

# ABSTRACT OF SANITARY REPORTS.

VOL. VIII.

WASHINGTON, D. C., MAY 19, 1893.

No. 20.

TREASURY DEPARTMENT, *U. S. Marine-Hospital Service.*—Published in accordance with act of Congress approved February 15, 1893.

## UNITED STATES.

### SPECIAL REPORTS.

*Arrival at Gulf Quarantine Station of bark Mistletoe, from Rio de Janeiro.*

GULF QUARANTINE, *May 8, 1893.*

SIR: I have the honor to report the arrival here on the 8th instant of the British bark *Mistletoe*, from Rio de Janeiro.

The sanitary history of the vessel is good and her present condition excellent. She will be fumigated and disinfected.

Very respectfully,

G. M. GUITÉRAS,  
*Passed Assistant Surgeon, M. H. S.*

To the SUPERVISING SURGEON-GENERAL M. H. S.

*Arrival at New York Quarantine of steamship Alesia, from Naples, with one case of smallpox.*

QUARANTINE, STATEN ISLAND, N. Y., *May 15, 1893.*

The steamer *Alesia*, which arrived from Naples with 983 steerage passengers on board, is detained because of smallpox case. Camillo Deodati, aged 34 years, of Aquila, Italy, was discovered on the twentieth day out with fever and slight papular eruption on the face, and isolated by the surgeon on arrival. He was found in the ship's hospital covered with the eruption, largely papular. He was removed to reception hospital. Compartments occupied by him had 117 other passengers. The passengers will be vaccinated and a portion will be held for observation, and the vessel disinfected. Further particulars later.

WM. T. JENKINS,  
*Health Officer.*

To Surgeon-General WYMAN, M. H. S.

NOTE.—The medical officer of the Marine-Hospital Service on duty at Naples has been notified of the above by cable.

*Smallpox and typhus fever abating in Mexico.*

LAREDO, TEX., *May 9, 1893.*

SIR: Smallpox and typhus are both abating in Mexico and San Luis Potosi.

Two cases of smallpox were discovered in the city about a week ago. They were isolated by the city health officer, and there have been no new cases.

I am, very truly,

THOS. J. TURPIN,  
*Sanitary Inspector, M. H. S.*

To Surgeon-General WYMAN, M. H. S.

*Promulgation of foreign quarantine regulations.*

Official notification has been received that the quarantine regulations made by the Secretary of the Treasury have been posted for ten days in the offices of the United States consuls at the following-named ports. (See also ABSTRACT OF SANITARY REPORTS, Vol. VIII, Nos. 15, 16, 18.)

*Algeria.*—Algiers.

*Austria.*—Buda-Pesth, Trieste, Vienna.

*Bahamas.*—Nassau.

*Bavaria.*—Fürth, Nuremberg.

*Belgium.*—Antwerp, Brussels, Ghent.

*Bermuda.*—Nassau.

*British Colombia.*—Victoria.

*Canada.*—Amherstberg, Brockville, Clifton, Courtright, Fort Erie, Gaspé Basin, Guelph, Hamilton, London, Ontario, Palmerston, Paspebiac, Port Rowan, Port Sarnia, Port Stanley and St. Thomas, Quebec, St. Johns, Sherbrooke, Three Rivers, Toronto, Windsor.

*Cuba.*—Cienfuegos, Matanzas, Nuevitas, Sagua La Grande, San Juan de Los Remedios.

*Egypt.*—Cairo.

*England.*—Birmingham, Bradford, Bristol, Falmouth, Gloucester, Leeds, Leicester, Liverpool, London, Manchester, Mitford Haven, Newcastle-upon-Tyne, Newport, Nottingham, Plymouth, Sheffield.

*France.*—Bordeaux, Cette, Cognac, Limoges, Lyons, Marseilles, Nantes, Nice, Paris, Roubaix, Toulon.

*Germany.*—Annaberg, Bremen, Brunswick, Chemnitz, Dresden, Frankfort-on-the-Main, Glauchau, Hamburg, Kehl, Mannheim, Mayence, Sonneberg, Stuttgart.

Gibraltar.

*Holland.*—Amsterdam, Rotterdam.

*Ireland.*—Belfast, Cork, Dublin, Limerick, Londonderry, Queenstown.

*Italy.*—Bastia, Genoa, Leghorn, Naples, Palermo, Rome, Venice.

*Madeira.*—Funchal.

*Mexico.*—Acapulco, Matamoros, Nogales, Nuevo Laredo, Paso del Norte, Piedras Negras, Tampico, Tuxpan, Vera Cruz.

*Morocco.*—Tangier.

*New Brunswick.*—Moncton, St. John, St. Stephens.

*Norway.*—Bergen, Christiania.

*Nova Scotia.*—Halifax, Wallace.

*Prince Edward Island.*—Charlottetown.

*Prussia.*—Berlin, Crefeld, Erfurt, Magdeburg, Stettin.

*Russia.*—Helsingfors, Odessa, Riga, St. Petersburg.

*Scotland.*—Dundee, Edinburgh, Glasgow.

*Sicily.*—Messina.

*Spain.*—Cadiz, Denia, Grao de Valencia, Merida, Palma, Port Mahon.

*Sweden.*—Gothenburg.

*Switzerland.*—Geneva, St. Galle.

*Sandwich Islands.*—Honolulu.

*Syria.*—Beirut.

*Turkey.*—Constantinople.

*United States of Colombia.*—Barranquilla, Colon, Panama.

*Venezuela.*—Maracaibo, Puerto Cabello.

*Wales.*—Cardiff, Llanelly, Swansea.

*West Indies.*—Antigua, Curaçoa, Guadeloupe, Montserrat, St. Christopher, St. Martin, St. Pierre, St. Thomas.

*Windward Islands.*—Barbados.

VESSELS REMAINING, ARRIVING AT, AND DEPARTING FROM UNITED STATES QUARANTINE STATIONS.

CAPE CHARLES QUARANTINE.

*Week ended May 13, 1893.*

One vessel inspected and passed.  
Nine vessels spoken and passed.

DELAWARE BREAKWATER QUARANTINE.

*Week ended May 13, 1893.*

Seventeen vessels inspected and passed.

GULF QUARANTINE.

*Week ended May 13, 1893.*

Name of vessel.	Date of arrival.	Where from.	Destination.	Treatment of vessel and cargo.	Date of dep'ture.
Norwegian bark Mynt* .....	Apr. 29	Rio de Janeiro.	Mobile.....	Disinfected ... ..	May 11
American schooner Magnolia..	May 6	Matanzas...	H a n d s - borough.	.....do.....	May 9
British bark Mistletoe.....	May 8	Rio de Janeiro.	A p a l a c h - icola.	Held for disinfection.	

\*Previously reported.

SAN DIEGO QUARANTINE.

*Week ended May 3, 1893.*

Three vessels inspected and passed.

SOUTH ATLANTIC QUARANTINE.

