost of material except by overhauling the books of the secretary of the board. The classing of schooners of 500 to 800 tons, which are pretty sure to be American, with foreign barks and steamers of 800 to 1,600 tons is unfair as to value of duty performed.

The ballast charges are arranged between owners of schooners and masters of vessels, but are about 50 cents per ton; at this rate the schooners do not make much, as the ballast must be carried about 4 miles to be dumped.

There are no tonnage or wharfage charges. The local harbor master has a schedule of fees for superintending the discharge of ballast, from \$2.50 to \$3 per day, but this is not under the jurisdiction of the quarantine authorities except to see that the harbor master's man does not go ashore until the vessel is released.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

The custom-house is located at Bay St. Louis, Pascagoula being a subport. I found the deputy collector, Mr. Krebs, much interested in quarantine matters, but as the books were kept at the main office could not learn much as to the work of the quarantine. As all vessels entering the district come for cargo, there is little or no immigration.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

The facilities are not sufficient to care for anything except to inspect. There is not sufficient commerce to warrant the erection of a modern plant. Concessions on the part of pilots at Ship Island Bar and world-wide promulgation of orders for all vessels to be cleaned up before they appear at Horn Island Bar would not only render a quarantine useless, but would in fact make the inspection station a superfluity. The inspector of customs, always a Mississippi man and always intelligent and interested in his own locality, could and would truthfully and definitely report as to the history and condition of his vessel.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

It is difficult to reply to this question in this case. The quarantine physician would, but for the embargo put upon him by the Secretary of the Treasury, under the order of May 11, 1895, and subsequent orders, attempt to disinfect vessels which should have proper treatment. But the orders of the Secretary are carried out at the custom-house, or, at least, I think they are.

The local law "period of observation" exceeds, as was seen, the Treasury regulations, so it is presumed this particular is observed if occasion offers.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer state that the Treasury regulations have been complied with, as required by section 5, act of February 15, 1893? Transmit copy of certificate.

No. It says that the vessel "has been inspected and no quarantinable disease found on board. She is hereby released from quarantine restrictions." A copy is inclosed.

17. What disposition is made of the consular bills of health?

One copy is sent to the secretary of the local board at Scranton; one is filed at the custom-house at Bay St. Louis, with the vessel's papers.

18. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

In 1886 the county board sent a tugboat to Ship Island Quarantine, and by force towed an infected vessel to Horn Island Harbor. The quarantine physician



refused to pass the vessel and ordered her and the tug back to Ship Island. The matter was referred to the board of health, which body refused to have the vessel returned, although there was at the time a case of yellow fever on board, in the person of a negro who had been on board a few days as a ballast hand in place of sick members of the crew. The quarantine physician resigned at once, and another was appointed who had the vessel loaded "in quarantine."

In 1896 the quarantine physician boarded a British steamer from Santos which had sought Horn Island as a harbor in a fierce blow and inspected her throughout, after which he repaired to the village of Pascagoula to get his mail. The vessel went to Ship Island for treatment.

The discharge of ballast at Ship Island Quarantine works an apparent hardship on the harbor master at Horn Island, but if this gives no equal benefit to the Ship Island harbor master, I can not see that sending all ballast vessels to Ship Island does any serious injury to the ballast man at Horn Island, as vessels in quarantine should not pay harbor master's fees. That they should bear the cost of putting out every pound of ballast is self-evident.

The order of May 11, which practically excluded vessels from cholera ports and ports south of 25° north latitude from Horn Island until after they had been treated at Ship Island seriously interfered with work and receipts of both the board of health and the harbor master, and has caused local pride to agitate the question of establishing a complete quarantine station on Petit Bois Island. It appears that the State board of health is not averse to this. I have had no chance to inspect the locality, and, while I think the protection is good, I do not believe there is sufficient water. It is not proposed to put the station on Horn Island, as that might encroach on the limits of the loading anchorage. This matter should be given some attention at an early date.

(1) I am compelled to recommend that in future the permission of the Department for the local board to use the Treasury buildings for quarantine purposes be withheld. The failure of the board to care for them, or to prevent the burning of one and the failure to report the loss, and the uselessness of inspections being made from that point by a nonimmune officer, warrant me in advising that a gentleman should not be required to live in such isolation when no good is to come from his suffering. The quarantine physician can as well live in Pascagoula, or, preferably, all the duties can be performed by a customs inspector.

(2) I have also to recommend the issuance of an order relative to inspections and treatment of vessels in the Shieldsboro district, so as to require an inspection of all foreign port vessels during the year, and of "via domestic port" vessels which have been in infected ports within thirty days; and to clearly state what quarantine stations are considered as fully equipped for the duties expected.

JUNE 14-15, 1896.

#### LOUISIANA.

##### *REPORT OF INSPECTION OF LOCAL QUARANTINE STATIONS.*

By Surg. H. W. SAWTELLE, M. H. S.

#### RIGOLETS.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

This station is located on the west end of Rabbit Island, on the old United States light-house site, which is still, I understand, the property of the United States. It is 31 miles distant from New Orleans. The quarantine reservation contains about 1½ acres of land. This is an inspection station only. The buildings consist of a



small cottage for the resident physician, one for the employees, a storehouse, a small outhouse, and a temporary boathouse. The wharf and boathouse were carried away by a storm in October, 1893. A new wharf and boathouse are needed, and the quarters for the employees require some repairs. Anchorages in middle of river about one-fourth mile opposite station, where all vessels are inspected. Two rowboats are furnished for inspection purposes. No apparatus for disinfection; no facilities for the treatment of the sick or detention of suspects. Mail from Rigolets railroad station only.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. J. E. Dousson, resident physician; post-office address, Rigolets railroad station. Employees, 2 boatmen and 1 night watchman.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

Inclosure: Governor's proclamation and regulations board of health, marked A. Inspections are made by day and night, but infected or suspected vessels would be inspected only by daylight. The passengers and crew are mustered, and the list compared with the manifest and the vessels thoroughly examined. Should vessels subject to quarantine arrive, they would be remanded to the Mississippi River Quarantine for necessary treatment. The quarantine physician has no authority to deviate from the printed regulations. Any question in reference to the disposition of any craft not plainly provided for by regulation would be submitted for the decision of the board of health.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

None. No unnecessary detention. No disinfection here.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

April 15 to November 1 only.

6. Are vessels from other United States ports inspected?

All vessels are inspected.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

Inspections are made in accordance with Treasury regulations, as stated above. All quarantinable vessels, also foreign vessels, if any arrive, would be remanded to the Mississippi River Quarantine.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.) and how regulated? Is there any intercommunication allowed among vessels in quarantine?

No communication; no intercommunication would be permitted.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

In each case the vessel would be sent to the Mississippi River station for purification. Evidence of infection, quarantinable disease on board or having had such on board during voyage or within thirty days next preceding arrival.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Records of all cases are kept and transmitted to the board of health.



11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

Schedule of fees, viz: Vessels under 12 tons, 50 cents; vessels from 12 and under 25 tons, \$1; vessels 25 tons and over, \$2; steamers, \$2; ocean steamers, \$5. These fees are not collected from vessels hailing from Louisiana ports or from pleasure boats.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

Included in statement inclosed with report of Mississippi River Station, it being in the same customs district.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

The custom-house is not occupied or used by the Government. No customs officer here. No immigration.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

I think the work of inspection is carefully performed and the facilities sufficient for the shipping at present.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection of vessels, and particularly the period of observation after disinfection, are observed.

To accommodate many small vessels sailing between ports, near-by inspections are made both night and day, but quarantinable vessels, as stated before, would only be inspected by day.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer state that the Treasury regulations have been complied with, as required by section 5, act of February 15, 1893? Transmit copy of certificate.

No; copy of permit inclosed, marked B.

17. What disposition is made of the consular bills of health?

No foreign arrivals. All vessels passing here are engaged in trade along the coast.

18. Mention any facts which, in your opinion, should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

This station guards the entrance to Lake Pontchartrain, which is connected with the city of New Orleans by two canals known as the old and new basins. The quarantine physician is required to make weekly reports to the Louisiana board of health of all vessels inspected. During the quarantine season about 1,200 small coastwise vessels, carrying principally lumber, coal, wood, and fish, are inspected.

JUNE 17, 1896.

A.

#### QUARANTINE PROCLAMATION.

STATE OF LOUISIANA, EXECUTIVE DEPARTMENT,

*Baton Rouge, April 7, 1896.*

At the request of the board of health of the State of Louisiana, embodied in a resolution adopted by that body at a regular meeting held on March 12, 1896, and by virtue of the authority in me vested by law, I, Murphy J. Foster, governor of the State of Louisiana, do hereby issue this my proclamation, to take effect from and after the 15th day of April, A. D. 1896, that all vessels, together with their



crews, passengers, baggage, and cargoes, arriving at the several quarantine stations of Louisiana from and after that date shall be subjected to inspection and sanitation according to the following schedule, to wit:

First class. All vessels not included in the three following classes:

Second class. Vessels arriving from suspected ports. (Intertropical American and West Indian and Brazilian ports, which, in the absence of satisfactory evidence to the contrary, are considered suspicious, and other ports which may be declared suspicious by the board of health.)

Third class. Vessels arriving from ports known to be infected.

Fourth class. Vessels which, without regard to port of departure, are infected; that is to say, vessels which have yellow fever, cholera, or other contagious or infectious disease on board at the time of arrival, or have had same on voyage.

Vessels of the first class to be subjected to necessary maritime sanitation without detention of either vessels or persons longer than may be necessary to place such vessels in good sanitary condition.

Vessels of the second class to undergo the same treatment as those of the first class until May 1, 1896, on and after which date vessels of the second class shall be subjected to full sanitation at the Mississippi River Quarantine Station, together with detention of vessels and persons for such length of time as the board of health may determine.

Vessels of the third class to be subjected to full sanitation at the Mississippi River Quarantine Station, without detention of either vessels or persons after disinfection, until May 1, 1896, on and after which date vessels of this class shall be detained for observation, together with their crews, cargoes, and passengers, for such length of time after completion of disinfection as the board of health may determine.

Vessels of the fourth class arriving at Port Eads with sickness on board shall proceed direct to the lazaretto, from whence, after landing the sick, they shall proceed to the Mississippi River Quarantine Station, there to undergo thorough disinfection. Vessels of the fourth class with no sickness on board shall proceed direct to the Mississippi River Quarantine Station for disinfection. All vessels of the fourth class, after completion of disinfection, shall be detained for such length of time as the board of health may determine.

All vessels arriving from ports known or suspected to be infected with cholera shall be subjected to maritime sanitation and such detention as the board of health may determine.

Vessels arriving from ports and places belonging to the second, third, and fourth classes, as set forth in the above schedule, shall not be allowed to pass the Rigolets, the Atchafalaya, or Lake Charles quarantine stations, or other quarantine stations which may hereafter be established, without having undergone proper maritime sanitation at the Mississippi River Quarantine Station.

Vessels engaged in the tropical fruit trade whose sanitary condition and health record are satisfactory may be allowed to pass the Mississippi River Quarantine Station after inspection, subject, however, to such regulations and sanitary treatment as the board of health may prescribe.

Quarantine officers at the several stations in this State are specially charged and required to strictly enforce the execution of this proclamation, and the board of health in the city of New Orleans is requested to prosecute vigorously all violators of the same, as well as of the quarantine laws and regulations of this State.

Given under my signature and the seal of the State of Louisiana, at the city of Baton Rouge, this 26th day of March, A. D. 1896.

MURPHY J. FOSTER,  
*Governor of Louisiana.*

By the governor:

T. S. ADAMS, *Secretary of State.*

At a meeting of the board of health of the State of Louisiana, held April 23, 1896, the following resolutions were unanimously adopted:

*Resolved*, That in accordance with the governor's proclamation of quarantine, the period of detention of vessels from infected or suspected ports having no sickness on board shall be three full days from time of completion of disinfection.

This regulation to apply to all vessels not otherwise provided for and continue in full force during the quarantine season, unless modified by action of this board.

*Resolved*, That hereafter full quarantine restrictions will be imposed on all vessels whose officers willfully attempt deception in regard to any case of sickness, or material capable of carrying infection, or willfully disregard the rules and regulations of the board of health; and such detention will be imposed thereafter on every vessel on which any officer who has previously attempted to practice deception is found in any official capacity.



*Resolved*, That vessels from tropical quarantine ports where a United States medical officer is stationed, such vessels carrying a crew each of which is acclimated, i. e., has had yellow fever, may be given pratique to come to New Orleans immediately after disinfection at the Mississippi River Quarantine Station, under the following additional conditions: They shall bring no passengers from such ports. They shall not be moored at any wharf in any quarantined port, but lie in the open bay; cargoes to be lightered. Only the captain and purser, or officer necessary to enter and clear the vessel, shall be allowed to go on shore at quarantined ports. Crews shall not be allowed to sleep on deck while in such ports. They must bring certificates from the United States medical officer that there has been no unnecessary communication between the ship's crew and the shore, and that they leave such port in perfect sanitary condition. No bedding or household effects will be allowed to be brought from any infected port at any season of the year.

*Special instructions to owners, agents, masters of vessels, and passengers.*

The Louisiana State board of health recommends the following suggestions to agents, owners, masters of vessels, and passengers for the purpose of facilitating the work of quarantine officers and reducing the period of detention to a minimum:

(1) That vessels should be stripped during the quarantine seasons of all woolen hangings, carpets, curtains, and such like materials, and upholstered furniture as far as practicable, hair or moss mattresses to be replaced by wire or wicker beds.

(2) That, as far as possible, vessels trading with tropical ports should be manned with acclimated crews.

(3) Masters of vessels, ship and consular agents are earnestly requested to instruct passengers from quarantinable ports to dispense, as far as possible, with baggage which may be injured by wetting or heat (230° F.) while undergoing disinfection. Such passengers are especially warned against bringing furs, silks, skins, laces, velvets, and other fabrics of delicate texture, as they will be compelled to assume all risks of injury.

(4) While in ports infected with yellow fever, vessels should be anchored out in the harbor, when this is possible, and the crew prohibited from going ashore, especially at night.

(5) When practicable, cargoes should be loaded in such a manner as to allow access to the pumps, and also to enable the quarantine officers to pump out and wash the bilge.

(6) For the purpose of avoiding delay and expense at quarantine, owing to the necessity of shifting of cargo for the object of disinfection, it is recommended that there be constructed in all vessels from quarantine ports an open framework shaft 15 inches in diameter from the center of each hatch, through which the fumigating pipe may be introduced down to the dunnage of the vessel.

(7) Special attention should be given to cleanliness of vessels and persons, and provision should be made for all possible ventilation of the entire vessel. The best disinfectants, and instructions for using same, can be obtained by application to the board of health or any of its officers.

(8) Masters should, before arrival, see that the bilge is thoroughly pumped out and cleansed, and that the entire vessel be put in such good sanitary condition as to permit of the least possible detention. Fruit vessels, particularly, should be kept thoroughly cleansed for the purpose of avoiding delay at the quarantine station.

(9) Vessels observing the above recommendations will receive special consideration at the quarantine station, detention and cost of cleaning, disinfecting, etc., being materially lessened thereby.

S. R. OLLIPHANT, M. D., *President*.

G. FARRAR PATTON, M. D., *Secretary*.

B.

No. ———.  
Month, ———, 189—.

Hour, ———.

Port, ———.

Name of vessel, ———.

Name of captain, ———.

Crew, ———.

Passengers, ———.

Cargo, ———.

Quarantine charges, ———.

Board of Health, State of Louisiana.

No. ———. RIGOLETS.

QUARANTINE STATION, ———, 189—.

This is to certify that ——— is hereby permitted to proceed to New Orleans.

—————,  
*Resident Physician.*



## MISSISSIPPI RIVER QUARANTINE STATION.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

This quarantine is located 90 miles below New Orleans, on the east bank of the Mississippi River. The reservation contains about 2,000 acres, with a frontage of about 2 miles on the river. The land thereabout is marshy and uninhabited. There are eleven wooden buildings belonging to the station, namely, seven at the disinfecting station, three at the lazaretto, one at the inspection station, all constructed on piles. No additions or improvements have been made during the past year. The building containing the plant is a substantial structure with a corrugated iron roof; dimensions about 60 by 108 feet. It is open to the weather on the front and sides. The tank containing the bichloride of mercury solution stands on the top of this building, about 40 feet from the floor; capacity about 8,000 gallons. The strength of the solution used at this station is 1:1000. This tank is provided with hose attachments complete. The other buildings consist of a house for the resident physician, one for the assistant resident physician, one for the employees, a boathouse, and two outhouses. A small room on each side of the disinfection house is provided—one for males and one for females—for use when changing clothing. A small, tight room is provided on the wharf for the disinfection of mail by sulphur fumes. The buildings are in fair condition. The station is supplied with rain and river water. The wharf is about 400 feet in length, with about 28 feet of water alongside. It is in good condition. The lazaretto is about 6 miles below the disinfecting station in Pass a L'Outre. There are three hospital buildings, built on the cottage plan, with verandas around them. The largest is used mostly for fever patients. In this building a ward is provided for cases under observation. About 50 yards from the main building a house is provided for cases suffering from smallpox or leprosy. There are four wards, two about 26 by 52, and two smaller wards, each about 12 by 26 feet. The interior and exterior of the hospital buildings are in need of repairs, also the hospital wharf.

The inspection station is at Port Eads, 14 miles below the lazaretto. All quarantinable vessels are anchored in the river, nearly opposite the main station, when not alongside of wharf undergoing treatment. Infected vessels are anchored about one-half mile from those under observation. Inspections are made by steam tug, steam launch, and rowboats. The plant consists of three disinfecting steam cylinders, which have been in use seven years, each 50 feet in length over all by about 8 feet in diameter; steam boiler, 40-horsepower steam pump, and steam winch. The inside of the cylinders are provided with coils of pipe connected with the boiler, which affords heat necessary to raise the temperature to 210° F., dry heat, and by means of perforated pipes live steam is turned in and the temperature increased to 230° F., moist heat. Articles to be disinfected are placed on racks provided for that purpose for each cylinder. The disinfecting chambers are fitted up with thermometer, pressure gauge, etc., complete. Besides the steam disinfecting chambers, a tug is fitted up with a tank containing the solution of bichloride of mercury, with pump attachments; also a sulphur furnace for the generation of SO<sub>2</sub> for disinfecting the hold and cargo. It is constructed with several pans, arranged one above the other, with air spaces connecting them alternately at the front and back, so that air is made to pass over the contents of all of the pans. The furnace serves to keep the sulphur in the first pan in a molten state, and the heat from this pan melts the sulphur in the pan above. An airtight galvanized-iron pipe leading from the roof of the hold is connected with the



furnace over the surface of the bottom pan to supply oxygen, exhausting the air of the hold and replacing it with  $\text{SO}_2$ . This pipe is provided with a cock for obtaining samples of the air and a valve for regulating its supply to the furnace. An 8-inch galvanized-iron discharge pipe taps the furnace at the top, which leads into the reservoir within 6 inches of the bottom. From this reservoir the gas is forced to the bottom of the hold to the dunnage by a Sturtevant fan through an 8-inch galvanized-iron pipe, which taps the reservoir near the bottom, and by means of an internal elbow leading up to within 6 inches of the top a complete break of the current is made, thus effectually preventing any burning particles of sulphur from being carried into the ship's hold. A return current is now established in the second pipe from the hold to the furnace and the foul air of the ship's hold is drawn into the furnace and consumed.

The furnace is kept in operation until the hold is purified, or until a short time after the return current shows the presence of sulphur fumes. If a vessel arrives with cargo and requires disinfection, chutes are made through the cargo down to the bottom of the ship's hold to admit the fumigating pipes. It is claimed that the strength of the gas generated with this furnace is about 18 per cent. A "gas tester"<sup>1</sup> is provided by which the strength of the  $\text{SO}_2$  is determined. The sick are removed by boat to the hospital. There being no detention house, suspects are detained on board. Mail and telegraph to New Orleans and Port Eads.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. C. P. Wilkinson, resident physician; Dr. Joe S. Jones, assistant resident physician; post-office, Mississippi River Quarantine Station. Total number officers and subordinates, 32. The regular force at the hospital consists of 2 nurses, 1 male and 1 female. The assistant resident physician pays two visits to the patients in hospital daily. Inspection station (Port Eads), Dr. J. N. Thomas, inspector. The house provided for the inspector is in fair condition. Total number officers and employees, 3. Quarantine attendants are authorized according to the demands of the service, and no officer or attendant is employed unless immune to yellow fever.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations; and describe the quarantine customs of the port as they are carried out.

Inclosures: Governor's proclamation and special instructions of board of health, marked A. (See report on Rigolets Quarantine Station.) All vessels arriving at the inspection station, Port Eads, are boarded and thoroughly examined by the experienced inspector. Those from nonsuspected ports with clean bills of health, having had no sickness on board during voyage or upon arrival, if found to be in good sanitary condition, are allowed to proceed to the city without detention. Those from infected or suspected ports with no sickness on board are remanded to the main station, 20 miles above, and after disinfection detained three full days. If no sickness occurs in the meantime, she is allowed pratique. Any vessel arriving with quarantinable disease on board is taken to the lazaretto, where the sick are removed to hospital under the direction of the quarantine physician, who gives necessary orders for their care. The vessel is then moved to the main station, 6 miles above, the bilge cleansed, all ballast discharged, except close-grained hard rock, which, if retained on board, is disinfected with the solution of bichloride of mercury and  $\text{SO}_2$ , and all baggage of passengers, and crew clothing, bedding, upholstery, dunnage, and all the movable textile fabrics on board are removed and hung on racks and disinfected in the steam cylinders with temperature of  $210^\circ$  F. dry heat, increased to  $230^\circ$  F. moist heat, maintained one-half hour, with pressure of about 7 pounds to the square inch on the cylinder. The cabins, living

<sup>1</sup> The "gas tester" was devised by Dr. Joseph Albrecht of New Orleans.



apartments, and decks are washed down with the solution of bichloride of mercury, after mechanical cleansing, and the rooms fumigated with  $\text{SO}_2$ ; and all articles that would be injured by heat disinfection are saturated with the bichloride of mercury solution and hung up to dry. The hold and cargo are then disinfected with sulphur dioxide. If practicable, the cargo is disinfected without breaking bulk. Time of exposure, for iron vessels, forty-eight hours; wooden, seventy-two hours. Empty hold, if of iron, twelve hours' exposure, followed by washing with the solution of bichloride of mercury by means of hose. If of wood, the sulphur dioxide exposure would be for forty-eight hours, air streaks open, the application of  $\text{SO}_2$  also preceding the bichloride treatment. The vessel is then detained three days, after which she is redisinfecting as an extra precaution and held two days, making in all five days' detention. No charge is made for the second disinfection.

The foregoing method of disinfection is employed for all vessels requiring disinfection. In case of cholera infection the water tanks would be purified with a solution of permanganate of potassa and refilled, the food supply destroyed, and the ship revictualled; water-closets would be cleansed with the solution of bichloride of mercury, and all refuse burned in the ship's furnace. After disinfection for smallpox infection and vaccination of all requiring it, the period of detention of vessel would be decided by the board of health. Lepers would be detained in accordance with the regulations governing the subject. Vessels engaged in the tropical fruit trade between Central American, South American, and West Indian ports and New Orleans are allowed to pass without detention provided said vessels strictly conform to the special regulations (copy inclosed, marked B). The quarantine physician is not authorized to deviate from the printed regulations. Any questions as to the disposition of vessels not provided for by the regulations are referred to and decided by the board of health; but under the State law he has authority to detain any vessel, independent of the board of health, whose sanitary condition is in his opinion dangerous to the public health.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

None; no unnecessary detention or disinfection of vessels.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

Inspection during entire year; disinfection in case of quarantinable disease the entire year.

6. Are vessels from other United States ports inspected?

Yes.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine—(a) between arrival and commencement of disinfection, (b) the time occupied by disinfection, and (c) time after completion of disinfection of vessels until discharge.

The entire vessel is inspected, if practicable. The bill of health and clinical record of all cases treated during the voyage, if any, crew and passenger list, and manifest and ship's log are examined. Crew and passengers are mustered and examined, and list compared with the manifest for discrepancies. No person, except quarantine officer and his employees, allowed on board until after inspection and discharge of vessel by quarantine officer. Disinfection is commenced as soon as practicable after arrival, and treated as described above under interrogatory No. 3.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?