*Week ended May 6, 1893.*

Name of vessel.	Date of arrival.	Where from.	Destination.	Treatment of vessel and cargo.	Date of dep'ture.
Norwegian bark Thiorva.....	Apr. 30	Montevideo.	Sapelo.....	Bilge disinfected.....	May 2

*Reports of States, and yearly and monthly reports of cities.*

CALIFORNIA—*Los Angeles*.—Month of April, 1893. Population 65,000. Total deaths, 87, including phthisis pulmonalis, 19; enteric fever, 10; diphtheria, 1; and whooping cough, 2.

CONNECTICUT.—Month of April, 1893. Reports to the State board of health from 168 towns, having an aggregate population of 786,490, show a total of 1,395 deaths, including phthisis pulmonalis, 130; scarlet fever, 25; diphtheria and croup, 22; measles, 6; and whooping cough, 10.

IOWA—*Davenport*.—Month of April, 1893. Estimated population, 34,500. Total deaths, 41, including phthisis pulmonalis, 8, and diphtheria, 1.

MARYLAND—*Baltimore*.—Month of April, 1893. Population, 455,427. Total deaths, 854, including phthisis pulmonalis, 116; enteric fever, 10; diphtheria, 15; measles, 12; and whooping cough, 4.

MASSACHUSETTS—*Brockton*.—Month of April, 1893. Estimated population, 30,000. Total deaths, 39, including 6 from phthisis pulmonalis.

*Worcester*.—Month of April, 1893. Estimated population, 93,000. Total deaths, 158, including phthisis pulmonalis, 17; enteric fever, 2; scarlet fever, 1; diphtheria, 1; croup, 1; measles, 2; and whooping cough, 4.

MICHIGAN.—Week ended May 6, 1893. Reports to the State board of health from 76 observers indicate that remittent fever increased, and that measles, inflammation of bowels and erysipelas decreased in area of prevalence. Scarlet fever was reported present at 52 places, diphtheria at 26, measles at 26, and enteric fever at 13 places.

OHIO—*Cincinnati*.—Month of April, 1893. Estimated population, 305,000. Total deaths, 517, including phthisis pulmonalis, 68; enteric fever, 4; scarlet fever, 1; diphtheria, 10; croup, 2; measles, 12; and whooping cough, 4.

*Cleveland*.—Month of April, 1893. Estimated population, 261,353. Total deaths, 395, including phthisis pulmonalis, 49; enteric fever, 14; scarlet fever, 2; diphtheria, 8; croup, 9; and whooping cough, 1.

TENNESSEE—*Chattanooga*.—Month of April, 1893. Population—white, 27,000; colored, 13,000; total, 40,000. Total deaths—white, 18; colored, 28; total, 46, including phthisis pulmonalis, 12, and scarlet fever, 1.

*Nashville*.—Month of April, 1893. Estimated population—white, 54,595; colored, 33,159; total, 87,754. Total deaths—white, 72; colored, 64; total, 136, including phthisis pulmonalis, 27; enteric fever, 3; croup, 1; and whooping cough, 2.

*Publications received.*

Annual Report of the Health Department of the City of Richmond, Va., 1892.

Annual Report of the Board of Health of the City of Manchester, N. H., 1892.

Annual Report of the Sanitary Department of the City of Harrisburg, Pa., 1892.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Population, U. S. Census of 1890.	Total deaths from all causes.	Deaths from—													
				Pneumonia.	Yellow fever.	Smallpox.	Varioloid.	Cholera.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.			
Auburn, N. Y.	May 13.	25,858	11	3													
Baltimore, Md.	May 13.	434,439	188	25						1		3	3	3			
Binghamton, N. Y.	May 13.	35,005	17	2						1			6				
Boston, Mass.	May 13.	448,477	258	37						3	4	6	2				
Chicago, Ill.	May 6.	1,099,850	614	54						22	11	20	11	6			
Cincinnati, Ohio.	May 12.	296,908	112	15								3	3				
Cleveland, Ohio.	May 6.	261,353	109	12						6	2	3					
Detroit, Mich.	May 13.	205,876	77									2	4				
Fall River, Mass.	May 12.	74,398	32	2							1						
Galveston, Tex.	May 5.	29,084	6	1													
Louisville, Ky.	May 13.	161,129	72	10							4		2				
Milwaukee, Wis.	May 13.	204,468	80	8						2	1	2					
Minneapolis, Minn.	May 13.	164,738	56	7					1				1				
Mobile, Ala.	May 13.	31,076	25	1													
Nashville, Tenn.	May 13.	76,306	32	7													
Newark, N. J.	May 13.	181,830	96	18								2					2
New Orleans, La.	May 6.	242,039	171	14													
New York, N. Y.	May 13.	1,515,301	940	99		3			4	8	20	28	7	12			
Pensacola, Fla.	May 6.	11,750	3														
Philadelphia, Pa.	May 6.	1,046,964	460	58						11	2	18	1	3			
Pittsburg, Pa.	May 6.	238,617	101	9						5	4	4	4				
Portland, Me.	May 13.	36,425		4													
Providence, R. I.	May 13.	148,944	77							1	3		1				
Richmond, Va.	May 6.	81,388	30	4						1							
Rochester, N. Y.	May 13.	133,896	59	10							1		1				
San Diego, Cal.	May 6.	16,159	5														
San Francisco, Cal.	May 5.	298,997	116	16		1				3							
Toledo, Ohio.	May 12.	81,434	24							1	1	3					
Washington, D. C.	May 6.	230,392	102	12						5							

Table of temperature and rainfall, week ended May 15, 1893.

[Received from Department of Agriculture, Weather Bureau.]

Locality.	Temperature in degrees Fahrenheit.			Rainfall in inches and hundredths.		
	Normal.	*Excess.	*Defic'ncy.	Normal.	Excess.	Deficiency.
<b>New England States:</b>						
Eastport, Me.....	46	2	.....	.98	.....	.18
Portland, Me.....	52	4	.....	.72	2.38	.....
Northfield, Vt.....	52	6	.....	.63	.....	.53
Manchester, N. H.....	55	3	.....	.87	.....	.27
Boston, Mass.....	55	3	.....	.77	.....	.37
Nantucket, Mass.....	51	0	.....	.92	.....	.....
Block Island, R. I.....	51	1	.....	.86	.14	.....
New London, Conn.....	55	3	.....	.84	.....	.84
<b>Middle Atlantic States:</b>						
Albany, N. Y.....	58	4	.....	.65	.05	.....
New York, N. Y.....	59	1	.....	.68	.....	.58
Philadelphia, Pa.....	62	0	.....	.63	.....	.63
Atlantic City, N. J.....	56	0	.....	.58	.....	.18
Baltimore, Md.....	63	.....	2	.77	.....	.57
Washington, D. C.....	63	.....	2	.84	.....	.24
Lynchburg, Va.....	65	.....	5	.84	.....	.24
Norfolk, Va.....	65	.....	3	.91	.....	.11
<b>South Atlantic States:</b>						
Charlotte, N. C.....	68	.....	6	.98	.....	.68
Raleigh, N. C.....	66	.....	4	1.37	.03	.....
Wilmington, N. C.....	69	.....	3	.94	.86	.....
Charleston, S. C.....	72	.....	2	.87	.....	.07
Augusta, Ga.....	72	.....	4	.77	.....	.47
Savannah, Ga.....	78	.....	3	.40	.....	.40
Jacksonville, Fla.....	74	.....	2	1.13	.....	.74
Titusville, Fla.....	76	.....	1	1.13	.....	.93
Jupiter, Fla.....	75	.....	2	1.83	.....	1.63
Key West, Fla.....	80	.....	2	.78	.....	.68
<b>Gulf States:</b>						
Atlanta, Ga.....	68	.....	2	.85	.....	.35
Pensacola, Fla.....	73	0	.....	.70	.80	.....
Mobile, Ala.....	73	0	.....	.98	.92	.....
Montgomery, Ala.....	72	.....	2	.91	.....	.31
Vicksburg, Miss.....	72	2	.....	1.10	.....	.10
New Orleans, La.....	74	1	.....	1.12	.29	.....
Shreveport, La.....	73	1	.....	.99	.....	.37
Fort Smith, Ark.....	68	0	.....	.98	.12	.....
Little Rock, Ark.....	69	1	.....	1.26	.....	.56
Palestine, Tex.....	71	1	.....	1.63	.67	.....
Galveston, Tex.....	75	1	.....	.92	.....	.02
San Antonio, Tex.....	74	1	.....	.77	2.54	.....
Corpus Christi, Tex.....	75	1	.....	.76	1.54	.....
<b>Ohio Valley and Tennessee:</b>						
Memphis, Tenn.....	69	2	.....	.83	.57	.....
Nashville, Tenn.....	67	1	.....	.78	.72	.....
Chattanooga, Tenn.....	67	1	.....	.98	.....	.28
Knoxville, Tenn.....	65	1	.....	.84	.46	.....
Louisville, Ky.....	65	1	.....	.84	.06	.....
Indianapolis, Ind.....	62	0	.....	.91	.49	.....
Cincinnati, Ohio.....	63	.....	1	.77	1.03	.....
Columbus, Ohio.....	61	.....	1	1.12	.08	.....
Pittsburg, Pa.....	61	.....	1	.77	.....	.37
<b>Lake Region:</b>						
Oswego, N. Y.....	53	5	.....	.56	.....	.26
Rochester, N. Y.....	55	7	.....	.66	.....	.56
Buffalo, N. Y.....	53	3	.....	.77	.....	.47
Erie, Pa.....	54	4	.....	.76	.....	.10
Cleveland, Ohio.....	55	3	.....	.71	.69	.....
Sandusky, Ohio.....	57	1	.....	.77	.53	.....
Toledo, Ohio.....	57	3	.....	.77	.....	.17
Detroit, Mich.....	57	1	.....	.77	.....	.17
Port Huron, Mich.....	51	5	.....	.72	.18	.....
Alpena, Mich.....	48	4	.....	.82	.08	.....
Marquette, Mich.....	47	1	.....	.56	.....	.26
Green Bay, Wis.....	52	2	.....	.65	.15	.....
Grand Haven, Mich.....	53	0	.....	.77	.03	.....
Milwaukee, Wis.....	52	2	.....	.77	.....	.27
Chicago, Ill.....	54	2	.....	.84	.....	.44
Duluth, Minn.....	47	1	.....	.72	.....	.12

\*The figures in these columns represent the average daily departure. To obtain the average weekly departure these should be multiplied by seven.

Table of temperature and rainfall, week ended May 15, 1893—Continued.

Locality.	Temperature in degrees Fahrenheit.			Rainfall in inches and hundredths.		
	Normal.	*Excess.	*Defic'ncy.	Normal.	Excess.	Deficiency.
<b>Upper Mississippi Valley :</b>						
St. Paul, Minn.....	56	0	.....	.70	.....	.50
La Crosse, Wis.....	57	3	.....	.65	.....	.35
Dubuque, Iowa.....	58	2	.....	.89	.....	.19
Davenport, Iowa.....	59	1	.....	1.02	.....	.32
Des Moines, Iowa.....	60	2	.....	1.08	.02	.....
Keokuk, Iowa.....	61	3	.....	.91	.....	.51
Springfield, Ill.....	61	1	.....	1.12	.18	.....
Cairo, Ill.....	66	2	.....	.84	.16	.....
St. Louis, Mo.....	65	1	.....	.88	.12	.....
<b>Missouri Valley :</b>						
Springfield, Mo.....	67	0	.....	1.41	.19	.....
Kansas City, Mo.....	63	3	.....	.91	.....	.31
Concordia, Kans.....	61	5	.....	.94	.26	.....
Omaha, Nebr.....	61	3	.....	1.00	.70	.....
Yankton, S. Dak.....	58	2	.....	.96	.....	.96
Valentine, Nebr.....	56	0	.....	.84	.....	.64
Huron, S. Dak.....	54	2	.....	.79	.....	.46
Pierre, S. Dak.....	56	0	.....	.47	.....	.39
<b>Extreme Northwest :</b>						
Moorehead, Minn.....	52	0	.....	.56	.14	.....
St. Vincent, Minn.....	49	1	.....	.38	1.42	.....
Bismarck, N. Dak.....	53	1	.....	.56	.....	.56
Fort Buford, N. Dak.....	53	2	.....	.36	.....	.28
<b>Rocky Mountain Slope :</b>						
Havre, Mont.....	52	6	.....	.23	.....	.13
Helena, Mont.....	52	4	.....	.28	.....	.08
Rapid City, S. D.....	52	4	.....	.91	.....	.91
Spokane, Wash.....	56	2	.....	.28	.....	.18
Walla Walla, Wash.....	62	.....	2	.45	.....	.45
Winnemucca, Nev.....	53	9	.....	.14	.....	.14
Salt Lake City, Utah.....	58	6	.....	.45	.....	.45
Cheyenne, Wyo.....	50	4	.....	.49	.....	.49
North Platte, Nebr.....	57	5	.....	.63	.....	.63
Denver, Colo.....	55	5	.....	.74	.....	.74
Montrose, Colo.....	56	4	.....	.15	.....	.15
Pueblo, Colo.....	58	4	.....	.28	.....	.28
Dodge City, Kans.....	62	2	.....	.86	.04	.....
Abilene, Tex.....	71	.....	3	1.00	4.70	.....
Santa Fe, N. Mex.....	55	1	.....	.16	.64	.....
El Paso, Tex.....	72	.....	4	.07	2.23	.....
Tucson, Ariz.....	73	.....	3	.05	.65	.....
<b>Pacific Coast :</b>						
Olympia, Wash.....	54	0	.....	.52	.....	.22
Portland, Oregon.....	59	.....	1	.58	.....	.48
Roseburg, Oregon.....	57	1	.....	.41	.....	.41
Eureka, Cal.....	54	0	.....	.70	.....	.50
Red Bluff, Cal.....	67	3	.....	.30	.....	.30
Sacramento, Cal.....	64	4	.....	.19	.....	.19
San Francisco, Cal.....	58	.....	2	.14	.....	.14
Fresno City, Cal.....	67	3	.....	.01	.....	.01
Keeler, Cal.....	66	4	.....	.06	.....	.06
Los Angeles, Cal.....	64	0	.....	.07	.03	.....
San Diego, Cal.....	62	0	.....	.07	.33	.....
Yuma, Ariz.....	77	.....	3	.00	.30	.....