No communication; no intercommunication allowed among vessels in quarantine. Pilots on infected vessels are detained on board for observation the usual length of time, covering the period of incubation of the disease for which the vessel is held.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

In each case the vessel would be treated in accordance with the rules given above under quarantine customs. (Interrogatory No. 3.) Evidence of infection, quarantinable disease on board, or having had such on board during the voyage, or within thirty days next preceding arrival.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Records are kept of cases at station on arrival and during detention.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

Inspection: Ships and steamships, \$20; barks, \$17; brigs, \$10; schooners, \$7.50. Disinfection: Steamships, \$130; ships, \$80; barks, \$60; brigs, \$50; schooners, \$17.50.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

*Number of foreign vessels entered at the port of New Orleans for the year ending December 31, 1895.*

Country.	Bal- last.	Cargo	Country.	Bal- last.	Cargo.
<i>January.</i>			<i>March.</i>		
Africa.....	1		Belgium.....		2
Belgium.....		1	Brazil.....		1
Brazil.....	2	2	Canary Isles.....		1
Canary Isles.....	1		Costa Rica.....		4
Costa Rica.....		5	Cuba.....	6	
Cuba.....	9	1	England.....	7	10
England.....	9	11	France.....		2
France.....	1	1	Honduras.....		2
Germany.....		1	Italy.....		4
Honduras.....		4	Mexico.....	1	1
Italy.....		3	Nicaragua.....		3
Jamaica.....	1	1	Spain.....		1
Malay Isles.....	1		United States of Colombia.....		10
Mexico.....		3			
Nicaragua.....		2	Total.....	14	41
Scotland.....	1				
United States of Colombia.....		5	<i>April.</i>		
West Indies—British.....	1		Azores.....	1	
Total.....	27	40	Belgium.....		1
			Brazil.....		1
<i>February.</i>			Costa Rica.....		2
Belgium.....		1	Cuba.....	4	
Brazil.....	2		England.....	3	10
Costa Rica.....		3	Germany.....		1
Cuba.....	4		Honduras.....		2
England.....	2	8	Italy.....		1
France.....	1	1	Jamaica.....	1	
Germany.....	1		Malay Isles.....	1	
Honduras.....		1	Nicaragua.....		5
Italy.....		3	United States of Colombia.....		9
Nicaragua.....		2			
United States of Colombia.....		6	Total.....	10	32
West Indies—British.....	5				
Total.....	15	25			



Number of foreign vessels entered at the port of New Orleans for the year ending December 31, 1895—Continued.

Country.	Bal- last.	Cargo.	Country.	Bal- last.	Cargo.
<i>May.</i>			<i>September—Continued.</i>		
Belgium .....		2	Italy .....		1
Brazil .....		1	Jamaica .....	1	
Canary Isles .....	1		Mexico .....	1	1
Cape Verde .....	1		Netherlands .....	1	
Costa Rica .....		5	Nicaragua .....		5
Cuba .....	6	1	United States of Colombia .....		7
England .....	2	8	Scotland .....	1	
France .....	1		Total .....	7	34
Germany .....		1	<i>October.</i>		
Honduras .....		2	Belgium .....		1
Italy .....		3	Brazil .....	3	3
Netherlands .....	1		Costa Rica .....		4
Nicaragua .....	1	7	Cuba .....	7	1
Portugal .....	1		England .....	7	11
United States of Colombia .....		12	Germany .....		3
Total .....	14	42	Italy .....		1
<i>June.</i>			Jamaica .....	1	1
Belgium .....		1	Mexico .....	3	
Brazil .....		1	Nicaragua .....		7
Costa Rica .....		4	United States of Colombia .....		5
Cuba .....	2	1	West Indies—British .....	1	
England .....		8	Total .....	22	37
Germany .....		3	<i>November.</i>		
Italy .....		2	Belgium .....		1
Mexico .....		1	Brazil .....	2	3
Nicaragua .....		8	Cape Verde .....	6	
United States of Colombia .....		9	Costa Rica .....	1	2
West Indies—British .....	1		Cuba .....	7	
Total .....	3	38	England .....	10	13
<i>July.</i>			Germany .....		1
Belgium .....		1	Honduras .....		1
Brazil .....	1	2	Italy .....		4
Costa Rica .....		4	Jamaica .....		2
Cuba .....	6		Madeira .....	1	
England .....	1	4	Mexico .....	1	
Germany .....		5	Netherlands .....	1	
Honduras .....		1	Nicaragua .....		8
Mexico .....	2	1	Scotland .....		1
Nicaragua .....		6	United States of Colombia .....		7
United States of Colombia .....		8	West Indies—British .....	1	
Total .....	10	32	Total .....	31	42
<i>August.</i>			<i>December.</i>		
Belgium .....		1	Belgium .....		1
Brazil .....	2		Bermuda .....	1	
Costa Rica .....		3	Brazil .....	2	1
Cuba .....	1		Canary Isles .....	2	
England .....		6	Cape Verde .....	2	
Germany .....		3	Costa Rica .....		2
Nicaragua .....		7	Cuba .....	6	1
Spain .....	1		England .....	10	12
United States of Colombia .....		9	Germany .....		3
Total .....	2	31	Italy .....		2
<i>September.</i>			Jamaica .....	1	4
Belgium .....		2	Mexico .....		1
Brazil .....	1	1	Nicaragua .....		5
Costa Rica .....		4	United States of Colombia .....		6
Cuba .....	2		Scotland .....	1	
England .....		10	Honduras .....		1
Germany .....		3	West Indies—British .....	1	
Total .....			Total .....	26	39

## RECAPITULATION.

Total in ballast .....	181
Total in cargo .....	433
Total .....	614



Number of domestic vessels entered at the port of New Orleans for the year ending December 31, 1895.

Country.	Bal- last.	Cargo.	Country.	Bal- last.	Cargo.
<i>January.</i>			<i>July.</i>		
Cuba .....	1	5	Costa Rica .....		2
Honduras .....		7	Cuba .....		5
Mexico .....		1	Honduras .....		13
Nicaragua .....		1	Mexico .....		2
United States of Colombia .....		1	Nicaragua .....		4
Total .....	1	15	United States of Colombia .....		1
<i>February.</i>			<i>August.</i>		
Cuba .....		4	Costa Rica .....		1
Honduras .....		4	Cuba .....		6
Nicaragua .....		2	Honduras .....		10
Total .....		10	Mexico .....	1	2
<i>March.</i>			<i>September.</i>		
Costa Rica .....		1	Nicaragua .....		2
Cuba .....		5	Trinidad .....		1
Honduras .....		10	Total .....	1	22
Mexico .....		3	<i>October.</i>		
Nicaragua .....		3	Cuba .....		4
Trinidad .....		1	Honduras .....		12
Total .....		23	Jamaica .....		1
<i>April.</i>			<i>November.</i>		
Costa Rica .....		2	Cuba .....		3
Cuba .....		5	Honduras .....		11
Honduras .....		13	Mexico .....	1	1
Mexico .....		1	United States of Colombia .....		1
Nicaragua .....		4	Total .....	1	16
Total .....		25	<i>December.</i>		
<i>May.</i>			Cuba .....		1
Cuba .....		4	Honduras .....		9
Honduras .....		14	Mexico .....		1
Mexico .....	1	3	Nicaragua .....		2
Nicaragua .....		6	Total .....		13
Total .....	1	27			
<i>June.</i>					
Costa Rica .....		1			
Cuba .....		4			
Honduras .....		12			
Mexico .....		4			
Nicaragua .....		6			
Total .....		27			

## RECAPITULATION.

Total in ballast .....	4
Total in cargo .....	237
Total .....	241

## Coastwise vessels entered during the year.

Month.	Yellow- fever ports.	Other ports.	Month.	Yellow- fever ports.	Other ports.
January .....	1	32	July .....	1	16
February .....	2	23	August .....	2	13
March .....	4	22	September .....		18
April .....		23	October .....		27
May .....		19	November .....	3	37
June .....	1	16	December .....	5	26

## RECAPITULATION.

Total number arrived coastwise .....	270
Total from yellow-fever districts .....	20



13. State results of your visits to (a) the custom-house; (b) the Immigration Bureau.

I ascertained that the bills of health and quarantine certificates are duly filed at the custom-house, and that immigrants are admitted in accordance with the immigration regulations.

14. State whether, in your opinion, the quarantine facilities are sufficient to care for the shipping entering the port.

Yes; at present.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

The solution of bichloride of mercury used is 1 : 1,000 instead of 1 : 800. Inspection of fruit vessels by night. I am satisfied that the rules regarding inspection, disinfection, and the period of observation after disinfection are observed as stated in the quarantine certificates of inspection, signed by the quarantine officer.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with as required by section 5 act of February 15, 1893? Transmit copy of certificate.

Yes. Copy inclosed, marked C.

17. What disposition is made of the consular bills of health?

Filed at custom-house.

18. Mention any facts which, in your opinion, should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

A bath house and detention barracks are very much needed to facilitate the work of the station. The quarantine officers here have had many years of experience in quarantine affairs, and the station appears to be carefully conducted.

JUNE 3-4, 1896.

## B.

### *Rules and regulations governing vessels engaged in the tropical-fruit trade.*

[Adopted April 23, 1896.]

#### OFFICE BOARD OF HEALTH, *State of Louisiana.*

All vessels engaged in the tropical-fruit trade between Central American, South American, and West Indian ports and New Orleans, will be allowed to pass the Mississippi River Quarantine Station without detention longer than is necessary for a thorough inspection (either by day or night) by the quarantine officers, so long as a properly accredited medical agent of this board certifies that such ports and places are free from contagious or infectious disease, and provided said vessels shall strictly conform to the following conditions:

First. They shall not be allowed to bring to this port bedding or household effects of any kind.

Second. After leaving New Orleans said vessels shall not take on board passengers during any part of their trip, nor shall they bring passengers to this port, except as herein provided. Cabin passengers only will be allowed at the discretion of the medical officers, provided the applicant has been a resident of the place for ten days preceding and is known to the medical officer. This officer must satisfy himself that the applicant has not been in any infected locality in the past thirty days and that none of his effects have been exposed to infection.

Third. They shall carry an acclimated crew, unless impracticable.

Fourth. They shall not touch at any infected or suspected port, and have no communication with any vessel during their voyage, except in case of distress.

Fifth. They shall only touch at such ports or stations as are mentioned in their schedule, which latter shall be communicated to the board of health.

Sixth. They shall be required to make a full disclosure when arriving at a quarantine station of all the ports and places they have visited on their voyage.



Seventh. They may take on board a crew of laborers known to be acclimated, and from some healthy point where they permanently reside and remain, the crew being as nearly as possible always composed of the same men. The captain or other officer may go ashore for the purpose of entering or clearing vessels only. Any further communication with shore or natives will be considered a violation of regulations, and vessels in default will be treated accordingly.

Eighth. These vessels shall be cleansed and, when necessary, disinfected in the city of New Orleans, after discharge of cargo.

Ninth. Vessels receiving night inspection at quarantine will not be allowed to discharge cargo on arrival at New Orleans until after a daylight inspection by the shipping inspector of this board, and the captains, owners, or agents shall not allow anyone to go ashore or to come on board until after such daylight inspection.

Should for any reason a fruit port become infected or even suspicious, vessels from that port will be liable to such additional regulations as the board of health may adopt.

[Resolution adopted April 23, 1896.]

*Resolved*, That hereafter full quarantine restrictions will be imposed on all vessels whose officers willfully attempt deception in regard to any case of sickness, or material capable of carrying infection, or willfully disregard the rules and regulations of the board of health; and such detention will be imposed thereafter on every vessel on which any officers who have previously attempted to practice deception are found in any official capacity.

S. R. OLLIPHANT, M. D.,  
*President.*

G. FARRAR PATTON, M. D.,  
*Secretary.*

#### PASSENGER PERMIT.

—, —, 1896.

Permission is hereby granted to — to proceed to New Orleans, La., on board the steamship —, leaving this port —, 1896.

Description of holder: Sex, —; race, —; complexion, —; height, —; weight (about) —; color of eyes, —; color of hair, —; baggage; number of trunks —, valises —, packages —; character of baggage —.

—,  
*Medical Officer Louisiana State Board of Health.*

C.

No. —  
BOARD OF HEALTH, STATE OF LOUISIANA,  
*Mississippi River Quarantine Station, — 189—.*

I hereby certify that —, from —, via —, has complied with all requirements of the quarantine regulations of the board of health, State of Louisiana. I also certify that the said vessel has in all respects complied with the quarantine regulations prescribed by the Secretary of the Treasury, under authority of the act of Congress approved February 15, 1893.

—, M. D.  
*Resident Physician.*

#### ATCHAFALAYA RIVER.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

This is an inspection station only. It is located on the west bank of the Atchafalaya River, 3 miles below Morgan City, about 25 miles from the Gulf, and 80 miles from New Orleans. The reservation consists of about one-half acre of land, which belongs to the State. The station is provided with a small wooden house, a small boathouse, and an old wharf about 25 feet in length. The buildings and wharf are in a dilapidated condition and unfit for use for quarantine purposes. The quarantine physician resides in Morgan City, and the "guard"



or boatman lives at the station. There is no apparatus for disinfection or facilities for the care of the sick. Anchorages in middle of river for all vessels. Infected vessels would be remanded to the Mississippi River quarantine for treatment after inspection. Inspections are made by rowboat.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. G. H. Douglas, quarantine physician; post-office address, Morgan City, La.; number of employees, 1 boatman.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

Inclosures: Governor's proclamation and regulations board of health, marked A. (See report on Rigolets quarantine station.) All vessels are boarded or hailed at the station by the boatman, and if any sick persons are reported on board the matter is at once reported to the quarantine physician, who examines them and inspects the vessel. The crew and passengers are mustered and the list compared with the manifest. Should a quarantinable vessel arrive, she would be at once remanded to the Mississippi River quarantine for treatment, or be detained at the station forty days.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

None; no unnecessary detention; no disinfection here.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

Inspections only made from April 15 to October 15.

6. Are vessels from other United States ports inspected?

Yes.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection; (*b*) the time occupied by disinfection; and (*c*) time after completion of disinfection of vessels until discharge.

Inspections are made as described above under quarantine customs. Infected or suspected vessels would be at once remanded to the Mississippi River quarantine.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

None.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

In each case the vessel would be remanded to the Mississippi River quarantine for treatment. Evidence of infected quarantinable disease on board having had same during voyage or within thirty days next preceding arrival.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

A record of all cases of sickness on board during voyage, etc., would be kept by the quarantine physician and reported to the board of health with regular monthly report.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.



Schooners under 25 tons, \$1; over 25 tons, \$2; steamships, \$10.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

Inclosure: Statement of arrival of vessels during year ended December 31, 1895, marked B.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

The regulations in respect to filing of bills of health understood. No immigration here. Should immigrants arrive, they would be received under the immigration regulations of the Department.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

As long as the quarantine work is limited to the inspection or hailing of vessels, the facilities are sufficient for the commerce of the port. This station is intended to prevent the passage of quarantinable vessels into the Mississippi, Teche, and Red rivers, and in case of an epidemic it would probably be necessary to erect suitable quarantine buildings, wharf, etc., and have a resident quarantine physician.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

The hailing of vessels by the boatman and the passing of same by him, except when sickness is reported on board, does not appear to meet the requirements of the Treasury regulations.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

No certificates of inspection or of pratique issued. Most of the vessels arriving here hail from ports near by. Bills of health are, however, given by the collector of customs to vessels bound to distant ports upon application.

17. What disposition is made of the consular bills of health?

Filed at the custom-house.

18. Mention any facts which, in your opinion, should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

Lake Charles station is auxiliary to this, it being under the supervision of the same quarantine physician. As quarantinable vessels seldom call there the board of health deems it only necessary to employ a "guard" or boatman who lives at the place to hail all vessels and report to the quarantine physician of the Atchafalaya station should a suspected craft arrive. There are no quarantine buildings or equipments of any kind thereat. The station is intended to prevent the introduction of contagious diseases from Vera Cruz and ports in Mexico and Central America, and it might become an important point in case of a widespread epidemic in those countries. As the foregoing includes all of the information obtainable in respect to the station, it appears to be unnecessary to make a visit to the locality.

JUNE 10, 1896.



## B.

*Statement of vessels arriving in district of Teche, Louisiana, during the calendar year ending December 31, 1895.*

Coastwise.*	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Port of Brashear.	4	2	1	4	3	2	5	5	2	3	2	2	35
Calcasieu Pass.....	14	22	13	19	25	28	26	19	27	27	28	22	270
Total.....	18	24	14	23	28	30	31	24	29	30	30	24	305

\* Principally from Texas ports with produce and in ballast.

Two vessels arrived at Calcasieu Pass in January from Tuxpan, Mexico, with fruit and miscellaneous cargo and ballast.

Steamships carry general merchandise and merchandise in bond for foreign shipments, return cargoes hides, wool, cotton, and miscellaneous. Sailing vessels carry principally lumber to Texas and Mexican ports, returning generally in ballast.

## TEXAS.

## REPORT OF INSPECTION OF LOCAL QUARANTINES.

By Surg. H. W. SAWTELLE, M. H. S.

## SABINE PASS.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

This station is located 2 miles from Sabine Pass. It consists of a wharf, about 50 feet in length, in fair condition, a wooden building containing the plant, and a small wooden building used for quarters for the employees. The quarantine officer resides in town. The buildings are in fair condition. Wooden cisterns are provided for storage of potable water for the use of the station. Anchorage about one-half mile from station. Limits of anchorage for noninfected vessels about one-half mile, and for infected vessels about 2 miles or more. Inspections are made by rowboat.

The apparatus for disinfecting consists of a steam boiler, a steam cylinder about 40 by 8 feet, with thermometer, pressure gauge, etc., complete, also perforated pipe for turning in live steam for disinfecting clothing and baggage. The quarantine officer informs me that this apparatus has never been used, although vessels have been disinfected at the station; and, instead of removing bedding, clothing, and textile fabrics from the vessel and disinfecting them by steam, the doctor stated that they were disinfected on board with sulphur dioxide by the pot system.

A special sulphur furnace is used for the disinfection of vessels, the gas being forced into the hold by means of a Sturtevant fan, but the doctor was unable to give the amount of sulphur used per 1,000 cubic feet of space, or for the average-sized vessel. I was shown a small box, which would hold perhaps 100 pounds of sulphur, and was told that two such boxes full were used in the fumigation of a vessel. During my interview with the doctor he stated that hereafter he would use the steam cylinder in the disinfection of bedding, clothing, etc.

No facilities for the removal and detention of the sick or of suspects.

Mail daily from Sabine Pass. Telegraph facilities only from Beaumont, Tex., 30 miles distant.



2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. A. N. Perkins, quarantine officer; post-office address, Sabine Pass, Tex. Total number of officers and employees, 3. A deputy collector of customs is stationed here.

3. Transmit copies of the laws under which the local quarantine is maintained, and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

Governor's proclamation, same as sent with report of Galveston Station. No local regulations. The Treasury quarantine regulations have been adopted at all the stations in Texas.

Upon boarding a vessel, the bill of health, the log, clinical record of cases treated during voyage, if any, are examined, and the crew and passengers mustered and examined and compared with the list and manifest for any discrepancies, and all portions of the vessel practicable inspected. In case she hails from a port south of the twenty-fifth degree of north latitude, under the governor's proclamation, she is held as an infected vessel and detained five days for purification and for such an additional period of time as may appear necessary, and is finally released by direction of the State health officer. The bilges are pumped and cleansed with sea water, and the vessel made mechanically clean. The hold is then disinfected with  $\text{SO}_2$ , with the special sulphur furnace. Close-grained hard rock ballast is disinfected with the bichloride solution 1:800. All other ballast is discharged outside the bar. If with cargo, she is disinfected without breaking bulk, if practicable. All living apartments are disinfected by the pot system, and all portions of the vessel washed down with a solution of bichloride of mercury 1:800. As before stated, clothing, bedding, etc., are left on board and fumigated by means of pots. I inferred that such a disinfection of clothing was made only in case of vessels not considered infected, but held under the governor's proclamation.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

As far as I can learn there appears to be no unnecessary detention or disinfection except as stated above regarding clothing, etc.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

May 1 to November 1, or until discontinued by proclamation of the governor of the State.

6. Are vessels from other United States ports inspected?

All vessels are inspected.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

Quarantine procedures same as described under quarantine customs of the port, but if infected the vessel would be remanded to the United States Gulf Quarantine, Ship Island, for treatment. Disinfection commenced as soon as practicable after arrival.

The time occupied by disinfection, in accordance with article 8 of the Treasury regulations. All vessels are detained five days or longer if deemed necessary and disinfection practiced daily. Vessels hailing from other ports, with clean bills of health, with no sickness on board during voyage or upon arrival, sanitary condition of vessels good, are given pratique.



8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

None. No communication with vessels in quarantine, except under the direction of the quarantine officer. No intercommunication would be allowed among vessels in quarantine.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case?

In each case the vessel would be remanded to the United States Gulf Quarantine Station, though a vessel with smallpox infection might under some circumstances be treated at the station. Evidence of infection, quarantinable diseases on board or having had such on board during voyage, or within thirty days next preceding arrival.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Records of all cases of disease during voyage, upon arrival, or during detention, would be kept at station.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

No inspection fees are collected. Disinfection fee, the cost of material only.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

From foreign ports, 22; foreign ports in yellow fever latitude, 17; from domestic ports, 19. No record of previous movements of coastwise vessels. Statement of arrival of vessels for the year ended December 31, 1895, is included in a similar statement inclosed with report of Galveston Station.

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

I ascertained at the custom-house that the bills of health and quarantine certificates are duly filed. No immigration here.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

At present the facilities appear to be sufficient.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

I do not consider the manner of disinfecting clothing, bedding, etc., in accordance with the Treasury regulations. The regulations regarding inspection and period of observation after disinfection are believed to be observed in the main.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

Yes; certificate same as transmitted with report of Galveston Station. No copy obtained for transmission.

17. What disposition is made of the consular bills of health?

Filed at custom-house.

JULY 23, 1896.



## GALVESTON.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects, mail and telegraph facilities, etc.

This station is located in Galveston Bay, about  $1\frac{1}{2}$  miles below the city. The buildings consist of a cottage for the quarantine officer, two small buildings for the employees, and a disinfecting warehouse. The buildings are all wooden, and constructed on piles. The quarantine officer and employees reside on the extreme end of Galveston Island, known as Fort Point. The warehouse is located directly opposite, across the main ship channel, a distance of one-half mile. The wharf upon which the warehouse is built is 304 by 60 feet and the warehouse is about 274 by 50 feet, thus affording a working space of about 10 feet in front of building. This building contains the disinfecting cylinder, special sulphur furnace, 20-horse-power steam boiler, steam pump, steam winch, 6 wooden cisterns 3,000 gallons each, which furnish necessary rain water for the use of the station, with necessary hose connections. A space of about 45 by 80 feet is reserved for airing cargo, etc. There are hospital accommodations for about 20 patients with dining room, office, kitchen, 3 water-closets and 3 bathrooms. A room, about 40 by 70 feet is provided for the inspection of immigrants, together with bathing facilities and dressing rooms.

There is a small house, about 12 by 12 feet, situated on the southwest end of the wharf, for smallpox cases. The buildings are all in good order. Depth of water alongside of wharf at low water 11 feet. Contracts are about to be made to increase the depth to 25 feet. Anchorage for noninfected vessels in Bolivar Channel  $1\frac{1}{2}$  to 2 miles from station, northeast of "black buoy." Infected vessels are anchored outside of bar, 6 miles from station. Inspections are made by steam tug, naphtha launch, and 3 rowboats.

Apparatus for disinfection: One steam cylinder, 60 by 8 feet, fitted up with thermometer, pressure gauge, etc., complete. Perforated pipes are provided by means of which live steam is turned on and the temperature increased  $225^{\circ}$  F. moist heat. Special sulphur furnace for the generation of  $\text{SO}_2$  for disinfection of vessels, the gas being forced into the hold by a Sturtevant fan. Sulphur pots are also used for the disinfection of cabins and living apartments. The tank containing the solution of bichloride of mercury, 1 : 800, stands on the wharf, capacity 800 gallons. This disinfectant is applied by means of a hand force pump. The sick are removed by tug to hospital; the room used for the inspection of immigrants is also used for those detained as suspects.

Mail and telegraph from Galveston. Telephonic communication from station to city. The disinfecting station appears to be in too close proximity to the city.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. W. F. Blunt, State quarantine officer; number of employees, 8; total number of officers and employees, 9. The number of employees is regulated according to the necessities of the service.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

Inclosure A, governor's proclamation. No other local regulations. The quarantine regulations of the Treasury Department have been adopted, and I am informed that they are strictly enforced. Inspections are made promptly upon arrival of vessels. The crew and passengers are mustered and thoroughly inspected and the lists compared with articles and manifest for discrepancies. All portions of the ship are then inspected as far as practicable. In accordance with



the governor's proclamation all vessels arriving from ports south of the twenty-fifth degree of north latitude are considered infected and they are placed in quarantine and disinfected and held for a period of five days and longer if deemed advisable to do so. In case a vessel arrives with quarantinable disease on board, she would be remanded to the United States quarantine station at Ship Island, Mississippi. Should sickness break out on a vessel held in quarantine for observation, she would be disinfected and after the termination of the cases she would be redisinfecting and held five days after completion of the last disinfection. All bedding, clothing, and all textile fabrics, curtains, carpets, etc., are removed and placed in the steam cylinder and treated with dry and moist heat increased to 225° F., for a period of two hours, with a pressure of about 10 pounds to the square inch on the cylinder. All articles that would be injured by steam are thoroughly wetted in the solution of bichloride of mercury, 1 : 800. In the meantime the vessel is made mechanically clean, the bilge pumped and cleansed with sea water, after which the solution of bichloride of mercury is applied by means of hose, and then she is fumigated with sulphur dioxide, the gas being forced into the vessel from the special sulphur furnace by means of a Sturtevant fan. In case of wooden vessels the SO<sub>2</sub> application precedes the bichloride treatment. The cabins and living apartments are disinfected with SO<sub>2</sub> by the pot system, and washed down with the bichloride solution. Soft ballast is discharged outside of the bar, close-grained rock ballast is disinfected by the HgCl<sub>2</sub> solution and allowed to remain on board. Fruit vessels are subject to the foregoing rules, but special consideration would be given provided a medical inspector employed by the State certifies that the port and surrounding country from which she cleared are healthy, and that no one has had communication with the shore at port of departure or during the voyage, except the captain, in accordance with the conference of Gulf quarantine officers of 1894. No fruiters have called at this port for the past two years. Should a cholera-infected vessel be detained here for treatment, in addition to the foregoing the water tanks would be discharged, at sea, if practicable, and purified with a 10 per cent solution of permanganate of potassa and refilled with pure water. The food and all refuse on board would be burnt in the ship's furnace and the vessel revictualled. Nothing would be thrown overboard from such a vessel.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

Governor's proclamation; copy inclosed marked A; also Instructions to Pilots, B. No unnecessary detention or disinfection to my knowledge.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

Foreign vessels are inspected throughout the year; domestic vessels from May 1 to November 1, or until discontinued by governor's proclamation. Disinfection is practiced at all times in case of suspected or infected vessels or baggage.

6. Are vessels from other United States ports inspected?

Yes.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection; (*b*) the time occupied by disinfection; and (*c*) time after completion of disinfection of vessels until discharge.

Same as given under quarantine customs, interrogatory 3.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?



No communication except under the supervision of the quarantine officer. Pilots do not board infected vessels. Such vessels are convoyed to the quarantine anchorage outside the bar by the pilots and turned over to the quarantine officer. No intercommunication among vessels in quarantine. Supplies for vessels in quarantine are delivered under the direction of the quarantine officer.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants); and what conditions are regarded as giving evidence of the vessel's infection in each case.

In each case the vessel would probably be remanded to the United States quarantine station, Ship Island, Mississippi, but if detained at this quarantine by order of the State health officer, the vessels would be treated strictly in accordance with Treasury quarantine regulations. Evidence of infection, quarantinable disease on board, or having had such during voyage, or within sixty days next preceding arrival.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival and during detention.

Records of all cases are kept at the station.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

Fees for disinfection: Steamships, \$25; all other vessels from \$10 to \$25 according to size. No fees charged for inspection.

12. Make a statement showing the number of vessels arriving at this port during the preceding calendar year, by months, (a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

*Vessels arrived in the district of Galveston during the year 1895.*

Month.	Foreign ports.	Ports in yellow-fever latitude.	Domestic ports.	Cargo.	Ballast.
January .....	34	17	40	37	37
February .....	24	18	27	27	24
March .....	14	12	33	27	20
April .....	11	9	34	28	17
May .....	9	8	26	24	11
June .....	7	6	23	19	11
July .....	5	5	20	20	5
August .....	5	5	29	29	5
September .....	10	9	30	28	12
October .....	42	24	37	38	41
November .....	27	20	31	29	29
December .....	19	11	28	30	17

*Chief commerce of the port by countries.*

Countries.	Cargo.	Ballast.	Total vessels.
Domestic .....	300	58	358
England .....	18	28	46
West Indies .....	3	29	32
Mexico .....	3	28	31
Cuba .....	1	21	22
All other .....	11	65	76

13. State results of your visit to (a) custom-house; (b) the immigration bureau.

I ascertained that the consular bills of health are properly filed. No immigration officer here.



14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

The quarantine facilities appear to be sufficient for the shipping of the port at present.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

I believe the quarantine regulations of the Treasury Department are complied with regarding inspection, disinfection, and the period of observation after disinfection.

16. Does the certificate of inspection or of pratique signed by the quarantine officer state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

Yes. Copy inclosed, marked C.

17. What disposition is made of the consular bills of health?

Filed at custom-house.

18. Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

The present quarantine officer has had many years' experience in quarantine affairs, and the station appears to be well conducted. In my opinion, it will be necessary to remove the disinfecting plant to a more isolated locality at no distant date, as extensive improvements are now under way in the harbor within about one-half mile from the station. Moreover, it is situated only about 1½ miles from the city.

JULY 10, 1896.

A.

#### QUARANTINE PROCLAMATION BY THE GOVERNOR OF TEXAS.

Be it known that I, Charles A. Culberson, governor of the State of Texas, by authority invested in me by the laws of this State, do hereby declare that quarantine shall be established on the Gulf coast and Rio Grande border on and after May 1, 1896, and that it shall continue until closed by proclamation.

Said quarantine shall apply to all vessels, persons, or things coming from places infected by yellow fever, smallpox, or cholera, and all places south of 25° north latitude shall be considered infected unless proof to the contrary be submitted to the State health officer and special exemption be granted to said places; and persons from such places are prohibited from entering this State within a period of ten days.

I further declare quarantine against any person or persons infected or liable to be infected with yellow fever, smallpox, or cholera, either within or without the State, and direct the quarantine officers of the State and health officers of counties and towns to establish local quarantines around any and all such persons whenever discovered. The coast quarantine stations shall be governed by the following rules:

**RULE 1.** Every vessel arriving at any port in this State must halt for inspection at some point designated by the local quarantine officer, and no person shall board the vessel until after inspection, and then only when permission to do so is given by the quarantine officer; and all orders made and requirements imposed upon said vessels must be promptly obeyed by both officers, crew, and passengers.

**RULE 2.** Vessels from an infected place having had no sickness of an infectious kind en route shall be detained and subjected to daily processes of purification, such as shifting cargo, fumigating, ventilating, pumping out bilge water, and freely using disinfectants, for five consecutive days before being permitted to land either passengers, crew, or cargo, and a longer period if in the judgment of the quarantine officer it is necessary to insure perfect safety.

**RULE 3.** Vessels from infected ports laden with such articles as can not possibly be carriers of infection, and vessels coming empty from infected places, may be admitted after complying with above conditions and such other rules as may be prescribed by the State health officer.



RULE 4. Every vessel engaged in the fruit business with interdicted places must conform to the rules prescribed by the conference of Gulf State health officers at New Orleans February 2, 1894, and evidence of such compliance must be submitted to the State health officer before a special permit will be granted.

Local boards of health, civil and military authorities, and citizens of Texas are solicited to assist the quarantine officers in the execution of the above rules, and are earnestly requested to notify the governor of any dereliction of duty by officers or employees, or any other facts that will give greater efficiency to the quarantine service.

In testimony whereof, I hereunto sign my name and have caused the seal of State to be affixed, at the city of Austin, this 14th day of March, A. D. 1896.

[SEAL.]

C. A. CULBERSON,  
*Governor of Texas.*

By the governor:

ALLISON MAYFIELD,  
*Secretary of State.*

B.

INSTRUCTIONS TO PILOTS.

You are hereby notified not to bring any vessel across the bar until captains have signed the oath below.

By order of—

W. F. BLUNT, M. D.,  
*State Quarantine Officer.*

I, \_\_\_\_\_, captain commanding the \_\_\_\_\_, do solemnly swear that I have had no sickness on board, and have none at the present time, and that I have had no death on board, and that I have a clean bill of health, and have not touched at any place where any contagious disease existed.

C.

QUARANTINE STATION, *Galveston*, \_\_\_\_\_, 189—.

I certify that \_\_\_\_\_, of \_\_\_\_\_, from \_\_\_\_\_, has in all respects complied with the quarantine regulations prescribed by the Secretary of the Treasury, and that in my opinion she will not convey quarantinable disease. Said vessel is this day granted free pratique.

\_\_\_\_\_, M. D.,  
*State Quarantine Officer, Port of Galveston, Tex.*

QUINTANA.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

This station is located at Quintana, a small town of about 300 inhabitants on the Brazos River about 2 miles from the Gulf and about 4 miles from Velasco, where a deputy collector is stationed. It is an inspection station only, there being no buildings or apparatus of any kind provided for quarantine work. Anchorage grounds at the mouth of the river through which all vessels subject to quarantine enter the port from the Gulf. Infected vessels would be anchored about 1 mile from those noninfected. Inspections are made by means of a rowboat. Mail from Quintana and telegraph from Velasco.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. E. S. Weisiger, State quarantine officer; post-office address, Quintana, Tex.; total number of officers and subordinates, 3.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.



No copy of governor's proclamation on hand (see copy inclosed with report of Galveston Station). The quarantine customs of the port, as regards inspection, I was informed, are strictly in accordance with the Treasury quarantine regulations and governor's proclamation.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

Governor's proclamation (see copy with report of Galveston Station). Infected vessels, or those requiring treatment, are remanded to the Galveston Quarantine Station for treatment, there being no facilities here for quarantine work. I was informed that there is no unnecessary detention.

5. State whether the inspection is maintained throughout the year, or for what period, and what treatment of vessels is enforced during the entire year.

May 1 to November 1 only, or until discontinued by proclamation of the governor.

6. Are vessels from other United States ports inspected?

All vessels are inspected.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

The inspection includes the muster of passengers and crew and the comparison of the list with the manifest for discrepancies, examination of bills of health, ship's log, and all portions of the vessel practicable. If found to be infected, the vessel is remanded at once to the Galveston Station for treatment.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

No communication would be allowed between vessels in quarantine except under the supervision of the quarantine officer, and no intercommunication would be allowed between the vessels in quarantine.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying infection), and what conditions are regarded as giving evidence of the vessel's infection in each case.

In each case the vessel would be sent to the Galveston quarantine for treatment. Evidence of infection: Quarantinable diseases on board, or having had such during voyage, or within thirty days next preceding arrival; foul bill of health, and bad sanitary history of vessel.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

No. All quarantinable diseases found on board of vessel on arrival would be reported to the State health officer at once.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

No inspection fees collected here.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(*a*) from foreign ports; (*b*) from foreign ports in yellow-fever latitudes via domestic ports; (*c*) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

January 4, British steamship *White Jacket*, from St. Vincent, Cape Verde Island, no cargo; February 22, Mexican steamship *El Gullo*, from Galveston, no



cargo, water ballast; March 23, Norwegian steamship *Sultan*, from Castries, St. Lucia, no cargo, water ballast; May 4, Mexican steamship *El Gullo*, from Tampico, Mexico, no cargo, water ballast; October 9, British steamship *Glenislo*, from Shields, England, no cargo, water ballast; October 12, British steamship *Geo. Pyman*, from Cardiff, England, no cargo, water ballast; November 5, British steamship *Glanhafran*, from Havana, Cuba, no cargo, water ballast; November 11, Mexican steamship *El Gullo*, from Tampico, Mexico, no cargo, water ballast; December 28, Mexican steamship *El Gullo*, from Galveston, no cargo, water ballast.

13. State results of your visit to (a) the custom-house, (b) the Immigration Bureau.

Bills of health filed at custom-house; no immigration here.

14. State whether, in your opinion, the quarantine facilities are sufficient to care for the shipping entering the port.

At present the facilities for inspection are sufficient.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection of vessels are observed.

The Treasury quarantine regulations regarding inspection of vessels are observed.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with, as required by section 5, act of February 15, 1893? Transmit copy of certificate.

Yes. Copy inclosed, marked A.

17. What disposition is made of the consular bills of health?

Filed at custom-house.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

The quarantine officer here appears to be too feeble for active work.

JULY 15, 1896.

A.

QUARANTINE STATION,  
Quintana, Texas, ———, 189—.

To the Deputy Collector of Customs, Velasco:

The ——— is granted permission to proceed to the city of Velasco and discharge, all the requirements of the quarantine act of February 15, 1893, having been complied with, as regards vessels, officers, and crews.

—————, M. D.,  
State Quarantine Officer.

#### PASS CAVALLO.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick and for the removal and detention of suspects; mail and telegraph facilities, etc.

This station is located at Alligator Head, Matagorda Bay, about 4 miles from the Gulf and 20 miles from Port Lavaca, where a deputy collector of customs has an office. This quarantine was moved a few months ago from Matagorda Peninsula to Alligator Head, the old site being in a dangerous locality. All vessels drawing 2 feet or more enter Matagorda Bay through Pass Cavallo. Small boats occasionally take the inside route by entering the bay through Mitchels Cut, 60 miles above the quarantine station here, or through Aransas Pass, about 45 miles below. The quarantine officer is provided with a wooden cottage, which also affords accommodations for the employees. It is built on piles and in good con-



dition. The reservation consists of 1 acre of land, which was donated to the State for quarantine purposes. Two wooden cisterns are provided for the storage of potable water for the use of the station. No wharf or boathouse. Anchorage grounds, about 2 miles from the station. Limits of anchorage for noninfected and for infected vessels, about 800 yards. Inspections are made by sail or row boat. No apparatus for disinfection, except by the pot system. No facilities for the removal and treatment of the sick or for the removal and detention of suspects. Mail and telegraph from Port Lavaca only

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. T. J. McFarland, quarantine officer; post-office address, Port Lavaca, Tex. Total number officers and employees, 3.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

Governor's proclamation (see Galveston report). No local regulations. The Treasury quarantine regulations are carried out here. All vessels coming from the Gulf are inspected, the bill of health examined. The crew and passengers are mustered and thoroughly examined, and the lists compared with the manifest for discrepancies and all portions of vessel inspected. If the vessel hails from a port north of the twenty-fifth degree of north latitude with clean bill of health, no sickness on board upon arrival or during voyage, and the vessel is found to be in good sanitary condition, she would be allowed to proceed. In case the vessel hails from a port south of the twenty-fifth degree of north latitude, under the governor's proclamation, it would be placed in quarantine, and should there be sickness on board of a contagious character she would be remanded to the quarantine station at Galveston for treatment. Should there be no sickness on board the vessel would be made mechanically clean and disinfected with sulphur dioxide, 5 pounds to 500 cubic feet of space, by the pot system, and then washed down with a solution of bichloride of mercury, 1:800, and held for a period of five days. All clothing, etc., would be boiled for one hour, and then saturated with the solution of bichloride of mercury. All bedding would be thoroughly sprinkled with the mercuric solution or burned at the discretion of the quarantine officer. Ballast of close-grained hard rock would be disinfected with the  $HgCl_2$  solution and allowed to remain on board. All other ballast would be discharged 3 leagues outside of harbor. No fruit vessels enter here.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

None, except governor's proclamation. No unnecessary disinfection or detention.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.

May 1 to November 1, or until discontinued by governor's proclamation.

6. Are vessels from other United States ports inspected?

All vessels are inspected.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine, (a) between arrival and commencement of disinfection; (b) the time occupied by disinfection, and (c) time after completion of disinfection of vessels until discharge.

Same as under customs, namely: All infected vessels would be remanded to the Galveston Station for treatment. Should a suspicious vessel be disinfected here, as described above, the work would be commenced as soon as practicable after arrival. Time occupied in disinfecting a wooden vessel, seventy-two hours; iron



forty-eight hours. Such vessels would be held five days after completion of disinfection and should no sickness occur in the meantime they would be discharged if approved by the State health officer.

8. What communication is held with vessels in quarantine and before quarantine by pilots, etc., and how regulated? Is there any intercommunication allowed between vessels in quarantine?

No communication with vessels in quarantine except by permission of the quarantine officer. No intercommunication. Should pilots board infected vessels, they would be subject to the same rules or treatment as the passengers or crew.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

In each case the vessel would be sent to the Galveston quarantine for treatment, there being no facilities here for their care. Evidence of infection of vessels, quarantinable diseases on board or having had such during voyage or within thirty days next preceding arrival, foul bill of health and bad sanitary history.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Records of all cases of disease that have occurred during voyage, on arrival, and during detention would be kept at the station.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

No fees for inspection collected here. Fee for disinfection, cost of materials.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

From foreign ports, none; from domestic ports: January, 6; February, 10; March, 9; April, 12; May, 4; June, 7; July, 18; August, 21; September, 15; October, 14; November, 17; December, 18. Vessels come chiefly from the ports of Matagorda, Galveston, Corpus Christi, Rockport, and Point Isabel, Tex., and Lake Charles, La. Some in cargo, others empty.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced; and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

The quarantine regulations of the Department relating to inspection and disinfection, also period of observation after disinfection, I think, are observed.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

Yes. Copy inclosed, marked A.

17. What disposition is made of the consular bills of health?

Consular bills of health would be filed at custom-house.

JULY 20, 1896.

QUARANTINE STATION, "A,"  
Pass Cavallo, ———, 189—.

I certify that ——— of ——— from ———, has in all respects complied with the quarantine regulations prescribed by the Secretary of the Treasury, and that in my opinion she will not convey quarantinable disease. Said vessel is this day granted free pratique.

—————, M. D.,  
State Quarantine Officer, Pass Cavallo, Texas.



## ARANSAS PASS (NEAR ROCKPORT).

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

This station is located in the Bay of Aransas, Harbor Island, about 9 miles from Rockport and about 6 miles from the pass, through which all vessels enter the bay from the Gulf.

The buildings consist of a cottage for the quarantine officer, one small house for the boatman, and a small hospital, dimensions about 18 by 40 feet, but it has no kitchen, bathroom, or water-closet provided. It has never been used for hospital purposes. The buildings are all built on piles and they are in fair condition. There is a small wharf about 30 feet in length in fair condition. Anchorage one-half mile opposite station for all vessels. Limits of anchorage for noninfected and infected vessels, 2 miles. Inspections are made by sail and row boat. No apparatus for disinfection except by the pot system. The sick would be removed by sail or row boat. No facilities for the detention of suspects. Daily mail and telephone to Rockport. Telegraph from Rockport.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Dr. W. E. Pugh, State quarantine officer; post-office address, Rockport, Tex.; number of employees, 1 boatman. A deputy collector of customs is stationed at Rockport.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

[See governor's proclamation, Galveston report.] No local regulations. The Treasury quarantine regulations, I am informed, are strictly enforced. All vessels coming from the Gulf are inspected; the bill of health examined. The crew and passengers are mustered and thoroughly examined, and the list compared with the manifest for discrepancies, and all portions of vessel inspected. If the vessel hails from a port north of the twenty-fifth degree of north latitude, with clean bill of health, no sickness on board upon arrival or during voyage, and the vessel is found to be in good sanitary condition, she would be allowed to proceed. In case the vessel hails from a port south of the twenty-fifth degree of north latitude, under the governor's proclamation she would be placed in quarantine, and should there be sickness on board of a contagious character it would be remanded to the quarantine station at Galveston for treatment. Should there be no sickness on board, the vessel would be made mechanically clean and disinfected with sulphur dioxide, 5 pounds to 500 cubic feet of space, by the pot system, and then washed down with a solution of bichloride of mercury, 1:800, and held for a period of five days. All clothing, etc., would be boiled for one hour and then saturated with the solution of bichloride of mercury. All bedding would be thoroughly sprinkled with the mercuric solution, or burned, at the discretion of the quarantine officer. Ballast of close-grained hard rock would be disinfected with the  $HgCl_2$  solution and allowed to remain on board. All other ballast would be discharged 3 leagues outside of harbor. No fruit vessels enter here.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

None. No unnecessary detention or disinfection as far as I was able to ascertain.

5. State whether the inspection is maintained throughout the year or for what period, and what treatment of vessels is enforced during the entire year.



May 1 to November 1, or until discontinued by proclamation of governor.

6. Are vessels from other United States ports inspected?

All vessels entering the harbor are inspected.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection; (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessel until discharge.

Procedures same as described under interrogatory No. 3. Infected vessels would be remanded to the Galveston station, there being no adequate facilities here for their treatment. Should a suspicious vessel be disinfected here as described above, the work would be commenced as soon as practicable after arrival. Time occupied in disinfecting a wooden vessel, seventy-two hours; iron, forty-eight hours. Such vessels would be held five days after completion of disinfection, and should no sickness occur in the meantime they would be discharged if approved by the State health officer.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.) and how regulated? Is there any intercommunication allowed among vessels in quarantine?

If pilots board infected vessels they would be subject to the same treatment as the passengers and crew. No intercommunication would be allowed among vessels in quarantine.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

In each case they would be remanded to the Galveston station for treatment. Evidence of infection, quarantinable disease on board or having had such on board during voyage or within thirty days next preceding arrival, bad history and foul sanitary condition of vessel.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Records of all cases of sickness on board during voyage, on arrival, and during detention would be kept at the station.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

No inspection fees collected here. In case of disinfection, steamships \$25, all other vessels \$15. No other charges.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(*a*) from foreign ports; (*b*) from foreign ports in yellow-fever latitudes via domestic ports; (*c*) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

Only one foreign vessel arrived during the year ending December 31, 1895. Number of domestic vessels not known, but estimated at about 100.

13. State results of your visit to (*a*) the custom-house; (*b*) the immigration bureau.

I ascertained that the bills of health are filed at the custom-house. No immigration here.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

At present the quarantine facilities appear to be sufficient for the shipping.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection of vessels, are observed.



I think the Treasury quarantine regulations are satisfactorily complied with.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

Yes; no certificates of pratique issued except to vessels from foreign ports. No copies on hand, but the blanks are the same as those used at Galveston.

17. What disposition is made of the consular bills of health?

Filed at custom-house.

JULY 18, 1896.

#### BRAZOS SANTIAGO.

1. Describe the quarantine station, location, buildings, anchorage, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

This station is located on Padre Island, 3 miles below Point Isabel, about 1 mile south of Brazos Santiago on the Laguna Madra, and 26 miles from Brownsville. The buildings consist of a house for the quarantine officer, and two "jacals," or outhouses, for use of the employees. The buildings are in good condition. Anchorages opposite station about 200 yards distant. A wooden cistern is provided for the storage of potable water for the use of the station. Vessels drawing over 9 feet can not cross the bar at this port and those drawing over 6 feet are unable to go to the wharf at Point Isabel. Limits of anchorage for noninfected and infected vessels,  $1\frac{1}{2}$  miles. Inspections are made by sail and row boats. No apparatus for disinfection of vessels or baggage, except by sulphur pots. No facilities for removal and treatment of the sick, or removal and detention of suspects. Mail and telegraph from Point Isabel.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers, subordinates, etc.

Dr. Arthur S. Wolff, quarantine officer; post-office address, Point Isabel, Tex. Total number of officers and employees, 5. A deputy collector of customs is stationed at Point Isabel.

3. Transmit copies of the laws under which the local quarantine is maintained and copies of the quarantine regulations, and describe the quarantine customs of the port as they are carried out.

No copy of governor's proclamation on hand. The quarantine regulations prescribed by the State of Texas, viz, the governor's proclamation, and Treasury Department are strictly enforced. All vessels are thoroughly inspected upon arrival. The bills of health, manifests, ship's log, entire vessel and crew are examined, and sanitary condition of vessel noted. The crew and passengers are mustered and the lists compared with manifest for discrepancies. If the vessels hail from a non-infected port with a clean bill of health, with no sickness on board during voyage or upon arrival, and the sanitary condition of the ship is good, she would be allowed free pratique with the approval of the State health officer. All vessels from infected ports are detained and fumigated with sulphur by the pot system, 5 pounds to 500 cubic feet space; the bilge would be pumped and cleansed with sea water and all parts of vessel and cargo, if any, ventilated, the cargo being shifted daily, and cabins and living rooms fumigated and washed down with a solution of bichloride of mercury, 1:800, and decks washed with a solution of carbolic acid, 1:25 to 1:50. Ballast of close-grained rock would be disinfected with the solution of bichloride of mercury and allowed to remain on board. All other ballast would be discharged outside of bar. All bedding would be burned, and all clothing of passengers and crew would be disinfected by boiling about one hour and rinsed in the



solution of bichloride of mercury. The vessel would then be held five days, and should no sickness occur in the meantime pratique would be given by State health officer upon recommendation of the quarantine officer.