\*The figures in these columns represent the average daily departure. To obtain the average weekly departure these should be multiplied by seven.

## FOREIGN.

(Reports received from medical officers of the U. S. Marine-Hospital Service detailed for quarantine service at foreign ports.)

*Relative to reporting the destination of immigrants landing at Quebec.*

QUEBEC, CANADA, May 9, 1893.

SIR: In reply to your letter of the 5th instant, directing me to report by telegraph the arrival of every vessel bringing immigrants, and "so far as possible their destination," I have the honor to state that I wired to-day the late arrivals, including the steamers just docked.

In the matter of reporting destinations of immigrants, it will be a work involving considerable delay after the arrival of the ship and probable departure of the trains. Many immigrants are unbooked for ultimate destination upon arrival; or the booking list may only indicate a large railroad center whence the immigrants scatter to local points, as Chicago, Minneapolis, and Winnipeg.

After arrival at dock the immigrants are busy unpacking their effects for disinfection and repacking same and caring for their trunks, boxes, etc., till checked. Then they are ticketed and later those having United States tickets are furnished with my certificate of disinfection. Until the ticket clerks of the railroad companies tabulate the sales of tickets from their coupon stubs, it is impossible to determine their actual destinations. This tabulation may not be made for many hours, for one cause or another, during which time the passengers have started on their journey. Many purchase tickets to Winnipeg, from whence they make a second purchase to local points in the adjoining tier of Northwestern States of the Union. This will explain the difficulty of tracing the immigrant from his landing to his actual destination, as well as the reasons which prevent securing the same immediately upon arrival of the steamer. I will endeavor to procure essential information as soon as possible for your use, and am promised the assistance of the authorities in the matter.

Very respectfully, your obedient servant,

CHAS. E. BANKS,  
Past Assistant Surgeon M. H. S.

To the SUPERVISING SURGEON-GENERAL M. H. S.

*Report on the Canadian Quarantine Station at Grosse Isle.*

Under date of May 10, 1893, Passed Assistant Surg. Chas. E. Banks reports as follows:

QUEBEC, CANADA, May 10, 1893.

SIR: I have the honor to state that on the 7th instant I visited and inspected carefully the quarantine station at Grosse Isle in the St. Lawrence, and submit the following report thereon:

Grosse (originally Grâce) Isle is 31 miles below Quebec, in the middle of the river St. Lawrence, which at that point is 12 miles wide. The island is approximately 1½ miles long, a half mile wide, and contains about 700 acres. It was first used by the Dominion authorities as a quarantine station in 1832, when it was administered as such by the military forces of the British Government. In time the actual professional work was placed in the hands of a civil appointee, and then by degrees



the military establishment relinquished control to the civil government, and it has now been for many years under the charge of the department of agriculture, forming the principal feature of the several stations known collectively as the St. Lawrence quarantines.

The Grosse Isle quarantine is under the charge of a superintendent and a staff of 21 assistants constituting the permanent force under normal conditions. The principal officials are Frederick Montizambert, M. D., F. R. C. S., medical superintendent, and Frederick W. Church, M. D., and Joseph V. Coté, M. D., assistants.

The present superintendent has been in charge of the station since 1869, having served three years previously as assistant to a former superintendent. This long service and its practical results are so well known to the sanitarians of America that any words of introduction from me would be unnecessary.

The island itself is well suited for its purposes, being so conformed that it has been readily adapted to the plans of its administrators into the three artificial divisions that exist to-day: the sick, central (executive), and healthy. In fact, the entire sanitary defense of Canada, as her commerce is now carried on, is of an ideal character, being controlled by this one sentinel in her one great water avenue during the summer (the ordinary quarantine season), by which every foreign vessel must pass to reach her great ports, Montreal and Quebec. The three divisions of Grosse Isle will now be considered in turn.

#### I. CENTRAL (EXECUTIVE) DIVISION.

The middle third of the island contains the residence and office of the superintendent, the barracks for the crew and families of the boarding steamer, bakery, stables, and several outbuildings, Roman Catholic chapel and priests' residence, Episcopal chapel and rectory. These two chapels were erected by the Dominion Government for the use of the permanent and temporary residents. The superintendent's office is connected with several points about the island by telephone to facilitate the transaction of business and also by telegraph with Quebec. He receives through the signal and telegraphic service of the Dominion, every morning and evening, reports of the movements of incoming vessels as soon as they are sighted in the Gulf of St. Lawrence or at the mouth of the river, and can thus, many hours ahead, calculate upon their probable arrival at Grosse Isle. This division has a short wharf used by the boats of the station for landing of supplies, residents, and those destined for the sick division. A fine ambulance, constructed after designs by Dr. Montizambert, is in service for this division, and I noted the prompt response to the call for it by whistle from the boarding tug, on the day of my visit, when a patient from a passing ship was brought ashore. All the buildings in this division are well adapted to their purposes.

#### II. SICK DIVISION.

This is on the easterly end of the island, and its limits are indicated by a dividing fence and stile, which is guarded by the quarantine police to prevent intercommunication when the division is in commission. The buildings on it consist of a hospital, steward's and orderlies' quarters, cholera lazaretto, barracks for detained relatives of patients, disinfecting buildings, washhouses for hospital and lazaretto, and storehouses. The hospital is a brick building (erected 1879) of two stories made to accommodate 100 beds. It has four wards of 20 beds each, and smaller

rooms for officers or for cases requiring the seclusion of a private ward. The ward furniture consists of iron cots provided with straw bale mattresses which are burned after use. It has the usual administrative, dispensary, and subsistence arrangement and is operated by the usual routine methods familiar to administrators of public institutions. At present there are but three cases in the hospital, all of a temporary and noncontagious character. The floors and inside work are of soft wood, and it is plastered throughout. It is well adapted for the purpose, has light and airy wards and is sufficiently ventilated.

The cholera lazaretto is a very old wooden building, about 75 feet long, of one story, peak roof, roughly constructed, whitewashed, and at present unfurnished. The other buildings in this division require no extended description. The disinfecting buildings are small wooden structures, used in part as store sheds, of which portions have been fitted up with new board linings and otherwise tightened to secure imperviousness for sulphur dioxide fumigation. A special apparatus for fumigating letters written by patients is a part of the arrangements in this division to prevent the spread of contagious disease. It is probable that several of the old buildings in this section will soon give way to new ones as the modern development of the station progresses. They were built and located at a time when sanitary science was in its formative period, while now a regard for convenience of administration will doubtless bring them into more compact relations, as the developments of our knowledge of the nature of contagion has taught us to deal with it less at arm's length. A crematory furnace for the disposal of bodies of persons deceased from cholera, and other purposes, a small steam sterilizing chamber, and laundry plant for the lazaretto will undoubtedly suggest themselves for this section as it is in turn reached in the evolution of the island from its primitive form of pesthouse to that of a scientific sanitary station.