Vessels from infected ports, with freight or cargo not likely to carry germs of infection, or vessels in ballast from such places, may be admitted after complying with the foregoing regulations. In case of smallpox infection, all passengers and crew not immune to the disease, in the opinion of the quarantine officer, would be vaccinated or held fourteen days. No fruit vessels have called at this port for the past three years. Such vessels coming from infected ports would be subject to the foregoing regulations and such other rules as may be prescribed by the State health officer, based upon the Treasury regulations. The above rules apply to all vessels, foreign and domestic, from all ports.

4. State what quarantine procedures, either under printed regulations or by custom, are enforced at the port, in addition to the requirements of the Treasury Department. It should also be stated whether there is undue or unnecessary detention or disinfection of vessels.

All passengers arriving and departing from this quarantine to any point in Texas or any other State are required to make affidavit that they or their baggage have not been in any place infected with yellow fever, cholera, or smallpox within the last twenty days (copy inclosed marked A). These affidavits are transmitted to the State health officer monthly. Under the governor's proclamation all vessels hailing from ports south of the twenty-fifth degree of north latitude are declared to be infected and held five days, and hence it is possible that if such an order is strictly enforced some vessels might be unnecessarily detained. I am unable to say that there is no unnecessary detention or disinfection.

5. State whether the inspection is maintained throughout the year or, for what period, and what treatment of vessels is enforced during the entire year.

Inspection from May 1 to November 1, or until closed by proclamation of governor. From November 1 to May, all passengers arriving either by steamer or stage are inspected by the quarantine officer at Brownsville before they are allowed to proceed. Ballast only treated during the quarantine season.

6. Are vessels from other United States ports inspected?

All vessels are inspected.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) the time occupied by disinfection, (*c*) time after completion of disinfection of vessels until discharge.

Inspection and treatment of infected vessels same as described above under quarantine customs. If disinfection is required, the work commences as soon as practicable after arrival of vessel unless she is remanded to another station for treatment. Fumigation by sulphur with pots is continued for about three days and nights, and all parts of the vessel are washed down with the bichloride of mercury and carbolic acid solutions. The vessels arriving here are mostly wooden. After completion of disinfection the vessels are held five days.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.), and how regulated? Is there any intercommunication allowed among vessels in quarantine?

No communication. Should a pilot board an infected vessel he would be subject to the same treatment as the crew and passengers. No intercommunication allowed between vessels in quarantine.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.



In each case the vessel would be placed in quarantine and the facts reported to the State health officer. In case of sickness on board the vessel would probably be remanded to the United States quarantine station, Ship Island, for treatment, there being no facilities here. If detained at this station the vessels would be treated in accordance with the Treasury regulations.

Evidence of infection of vessel: Cases of cholera, yellow fever, or smallpox on board, or having had cases during voyage or within thirty days next preceding arrival.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Yes.

11. Transmit schedule of quarantine fees, and give other fees and expenses necessarily and usually attendant on quarantine, as tonnage, ballast, wharfage charges, etc.

No fees collected for inspection. Disinfection fees, cost of material only.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

13. State results of your visit to (a) the custom-house, (b) the immigration bureau.

Bills of health filed at custom-house. No immigration here.

14. State whether in your opinion the quarantine facilities are sufficient to care for the shipping entering the port.

The quarantine facilities appear to be sufficient for the port at present.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specifically whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

The Treasury regulations are in my opinion properly carried out in all respects regarding inspection, disinfection, and period of observation after disinfection, as far as practicable, with the facilities at hand.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy of certificate.

Yes. Copy inclosed marked B.

17. What disposition is made of the consular bills of health?

Filed at custom-house.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

In addition to this station there is an inspection station at the mouth of the Rio Grande, known as the Port of Bagdad Quarantine Station, 10 miles distant from the Brazos de Santiago Station. This station being under the supervision of the quarantine officer at Brazos de Santiago, and as it is conducted under the same regulations, I did not consider it necessary to visit the place. Two guards only are employed as lookouts there, who report daily to the quarantine officer in charge. The quarantine officer has had many years of experience in quarantine matters at this port, and the station appears to be efficiently conducted. These two stations are important from the fact that they are in close proximity to the Mexican border on the Rio Grande. It is well known that the Mexican people have no quarantine laws or regulations at present in operation, and some friction has existed between the State of Texas and the Mexican authorities because of the strict quarantine maintained by the State of Texas. In consequence of



quarantine restrictions the business of small vessels trading between Vera Cruz, Tampico, Progreso, Soto la Marina, and Matamoras has been largely stopped during the quarantine season. In view of the fact that the river at Brownsville is only about 300 feet in width and free intercourse is established with Matamoras by means of a ferry, it is obvious that a strict watch at this point is necessary to prevent the importation of contagious diseases into Brownsville through Bagdad, at the mouth of the Rio Grande, via Matamoras.

JULY 13, 1896.

## A.

STATE QUARANTINE STATION, ———, 189—.

I, ———, do hereby solemnly swear that neither I nor my baggage have been in any place infected with yellow fever, cholera, or smallpox within the last twenty days.

Sworn to before me, \_\_\_\_\_.

Where from? ———.

Where to? ———.

No. ———.

Arrived at ———; date and hour ———; vessel's name ———; nationality ———; rig ———; where registered ———; tonnage ———; master's name ———; where from and latitude ———; date and hour of sailing ———; clearance preceding last ———; date ———; touched where ———; how long ———; boarded at sea ———; cargo ———; consignee ———; No. passengers C. & D. ———; No. crew ———; any sickness on board ———; description ———; put in quarantine ———; sanitary condition ———; deaths, if any, ———; bill of health ———.

I, ———, captain commanding the ———, do solemnly swear that I have truthfully answered the above and all other questions put to me by the quarantine officer, and that I have concealed nothing, but have truthfully revealed all things relating to the sanitary condition of my ship, cargo, crew, and passengers, and that I have mentioned each and every place touched at, or in any way had communication with during this voyage.

Given under my hand and seal, this ——— day of ——— A. D. 189—.

\_\_\_\_\_ [SEAL.]

## B.

QUARANTINE STATION,  
Brownsville, ———, 189—.

I certify that ——— of ——— from ——— has in all respects complied with the quarantine regulations prescribed by the Secretary of the Treasury, and that in my opinion she will not convey quarantinable disease. Said vessel is this day granted free pratique.

\_\_\_\_\_ M. D.,

State Quarantine Officer Port of Brownsville, Tex.

GENERAL COMMENTS UPON THE QUARANTINE STATIONS OF LOUISIANA AND TEXAS.

MARINE-HOSPITAL SERVICE,  
New Orleans, La., August 11, 1896.

SIR: In accordance with your order of May 1, 1896, I have the honor to advise you that I have inspected the quarantine ports in Louisiana and Texas. The reports relative to the Louisiana stations were forwarded to the Bureau in June last. I now transmit herewith reports of the stations in Texas. These reports show that the stations visited are all in charge of quarantine officials and equipped for ordinary quarantine work to meet the present necessities of the Service, and that the Treasury quarantine regulations are in the main complied with.

No station in either State was found to be completely equipped, or having all the facilities necessary for full quarantine operations of extensive proportions, though it should be said that some of the additional facilities required could be readily provided. No provision for bathing, detention of suspects, or warehouse



room for the care and protection of cargoes while undergoing treatment was found, except at Galveston. An important feature of particular interest to commerce in connection with the quarantines of Texas is the reduction to the minimum of quarantine fees, namely, no charge is made for the inspection of vessels at any station; at four of the six stations the fee for disinfection is cost of materials only; at the other two stations the fee is from \$10 to \$25.

In conclusion, I desire to say that my tour of observation was made pleasant because of the uniform courtesy shown me by the quarantine officers at the various stations, and I take this opportunity to return my thanks for their considerate kindness.

Very respectfully,

HENRY W. SAWTELLE,  
*Surgeon, Marine-Hospital Service.*

SURGEON-GENERAL MARINE-HOSPITAL SERVICE.

#### CALIFORNIA.

##### REPORT ON UNITED STATES QUARANTINE AND INSPECTION STATIONS.

By Surg. JOHN GODFREY, M. H. S.

U. S. QUARANTINE, SAN DIEGO.

Name of quarantine station: San Diego, Cal.

When was the station last inspected? March 12, 1895.

Name of inspecting officer: P. A. Surg. C. T. Peckham.

#### I. PERSONNEL.

Name of officer in command: A. A. Surg. W. W. McKay.

Date of assignment to duty: April 16, 1889. Name and rank of assistants, including acting assistant surgeons; also give number of members in each family: Only officer is Acting Assist. Surg. W. W. McKay; his family numbers four.

Name of steward and number of members in family: No steward.

Name and duties of each attendant: H. P. Olsen, pilot and boatman; Amos Kemp, engineer; Ole Nielsen, watchman; Joseph Sassomota, cook and laundryman.

#### II. GENERAL DESCRIPTION OF STATION.

Number of buildings: Seven.

Limit of anchorage for noninfected vessels: Bay contains 80 square miles.

Limit of anchorage for infected vessels: About 1 square mile.

Facilities for inspection of vessels: Station has one 10-horsepower naphtha launch, and two rowboats.

Apparatus for disinfection of vessels and of baggage: Steam chamber, sulphur furnace, bichloride tank, steam boiler, steam engine.

Facilities for removal and treatment of sick: Sick would have to be brought to wharf in ships' boats; transferred to hospital, or to hospital tents, on mattresses. (It was suggested that the carpenter make stretchers.)

Facilities for removal and detention of suspects: To be brought in small boats. No facilities for detention of suspects.

Mail and telegraph facilities: Mail brought by launch once daily. No telegraph, but there is communication with San Diego by telephone.

Give number of wharves: One.

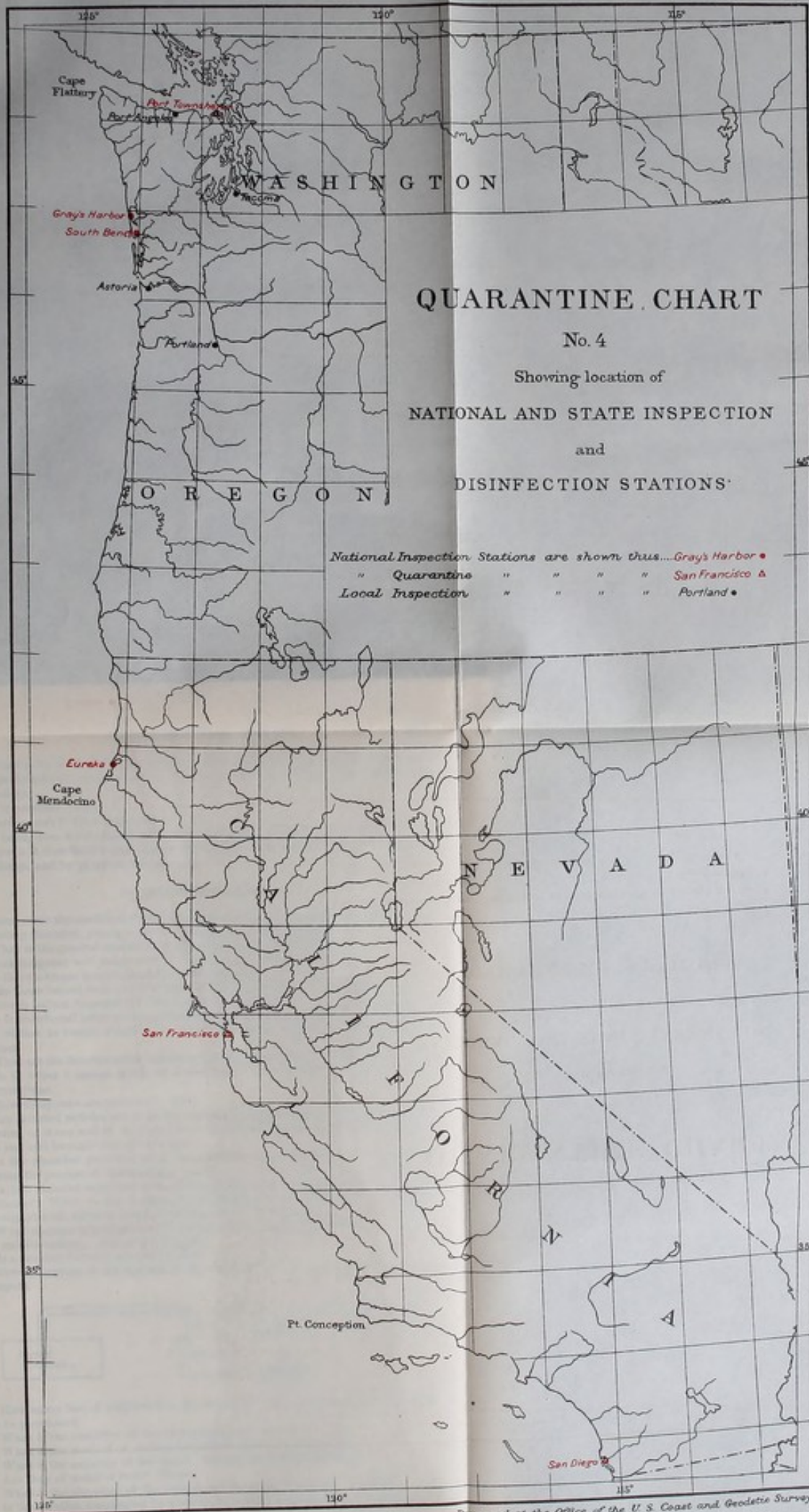
What is the length of the wharf frontage? One hundred and eight feet.

Are the wharves in good condition? Yes.

Are the mooring facilities ample? No; width of wharf will only accommodate small vessels.

What is the depth of water at mean low tide along the front of the wharf? Twenty-five feet.

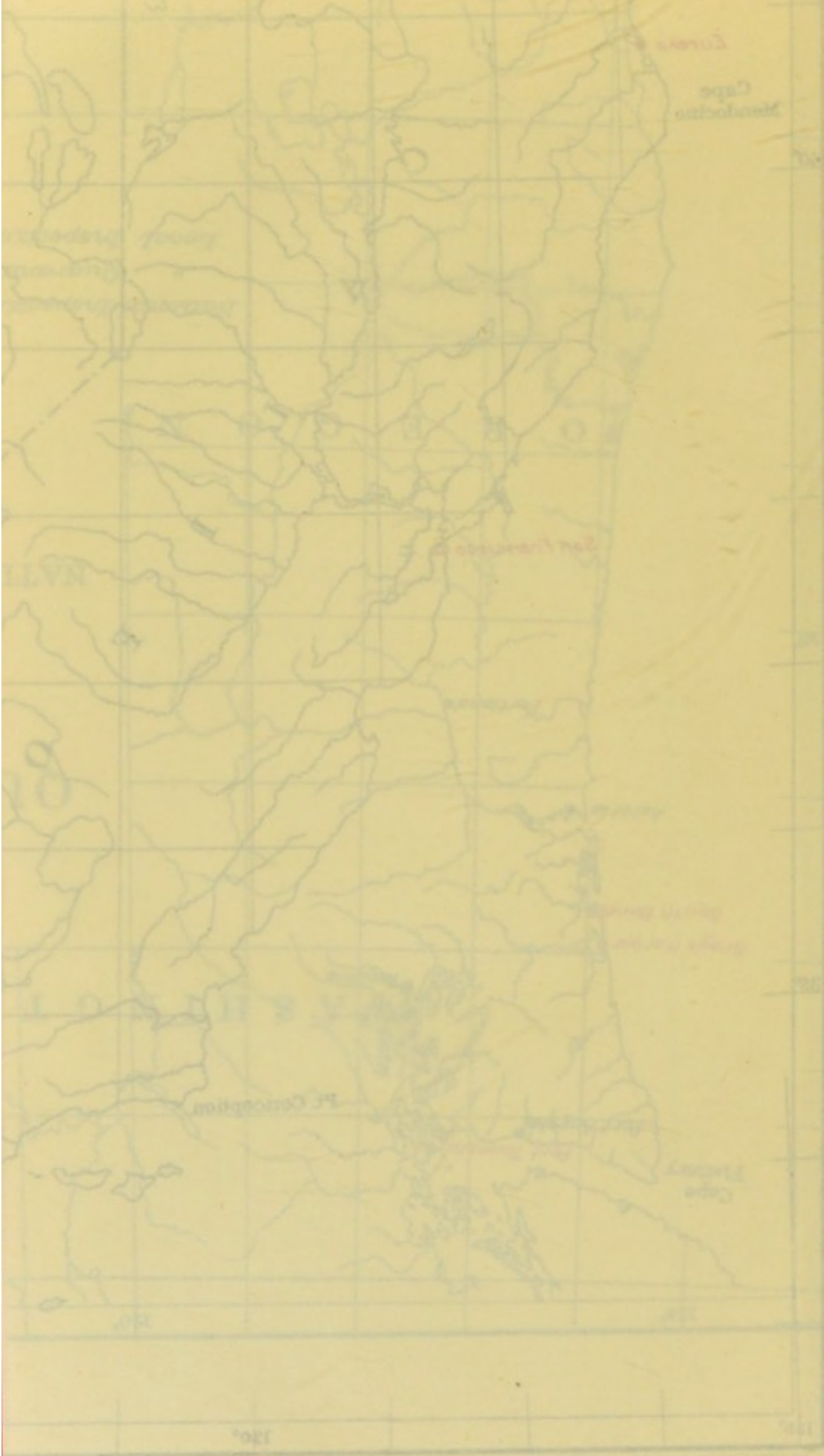




**QUARANTINE CHART**  
 No. 4  
 Showing location of  
**NATIONAL AND STATE INSPECTION**  
 and  
**DISINFECTION STATIONS**

*National Inspection Stations are shown thus... Gray's Harbor ●*  
*" Quarantine " " " " San Francisco ▲*  
*Local Inspection " " " " Portland ●*





Cape Mendocino

San Francisco

Pt. Conception

Cape

130°

135°



What is the source of water supply? City water by pipes, and three cisterns.  
Is it sufficient? At present, yes. During very dry years the cistern supply will run short.

Is it potable? Yes.

Hard or soft? City water, hard.

If hard, does it injuriously affect the boilers in use at the station? Yes.

How is it distributed and stored, if storage is necessary? By pipes into the buildings, and by plugs on the grounds.

### III. DISINFECTING MACHINERY.

Enumerate the machinery constituting the disinfecting plant: Steam boiler, disinfecting chamber, pump, sulphur furnace, fan, steam engine.

What is the general condition of all machinery? Good (new).

Does it appear well taken care of or neglected? Well taken care of.

Is there a steam hoisting engine for ballast? No.

Are there ballast tubs and a ballast car for the distribution of ballast? No.

How is ballast disposed of? None disposed of, so far.

Is it disinfected prior to being discharged, and what facilities exist for supplying ballast to vessels needing it? Facilities below station for supplying sand ballast.

What are the dimensions of the steam disinfecting chamber? Four feet 4 inches wide by 5 feet 4 inches inside by 9 feet long. Is it rectangular or cylindrical. Rectangular.

How many cars are provided? Two.

Are infected articles put in at one end and brought out at the other after disinfection, or is one end of the chamber used for loading and unloading? Put in at one end and brought out at the other.

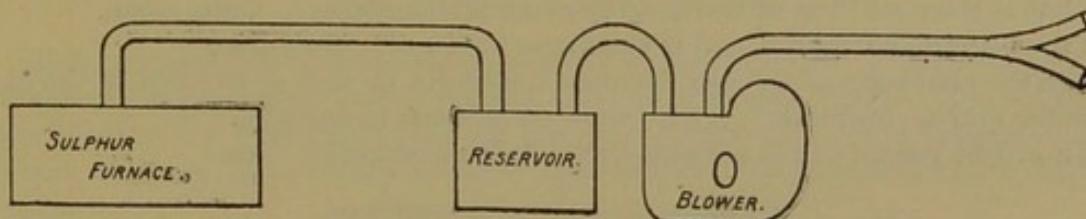
Is the chamber provided with thermometers for indicating the temperature during the process of disinfection? Yes.

Is the chamber equipped with any apparatus for the production of a partial vacuum? What is the nature of the appliance? If efficient in operation? Equipped with vacuum pump (Worthington). Is efficient,

What vacuum is produced, and how long does it take to obtain it? Five-tenths of an atmosphere. About five minutes.

Is a sulphur furnace provided? Yes.

Give a diagram of the method of gas distribution, showing the number of gas outputs.



How many feet of sulphur hose are provided? Three hundred feet authorized to be purchased.

What is the condition of the fan and engine? Good.

What is the method of storing bichloride solution? In a tank.

What is the capacity of the tank? Twenty-two hundred gallons.

Are they of wood or iron? Wood.

What is the elevation of the tank above the wharf flooring? Five feet.

Is the solution distributed by gravity, or is there a pump for the purpose? By pump.



How many feet of hose are provided for the distribution of the bichloride solution, and what is its size and condition? Three hundred feet 2-inch, authorized to be purchased.

How many steam boilers are provided? One.

What is their condition, and do they supply steam for all purposes? Good condition. Supply sufficient steam.

#### IV. BOATS.

Is the station provided with a steam tug, or other steam vessel? No.

Is the station supplied with a steam or naphtha launch? With naphtha launch.

Give dimensions. Thirty-five feet long; 7 feet beam; 2 feet 6 inches draft.

What is its condition? Good.

Give report of medical officer as to efficiency of the launch. "The most objectionable feature in connection with the engine on the naphtha launch is the difficulty sometimes experienced in getting up steam during the winter season in stormy weather; also the fact that the lodgment of kelp or seaweed on the propeller causes the pressure to run down rapidly, causing a corresponding loss of power at times when it is most likely to be needed."—*W. W. McKay, Acting Assistant Surgeon, M. H. S.*

How many small boats are provided, and what is the condition of them and their equipment? Two; in good condition.

Are more boats necessary or desirable? No.

#### V. HOSPITAL.

Give location of building used as hospital: On northern side of reservation.

Give general description of the building: Cottage plan; one ward; dispensary; steward's quarters; dining room; kitchen, disconnected by gallery; closet; cellar (under).

Dimensions: Fifty-eight feet by 29 feet.

Number of beds in ward: Ten.

How many beds can be added for emergencies: Five.

Cubic air space allowed each patient: Ten thousand feet.

Heating, lighting, and ventilating: Heated by coal grates; ventilator in roof.

Has the hospital sufficient furniture? Two bedside tables needed.

What kind of bedsteads, and what kind of mattresses and bedding? Iron bedsteads, hospital pattern, cotton mattresses, blankets, sheets, counterpanes, pillows.

Condition of bedding occupied by patients: Good.

Are the beds clean and free from vermin? Yes.

What is the condition of wards as to general cleanliness? Quite clean.

Is the nursing sufficient, and is the nurse immune? No nurse.

Does the character of the diet furnished conform to that prescribed in the diet table for marine hospitals? There were no patients in hospital.

Is a proper record of the patients under treatment kept? Yes.

#### VI. OUTBUILDINGS AND GROUNDS.

Describe the general condition of outbuildings: All building in good condition.

Are the grounds well policed? Yes.

Describe the officers' quarters and condition of furniture: Five living rooms, storeroom, bathroom, attic; all in good condition.

Describe steward's and attendants' quarters and condition of furniture: Steward's quarters unfurnished; attendants' quarters in good condition.

Describe dining room, condition of table furniture and tableware: Dining room 23 feet 9 inches by 12; everything in good condition.

Describe kitchen and furniture: Kitchen 17 by 12 feet; fixtures in good condition.



Describe dispensary: Size, 14 feet 6 inches by 13 feet 9 inches; sufficient closets and shelves; in good condition.

Describe laundry: Ample in size. Water supply convenient. Wooden tubs, should be enameled metal. No laundry stove; one badly needed. Wash has to be carried 100 yards to be boiled; ironing has to be done in kitchen, incommoding cook.

Describe the approaches to the station: By wharf. The station may be approached from the north by a road to the city; seldom used on account of distance, 9 miles.

Describe condition of fences and grounds: Good condition.

Describe drainage and condition of water closets: Complete sewer system, in good order, emptying into the bay.

Describe disposal of slops: Thrown into bay from end of wharf.

State whether any animals not authorized by the Department are kept on reservation: None.

#### VII. EQUIPMENT.

State approximately age and condition of each horse, and how long in service at this station: No horse belonging to Government kept at the station. A. A. Surg. McKay keeps a horse and a cow which he says are authorized by the Department.

Give number and character of vehicles: None on reservation.

Is there a blacksmith's forge provided? No.

Are there farming implements; and if so, are they in good condition? No farming implements.

Is there a fire apparatus provided; and if so, is there a fire drill organized? Two carts with hose attached; four fire hydrants; no regular drill.

#### VIII. DISCIPLINE.

Are officers and employees supplied with uniforms in compliance with the revised uniform regulations dated June 20, 1896? No; regulations not received.

Are uniforms properly worn? Yes.

Give method of granting leaves to officers and employees: Leave of few hours (verbal) granted to employees.

Describe when and how inspection, muster, and fire drills are conducted: Regular inspection Sunday forenoon; no muster. Each attendant is at his place of work when inspection is made.

#### IX. GENERAL ADMINISTRATION.

Make a statement showing the number of vessels arriving at the station during the preceding calendar year by months—(a) from foreign ports; (b) from foreign ports in yellow fever latitudes via domestic ports; (c) from domestic ports. From what countries chiefly do the vessels come? Are they in cargo, ballast, or empty?



## Shipping arrivals, San Diego, Cal., year 1895.

## FOREIGN.

Month.	Number.	Net tonnage.	Ensenada, Mexico.	Mexican possessions.	Dep Bay, British Columbia.	Nanaimo, British Columbia.	New South Wales.	London.	Cardiff, Wales.	Swansea, Wales.	Acapulco, Mexico.	Callao, Peru.	Corinto, Nicaragua.	Valparaiso, Chili.	Esquimault, British Columbia.	Cargo.
January .....	16	4,874	6	7	2									1		Coal, etc.
February .....	14	1,891	5	8			1									Do.
March .....	16	8,958	5	6			2									Do.
April .....	18	5,426	5	11		1	1				1					Do.
May .....	14	4,450	4	7		1			1				1			Do.
June .....	14	1,024	8	6												Guano, etc.
July .....	20	10,633	7	9			4									Coal, etc.
August .....	19	8,628	8	7			3									Do.
September .....	15	4,629	5	8				1				1			1	Cement, etc.
October .....	13	3,982	6	5			1									Coal, etc.
November .....	16	5,625	10	3			1	1		1						Coal and cement.
December .....	13	6,037	5	6		1		1								Do.
Total .....	188	66,157	74	84	2	5	13	3	1	1	1	1	1	1	1	

## DOMESTIC.

Month.	Number.	Tonnage.	California.	Washington.	Oregon.	New York.	Pennsylvania.	Cargo.
January .....	18	13,876	17		1			Lumber and general merchandise.
February .....	20	14,687	19	1				Do.
March .....	18	12,507	17		1			Do.
April .....	21	20,755	19	1		1		Do.
May .....	22	11,502	19	1	2			Do.
June .....	18	11,508	17	1				Do.
July .....	15	14,921	13	2				Do.
August .....	21	15,183	17	3	1			Do.
September .....	25	13,928	20	3	2			Do.
October .....	23	13,814	21	1			1	Do.
November .....	21	14,489	19	2				Do.
December .....	21	14,689	19	1	1			Do.
Total .....	243	171,859	217	16	8	1	1	

State whether in your opinion the quarantine facilities are sufficient to care for the shipping arriving at the station: From what has already been said, it is plain that should a vessel arrive with smallpox or cholera aboard, the facilities would be a little more adequate than at a common port of entry for caring for her.

Give annual amount expended at station for last three years: In 1893, \$3,796.65; in 1894, \$5,338.62; in 1895, \$4,619.76.

Give the immediate needs of the station as stated by the commanding officer: That the present wharf, 108 by 24 feet, is entirely occupied by warehouses filled with disinfecting machinery, and should have an addition of 75 feet at each end, with a 25-foot ell, the 75 feet on south end for ballast, ballast cars, and ballast-hoisting engine; the ell for quarters of crew of infected vessel; the 75 feet on north end for additional warehouse room and bathroom for passengers.

Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.



I would recommend that the station be allowed a night watchman, not only to guard the buildings against fire, but to make more secure the machinery and various properties on the wharf. There should be erected a bathroom for the attendants; a bathroom for detained passengers or crews; detention quarters; increased warehouse room. By increasing the size of the wharf according to diagram, and running a sea-wall as indicated, filling behind it with sand, the station would have room for all purposes, and could be made completely operable. The city is erecting a water reservoir near the station. I would suggest that the station connect with this.

JUNE 8, 1896.

LOS ANGELES.

1. Describe the quarantine station, location, buildings, anchorages, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick, and for the removal and detention of suspects; mail and telegraph facilities, etc.

The port of Los Angeles consists of two subports, San Pedro and Los Angeles or Santa Monica. The former is on a bay from 2 miles in area one way to a mile and a half the other, well protected with good holding ground. No limits have been fixed for infected vessels, as so far there have been none, but there is more than sufficient room on the right side of the harbor. At Santa Monica it is the roadstead, with a long wharf extending into the ocean. There is no facility for inspecting a vessel except that of the customs department; no disinfecting apparatus; no facilities for removal and treatment of sick or of suspects. There is a port officer at both subports and telephone communication with Los Angeles, also telegraph.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

M. K. Barretto, deputy clerk and inspector, represents Santa Monica; post-office address, Santa Monica, Cal. C. M. Bell, deputy and inspector, represents San Pedro; post-office address, San Pedro, Cal. There is no quarantine officer.

3. No local quarantine is maintained at either subport, consequently no laws or regulations are in force.

4. So far there has been no necessity for quarantine procedure, and none is enforced. In all, two suspected vessels were examined at Santa Monica by local health officer, and passed.

5. No quarantine inspection maintained.

6. No vessels from other United States ports inspected.

7. No quarantine procedures. No work of this kind done.

8. No vessels have been held in quarantine at either subport.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessel carrying or not carrying immigrants), and what conditions are regarded as giving evidence of the vessel's infection in each case.

As heretofore no vessel bringing diseases of the kinds referred to has come into the port, it is impossible to say what would be done. As the customs officer was without past experience, and had no instructions to meet such an emergency, he was unable to make a satisfactory answer.

10. No regular record of cases occurring during the voyage. Seamen needing treatment are cared for by authority of collector of customs at San Pedro.

11. No quarantine, no fees.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months, (a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.



## Arrivals at Los Angeles, Cal., during the year 1895.

## FOREIGN.

Month.	Number.	Net tonnage.	Antwerp.	Comox, British Columbia.	London.	Hamburg.	Nanaimo, British Columbia.	Newcastle, New South Wales.	Vancouver, British Columbia.	Cargo.
January .....	2	3,133		2						Coal.
February .....	5	9,915		3			1	1		Do.
March .....	3	5,444		3						Do.
April .....	2	4,175		1			1			Do.
May .....	4	7,992		3			1			Do.
June .....	3	6,066		2			1			Do.
August .....	3	2,651				1		1	1	Cement, coal, lumber.
September .....	2	3,784		2						Coal.
October .....	4	7,992		3			1			Do.
November .....	6	9,368	1	2	2				1	General merchandise, coal, lumber.
December .....	4	7,372		3				1		Coal.
Total .....	38	68,192	1	24	2	1	5	3	2	

## DOMESTIC.

Month.	Number.	Net tonnage.	California.	Oregon.	Washington.	Cargo.
January .....	17	8,770	16		1	General merchandise and lumber.
February .....	19	8,958	19			Do.
March .....	29	12,416	29			Do.
April .....	32	12,344	32			Do.
May .....	34	12,483	33		1	Do.
June .....	36	14,295	35		1	Do.
July .....	39	13,177	39			Do.
August .....	27	14,366	27			Do.
September .....	21	12,077	20		1	Do.
October .....	16	10,783	15		1	Do.
November .....	15	9,458	15			Do.
December .....	27	12,831	26	1		Do.
Total .....	312	141,958	306	1	5	

## Arrivals at San Pedro, Cal., during the year 1895.

## FOREIGN.

Month.	Number.	Net tonnage.	Fraser River, British Columbia.	Departure Bay, British Columbia.	Hamburg.	Japan seas.	New Westminster, British Columbia.	Vancouver, British Columbia.	Cargo.
January .....	3	2,126	1	1				1	Coal and lumber.
February .....	3	1,301	1				1	1	Lumber.
April .....	3	2,172		1	1		1		Coal, cement, and lumber.
May .....	3	1,089					1	2	Lumber.
June .....	1	408					1		Do.
July .....	1	233						1	Do.
August .....	1	281						1	Do.
September .....	3	986				1	2		Lumber and seal skins.
Total .....	18	8,596	2	2	1	1	6	6	



Arrivals at San Pedro, Cal., during the year 1895—Continued.

## DOMESTIC.

Month.	Number.	Net tonnage.	California.	Oregon.	Washington.	Cargo.
January .....	43	12,034	24	7	12	General merchandise and lumber.
February .....	39	10,067	28	8	3	Do.
March .....	26	10,651	14	7	5	Do.
April .....	36	10,873	26	5	5	Do.
May .....	30	9,505	22	6	2	Do.
June .....	26	8,229	21	3	2	Do.
July .....	36	13,335	21	9	6	Do.
August .....	34	11,960	20	7	7	Do.
September .....	35	12,833	20	6	9	Do.
October .....	36	8,406	22	7	7	Do.
November .....	42	15,447	28	5	9	Do.
December .....	43	16,288	28	7	8	Do.
Total .....	426	139,628	274	77	75	

13. State results of your visit to (a) the custom-house; (b) the immigration bureau.

Found that there was neither quarantine establishment nor immigration bureau, and apparently but little need of either.

14. State whether, in your opinion, the quarantine facilities are sufficient to care for the shipping entering the port.

Sufficient while the conditions remain as they are.

15. No quarantine; no regulations enforced.

16. No quarantine officer; no certificate.

17. What disposition is made of the consular bills of health?

Kept at the subports.

18. Mention any facts which, in your opinion, should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

There being no quarantine service, no recommendations can be made. I would suggest, however, that the inspectors of the subports, through the collector at Los Angeles, be explicitly instructed what to do in case a vessel should arrive with a case of infectious disease aboard. At present they have not the least idea what step to take. Dr. Hill, the Marine-Hospital representative at San Pedro, and also the local health officer, in reply to a question as to what he would do, answered that he would move the sick into a tent, isolated, and telegraph the State board of health.

JUNE 5-6, 1896.

[NOTE.—A sanitary inspector of the Marine-Hospital Service has been appointed for Los Angeles and San Pedro, and necessary instructions given to collector of customs.]

## U. S. QUARANTINE, SAN FRANCISCO.

Name of quarantine station: San Francisco Quarantine.

When was the station last inspected? March 27, 1895.

Name of inspecting officer: P. A. Surg. C. T. Peckham.

## I. PERSONNEL.

Name of officer in command: P. A. Surg. M. J. Rosenau.

Date of assignment to duty: March 2, 1896.

Name and rank of assistants, including acting assistant surgeons; also give number of members in each family: None.

Name of steward, and number of members in family: G. S. Brock and wife.

Name and duties of each attendant: A. L. Davis, engineer, machinist, farrier;



J. O'Brien, cook; E. McGlennon, carpenter; R. Johnson, watchman of *Sternberg* boatkeeper, pilot of launch; E. McKennon, nurse, laundryman, and postman; H. Strelow, gardener and boatman; W. Langdon, night watchman; S. Prescott, outman; E. T. Ross, stableman, laboratory assistant.

## II. GENERAL DESCRIPTION OF STATION.

Number of buildings: Fifteen.

Limit of anchorage for noninfected vessels: Any part of the bay except when infected vessels are to be anchored.

Limit of anchorage for infected vessels: About 6 square miles.

Facilities for inspection of vessels: Good.

Apparatus for disinfection of vessels and of baggage: Three double-jacketed cylinders; one sulphur furnace and fan (not connected) removed from *Geo. W. Sternberg*. Pump and tank on board *Sternberg* for bichloride solution.

Facilities for removal and treatment of sick: Removed by *Sternberg*; treated at lazaretto.

Facilities for removal and detention of suspects: To be removed by *Sternberg*; detained in Chinese barracks; capacity, 400; other barracks, capacity 300.

Mail and telegraph facilities: At both Tiburon and army post, Angel Island.

Give number of wharves: One.

What is the length of the wharf frontage? Two hundred feet.

Are the wharves in good condition? No. About 100 new piles needed.

Are the mooring facilities ample? Ample for small craft.

What is the depth of water at mean low tide along the front of the wharf? Thirteen to 17 feet.

What is the source of the water supply? Springs.

Is it sufficient? No.

Is it potable? Yes.

Hard or soft? Soft.

How is it distributed and stored, if storage is necessary? In tanks and cisterns.

## III. DISINFECTING MACHINERY.

Enumerate the machinery constituting the disinfecting plant: Three double-jacketed steel cylinder and boiler; one sulphur furnace and fan, removed from *Sternberg* and disconnected. Iron pump and 500-gallon galvanized tank on *Sternberg* for bichloride solution.

What is the general condition of all machinery? Good.

Does it appear well taken care of or neglected? Well taken care of.

Is there a steam hoisting engine for ballast? No.

Are there ballast tubs and a ballast car for the distribution of ballast? No.

How is the ballast disposed of? No facilities; would have to be disposed of according to kind, circumstances, etc.

Is it disinfected prior to being discharged, and what facilities exist for supplying ballast to vessels needing it? No ballast handled; none.

What are the dimensions of the steam disinfecting chambers? Each 40 feet long by 7 feet diameter.

Are they rectangular or cylindrical? Cylindrical.

Are infected articles put in at one end and brought out at the other after disinfection, or is one end of the chamber used for loading and unloading? Sometimes former, sometimes latter.

Is the chamber provided with thermometers for indicating the temperature during the process of disinfection? Yes.

Is the chamber equipped with any apparatus for the production of a partial



vacuum? What is the nature of the appliance? If efficient in operation? Not equipped; no appliance.

What vacuum is produced, and how long does it take to obtain it? None produced.

Is a sulphur furnace provided? Yes; one from *Sternberg*.

How many feet of sulphur hose are provided? Fifty feet of 6-inch rubber hose; can not be used because it collapses.

What is its condition? New; useless.

What is the condition of the fan and engine? Good.

What is the method of storing bichloride solution? None.

How many feet of hose are provided for the distribution of the bichloride solution, and what is its size and condition? Two hundred and fifty feet 1½-inch rubber hose, in fair condition; belongs to *Sternberg*.

How many steam boilers are provided? Two.

What is their condition, and do they supply sufficient steam for all purposes? Fair condition; sufficient steam.

#### IV. BOATS.

Is the station provided with a steam tug or other steam vessel? Yes.

If so, is she of wood or iron? Wood.

Give dimensions: Eighty feet long; 16 feet beam.

If of wood, is the vessel sheathed with metal? Copper.

Are the engines and boiler in good condition? Fair.

Give engineer's statement as to necessary repairs and renovation: No engineer; no repairs needed.

Is the station provided with a naphtha launch? One in construction.

Give dimensions: Thirty-six feet long; 8 feet beam; 3 feet 9 inches deep at center.

What is its condition? Unfinished.

Give report of medical officer as to efficiency of the launch: Untried.

How many small boats are provided, and what is the condition of them, and their equipment? One whale boat; one whitehall boat; one gig, belonging to *Phæbe*, in good condition.

Are more boats necessary or desirable? No.

#### V. HOSPITAL.

Give location of building used as hospital: At the base of a bluff in the north-western part of cove. (Lazaretto for contagious diseases.)

Give general description of the building: In hospital, two wards and bathrooms; in annex (for suspects), room for suspects, nurse's room, kitchen, store-room, lavatory, and water-closet.

Dimensions: Seventy-six by 26 feet.

Number beds in each ward: Not equipped.

How many beds can be added for emergencies? Could hold a total of 50.

Cubic air space allowed each patient: Five hundred feet on a basis of 50 patients.

Heating, lighting, and ventilating: Stoves, oil lamps, doors, and windows.

Has the hospital sufficient furniture? No.

What kind of bedsteads and what kind of mattresses and bedding? Cots; no mattresses; requisition made for blankets.

Condition of bedding occupied by patients: No patients. The little bedding at station is new.

Are the beds clean and free from vermin? Yes.

What is the condition of wards as to general cleanliness? Clean.

Is the nursing sufficient, and is the nurse immune? Sufficient at present. In



case of infectious diseases would need a trained nurse. The only available person for nurse on the island has had smallpox.

Does the character of the diet furnished conform to that prescribed in the diet table for marine hospitals? No patients. Diet table of Marine-Hospital Service considered the guide.

Is a proper record of the patients under treatment kept? No patients.

#### VI. OUTBUILDINGS AND GROUNDS.

Describe general condition of outbuildings: Structurally good; all in need of paint.

Are the grounds well policed? Yes.

Describe the officers' quarters and condition of furniture: Cottage with 8 rooms; furniture in good condition.

Describe steward's and attendants' quarters and condition of furniture: Steward's quarters, a cottage with 6 rooms; attendants' quarters, modern building, with 8 rooms; furniture in good condition.

Describe dining room, condition of table furniture and tableware: Ample in size. Furniture and ware sufficient and in good condition.

Describe kitchen furniture: Size 25 by 12 feet. All fixtures in good condition.

Describe dispensary: Well supplied with shelves, drawers, scales, pill tiles, etc.

Describe laundry: Building 50 by 20 feet. Cement floor; steam in character; composite steam tubs; water delivery fine; all in good condition.

Describe approaches to the station: By land, military road (2 gates); by water Raccoon Straits.

Describe condition of fences and grounds: New fences; grounds well kept, partly cultivated.

Describe drainage and condition of water-closets: Terra cotta drains—into the bay. Iron sewer pipes. Several water-closets in need of repairs; several more should be added for use of those landed pending disinfection of their baggage.

Describe disposal of slops: Deposited on beach at low tide.

State whether any animals not authorized by the Department are kept on the reservation: None.

#### VII. EQUIPMENT.

State approximately age and condition of each horse, and how long in service at this station: One horse, bought in 1892; about 10 years old; good draft horse.

Give number and character of vehicles: One dump cart.

Are they properly cared for? Yes.

Are harnesses in good condition? Old and worn.

Is there a blacksmith forge provided? Yes.

Are there farming implements; and if so, are they in good condition? Yes; new.

Is there a fire apparatus provided; and if so, is there a fire drill organized? One hose cart and 600 feet of fire hose provided. Two additional carts and additional hose should be provided.

#### VIII. DISCIPLINE.

Are officers and employees supplied with uniforms in compliance with the revised uniform regulations? Yes.

Are uniforms properly worn? Yes.

Give method of granting leaves to officers and employees: By verbal leave not to exceed twenty-four hours.

Describe when and how inspection, muster, and fire drills are conducted: Every Saturday at 3 p. m., inspection and muster. Fire drill at intervals to keep men in training.



## IX. GENERAL ADMINISTRATION.

Make a statement showing the number of vessels arriving at the station during the preceding calendar year, by months.

From foreign ports: April, 1; September, 6; October, 2; total, 9.

From foreign ports in yellow-fever latitudes via domestic ports, none.

From domestic ports, none.

From what countries chiefly do the vessels come? China, Japan, and Sandwich Islands.

Are they in cargo, ballast, or empty? Mainly steamers with cargo; occasionally sailing vessels in ballast.

State whether in your opinion the quarantine facilities are sufficient to care for the shipping arriving at the station? It is sufficient with repairs going on and improvements projected. In extraordinary cases there might be serious lack of water.

Give annual amount expended at station for last three years. For 1893, \$15,940.05; for 1894, \$14,993.06; for 1895, \$10,813.25.

Give the immediate needs of the station, as stated by the commanding officer. Wharf for large vessels; telephone to mainland; accommodations for cabin passengers; ejector for vacuum; cars for steam disinfection; formalin disinfector for mail and fine fabrics; crematory; bath house.

Mention any facts which in your opinion should be known to the Department bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

First, and most important, there should be a proper water supply. The surest, and in the end the most economical, way to furnish it would be by boring an artesian well. The springs furnish little more than sufficient water for the domestic uses of the station; a much larger number of consumers would most likely bring on a water famine.

Second. A shed should be built to protect the coal deposited on the wharf.

Third. A lavatory and water-closets for steerage passengers should be built near the wharf.

Fourth. The suction pipe for salt water should be extended to low-water level with as little delay as possible.

Fifth. Pipes should be laid for distributing salt water about the grounds, to be used in flushing and in case of fire; salt-water tanks should be elevated.

Sixth. There should be at least two additional hose carts, with fire hose (rubber).

Seventh. There should be lamp-posts, with proper glass protectors, that the grounds of the station may be lighted.

Eighth. The barracks buildings should be rendered sulphur tight.

Ninth. The steam chambers should have electrical thermometers.

Tenth. Under the order of things about to begin, an attendant to serve as fireman should be employed at once.

Eleventh. The interior finish of the lazaretto, plaster, should be changed so that it could be flushed and washed.

Twelfth. It is highly important that the station should have telephone communication. The inconvenience without it when the service begins to do the boarding is obvious.

Thirteenth. Attention is asked to the fact that all the power should be concentrated under one roof and not under several, as it is now, in view of the fact that one attendant has to manage all of it.

JUNE 20, 1896.



## EUREKA.

1. Describe the quarantine station, location, buildings, anchorage, etc. Give limits of anchorage for noninfected and for infected vessels; facilities for inspection of vessels; apparatus for disinfection of vessels and of baggage; facilities for removal and treatment of the sick and for the removal and detention of suspects; mail and telegraph facilities, etc.

The bay is U-shaped, being about 10 miles one way by half a mile the other. Sufficient anchorage for the vessels that arrive. Inspection made by hiring vessel for the purpose. No facilities for removal of sick, for their treatment, or for removal and detention of suspects. Mail and telegraph facilities ample.

2. Give personnel of the station or port; name of the quarantine officer or officers; post-office address; total number of officers and subordinates, etc.

Daniel Murphy, collector of customs; B. D. McDonald, deputy collector; Dr. B. Y. Harris, sanitary inspector, Marine-Hospital Service. Post-office, Eureka, Cal.

3. There is no local quarantine exercised.

4. No procedures except those prescribed by the Treasury Department.

5. Inspection is maintained throughout the year. Treatment would be by carbolic acid, bichloride mercury, and sulphur, as prescribed by quarantine regulations. There is no apparatus for disinfecting.

6. No vessels from other United States ports are inspected.

7. Describe quarantine provisions in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (*a*) between arrival and commencement of disinfection, (*b*) the time occupied by disinfection, and (*c*) time after completion of disinfection of vessels until discharge.

Vessels boarded by sanitary inspector, examination of crew, passengers (if any), the ship's manifest, log and bills (if necessary), would be treated as directed by the regulations. (*a*) Within two or three hours. (*b*) Limit prescribed by the regulations for each disinfectant. (*c*) Limit of time according to regulations.

8. What communication is held with vessels in quarantine (and before quarantine by pilots, etc.) and how regulated? Is there any communication allowed among vessels in quarantine?

No communication allowed. All persons are forbidden to board vessels until after visit of sanitary inspector. No communication would be allowed among vessels in quarantine.

9. State what will be done with a vessel infected with cholera; second, a vessel infected with yellow fever; third, a vessel infected with smallpox (said vessels carrying or not carrying immigrants); and what conditions are regarded as giving evidence of the vessel's infection in each case.

So far no vessel having either of those diseases has entered the port. Should one arrive the sanitary inspector reports that he would notify the Department by telegraph (per instructions), and the vessel would be sent to Angel Island quarantine. Otherwise procedure provided by the regulations would be carried out.

10. State whether records are kept at the station of the cases of disease that have occurred during the voyage, on arrival, and during detention.

Provision made for keeping record. Have had no diseases so far.

11. There are no quarantine fees.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(*a*) from foreign ports; (*b*) from ports in yellow fever latitudes via domestic ports; (*c*) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.



*Arrival of vessels during the year 1895.*

Month.	Foreign ports.	Domes- tic ports. <sup>a</sup>	Month.	Foreign ports.	Domes- tic ports. <sup>a</sup>
January .....		10	July .....		11
February .....		11	August .....		15
March .....		13	September <sup>d</sup> .....	1	16
April <sup>b</sup> .....	1	13	October .....		13
May <sup>c</sup> .....	1	12	November <sup>e</sup> .....	4	12
June .....		12	December <sup>c</sup> .....	1	12

<sup>a</sup> Passenger and general merchandise.  
<sup>b</sup> Ballast, from Australia.  
<sup>c</sup> Cargo, from Australia.

<sup>d</sup> Ballast, from Siberia.  
<sup>e</sup> Ballast, from Hawaiian Islands.

13. State the results of your visit to (a) custom-house; (b) the immigration bureau.

At the custom-house an intelligent understanding of quarantine procedure and what ought to be done should occasion arrive, of which there is but small probability. There is no immigration bureau.