### III. HEALTHY DIVISION.

It is gratifying to turn to this section, where the signs of activity and growth are more than evident. Eighty workmen are now engaged in putting finishing strokes upon several new buildings and appliances, or remodeling and improving old ones. Much has already been done here that will give great satisfaction to the health authorities of Canada and the United States, and that which remains to be finished is in such a state of advancement that the practical results could be immediately tested should the emergency arise. The inclemency of the spring, the ice blockade in the river, and the inevitable slowness of contractors have combined, as I am informed, to delay the expected completion of contracts which were limited to the first days of May for their expiration. This will account for the numerous statements of what is to be done in the following account of this division:

The principal buildings in this division, which is on the west end of the island, are the steam disinfecting plant, the lavatory, the cabin passengers' hotel, the intermediate and steerage detention barracks, residence of the medical assistant, landing wharf, police headquarters, and sundry storehouses.

*Steam disinfecting building.*—This is a new wooden structure at the shore end of the wharf. Rails with switches are laid upon the wharf leading to the building, and the iron carriages run from the dock to the steam chambers, three in number. These chambers are placed side by side, each 25 feet long by 8 feet 6 inches square. They are constructed of boiler iron, closed at both ends by iron doors, whose shell is also sup-

plied with steam, as hereafter noted. A Knowles vacuum pump operates all three chambers by a system of valves arranged to separate those not in operation from the one to be used, and when the vacuum has been secured the live steam is supplied by three high-pressure 40 horse power horizontal steel boilers of a tested pressure of 170 pounds, but certificated to be run at 120 pounds.

The doors are supplied by steam in their shells through special piping leading to them and terminating in 7-ply rubber hose, so that the doors can be opened and shut without the necessity of couplings. The steam chambers are the same as those in use at the Louise embarkment and are supplied with pressure gauges and thermometer, and will have electrical contact thermometers and registration dials forthwith to complete the contract. As soon as the chambers receive their coating of asbestos the building will be divided laterally to make an infected end in which the articles enter, and a noninfected end from which they are taken out. In the infected end in the second story, there are in process of erection twelve baths with shower attachments, to be equally divided for use between the sexes. After the passenger has been personally cleansed he passes to the noninfected end in the same story, over the steam chambers, to receive his sterilized clothes, which have been passed through the chambers while his bath is in progress, or he remains there until his outfit is returned to him in case it consists of but the suit he wears. The building and machinery is in readiness for practical operation although it still lacks a few of the minor details of construction noted above to pronounce it complete. It has a feed pump and large settling tank. Here also is a mercuric chloride tank for drenching wire trunks and containers, and a soapstone tank for articles requiring immersion.

*Cabin passengers' hotel.*—There is in process of erection a detention hotel for cabin passengers, which should have been completed in accordance with the time limit on May 1, so that the contractors are probably under forfeiture now. This is a wooden building located on a rocky bluff, 400 feet from the wharf, and is arranged with 54 staterooms, and 11 large rooms to accommodate 128 persons, two beds in a room. It is to be fitted with bath tubs, washout hopper-closets, hot and cold water, the materials for which are in readiness for the plumbers, who are following the carpenter work as fast as possible. The arrangements for the kitchen are good, and, with a large assembly or sitting room, warmed by open fireplaces at either end, and a balcony overlooking the St. Lawrence, the saloon passenger whose misfortune it may be to come over on an infected ship will find his lines fallen in pleasant places if he is destined to make a stay at Grosse Isle.

*The lavatory.*—This is an old building which was formerly fitted up with old-fashioned wash boilers surrounding four large chimneys situated equidistant in the interior. One end has been set off for laundry purposes, utilizing the old boilers and set wall tubs of wood when the clothing of the intermediate and steerage is washed. The next compartment has been fitted up by Dr. Montizambert for a bacteriological laboratory, and this room and the succeeding compartments are divided by corrugated galvanized iron walls 10 feet in height. The space above under the roof being open, access from one room to another or inspection over these walls is prevented by wire netting securely fastened to the top of the iron partitions. The next three divisions in the building are 3 bath and water-closet compartments, 6 baths and 8 closets in each, making a total of 18 tubs of iron porcelain lined, supplied with hot and cold water, and 24 earthenware washout closets (unitas) operated by

separate service boxes. These boxes are automatically filled from the water tanks overhead, which are supplied by a steam pump drawing directly from the St. Lawrence a few feet in front of the building.

The main trunk of the discharging sewer is controlled by a gate valve. This was put in by Dr. Montizambert for use in case of the development of a number of suspected or infected cases—cholera or typhoid fever. The gate would be closed, and a disinfecting solution poured down to sterilize the evacuations of the users until it was found to be necessary to scour it out by the accumulation of collected material. All these bath and water closets are built of this corrugated iron sheeting, and the old floors have been covered with smooth galvanized iron, soldered to prevent leakage, dipping towards the center where small outlets take off surplus drippings to the ground beneath. Three tanks of bichloride overhead in this building have leaders of hose, and the walls and floors can be thoroughly washed when necessary. It is a most admirable arrangement, and the only wish, not criticism, that one could make about it, is that these modern appliances and improvements could have been put in a building erected for the purpose. It is like "putting new wine in old bottles," and in view of the rapid decay of these wooden structures in this climate, it will probably require constant repair outside to support the interior work properly as time goes on.

*Detention buildings.*—There are eight detention barracks, of considerable age, dating back to the early days of the station. They are roughly built, unpretentious shells, whitewashed inside and out, but still showing evidences of their antiquity. Six of them, accommodating 250 persons each, or a total of 1,500, are devoted to the steerage passengers. They are fitted with wooden bunks now, but all will have galvanized-iron adjustable berths, two in a tier, similar to those used by some of the transatlantic lines in their immigrant passenger steamers. These beds are now overdue from England, and will be set up immediately upon arrival. A general washroom will be in each building. Two of the detention barracks have been set aside for intermediate passengers, accommodating about 200, and the improvements interiorly are now about completed. They consist of new flooring and subdivision of the space into staterooms made by wooden partitions to the height of the plates, protected overhead by wire netting to prevent intercommunication over the top. Each room will have a standing washbowl. A central room for dining is arranged in each barrack. Dry earth-closets for males and females are at opposite ends, the sexes being separated likewise in the assignment of rooms.

These barracks are not well located, being in low ground, and thus incapable of drainage whenever a water-supply system becomes an accomplished fact on the island. But it would seem that it would not be wise to expend a large sum of money in putting modern plumbing into buildings which can not last long at best and when they come to be rebuilt, as they must, they will be undoubtedly relocated with reference to drainage facilities.