14. In my opinion the quarantine facilities are sufficient to care for the shipping entering the port.

15. Name the quarantine regulations of the Treasury Department which are not properly enforced, and state specially whether the regulations regarding inspection and disinfection, and particularly the period of observation after disinfection, of vessels are observed.

I was informed that the inspector boarded all vessels, having the regulations with him, prepared to enforce them to the letter. So far, there has been no vessel needing treatment.

16. Does the certificate of inspection, or of pratique, signed by the quarantine officer, state that the Treasury regulations have been complied with as required by section 5, act of February 15, 1893? Transmit copy.

Yes; copy inclosed, marked A.

17. What disposition is made of the consular bills of health?

Filed in office of collector of customs.

18. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

No recommendations deemed necessary.

JUNE 15, 1896.

A.

CERTIFICATE OF DISCHARGE FROM NATIONAL QUARANTINE.

UNITED STATES QUARANTINE,  
 Eureka, Cal., March 30, 1896.

I certify that American schooner *Una*, of San Francisco, from Champerico, Central America, bound for Eureka, Cal., has in all respects complied with the quarantine regulations prescribed by the Secretary of the Treasury, and that, in my opinion, the vessel, cargo, and passengers are each and all free from infectious disease or danger of conveying the same. Said vessel is this day granted free pratique.

B. Y. HARRIS,  
 Sanitary Inspector, Marine-Hospital Service.



## OREGON.

## REPORTS ON LOCAL QUARANTINE AND INSPECTION STATIONS.

By P. A. Surg. J. C. PERRY, M. H. S.

## COOS BAY.

1. There is no quarantine establishment on Coos Bay. The limit of anchorage for noninfected vessels is 1 mile; it is located 2 miles below Empire City and about the same distance from the entrance to Coos Bay. That for infected vessels is just inside the bar, in Charleston Bay, and Empire City is the nearest village, being  $3\frac{1}{2}$  miles distant. There are no facilities for inspection, the health officer having to provide boat and boatmen at his own expense.

There are no facilities for disinfection, removal and treatment of sick, or detention of suspects. There is a daily mail to and from Empire City, and a telegraph office.

2. The health officer is Dr. C. W. Tower, whose post-office address is Marshfield, Oreg.

3. The only quarantine laws and regulations observed at this port are those prescribed by the State law, a copy of which is transmitted with my report on the quarantine service of Astoria, Oreg. No regular inspection service is maintained. The pilots are instructed to take all vessels with sickness aboard to Charleston Bay, raise the yellow flag, and then the health officer comes down and inspects the vessel, etc. No infected vessel has entered this port.

4. The only quarantine procedures enforced at this port are the regulations contained in the State law. The health officer expressed a willingness to comply with the regulations of the Treasury Department.

5. Inspections are maintained throughout the year.

6. Only those vessels having sickness on board are inspected.

7. The health officer, upon inspection of vessels, inquires as to the sanitary condition at port of departure, sickness occurring during the voyage, and investigates the sanitary condition of the crew and the vessel. If the vessel is found to be infected, the facts are reported to the collector of customs, and he will inform the Department.

8. No communication is held with vessels in quarantine except by health officer. Pilots are detained on board infected vessels, and no intercommunication among vessels is permitted.

9. As there are no facilities for disinfection of vessels or for the care of the sick of any vessel infected with yellow fever, cholera, or smallpox, such vessel would be held in quarantine and the facts immediately telegraphed to the Department by the collector of customs and authority asked to remand the vessel to the nearest United States quarantine station for disinfection, etc. In the meantime the people detained on board would be inspected daily by the health officer, and the most rigid means taken to prevent dissemination of the contagion.

10. No records are kept by the health officer.

11. There are no fees connected with the quarantine work at this port.

12. No vessels were entered at the custom-house during the last fiscal year. The coasting vessels are not required to report at the custom-house; these vessels come in cargo of general merchandise.

13. I was informed by the collector of customs that no vessels would be allowed to enter until he was satisfied that such vessels were free from any quarantinable disease. If an infected vessel arrives, he would communicate the facts to the Department and ask authority to send the vessel to the nearest United States quarantine station. There is no immigration bureau at this port.

14. I consider the inspection service sufficient for the needs of this port, provided the health officer exercises due vigilance in the performance of his duties.



15. The quarantine regulations of the Treasury Department will be enforced as regards inspection and observation. There are no facilities for disinfection. I furnished the health officer a copy of the quarantine laws and regulations of the United States, and he said he would follow them in his quarantine work. He was glad to learn that authority would be given to remand any infected vessel to the United States quarantine station at San Francisco, Cal.

JUNE 13, 1896.

GARDINER.

[I have the honor to inform the Bureau that while at Empire I was fortunate enough to secure all the data concerning the quarantine service at Gardiner, on the Umpqua River, and consequently it is not necessary for me to visit that port. The town of Gardiner is situated on the bank of the Umpqua River, 8 miles from its mouth. The river has a depth of 13 feet at low water at its mouth, but is not navigable for vessels of deep draft beyond Gardiner. No vessels from foreign ports reach this river, the commerce being carried on by coastwise vessels from Portland and San Francisco.]

1. There is no quarantine station on the Umpqua River. The limits of anchorage for noninfected vessels are 3 miles, and it is 3 miles from the town. The limits for infected vessels are 2 miles, and 5 miles from Gardiner, near the mouth of the river. There is a daily mail; no telephone or telegraph. Transportation by stage to Coos Bay.

2. J. L. Ellwood, M. D., Gardiner, Oreg. No subordinates.

3. The quarantine laws and regulations observed at this port are those prescribed by the State law, a copy of which is transmitted with my report of Astoria, Oreg. I was informed by the health officer that he inspected all vessels, and if he found them in bad sanitary condition they were ordered to the lower anchorage and the yellow flag was raised. No infected vessel has entered this port.

4. The quarantine procedures consist in those prescribed by the State law. There is no unnecessary detention of vessels.

5. Inspection is maintained throughout the year, and the treatment of vessels is the same.

6. Vessels from other United States ports are inspected.

7. Upon inspection the health officer inquires as to the sanitary condition of the port of departure, sickness during the voyage, and present sanitary condition of crew and vessel. If he finds boat infected, he communicates the facts to the collector of customs at Empire, and the latter will inform the Department. No other procedures are had.

8. No communication is held with vessels in quarantine except by the health officer. No intercommunication is allowed among vessels in quarantine. Vessels do not employ pilots.

9. Since there are no facilities for the disinfection of vessels infected with cholera, yellow fever, or smallpox, and no hospital or place for the detention of suspects and treatment of sick, such vessels will be reported to the collector of customs at Empire, and directed by him to the nearest quarantine station for disinfection and treatment, or be held in quarantine until advised by the Department. In the meantime strict vigilance would be maintained and all precautions taken to prevent the spread of contagion. All persons on vessel infected with smallpox, except those suffering with the disease, would be vaccinated. All vessels suspected of being infected would be held in quarantine the period of incubation of the disease quarantined against. The conditions regarded as giving sufficient evidence of vessel's infection are: Prevalence of disease in port of departure, sickness during the voyage or on arrival, and unsanitary condition of the vessel.

10. Records are kept by the health officer of all cases of disease occurring during voyage, on arrival, and during detention.



11. There are no regular quarantine fees.
12. No foreign vessels entered this port during last year. A few domestic vessels from Portland and San Francisco, most of them in cargo of general merchandise, and a few empty to load lumber.
13. There is no custom-house or immigration bureau at Gardiner, Oreg.
14. I consider the inspection service on the Umpqua River is sufficient to care for the needs of the place.

JUNE 14, 1896.

#### YAQUINA BAY.

[Yaquina is situated on Yaquina Bay,  $3\frac{1}{2}$  miles from its mouth. The bay has a depth of 23 feet in most places and is navigable several miles for large vessels. The custom-house is located at Yaquina but the collector and health officer reside at Newport, a village situated near the mouth of the bay.]

1. There is no quarantine station. The anchorage for noninfected vessels is about  $1\frac{1}{2}$  miles from Yaquina. The anchorage for infected vessels is three-fourths of a mile nearer the mouth of the bay. There are no facilities for inspection and for disinfection. There is a daily mail and a telegraph line; also telephone service to Toledo, Oreg.
2. Dr. J. S. Bayley is health officer; post-office address, Newport, Oreg. There are no subordinates.
3. There are no quarantine regulations enforced at this station except those prescribed by the State law, a copy of which is transmitted with my report of Astoria. No regular inspection service is maintained. The collector of customs informed me that he boarded all vessels soon after they entered the bay, and if they had any sickness on board or were in unsanitary condition he directed them to the anchorage and notified the health officer, who then inspected them. As yet there has been no necessity for this, since an infected vessel has never entered the bay.
4. The only quarantine procedures in addition to those required by the Treasury Department are those prescribed by the State law.
5. The same inspection service is maintained throughout the year.
6. Only vessels having sickness on board are inspected.
7. The quarantine regulations of the Treasury Department as regards inspection of vessels will be followed. If the vessel is found to be infected, the health officer will report the facts to the collector of customs, and he will inform the Department, requesting authority to remand such vessel to the nearest United States quarantine station for disinfection.
8. Vessels do not take pilots, since only coasting vessels enter. No communication is held with vessels in quarantine except by health officer, and no intercommunication among vessels is allowed.
9. As there is no suitable apparatus for the disinfection of vessels infected with contagious diseases, and no facilities for the care of the sick and the detention of suspects, such vessels would be ordered by the collector of customs to proceed to the nearest quarantine station for disinfection, or held in quarantine until advised by the Department as to what disposition should be made of the vessel. In the meantime the health officer would take the proper precaution to prevent the spread of the contagion. All persons on vessel infected with smallpox would be vaccinated. Any vessel suspected of being infected would be held in quarantine the period of incubation of the disease suspected, dating from the last exposure. The conditions considered as evidence of infection are: Prevalence of the disease at port of departure, sickness during the voyage or on arrival, and an unsanitary condition of the vessel.
10. Records of all cases of sickness are kept by the health officer.
11. There are no regular quarantine charges.



12. The only vessels entering Yaquina Bay are a few that run between this port and San Francisco and other towns on the coast of Oregon; most of them carry cargo of general merchandise, and some few in ballast. No foreign vessels enter this port.

13. I learned upon my visit to the custom-house that vessels are not allowed to enter unless the collector of custom is satisfied they are not a menace to public health. There is no immigration bureau.

14. The inspection station is, in my opinion, sufficient to guard against the introduction of contagious or infectious diseases, since the shipping is small and the danger almost nil.

15. The Treasury regulations regarding inspection and observation will be enforced at this port. There are no facilities for disinfection.

16. There are no certificates of inspection given.

17. There are no consular bills of health.

18. The health officer has been recently appointed, and is not familiar with the Treasury regulations. Copies of the quarantine laws and regulations of United States were given both to the health officer and to the collector of customs.

JUNE 16, 1896.

#### ASTORIA.

[Astoria is situated near the mouth of the Columbia River, and is the only place on the river where the State has made provision for quarantine purposes.]

1. There is no quarantine station on Columbia River. Vessels are quarantined near its mouth, and all pilots who bring in vessels suspected of being infected are required to anchor them below Smiths Point, and to immediately notify the health officer by hoisting a flag. The anchorage for noninfected vessels is one-half a mile, and for those infected 1 mile. There is ample and excellent anchorage. The facilities for inspection are meager, consisting of a small boat and one boatman. There are no facilities for disinfection, treatment of sick, and removal and detention of suspects. There are ample mail and telegraph facilities.

2. Dr. J. A. Fulton, Astoria, Oreg., is the health officer. One subordinate, a boatman, completes the personnel of the service.

3. I transmit herewith a copy of Oregon State quarantine law:

SEC. 3537. There shall be appointed by the governor, and removed at his pleasure, a health officer to reside at the port of Astoria, who shall be a graduate of a medical college and whose duty it shall be to board and to take charge of every ship and vessel arriving from the sea which shall have on board any person or goods infected with smallpox, cholera, leprosy, or contagious diseases, or which shall have had on board any such infectious disease during the voyage, or which shall be in such condition by reason of the bad health of the people on board, or the filthiness of the ship, or the decaying state of the cargo, or other cause as to endanger the health of the inhabitants of this State.

SEC. 3538. Every pilot who shall bring into the said port any ship or vessel in bad sanitary condition, or which he suspects may be capable of propagating disease, shall anchor such ship or vessel below Smiths Point and give immediate notice to the health officer.

SEC. 3539. When the health officer shall board a ship or vessel to investigate her unsanitary condition, he shall raise a red flag at the mainmast, which will suspend all intercourse with the shore, except by permission of the health officer. He shall then proceed by personal inspection and by the examination of witnesses sworn by him to ascertain if there be cause for her detention, and if not, he shall give to the master a certificate to that effect and strike his flag; but if he shall find on board the ship any case of contagious disease, or that the ship proper or cargo are infected with such disease, or if for any reason he shall believe that she is likely to propagate disease if allowed to go into port, he shall cause the ship to be anchored, at a safe and convenient place to be designated by him, and to be subjected to such cleansing and renovation and her cargo and hold to such ventilation and other treatment as he shall think necessary for their purification, and he shall cause such of the people who are sick or infected to be subjected to such sanitary treatment on the ship or shore as he shall think necessary for their speedy



recovery, and the reasonable and necessary expenses of such treatment shall be borne by the owners, master, or by the ship if they make default. And when he shall think it safe to do so, he should give to the master a certificate of health and strike his flag.

SEC. 3540. It shall be the duty of the health officer during all the time a ship may be under his flag to give all his time and care to such ship and her people, without charge for professional or other services.

SEC. 3541. The health officer shall execute a bond to the State with sureties to be approved by the governor.

[Law enacted February 14, 1887.]

SEC. 3542. There shall likewise be appointed a health officer to reside at Coos Bay and one to reside at Gardiner, near the mouth of the Umpqua River, each with an annual salary of four hundred dollars, whose duties and liability shall be the same as are prescribed by this chapter for the health officer at Astoria, Oregon.

[Laws of 1889, legislative assembly.]

AN ACT to amend section 3542, Chapter XLVI, of the general laws of Oregon, as compiled and annotated by William Lair Hill.

*Be it enacted by the legislative assembly of the State of Oregon:*

SEC. 1. That section 3542, chapter 46, of the miscellaneous laws of Oregon, as compiled by William Lair Hill, be amended so as to read as follows:

"SEC. 3542. There shall likewise be appointed a health officer to reside at Coos Bay, and one to reside at Gardiner, near the mouth of the Umpqua River, and one to reside at Yaquina near the mouth of Yaquina Bay, each with an annual salary of four hundred dollars, whose duties and liability shall be the same as are prescribed by the chapter for the health officer at Astoria."—[Approved Feb. 25, 1898.]

The Signal Service officer at Fort Canby reports all incoming vessels to the office in Astoria, and this information is immediately transmitted to the collector of customs and to the health officer. The health officer informed me that he meets the vessel at the anchorage and boards her, raising a red flag at the mainmast, which prevents communication with the shore until his inspection is complete. If the vessel is found free from any infectious or contagious disease, she is given free pratique; if infected, she will be directed to proceed to the nearest United States quarantine station for disinfection; and if suspicious, she will be placed in quarantine and developments watched. All foreign vessels are inspected.

4. Only those quarantine procedures prescribed by the State law are enforced. There is no unnecessary detention of vessels.

5. There is the same inspection and treatment of vessels throughout the entire year.

6. Only those having sickness on board are inspected.

7. Describe quarantine procedures in the inspection of vessels, and, if infected, the treatment. Give time in quarantine (a) between arrival and commencement of disinfection, (b) time occupied by disinfection, and (c) time after completion of disinfection of vessels until discharged.

(a) Vessels are inspected soon after arrival; the consular bills of health are examined, and any sickness among crew and passengers occurring during the voyage is ascertained; then the crew and passengers are examined and the general sanitary condition of the vessel ascertained by rigid inspection. (b) As there are no facilities for disinfection at this port, the vessel will be directed to the nearest United States quarantine station for treatment.

8. No communication is held with vessels in quarantine except by the health officer, and no intercommunication among them is permitted.

9. When a vessel is infected with cholera, yellow fever, or smallpox the regulations prescribed by the Treasury Department will be carried out as far as possible. The health officer will immediately report the facts to the medical officer in charge of United States Marine-Hospital Service at Portland, Oreg., and he



will inform the Department. The conditions regarded as showing infection are: Prevalence of disease at port of departure, sickness during the voyage or on arrival, and bad sanitary condition of the vessel.

10. Records of all cases of sickness are kept by the health officer.

11. No fees are charged except those prescribed by the State law.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.

I inclose a list of vessels entered at the custom-house during the fiscal year ending June 30, 1896, as follows:

*From foreign ports.*

Month.	Where from.	Number.	Cargo or ballast.	
July.....	Yokohama, Japan.....	1	General cargo.	
October.....	Nanaimo, British Columbia.....	1	Do.	
November.....	Yokohama, Japan.....	1	Do.	
	Rio de Janeiro, Brazil.....	6	Ballast.	
	Liverpool, England.....	1	General cargo.	
	Santos, Brazil.....	3	Ballast.	
	Belfast, Ireland.....	1	General cargo.	
	Santa Rosalia, Mexico.....	1	Ballast.	
	Cape Town, Africa.....	1	Cargo.	
	Panama.....	1	Ballast.	
	December.....	Talcahuana, Chile.....	2	Cargo.
		Dundee, Ireland.....	1	General cargo.
January.....	Nanaimo, British Columbia.....	1	Do.	
	Montevideo, Uruguay.....	1	Do.	
	Liverpool, England.....	2	Do.	
	Newcastle, New South Wales.....	1	Coal.	
	Hongkong, China.....	1	General cargo.	
February.....	Santa Rosalia, Mexico.....	1	Cargo.	
	Rio de Janeiro, Brazil.....	1	Ballast.	
	Acapulco, Mexico.....	1	Do.	
	Pisagua, Chile.....	1	Cargo.	
	Santa Rosalia, Mexico.....	1	Do.	

There were no arrivals from foreign ports in yellow-fever latitudes via domestic ports.

*From domestic ports.*

Month.	Where from.	Number.	Cargo or ballast.
July.....	San Francisco, Cal.....	15	General cargo.
	New York, N. Y.....	1	Ballast.
	Coquille, Oreg.....	1	General cargo.
	Portland, Oreg.....	15	Do.
	Tillamook, Oreg.....	4	Do.
	Seattle, Wash.....	2	Do.
	Redondo, Cal.....	1	Do.
August.....	Portland, Oreg.....	16	Do.
	San Francisco, Cal.....	18	Do.
	Tillamook, Oreg.....	5	Do.
	Florence, Oreg.....	3	Do.
	Eureka, Cal.....	1	Do.
	Redondo, Cal.....	1	Ballast.
	Seattle, Wash.....	1	General cargo.
	San Pedro, Cal.....	1	Do.
	Nehalem, Oreg.....	1	Do.
	San Diego, Cal.....	1	Ballast.
September.....	Coquille, Oreg.....	1	Cargo.
	New York, N. Y.....	2	General cargo.
	Philadelphia, Pa.....	1	Do.
	Seattle, Wash.....	1	Do.
	Redondo, Cal.....	2	Ballast.
	Tillamook, Oreg.....	7	General cargo.
	Portland, Oreg.....	20	Do.
October.....	San Francisco, Cal.....	11	Do.
	Portland, Oreg.....	23	Do.



*From domestic ports—Continued.*

Month.	Where from.	Number.	Cargo or ballast.
October.....	San Francisco, Cal.....	18	General cargo.
	Seattle, Wash.....	1	Do.
	Nehalem, Oreg.....	4	Do.
	Tillamook, Oreg.....	5	Do.
November.....	San Diego, Cal.....	3	Ballast.
	Portland, Oreg.....	17	General cargo.
	San Francisco, Cal.....	9	Do.
	Seattle, Wash.....	2	Do.
	Tillamook, Oreg.....	4	Do.
	San Diego, Cal.....	2	Ballast.
	Florence, Oreg.....	1	General cargo.
	New York, N. Y.....	2	Do.
	Redondo, Cal.....	3	Ballast.
	Boston, Mass.....	1	Do.
December.....	Empire, Oreg.....	1	General cargo.
	Portland, Oreg.....	19	Do.
	San Francisco, Cal.....	13	Do.
	Seattle, Wash.....	1	Do.
	Nehalem, Oreg.....	1	Do.
	Tillamook, Oreg.....	1	Do.
	New York, N. Y.....	1	Do.
January.....	San Pedro, Cal.....	1	Ballast.
	Portland, Oreg.....	17	General cargo.
	San Francisco, Cal.....	17	Do.
	Seattle, Wash.....	3	Do.
	Tillamook, Oreg.....	4	Do.
	San Diego, Cal.....	1	Ballast.
	Redondo, Cal.....	3	Do.
February.....	San Pedro, Cal.....	1	Do.
	Portland, Oreg.....	24	General cargo.
	San Francisco, Cal.....	16	Do.
	Seattle, Wash.....	2	Do.
	Nehalem, Oreg.....	1	Do.
	Tillamook, Oreg.....	1	Do.
	Florence, Oreg.....	1	Do.
March.....	Los Angeles, Cal.....	1	Do.
	Portland, Oreg.....	16	Do.
	San Francisco, Cal.....	19	Do.
	Tillamook, Oreg.....	4	Do.
	Redondo, Cal.....	1	Ballast.
	Port Townsend, Wash.....	1	General cargo.
April.....	Portland, Oreg.....	21	Do.
	San Francisco, Cal.....	16	Do.
	Seattle, Wash.....	2	Do.
	Tillamook, Oreg.....	3	Do.
May.....	Thorn Bay, Alaska.....	1	Do.
	Portland, Oreg.....	15	Do.
	San Francisco, Cal.....	15	Do.
	Seattle, Wash.....	2	Do.
	Tillamook, Oreg.....	4	Do.
	Redondo, Cal.....	1	Ballast.
	Port Townsend, Wash.....	1	General cargo.
June.....	Skonakawa, Alaska.....	1	Do.
	Portland, Oreg.....	7	Do.
	San Francisco, Cal.....	8	Do.
	Tillamook, Oreg.....	2	Do.
	Thorn Bay, Alaska.....	1	Do.
	Skonakawa, Alaska.....	1	Do.

13. I was informed by the collector of customs that the health officer made an inspection as soon as a vessel arrived, and if she had a clean bill of health and no sickness during the voyage she was given a certificate and allowed to proceed to her destination. If suspicious, the vessel was detained in quarantine and developments watched. There is no immigration bureau.

14. The quarantine facilities at this port are inadequate. There should be a well-equipped station at the mouth of the Columbia River, since many foreign vessels come to Astoria and to Portland, several of them having sailed from ports in the yellow-fever zone. There is also a line of steamers plying between this port and ports in the Orient. The facilities for inspection are not good, since in rough weather considerable difficulty is experienced in boarding vessels with the present means.

15. The quarantine regulations of the Treasury Department as regards inspection and observation are observed.



16. The certificate of inspection, or pratique, signed by the quarantine officer, does not state that the Treasury regulations have been complied with, as required by section 5, act of February 15, 1893.

17. The consular bills of health are given to the collector of customs.

18. In this connection, I wish to reiterate the necessity for the establishment of a modern quarantine station at the mouth of the Columbia River.

JUNE 18, 1896.

[NOTE.—A bill for the establishment of a United States quarantine station at the mouth of the Columbia River is now pending in Congress.]

#### PORTLAND.

[Portland is the only port of entry on the Willamette River, and is situated 4 miles from its mouth. This river is navigable for vessels of deep draft for a distance of 14 miles.]

1. There is no quarantine station on the Willamette River. The limits of anchorage for noninfected vessels is 1 mile; that for infected vessels about 1 mile from Portland and one-half mile from Cross Island. There are no facilities for disinfection. In case of infection, the city pesthouse would be used for the isolation of the sick, and near it is a building for the detention of suspects. The mail and telegraphic facilities are adequate.

2. There is no quarantine officer appointed by the State. Dr. C. H. Wheeler, the city health officer, attends to the quarantine work, and has authority to place in quarantine any vessel suspected of being infected with any contagious disease. His address is Portland, Oreg. There are no subordinates.

3. There are no laws or regulations for the government or maintenance of this quarantine service. The city physician follows the requirements of the quarantine regulations of the Treasury Department.

4. There are no additional quarantine procedures, and there is no unnecessary detention or disinfection of vessels.

5. Inspection is maintained throughout the year, and the same treatment is enforced.

6. Only those vessels with sickness on board are inspected.

7. The following are the quarantine procedures at this port: (a) Vessels are inspected immediately upon arrival; all foreign vessels are inspected; (b) time absolutely necessary; (c) the period of incubation of disease quarantined.

8. No communication is held with vessels in quarantine except by health officer, and no inter communication among vessels is allowed.