*Water supply.*—Unfortunately for the completion of this finely-arranged station it has no artificial water supply. Water for potable or other purposes is now drawn from dug wells and for laundry purposes from the river. But it is gratifying to add that the Dominion Government has instituted measures to provide for this deficiency. Two artesian wells are now being driven, the contractor arriving the same day as myself, and he has engaged to drive 1,000 feet to reach water, for potable purposes principally. In addition to this, two Worthington pumps are on their way to the island to be set up on the wharf. They will de-

liver river water to a 50,000-gallon tank on an eminence in the healthy division, through a 4-inch pipe, and thence it will be distributed to the buildings in that portion.

As an auxiliary supply, a condenser and aëerator will be set up in the boiler building at the head of the wharf to purify the river water for potable purposes, of the capacity of 2,000 gallons per day. "Pasteur" filters are to be supplied to each building. The ice blockade, which has just been broken, has delayed the shipment of all these materials from the contractors in Montreal or the departments in Ottawa.

*Deep water wharf.*—Another pressing need of the station is a deep-water wharf to which the large steamers can come and be docked when infected. At present the passengers would have to be transferred by one of the steamers belonging to the station and if the weather happened to be stormy it might cause serious delay. Dr. Montizambert has recommended this improvement to his government, but it has not yet been acted upon.

*Steamers.*—There are two vessels, viz :

First, *Challenger*: She is the regular boarding and inspecting boat and is of the following dimensions: Eighty-eight foot keel; 93 feet over all; draft, 7.6 feet; 18-foot beam; tonnage, about 96. She is of the seagoing tug type and is a model boat for the purpose, similar to the United States quarantine steamer *Foster*. She has been fitted with a small hospital room for removal of noninfectious cases from vessels not required to be kept in quarantine. She has a steam disinfecting attachment for disinfecting the ship's hospital from whence the case is taken, and a mercuric chloride sprinkler for completing the work of disinfection.

Second, *Druid*: A side-wheel steamer, 160 feet long, temporarily transferred from the department of marine and fisheries to the quarantine service. She has a large mercuric chloride tank for drenching infected vessels, a sulphur blast furnace on deck for fumigating ship's hospitals, the holds and cargoes of vessels, and is used for a supply steamer and to land the passengers and effects of infected vessels on the island for quarantine detention. She is not entirely suited for the work, being a side wheel boat, which makes her an awkward craft to run alongside of other vessels for disinfection purposes.

*General remarks.*—Comment upon such an elaborate plant as that above described must be of a favorable nature, and congratulations can be extended to the Government which has equipped it and to the guiding spirit of it all, who has through a long service brought it to its present efficiency. Although much remains to be done to complete the plans of Dr. Montizambert, yet the work is so far advanced that it can be clearly seen what the completed plan will be before another month ends.

An additional medical assistant has been appointed this year to increase the efficiency of the staff, thus relieving Dr. Montizambert of ordinary routine duties, as his own work has been materially increased this season in the supervision of the disinfecting stations at Quebec and Levis.

I was shown a small inclosure on the island, of about 2 acres, in which were buried between June and September, 1847, the bodies of 5,424 persons, the victims of typhus fever. They were refugee immigrants fleeing from the famine in Ireland in 1847 only to find a grave in America.

To the SUPERVISING SURGEON-GENERAL M. H. S.

*Arrival of steamship Parisian at Quebec.*

QUEBEC, May 13, 1893.

To Surgeon-General WYMAN,  
Washington, D. C.:

*Parisian* arrived from Liverpool; 810 steerage; 1 case measles, otherwise all well. English and Scandinavians predominate.

BANKS.

*Arrival at Halifax, Nova Scotia, of steamship Assyrian without European emigrants.*

HALIFAX, NOVA SCOTIA, May 9, 1893.

SIR: I have the honor to report that the steamship *Assyrian* arrived yesterday without any European emigrants. The regular fortnightly boat, *Corean*, is due about May 20.

Very respectfully,

ALEXANDER B. McDOWELL,  
Sanitary Inspector, M. H. S.

To the SUPERVISING SURGEON-GENERAL M. H. S.

*Inspection of ships and emigrants at Liverpool.*

UNITED STATES CONSULATE,  
Liverpool, May 2, 1893.

SIR: I have the honor to make the following report concerning the health of this port and the conditions affecting the sanitary inspections of ships, in so far as they have come under my observation. The health of the port is good, there being no contagious disease present except the minor ones affecting children and a few sporadic cases of smallpox and typhus fever. The latter are, as soon as detected, transferred to a special hospital, as required by law. The English Board of Trade maintains a medical inspection of every second cabin and steerage passenger leaving the port, with a view to prevent the outbreak of contagious sickness on board ship. These inspectors also examine the ship's stores as to their quality and quantity and the steerage compartments as regards cleanliness, air space, and ventilation. Their inspection does not include saloon passengers or the hold and bilges of the ship.

Most of the transatlantic ships are anchored off-shore before clearing, and are reached by the company's tenders. I have therefore found it convenient to inspect emigrants at the hours appointed for the inspection by the board of trade officials. Each emigrant is therefore inspected by three physicians, one of the medical officers of the board of trade, the ship's surgeon, and the United States medical inspector. The saloon passengers come on board about two hours after this inspection, and just before the vessel clears. The inspection of the passengers of each ship requires therefore about four hours, sometimes longer, including unavoidable delays. The inspection of the provisions can only be satisfactorily made just before they are placed on board and stored, which is done several days before sailing.

A notification is sent by the several companies when the stores are ready for inspection. To inspect the stores when the vessel is ready to sail would entail upon the passengers unnecessary hardship and delay should any portion of such stores be found unfit and have to be replaced. It is not practicable to investigate the condition of the hold and limber

spaces at the time of inspecting either the passengers or the stores, as this can be done only when the vessel is quite empty. It will thus be seen that a thorough inspection of a single ship requires three separate visits. \* \* \*

Very respectfully,

L. L. WILLIAMS,  
*Passed Assistant Surgeon, M. H. S.*

To the SUPERVISING SURGEON-GENERAL M. H. S.

*Cholera in Lorient.*

HAVRE, FRANCE, *May 2, 1893.*

SIR: I have the honor to make the following report of cholera in Lorient: Cases under treatment, 27; new cases, 3; deaths, 1; Lorient, district, 22 cases, 6 deaths; department of Morbihan, 14 cases, 5 deaths. The epidemic seems to be dying out, also that of typhus, of which latter I shall send you a report in a day or two.

Respectfully, yours,

E. R. HOUGHTON,  
*Assistant Surgeon, M. H. S.*

To the SUPERVISING SURGEON-GENERAL M. H. S.

*Report of cholera in the Department of Finistère.*

HAVRE, FRANCE, *May 4, 1893.*

SIR: I have the honor to give the following report which has just come in since departure of last one and from another source: Insane Asylum of St. Athanase (Finistère), 6 deaths; Quimper, 3 deaths during night of April 29; 1 case in a village near St. Athanase.