9. As there are no facilities for the disinfection of vessels infected with cholera or yellow fever, such vessels would be sent by the city health officer to the nearest United States quarantine station for disinfection and treatment. If the vessel was infected with smallpox, all the sick would be removed to the city pesthouse, and suspects detained, and everybody exposed to contagion vaccinated. The ship would be disinfected with a solution of bichloride of mercury and sulphurous acid gas, according to the instructions in the quarantine laws and regulations of the United States. The following facts are regarded as evidence of infection of a vessel: (1) Prevalence of disease at port of departure; (2) sickness during the voyage or on arrival, and (3) bad sanitary condition of vessel.

10. Records of all cases of disease are kept by the city physician.

11. There are no regular and fixed quarantine fees.

12. Make a statement showing the number of vessels arriving at the port during the preceding calendar year, by months—(a) from foreign ports; (b) from foreign ports in yellow-fever latitudes via domestic ports; (c) from domestic ports. Show also the character of the commerce carried on by the port, i. e., from what countries chiefly the vessels come, and whether in cargo, ballast, or empty.



I inclose a list showing the number of vessels entered at the custom-house during the last fiscal year, as follows:

*From foreign ports.*

Month.	Where from.	Number.	Cargo or ballast.
July .....	Yokohoma, Japan .....	1	General cargo.
August .....	do .....	1	Do.
September .....	do .....	1	Do.
October .....	Newcastle, New South Wales .....	2	Coal.
October .....	Dunkerque, France .....	1	Ballast.
October .....	Antwerp, Belgium .....	1	General cargo.
October .....	London, England .....	1	Do.
November .....	Newcastle, New South Wales .....	1	Coal.
November .....	Yokohoma, Japan .....	1	General cargo.
November .....	Antwerp, Belgium .....	2	Ballast.
December .....	Hongkong, China .....	1	General cargo.
December .....	Newcastle, New South Wales .....	1	Coal.
December .....	Antwerp, Belgium .....	1	General cargo.
January .....	Hongkong, China .....	1	Do.
January .....	Liverpool, England .....	1	Do.
January .....	London, England .....	1	Do.
January .....	Newcastle, New South Wales .....	1	Coal.
February .....	Yokohoma, Japan .....	1	General cargo.
March .....	do .....	1	Do.
March .....	Newcastle, New South Wales .....	1	Coal.
March .....	Hongkong, China .....	1	General cargo.
April .....	Yokohoma, Japan .....	1	Do.
May .....	do .....	1	Do.
May .....	Hamburg, Germany .....	1	Do.
May .....	Hongkong, China .....	1	Do.
June .....	Hongkong and Yokohoma .....	1	Do.
June .....	Calcutta, India .....	1	Ballast.

*From foreign ports in yellow-fever latitude via domestic ports.*

September .....	Panama, via Astoria .....	1	Ballast.
October .....	Santos, via Astoria .....	1	Do.
November .....	Santos, via Astoria .....	3	Do.
November .....	Rio de Janeiro, via Astoria .....	7	Do.
December .....	Panama, via Astoria .....	1	Do.
January .....	Santos, via Astoria .....	1	Do.
January .....	Rio de Janeiro, via Astoria .....	1	Do.

*From domestic ports.*

July .....	San Francisco, Cal .....	13	Cargo.
July .....	New York, N. Y. .....	1	Do.
July .....	Astoria, Oreg .....	3	Do.
August .....	San Francisco, Cal .....	9	Do.
August .....	Astoria, Oreg .....	2	Do.
September .....	New York, N. Y. .....	2	Ballast.
September .....	San Francisco, Cal .....	10	Cargo.
September .....	Astoria, Oreg .....	1	Do.
September .....	San Diego, Cal .....	1	Ballast.
September .....	Philadelphia, Pa .....	1	Do.
October .....	San Francisco, Cal .....	12	Cargo.
October .....	Astoria, Oreg .....	1	Do.
October .....	San Diego, Cal .....	2	Ballast.
November .....	San Francisco, Cal .....	9	Cargo.
November .....	Boston, Mass .....	1	Ballast.
November .....	Redondo, Cal .....	1	Do.
November .....	New York, N. Y. .....	1	Do.
November .....	Astoria, Oreg .....	2	Cargo.
November .....	San Diego, Cal .....	1	Ballast.
December .....	San Francisco, Cal .....	10	Cargo.
December .....	Astoria, Oreg .....	1	Do.
January .....	San Francisco, Cal .....	10	Do.
January .....	New York, N. Y. .....	1	Ballast.
January .....	Astoria, Oreg .....	3	Cargo.
January .....	San Diego, Cal .....	1	Ballast.
February .....	San Francisco, Cal .....	11	Cargo.
February .....	Astoria, Oreg .....	3	Do.
March .....	San Francisco, Cal .....	12	Do.
March .....	Astoria, Oreg .....	2	Do.
April .....	San Francisco, Cal .....	14	Do.
April .....	New York, N. Y. .....	1	Ballast.
May .....	San Francisco, Cal .....	10	Cargo.
May .....	Astoria, Oreg .....	1	Do.
May .....	Boston, Mass .....	1	Ballast.
June .....	San Francisco, Cal .....	9	Cargo.
June .....	Astoria, Oreg .....	2	Do.



13. The collector of customs informed me that the regulations in regard to the bills of health and quarantine certificates are being observed. The original bill of health is taken up by the collector of customs at Astoria. When a vessel enters that port, a certificate is issued by the health officer at Astoria to the master of the vessel which is delivered to the collector of customs at Portland. Eighty-four immigrants arrived at this port during the last fiscal year, all of whom were from Japan.

14. The inspection service as maintained is probably sufficient for the needs of this port, and capable of preventing the introduction of contagious diseases.

15. The quarantine regulations of the Treasury Department regarding inspection and observation are enforced by the health officer of the city.

16. Mention any facts which in your opinion should be known to the Department, bearing directly or indirectly upon the quarantine service, and make such recommendations as seem proper.

Since there is no disinfecting plant at Astoria, there should be some facilities at this port for the disinfection of vessels.

JUNE 25, 1896.

#### WASHINGTON.

#### REPORT UPON THE UNITED STATES QUARANTINE STATION, PORT TOWNSEND.

By P. A. Surg. WILLIAM G. STIMPSON, M. H. S.

Name of quarantine station: Port Townsend Quarantine Station.

When was the station last inspected? December 31, 1893.

Name of inspecting officer: P. A. Surg. J. O. Cobb.

#### I. PERSONNEL.

Name of officer in command: P. A. Surg. W. G. Stimpson.

Date of assignment to duty: September 10, 1894.

Name and rank of assistants, including acting assistant surgeons; also give number of members in each family: No assistants.

Name of steward and number of members in family: No steward.

Name and duties of each attendant: H. M. Duane, engineer; M. Drysdale, carpenter; George Pink, cook and nurse; John Lawrence, W. D. Pattison, boatmen; C. M. Weymouth, keeper of *Iroquois* and laborer; R. McDonnell, laborer and stableman; H. Hammond, laborer (temporary).

#### II. GENERAL DESCRIPTION OF STATION.

Number of buildings: Seven; hospital, attendants' quarters, surgeon's quarters, barracks, warehouse on wharf, tank house, stable.

Limit of anchorage for noninfected vessels: Upper part of Discovery Bay.

Limit of anchorage for infected vessels: Lower part of Discovery Bay.

Facilities for inspection of vessels: Two boatmen and a rowboat.

Apparatus for disinfection of vessels and of baggage: Steam disinfecting chamber and sulphur fumigating apparatus.

Facilities for removal and treatment of sick: Patients removed from wharf to hospital by horse and cart.

Facilities for removal and detention of suspects: Suspects detained in barracks holding about 200 persons and in quarantine steamer *Iroquois*. No facilities for detention of cabin passengers.

Mail and telegraph facilities: A telegraph line is being built from the Puget Sound telegraph line at Eagle Creek to the station at Diamond Point.

Give number of wharves: One.



What is the length of the wharf frontage? One hundred and nine feet.

Are the wharves in good condition? Yes. It has just been repaired at an expense of \$280.

Are the mooring facilities ample? A mooring buoy to cost \$895 has been contracted for.

What is the depth of water at mean low tide along the front of the wharf? Eighteen feet.

What is the source of water supply? Spring, one-half mile distant.

Is it sufficient? No; proposals for digging a well were opened October 1, 1896.

Is it potable? Yes.

Hard or soft? Hard.

If hard, does it injuriously affect the boilers in use at the station? The water used in the boiler is rain water from the roof of warehouse on wharf.

How is it distributed and stored, if storage is necessary? Rain water stored in iron tank on wharf.

### III. DISINFECTING MACHINERY.

Enumerate the machinery constituting the disinfecting plant: Boiler, steam-chamber vacuum pump, salt-water pump, bichloride pump, sulphur furnace, engine and fan, sulphur reservoir, and sulphur chamber.

What is the general condition of all machinery? Good.

Does it appear well taken care of or neglected? Yes; well taken care of.

Is there a steam hoisting engine for ballast? No.

Are there ballast tubs and a ballast car for the distribution of ballast? No.

How is ballast disposed of? No ballast has been taken out of vessels in quarantine.

Is it disinfected prior to being discharged, and what facilities exist for supplying ballast to vessels needing it? No occasion has arisen requiring the disinfection of ballast. There are no facilities for supplying ballast to vessels.

What are the dimensions of the steam disinfecting chamber? Four feet 4 inches by 5 feet 4 inches by 15 feet 10 inches.

Is it rectangular or cylindrical? Rectangular.

How many cars are provided? One.

Are infected articles put in at one end and brought out at the other after disinfection, or is one end of the chamber used for loading and unloading? Infected articles are put in at one end of the chamber and taken out at other end.

Is the chamber provided with thermometers for indicating the temperature during the process of disinfection? Yes; two thermometers.

Is the chamber equipped with any apparatus for the production of a partial vacuum? What is the nature of the appliance? Is it efficient in operation? Yes. Steam vacuum pump. Yes.

What vacuum is produced, and how long does it take to obtain it? Three to 7 inch vacuum, produced in about five minutes.

Is a sulphur furnace provided? Yes.

How many feet of sulphur hose are provided? One hundred feet.

What is its condition? Good.

What is the condition of the fan and engine? Good.

What is the method of storing bichloride solution? In tank.

What is the capacity of the tank or tanks? Five thousand gallons.

Are they of wood or iron? Wood.

What is the elevation of the tanks above the wharf flooring? Twenty-five feet 7 inches.

Is the solution distributed by gravity or is there a pump for the purpose? By both methods.



How many feet of hose are provided for the distribution of the bichloride solution, and what is its size and condition? Three hundred and fifty feet  $1\frac{1}{2}$ -inch hose, in good condition.

How many steam boilers are provided? One.

What is their condition, and do they supply sufficient steam for all purposes? Good; yes.

#### IV. BOATS.

Is the station provided with a steam tug or other steam vessel? No.

Is the station provided with a steam or naphtha launch? Yes; naphtha launch.

Give dimensions: Length, 38 feet; width, 8 feet; depth,  $3\frac{1}{2}$  feet.

What is its condition? Good.

Give report of medical officer as to the efficiency of the launch: The launch is not powerful enough for the waters of Puget Sound.

How many small boats are provided, and what is the condition of them and their equipment? Three; in good condition; equipped with oars and sails.

Are more boats necessary or desirable? A steam tug or a large steam launch is necessary for this station.

#### V. HOSPITAL.

Give location of building used as hospital: About 200 yards from surgeon's quarters.

Give general description of the building: Building is a cottage hospital, with one ward, 28 by 35 by 12 feet. Veranda in front. There are three small rooms and a kitchen and water-closet besides the ward.

Dimensions: Fifty-eight by 43 feet.

Number of beds in each ward: Twelve.

How many beds can be added for emergencies? Twelve.

Cubic air space allowed each patient? One thousand cubic feet.

Heating, lighting, and ventilating: Heated by fireplaces and stoves; lighted by lamps; ventilated by windows and fireplaces.

Has the hospital sufficient furniture? Yes, except tables and bedside stands.

What kind of bedsteads and what kind of mattresses and bedding? Iron bedsteads, cotton mattresses, hair pillows.

Condition of bedding occupied by patients: None occupied at present.

Are the beds clean and free from vermin? Yes.

What is the condition of wards as to general cleanliness? Clean.

Is the nursing sufficient, and is the nurse immune? Yes.

Does the character of the diet furnished conform to that prescribed in the diet table for marine hospitals? No diet furnished except when patients in hospital.

Is a proper record of the patients under treatment kept? Yes.

#### VI. OUTBUILDINGS AND GROUNDS.

Describe general condition of outbuildings: In good condition; barracks should be repainted one coat.

Are the grounds well policed? The grounds are not policed. When persons are in quarantine, care is taken by the surgeon in command to keep them apart from the rest of the people on the reservation.

Describe officers' quarters and condition of furniture: Surgeon's quarters should be given one coat of paint. Inside in good condition, but only one room carpeted. No furniture except bedroom set and office furniture.

Describe steward's and attendants' quarters and condition of furniture: These quarters need one coat of paint. No furniture except a few rough tables, chairs, and iron beds.



Describe dining room, condition of table furniture and tableware: No dining-room furniture; only small quantity of tableware for use of hospital.

Describe kitchen and furniture: Good range in kitchen, but no furniture.

Describe dispensary: Contains sufficient medicines for a small station.

Describe laundry: No laundry.

Describe approaches to the station: The station can be reached only by water.

Describe condition of fences and grounds: No fences. Roads in good condition. About 5 acres have been sown in grass seed. Rest of ground full of stumps. Only 20 acres cleared.

Describe drainage and condition of water-closets: Sewers from all buildings, but no water to flush them. Water-closets have never been used.

Describe disposal of slops: Everything possible is burned. Liquid slops go through sewers.

State whether any animals not authorized by the Department are kept on reservation? No.

#### VII. EQUIPMENT.

State approximately age and condition of each horse, and how long in service at this station: Six years old; in good condition. Only one horse; purchased February 13, 1896.

Give number and character of vehicles: One dump cart.

Are they properly cared for? Yes.

Are harnesses in good condition? Yes.

Is there a blacksmith's forge provided? Yes.

Are there farming implements, and if so, are they in good condition? No.

Is there a fire apparatus provided; and if so, is there a fire drill organized? No; buckets of water are kept around the buildings, and barrels of water on the roofs.

#### VIII. DISCIPLINE.

Are officers and employees supplied with uniforms in compliance with the revised uniform regulations dated June 20, 1896? No; but they will be by January 1, 1897.

Are uniforms properly worn? Yes.

Give method of granting leaves to officers and employees: Employees are granted leave when no vessels are in quarantine; a couple of days at the time.

Describe when and how inspection, muster, and fire drills are conducted: The station is inspected whenever the medical officer in command goes to Diamond Point. There have been no musters, on account of the small number of attendants and the frequent changes which have been made since the station was opened.

#### IX. GENERAL ADMINISTRATION.

Make a statement showing the number of vessels arriving at the station during the preceding calendar year, by months:

From foreign ports: January, 10; February, 12; March, 14; April, 13; May, 19; June, 17; July, 15; August, 18; September, 19; October, 14; November, 14; December, 16.

From foreign ports in yellow-fever latitudes via domestic ports: None.

From domestic ports: One.

From what countries chiefly do the vessels come? Hawaiian Islands, Chile, China, British Columbia, Mexico, Japan, Central America.

Are they in cargo, ballast, or empty? Some in cargo, most of them in ballast; a few empty.

State whether in your opinion the quarantine facilities are sufficient to care for the shipping arriving at the station: They are not; there should be a steam



boarding vessel, a bath house, and a house for the detention of cabin passengers at this station.

Give annual amount expended at station for last three years: In 1894, \$3,949.42; in 1895, \$6,928.16; in 1896, \$5,210.41.

Give the immediate needs of the station as stated by the commanding officer:

(1) Recommend that a hospital steward or an acting assistant surgeon be put in charge of the station at Diamond Point under the direction of the medical officer in command; the latter has to stay at Port Townsend to board and inspect vessels, so he has little control over the station, which is 12 miles away.

(2) A steam tug or a steam launch at least 60 feet in length should be provided for this station, as the boarding has now to be done in a rowboat. In rough weather the station is completely isolated, as the naphtha launch which is at present in use can not go there except on smooth water. This launch is too small, and the expense of running her is so great she should not be used very often. If this launch remains at this station, I would recommend that the naphtha engine be taken out and a boiler and steam engine substituted, as the expense for fuel would then be only one-tenth what it is at present.

(3) A house should be built for the accommodation of cabin passengers.

(4) A bath house is needed, and also some cheap clothing for the patients to put on while their body clothing is being disinfected.

(5) The swamp in front of the buildings should be drained.

(6) A fence should be built around the reservation.

(7) Two cisterns should be built; one at the surgeon's quarters and one at the attendants' quarters.

(8) The buildings should receive one coat of paint.

I certify that the foregoing is a careful and correct statement of the condition of the service at the Port Townsend Quarantine Station, inspected by me this 2d day of October, 1896.

WM. G. STIMPSON,

*Passed Assistant Surgeon, M. H. S., Inspector.*

*REPORT ON LOCAL QUARANTINE INSPECTION STATIONS.*

By P. A. Surg. J. O. COBB, M. H. S.

PORT ANGELES.

The health officer of Port Angeles makes careful inspection of all foreign vessels and charges a fee of \$5 for such inspections. He has inspected ships at night, but will not do so again.

Foreign ships that make Port Angeles a "port of call" average about two a month, and I think this number will fall off now that they know they will have to be inspected here.

The health officer is willing and anxious to conduct an efficient quarantine, and will proceed in all matters to the entire satisfaction of the Bureau.

AUGUST 6, 1895.

SEATTLE.

All ships that have entered here have been inspected at Port Townsend, and the health officer does not inspect unless requested. I visited the secretary of the Chamber of Commerce, and he said that, so far as he knew, the shipping men were well satisfied with the present quarantine arrangements. However, there might be some dissatisfaction if a ship could enter at Port Angeles and proceed direct to Seattle without further inspection at Port Townsend. This matter will be referred to under separate cover.

MARCH 11, 1895.



## TACOMA.

Since my last inspection of Tacoma, two months ago, only two ships from Asiatic ports have entered at this port. These ships had been previously inspected at Victoria and at Port Townsend, and they were entered without further inspection here.

The last ship in from China was the *Sikh*, and more than the usual routine inspection was accorded her at Victoria. The ship's surgeon reported to me that the baggage, bedding, etc., of the Chinese members of the crew had been sterilized by steam at the quarantine station at Victoria. I made a close and thorough examination of the quarters (forecastle) allotted to these men, and my opinion is that the bedding, etc., had not been disinfected, as claimed. Nothing had been done to the baggage, etc., of the officers, the white crew, or the few passengers on board.

The danger to be anticipated from these boats is not so much the cases of contagious diseases that might be found on board as from the clothing of such cases. I am thoroughly convinced that if there had been a case of contagious or infectious disease on the voyage that the ship's officers would do all in their power to conceal it. The voyage being so very long, a case will have terminated before arrival here, and thus deceive the health officers, and the disease be introduced by infected clothing.

I feel very anxious about this matter, and would respectfully urge the Bureau to hasten the construction of a steam sterilizing plant at Port Townsend and compel these ships to wait there until these articles could be sterilized. Such a plant can be placed on the *Iroquois*, and not more than two hours would be necessary to detain the ships at the Port Townsend Quarantine Station.<sup>1</sup>

I had a conversation with the ship's surgeon in regard to the plague in Hongkong. He said that he had visited the city hospitals for contagious diseases, one in the city and one floating, and that he had seen many cases. The hospitals are conducted by Chinese doctors, but the general sanitation is performed by Europeans or under their direction. The water supply is scarce, and filth abounds. From his description the disease is undoubtedly a typical plague. He said the accounts had been grossly exaggerated, that the disease and the conditions were not as bad as reported, and that it was well quarantined and was rapidly subsiding.

A new health officer has been appointed for Tacoma, but I did not succeed in finding him at his office. He had made an inspection of the *Sikh* before I went aboard. He does not receive fees for this work.

JUNE 25, 1894.

Nothing of importance has transpired at Tacoma since my last report. The health officer is a civilian, but the work of inspecting foreign ships is rigidly performed by the city physician. No charge is made for these inspections.

FEBRUARY 15, 1896.

## ABERDEEN.

I would invite your attention to the geographical situation of Grays Harbor. Mostly a lumber business is done here, and the largest vessels can not cross the bar. There are several foreign vessels during the year, and they enter direct.

During the fiscal year of 1895 there were 218 vessels arrived in Grays Harbor, 10 of which were from foreign ports. The foreign vessels came in ballast from Mexico, Guatamala, Honduras, China, and Hawaii.

There is a civilian health officer, but he does not inspect vessels. In case of sickness aboard the deputy would wire the collector for instructions.

I would recommend that foreign vessels be inspected by a physician.

JUNE 6, 1895.

<sup>1</sup>A complete disinfecting plant has been installed at Port Townsend Quarantine. See report on United States Quarantine Station, Port Townsend.



In accordance with telegraph instructions I visited Aberdeen for the special purpose of selecting a physician for recommendation as quarantine inspector, and as previously reported by wire September 13, 1895, I recommended Dr. T. C. Frary to be United States quarantine inspector for Grays Harbor, with compensation at the rate of \$50 a month from the 11th instant. Pending your advice in the matter, I directed the doctor to speak all vessels and make thorough inspection of all foreign ships and ships from foreign ports. He was especially directed to use unusual precaution with vessels from the Hawaiian Islands and upon any suspicion being attached to the ship to hold her and wire you for instructions.

I drove to Hoquiam and consulted with the tug boat company whose headquarters are at that point. It will be seen by the map forwarded that this is the most convenient point, as all vessels must either pass within a half mile of Hoquiam or enter the Hoquiam River. All shipping is lumber outgoing and in rock ballast incoming. Some of the vessels load lumber direct for Honolulu and return to San Francisco with fruit, rice, etc., and then come to Grays Harbor for lumber. The principal lumber trade is with San Francisco.

SEPTEMBER 10, 1895.

[NOTE.—A sanitary inspector of the Marine-Hospital Service has been appointed for Grays Harbor.]

#### BLAINE.

The health officer of Blaine is a civilian. No inspection of foreign vessels is made at all. No fee is charged. In case of sickness aboard the deputy collector would wire the collector for instructions.

I would again invite your attention to former report on quarantine matters at Blaine, and in this connection I have to report that, in company with the deputy collector and the former health officer, Dr. King, I inspected most of the roads and environs of Blaine. The doctor pointed out to me the various roads and paths by which people quarantined in British Columbia tried to enter the State clandestinely to escape quarantine.

The line between British Columbia and the United States is practically through the town, just over the line being known as Douglass. I would invite your attention to a good map of Blaine Harbor, and especially to a point of land which I believe is called Point Roberts. The international line runs through this point, and I am informed that it was next to impossible to keep people from getting in at that point during the last epidemic of smallpox. It is also noted for a smuggler's point.

There are a great number of fishing boats in this harbor that run outside, and two small steamers ply between Blaine and fishing points on the other side.

The deputy collector informs me that he has had a great deal of trouble with the Japanese, who try to enter there. These men are landed from the Empress Line of steamers at Vancouver, and, through motives of economy and other reasons, walk from Vancouver via Westminster and Blaine to Seattle and their final destination. Of course the greater number of these men enter the State through the regular passenger traffic channels.

In time of an epidemic in British Columbia I would suggest that a medical officer with a launch be stationed at Blaine, as I deem it the hardest point to guard in the State.

I would recommend the employment of a sanitary inspector to be stationed at Blaine to inspect all boats and trains from British Columbia.

JUNE 3, 1895.



## WHATCOM.

I called upon the health officer and inquired into his methods of inspection, etc. There have not been any foreign ships entered at this port for several months.

There are no means at this port for disinfection, and vessels would be ordered to Port Townsend.

JUNE 28, 1894.

There have been no foreign ships entered direct at Whatcom since last report. The health of Whatcom is good.

MARCH 10, 1895.

## SOUTH BEND.

All vessels have been allowed to enter South Bend without inspection.

Under the present conditions I deem it advisable that the few foreign ships entering here be inspected by a United States quarantine inspector, and for this duty I have the honor to recommend (as reported by wire the 15th instant) the appointment of Dr. Wilson Gruwell, with compensation of \$5 for each inspection, his duties dating from September 13, 1895.

As explained by map inclosed, the most convenient and efficient point is South Bend for such inspection. The larger number of vessels clearing from South Bend are bound for Honolulu, but return to San Francisco with fruit, rice, etc., and thence here for lumber.

Only two foreign ships entered last year. The lumber trade is improving, and it is expected that all these small lumber stations will have many foreign entries this year.

SEPTEMBER 11, 1895.

[NOTE.—A sanitary inspector of the Marine-Hospital Service has been appointed at South Bend at a compensation for each vessel inspected.]

*GENERAL REPORT UPON QUARANTINE AND SHIPPING INTERESTS IN THE STATE OF WASHINGTON.*

By P. A. Surg. J. O. COBB, M. H. S.

This part of the country has settled up so rapidly, with its railroads and steamboat routes established, that it may be hard for one to exactly comprehend the relative positions and the many means of communication between the towns in the northwestern part of the State and the adjoining towns in British Columbia. It is because of the vagueness of information in regard to this section that this report, with sectional and railroad maps, is submitted for your assistance in directing a quarantine against British Columbia in case it should ever become again necessary.

To make myself perfectly familiar with all the details, important and minor routes connecting the towns of British Columbia with towns on the borders of this State, I made it a point to travel over most of these routes by boat or rail. I found many ways that one could, if well informed, enter the State from British Columbia and evade the quarantine inspectors on this side.

In this connection I would respectfully invite your attention to the map of the State and the waters of the Strait of Juan de Fuca, Washington Sound, and Puget Sound. One must not confuse the names and positions of these waters, as Puget Sound is a very small part, being a narrow body of water commencing at Port Townsend and ending at Olympia, and ships bound into the sound from foreign ports, as most of them are, must pass Port Townsend. It will readily be seen that in so far as the quarantine at Port Townsend is concerned, no great fear need be entertained that epidemic diseases will be introduced into the State by this point. An infected ship can be easily treated, but with an epidemic in



any of the British Columbian cities the main trouble to be feared is that the disease will be introduced into the northwestern part of the State from said places. If one of these cities should have an epidemic disease the other places would certainly become infected, for in the last epidemic Vancouver quarantined Victoria, and travel was suspended between the two places; but the quarantine had to be raised, as the high courts of the Dominion decided that the quarantine was illegal.

If a well-informed person found himself in Victoria and quarantine were declared against British Columbia, he would have several ways of getting into the State without entering by Port Townsend, where he would certainly be inspected and possibly detained. There are a great many small craft in these waters that ply among the islands, carrying fruits and produce to the various cities. One of these boats could be hired in Victoria and a passenger could be landed in a short time anywhere on the islands, and could reach the mainland by one of the regular steamers that run on the island route, and as said steamers do not touch at any point outside of the State, they would escape inspection.

From San Juan Island to Victoria it is just 13 miles. In the summer months there is a boat running direct from Victoria through the islands to Whatcom. It would be well to have the boat inspected at Friday Harbor, in the islands, as a passenger could leave the boat there, join a regular steamer, and get back to the State at Whatcom without inspection. This boat (from Victoria to Whatcom) should be compelled to report to the local health officer at Whatcom at each trip. The Revenue-Marine Service has a steam launch stationed at Friday Harbor to patrol the islands, and during an epidemic it would be advisable to have an inspector stationed with the launch to watch this the most dangerous point at which persons can enter the State and elude inspection.

A person in Victoria wishing to enter the State could also leave that place by the Canadian Pacific Railway steamer *Channer*, go to Vancouver in six hours, go from there to New Westminster (13 miles) by an electric tram car, and there take the train on the Great Northern and ride to Douglas, just at the State line, leave the train on the British Columbia side, stay over a day at the charming little hotel there, and at any time walk a few hundred yards to Blaine and take train or boat to his destination. Or the person could leave Victoria every other day on the steamer *Princess Louise* and go direct to New Westminster and proceed as above. Or still another way would be to go from Vancouver via Mission Junction to Huntington, leave the train there and walk to Sumas, not a great distance. From Vancouver there is a weekly boat, the *Utopia*, that touches at Blaine, Friday Harbor, and other cities. It carries freight and passengers, and would have to be inspected at Blaine and again after leaving the islands, as it might pick up a passenger in the islands that had gotten over from Victoria. One could also take the Canadian Pacific east-bound overland train at Vancouver, go several miles into the interior, and join the west-bound overland train that runs a baggage car, coach, and sleeper direct to Seattle over the Great Northern via Mission and Sumas. The only other way that I know that one could enter the State and avoid inspection is to go direct from Vancouver via Canadian Pacific to Revelstoke, take a branch line there to the Arrow Lakes, thence by steamer to Little Dalles or Northport, and return to the State at that point. A young gentleman and his wife actually did this in the last epidemic. They were visiting in Victoria and were stopped at Sumas by the inspector, and they went by Revelstoke and returned to the State that way.

In case it should become necessary to quarantine British Columbia, it would be advisable to station inspectors at Blaine, Sumas, Friday Harbor, and Little Dalles or Northport. The inspector at Blaine should inspect all small boats and the steamer *Utopia*, which runs on a regular weekly trip, as above mentioned, to Vancouver. The Great Northern runs one train south from (New) Westminster



daily, and the inspector should accompany the train from that place and note all passengers that leave the train at Douglas. By inspecting the next train before it left Blaine any passenger trying to elude inspectors could thus be detected. The Great Northern also runs a daily train direct from Vancouver via Mission, over the Canadian Pacific, to Seattle, and an inspector would have to be stationed at Sumas. This inspector should also inspect the passengers of the west-bound Canadian Pacific overland train, which runs a baggage car, coach, and sleeper direct to Seattle via Mission. An inspector at Little Dalles could effectually guard the State at that point.

The customs department has an inspector stationed at Vancouver to look after bonded freight and bonded passengers bound for the United States. Some Chinese merchants have passed through Vancouver in bond, and smallpox has appeared among these passengers. The Canadian Pacific officials try to conceal these cases; and last summer, as I then telegraphed you, there was a case of smallpox in one of these bonded warehouses for three days and it was concealed from the inspector, though he suspected that something was wrong. He informed us just as soon as he was certain that it was smallpox. He has promised that he will watch these cases closely and wire on the least suspicion.

In conclusion, I have to invite your attention to the inclosed newspaper article from the Port Angeles Democrat-Leader, which comments on the quarantine of this district. I have inspected Port Angeles and am familiar with the conditions. In this connection your attention is also invited to Department letter of July 15, 1892, in regard, incidentally, to vessels entering at Port Angeles. The instructions contained in said letter are capable of misconstruction, owing to the use of the words "Puget Sound," and said instructions only apply to vessels bound for Port Townsend or points on Puget Sound. I can not conceive that any other idea was entertained, for it is manifestly unjust to require a ship whose destination is Port Angeles, on the Strait of Juan de Fuca, 28 miles west and outside of Puget Sound, to go to Port Townsend for the purpose of being inspected by the United States quarantine officer with the view of entering at Port Angeles. It would be equally unjust to require vessels bound for points on Washington Sound, viz, Roche Harbor, Blaine, and Whatcom, to make as long a detour by Port Townsend for the same purpose. The affair referred to is not of this nature, for it is well known that the British bark *Glenesch* (not *Gilcruix*, as reported) in tow (to avoid delay over night at Port Townsend, which it would not reach until after nightfall) put in to Port Angeles, was inspected at night by the local health officer, entered by the customs officer, and then proceeded on its way up the Sound, by Port Townsend without stopping. There is nothing to hinder all foreign ships from doing likewise, and as I write this communication a vessel in tow has passed in without stopping, and I am informed that it previously put in at Port Angeles.

The Chinese steamers, sailing under the British flag, do not like to stop here for inspection, and have tried time and again to evade the regulation referred to in Department letter of July 15, 1892. These steamers run in connection with the Northern Pacific Railroad, and they want their steamers entered direct at Tacoma on the local health officer's certificate. These ships are hard to deal with and will avoid this station if possible, and unless some ruling is made to the contrary, I expect that they will soon adopt the Port Angeles method of entering. The excuse for entering at Port Angeles is that the ship, not knowing its destination, puts in there for orders.

Shipping agents in Seattle and Tacoma want to have these vessels enter there direct, for if the ship puts in at Port Townsend it is boarded by the local agent, and they lose the business. They have raised the point before, and are again grumbling that if a vessel can be inspected by the local health officer at Port Angeles and then the vessel pass into Puget Sound without inspection by the United States quarantine officer at Port Townsend, why not allow them to



proceed direct to the port of destination, be examined by the local health officer, and entered? I think the point well taken.

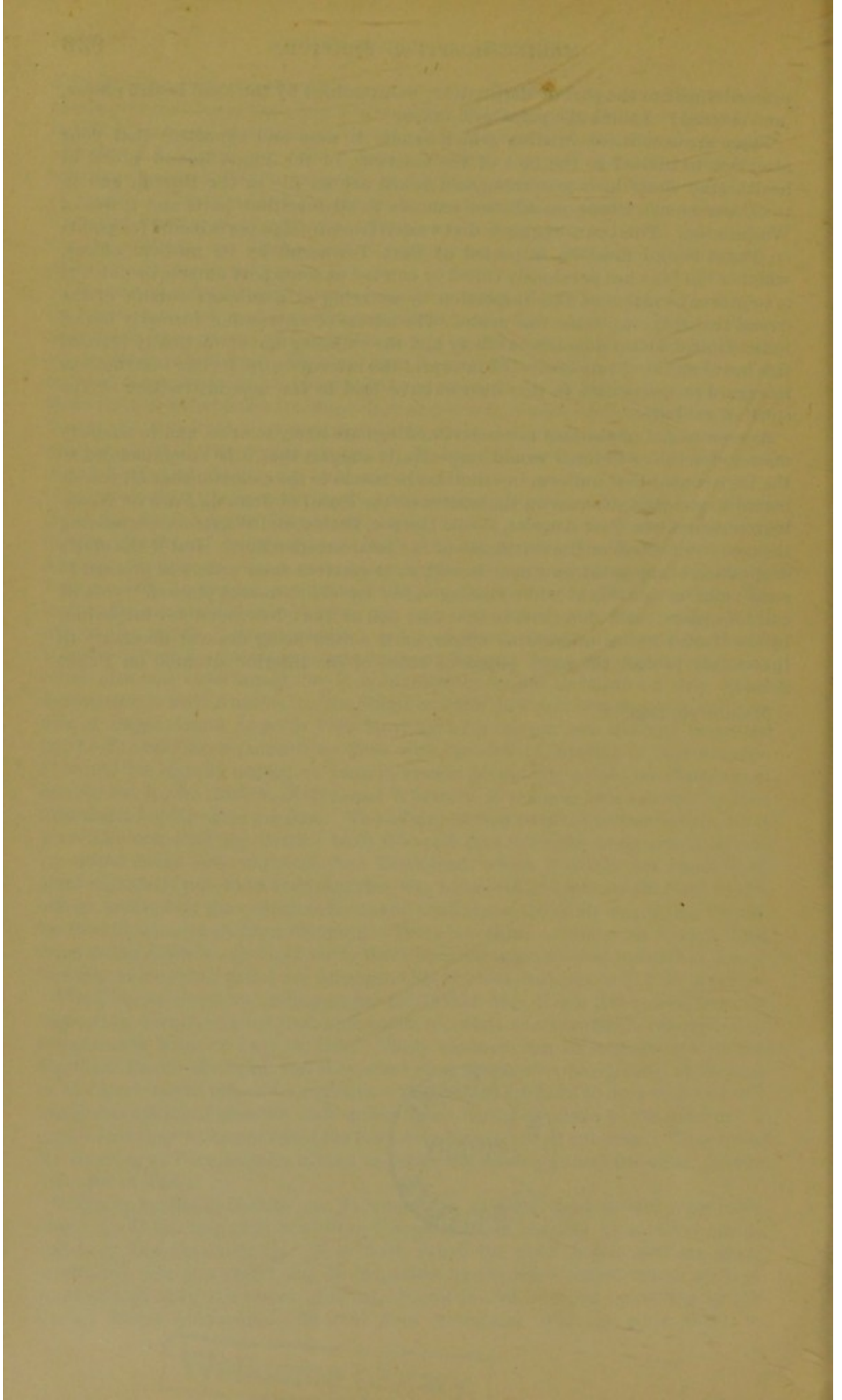
There are conditions existing which render it wise and expedient that your attention be invited to the fact of the existence of the Puget Sound board of health (the State laws governing said board are on file in the Bureau and in the Department), whose jurisdiction extends to all maritime ports and towns of Washington. This board requires that vessels from foreign ports bound for points on Puget Sound must be inspected at Port Townsend by its medical officer, whether the boat has previously called or entered at some port outside or not. It is to prevent evasion of this inspection by entering at a subport outside of the Sound that this regulation was made. The letters of instruction formerly issued to the United States quarantine officer and the collector have practically ignored this board and the State law. If I interpret the law correctly, former instructions in regard to quarantine in this district have lead to the misconstruction of the spirit of said act.

As serious and unpleasant misunderstandings are likely to arise, and to simplify matters for the collector, I would respectfully suggest that it be recommended to the Department that uniform instructions be issued to the collector that all vessels bound to any port situated on the waters of the Strait of Juan de Fuca or Washington Sound, viz, Port Angeles, Roche Harbor, Blaine, and Whatcom, permitting them to enter direct on the certificate of the local health officer. But if the ship's destination is any point on Puget Sound, or it receives final orders to proceed to some point on said Sound while making one of the above-named places a "port of call for orders," said ship must in that case call at Port Townsend for inspection by the United States quarantine officer, such action being deemed necessary to thoroughly protect the more populous cities of the interior situated on Puget Sound.

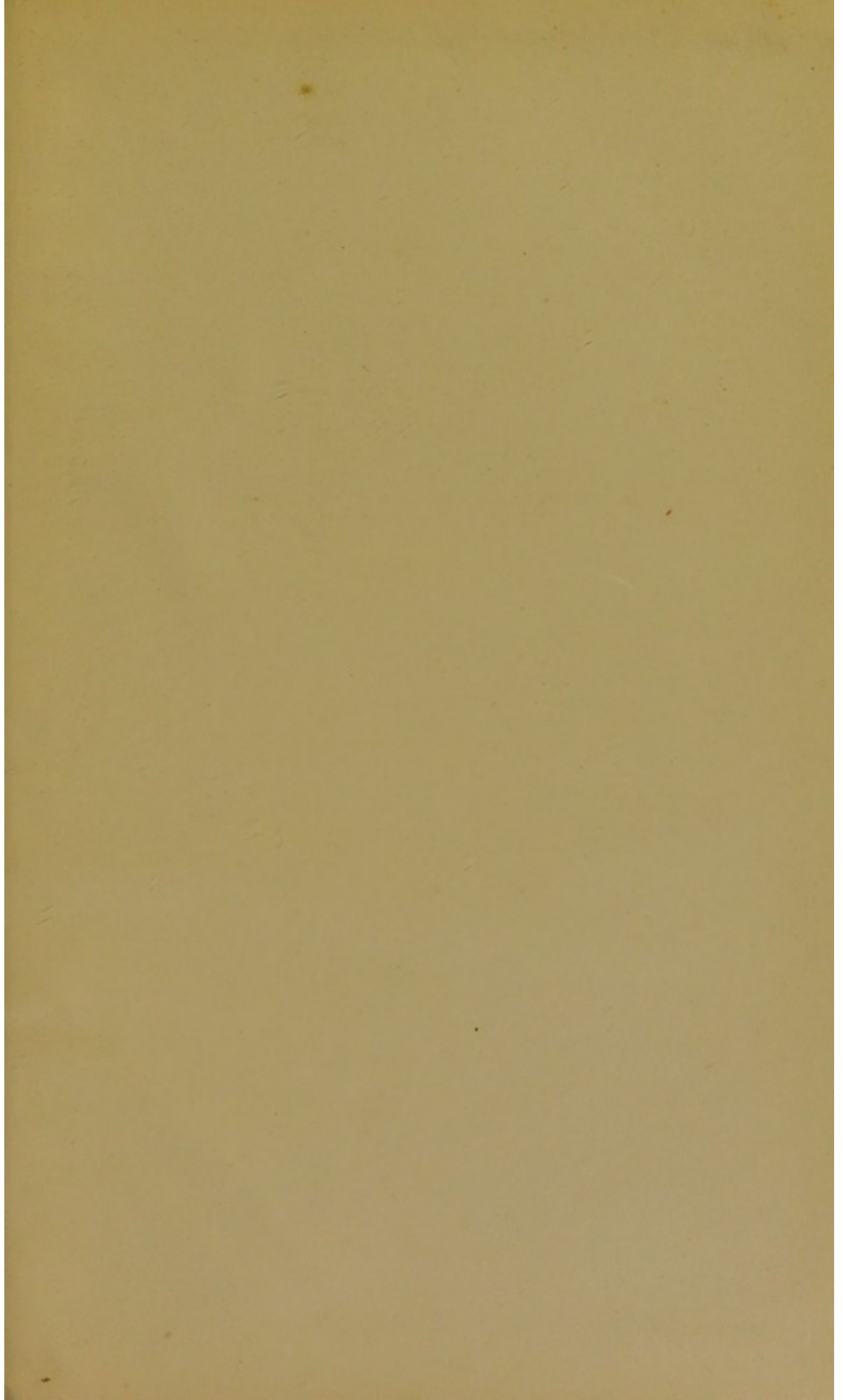
MARCH 20, 1895.



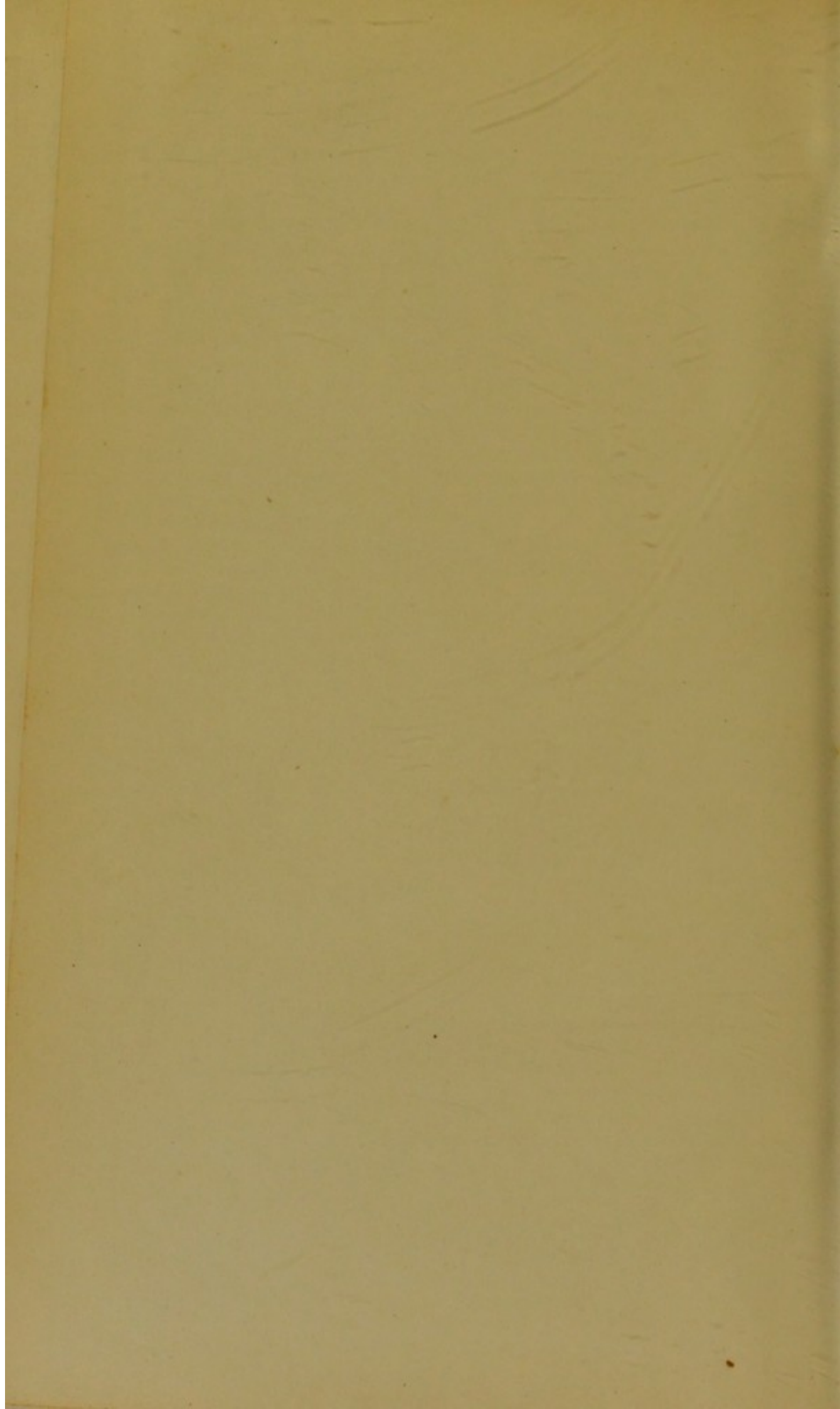
















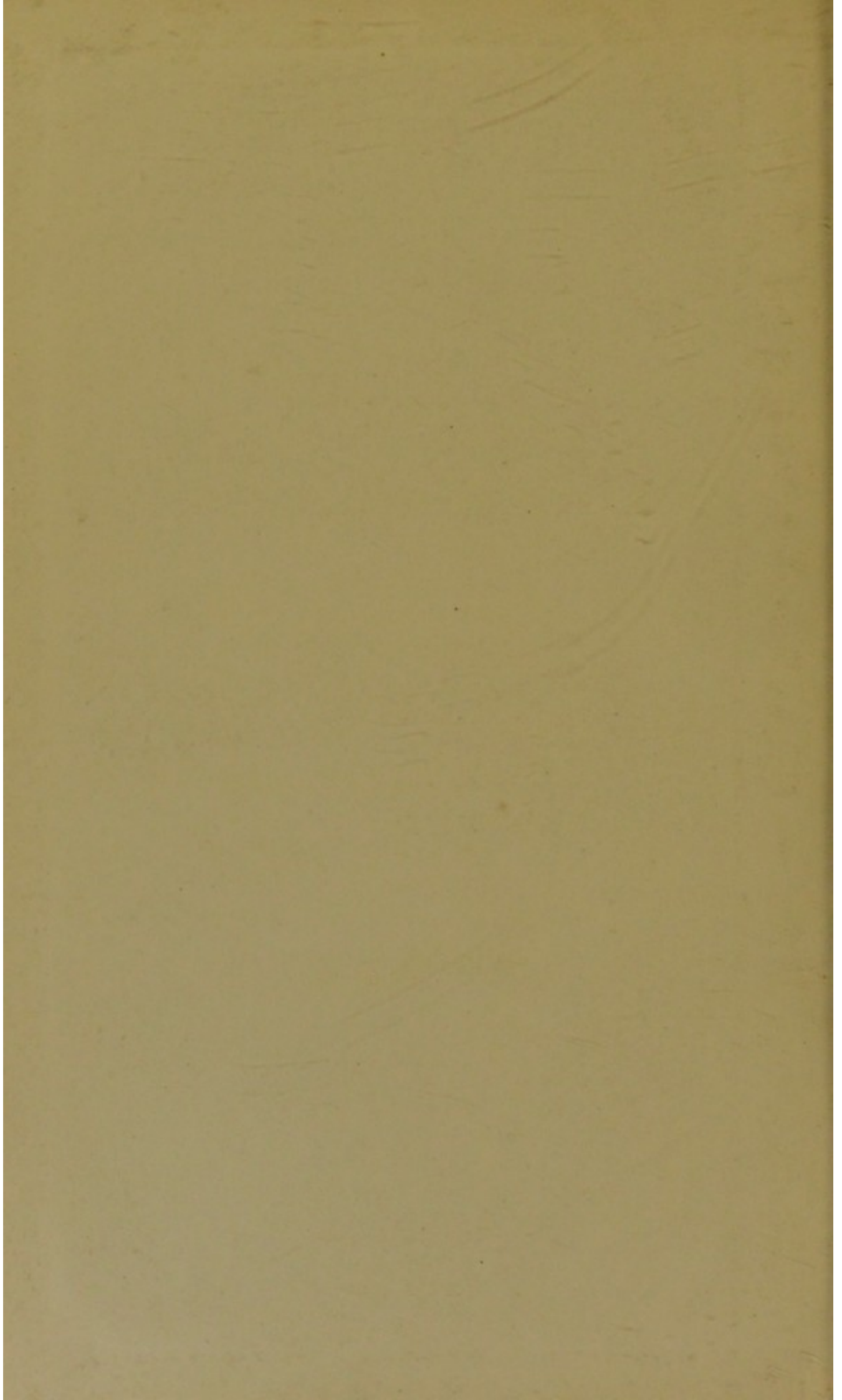














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