The report of the consular agent will be forwarded as soon as it arrives.

Respectfully, yours,

E. R. HOUGHTON,  
*Assistant Surgeon, M. H. S.*

To the SUPERVISING SURGEON-GENERAL M. H. S.

*Relative to reported cases of cholera and typhus fever at Rouen and Cherbourg.*

HAVRE, FRANCE, *May 4, 1893.*

SIR: Having heard of a report of several cases of cholera at Rouen and typhus at Cherbourg, I called on the prefect, who happened to be down from Paris, and I have the honor to inform you as to his statements. No cholera at Cherbourg or Rouen. No typhus at Cherbourg, but 1 suspected case, an old man, who is now under treatment.

I have to-day visited the Nouvel Hôpital, but found neither cholera nor typhus, nor is there any in Havre to-day.

Respectfully, yours,

E. R. HOUGHTON,  
*Assistant Surgeon, M. H. S.*

To the SUPERVISING SURGEON-GENERAL M. H. S.

*The sanitary condition of Marseilles.*

UNITED STATES CONSULATE,  
*Marseilles, April 12, 1893.*

SIR: I have the honor to inclose herewith a translated extract from the bulletins of health of the city of Marseilles for the months of February and March, 1893.

This information has been secured with the greatest difficulty, as it had been decided by the sanitary authorities to no longer furnish the bulletins to the public. Under the circumstances, after calling on the maire and the préfet, and not having secured anything definite, I was compelled to inform the agents of the steamship companies that I would be unable to furnish them clean bills of health. Within twenty-four hours after this action the bulletins were sent to me. The figures, however, as you will no doubt observe, are very unsatisfactory. Cholera is not mentioned, nor will it be in the future, and for definite information I am compelled to run after private practitioners and watch the hospitals. Within the two weeks I have been in Marseilles, the business requiring the attention of the medical officer has increased rapidly, and my time is now fully occupied in supervising disinfections of rags, wool, and hides.

At Lorient, yesterday, there was but one new case of cholera, and no deaths; but in the arrondissement, practically the suburbs, there were 18 cases and 6 deaths.

There is no cholera in Marseilles at this date.

Respectfully, yours,

FAIRFAX IRWIN,  
*Surgeon, M. H. S.*

To the SUPERVISING SURGEON GENERAL M. H. S.

[Inclosure 1.—Department Bouches du Rhone.—Translation.—Extract.]

CITY OF MARSEILLES, SANITARY STATISTICS, FEBRUARY, 1893.

Population, 406,919. Deaths during the month of February (causes of death, all ages): Typhoid fever, 15; smallpox, 4; scarlet fever, 2; whooping cough, 5; diphtheria, 36; diarrhea, (gastro-enteric), 178; other causes of death, 213; causes remaining unknown, 59.

I invite attention to the following points: Diarrhea, 178 cases. Cholera is not mentioned in the report, and at least 50 per cent of the 178 cases may be put down as due to cholera.

There are given a total of 272 cases in which the cause of death is not mentioned.

FAIRFAX IRWIN,  
*Surgeon, M. H. S.*

[Inclosure 2.—Department Bouches du Rhone.—Translation.—Extract.]

CITY OF MARSEILLES, SANITARY STATISTICS, MARCH, 1893.

Population, 406,919. Deaths during the month of March (causes of death, all ages): Typhoid fever, 6; smallpox, 7; measles, 13; scarlet fever, 2; whooping cough, 16; diphtheria, 40; diarrhea (gastro-enteric), 52; other causes of death, 193; causes remaining unknown, 57.

NOTE.—It will be observed that the falling off in deaths from diarrhea is marked, viz, from 178 cases in February to 52 cases in March. Deaths from causes not given, 250, making for the two months, February and March, a total of 522.

FAIRFAX IRWIN,  
*Surgeon, M. H. S.*

*Further report as to disinfection of emigrants' baggage at Antwerp.*

UNITED STATES CONSULATE,  
*Antwerp, May 2, 1893.*

SIR: I have the honor to state that all baggage from infected localities is unpacked, spread on racks, and disinfected by steam.



The infected localities include Russia, Galicia, Hungary, Lorient in France, and Antwerp.

All the other baggage is fumigated by sulphur.

It is perhaps proper to state that prior to my arrival in Antwerp nothing in the way of disinfection of baggage or the control of emigrants had been attempted. The introduction of the requirements of our regulations requires time and no little patience on my part. The company can not erect its disinfecting plant on the wharf without permission from the city. But I am told positively that the mayor will grant the required lease this week, and that work will be begun immediately.

There were 560 pieces of baggage on the steamship *Belgenland*, weighing in all about 9 tons. The sorting out of this amount of baggage according to infected and noninfected localities was a labor of no small dimensions. Now the company assort its baggage upon arrival into two heaps, the one from infected the other from noninfected localities. These are things which the company is learning by experience. They have not yet arrived at a satisfactory system, for the complications of handling baggage in Belgium make the problem of assortment exceedingly involved.

Since my arrival here the baggage from infected localities has been unpacked, spread on the bed frames of one of the ship's compartments, and exposed to steam for one hour. At first the company placed the stevedores at my disposal for the performance of this work, but their help was so unsatisfactory that the company now has the stewards assist me. Since this change there is much less soiled linen and breakage from carelessness.

The steerage passengers are passed in review in the following manner: They move down the gang-plank spaced 10 feet apart. I stand on the deck facing the arriving passengers. As each emigrant is inspected he is handed a card. Doubtful cases are placed aside to be examined more minutely later.

The crew is examined at boat muster. This takes place about two or three hours prior to embarkation. This is the only chance of seeing all the crew together.

The remainder of the inspection is done at such times as are found to be most convenient to all concerned, if possible within six hours of sailing. These are duties which I find it desirable to perform so as not to disturb the business of the company, nor conflict with the Belgian laws on these subjects, which also provide for the sanitary inspection of the ship and the medical inspection of emigrants.

With freighters the time of sailing is a matter of much uncertainty. The crew is unmanageable, and as a rule drunk.

In all cases I satisfy myself that the ship is clean and in good sanitary condition before giving the bill of health. Disinfection is only required when I consider it necessary.

All cargo is presented for inspection and, if necessary, disinfection.

I have declined to certify to some articles, such as egg albumen from Russia, without certificates of district of origin or of health; rags collected at Antwerp, on account of the prevalence of smallpox; old feather beds and similar articles.

Very respectfully, your obedient servant,

M. J. ROSENAU,  
*Assistant Surgeon, M. H. S.*

To the SUPERVISING SURGEON-GENERAL M. H. S.

*Report of contagious diseases at Antwerp.*

UNITED STATES CONSULATE,  
*Antwerp, May 3, 1893.*

SIR: I have the honor to communicate that the official report received at this office to-day shows that for the week ending April 29, 1893, there have been 80 cases of smallpox treated at the civil hospitals, with a death rate of 9.

I am given to understand from several sources that vaccination is not compulsory in Belgium.

The same report shows 4 cases of typhoid fever; 1 case of scarlet fever; and 4 cases of diphtheria, with 1 death.

Very respectfully, your obedient servant,

M. J. ROSENAU,  
*Assistant Surgeon, M. H. S.*

To the SUPERVISING SURGEON GENERAL M. H. S.

*Report of sanitary procedure at Hamburg.*

UNITED STATES CONSULATE,  
*Hamburg, May 2, 1893.*

SIR: Referring to Department cablegram of 30th ultimo, and other matters having a similar bearing, I beg to submit the following report of the situation as observed here, and such information as I have been able to gather as to the whole of northwestern Europe:

First. In Hamburg there has been, to the best of my knowledge and belief, not a single case of cholera asiatica since March 4.

There was in January, 1893, a total of 30 cases and 4 deaths; in February, 2 cases and 1 death; in March, 1 case and no deaths.

Each case of diarrhea occurring in this city and coming to the knowledge of the authorities is most carefully looked into, and the feces subjected to bacteriological examination by Prof. Dr. Dunbar, an American, and a scientist of high order, and since the case convalescent on March 4 not a single instance of spirillæ is recorded.

The streets of the city are clean, the sewers in fine condition. The water supply is not good, but the authorities endeavor to supply free to all who will take it an ample supply of boiled water for drinking purposes, and also a fair quantity of artesian water. This latter is, however, mostly consumed in supplying seagoing vessels. In this connection I should state that, independent entirely of any possible contamination by cholera spirillæ, the water of the Elbe River is absolutely unfit for drinking, and hence it is very likely that a stranger drinking this water at its best will contract a violent diarrhea.

As to merchandise shipped hence, I beg to say that, under the regulations, I have made three classifications of cargo. First. Textiles, new, dry, and clean, and goods of a similar nature (character clearly shown on manifest, which I visé each time) go without detention or hindrance of any kind. Second. A class which I inspect either in person or by my assistant, and either pass or order disinfected, according to the merits of the case. Third. A class consisting of old and dirty personal effects, bedding, especially feathers, which I have excluded absolutely except under steam disinfection in some rare cases.

The shippers and shipowners, as well as interior consulates, have been notified of these classifications, and while there has been a vast amount of trouble to enforce these rules, and at the first an impossibility, I can

safely say that now, with few if any exceptions, the ruling is working smoothly and with a minimum of inconvenience to all parties.

As to passenger traffic—and here we have the greatest difficulty and least facilities—the matter stands thus :

The passengers (steerage) arrive here day by day from all of northern and eastern Europe, and are, according to class, placed either in the thirty or more boarding houses or in the barracks on the America quay. All Russians, Galicians, Hungarians, and southern Europeans, if any, go henceforth to the barracks, where they will comply with the exact letter of the regulations governing such matters as laid down in article 9, pages 14–15, Regulations, February 24, 1893.

It is claimed that all the Russians, who have heretofore gone through Hamburg, will now go by way of Bremen, and henceforward Hamburg will have no more Russians passing through.

Very respectfully, yours,

J. H. WHITE,  
*Passed Assistant Surgeon.*

To the SUPERVISING SURGEON-GENERAL M. H. S.

*Erection of steam-disinfecting plant by steamship company at Rotterdam.*

ROTTERDAM, NETHERLANDS, *May 1, 1893.*

SIR : I have the honor to make the following statement of operations at this port : \* \* \*

Regarding unpacking of emigrants' baggage and disinfection by steam, I would state that the contents of your telegram were immediately made known to the consul and the directors of the steamship company. We held a conference at the consul's office this morning, and the directors agreed to arrange their disinfecting chamber upon plans submitted by me, viz. to erect bins made of gas pipe (or something similar), covered with galvanized-iron wire netting, the entire plant to be easily taken down or put up. They will go to work at it at once, and will have it ready before the next vessel leaves here, May 6. We will confine the disinfection of baggage to that coming from infected ports. \* \* \*

The request that inland consuls, where cholera exists, telegraph the consuls at seaport towns of the intended departure from their ports of immigrants from infected localities has met with no response at this port. \* \* \*

Mr: Reuchlin, director of the Passenger Steamship Company, said this morning that he would do anything reasonable to conform to the regulations. They have just completed a building, nicely arranged, for the isolation of passengers coming from infected localities, or suspects. They are very proud of their record of having carried no cholera into New York Harbor last year, and wish to retain that reputation.

Very respectfully,

R. M. WOODWARD,  
*Passed Assistant Surgeon, M. H. S.*

To the SUPERVISING SURGEON-GENERAL M. H. S.

*Report of inspection and disinfection of vessels and emigrants at Naples.*

UNITED STATES CONSULATE,  
*Naples, April 23, 1893.*

SIR : During the past thirty days there have been about 16 vessels and 18,000 passengers. During May there will be 14 sailings. There are absolutely no conveniences or arrangements for the handling of the

hips and passengers. The ships lie at anchor from a quarter to half as mile from the quay, and transfer is made in rowboats, necessitating great loss of time and very considerable discomfort. I have succeeded in making arrangements, however, for the handling and inspection of the people, that can be made to answer for the present, but would be entirely worthless if cholera should appear in the country from which the emigrants come, or in Naples. My most earnest recommendations to the steamship companies have produced no effect in the direction of supplying suitable accommodations. The directions in the regulations in regard to an inspection of passengers just previous to sailing are wholly impracticable at this port. In the first place, the vessel on the day of sailing is in the hands of an Italian health and police commissioner; moreover, the discovery of one case of contagious disease, or with a suspicious history, would hold up the entire ship. I have, therefore, adopted the plan of passing an inspected passenger into a clean ship as follows:

When the ship is announced to be ready, I inspect her thoroughly, direct such changes made as I deem necessary, and examine her medical record. I then proceed with the examination of the passengers at a small building on the quay, where temporary arrangements have been made for the work. The passenger is then taken on board and not allowed to leave again. With only a very few exceptions the passengers are Italians with passports of only a week or ten days old, so that we have a reliable check upon their previous whereabouts. As each passenger passes the medical inspection, his passport is stamped. On the day of sailing I visit the ship, examine her throughout, note if the required changes have been made, and muster the crew. This, before the arrival on board of the Italian commission. When they arrive, all the passengers are driven on deck by armed guards, the companion ways closed, and the entire crowd of men, women, and children kept standing, exposed to all weathers, from six to eight hours, until they can be passed in single file before the commissioners and have their passports examined. As they pass I note if their passports bear my stamp, and am thus certain that there is no one aboard that I have not seen. For the present, I have not deemed it necessary to require the disinfection of the baggage, except in a few cases. I have, however, rejected a large quantity of old bedding, and put a stop to the practice of carrying sausage, cheese, etc., in personal luggage. The work of examining the baggage is very tedious and laborious. At present I have each passenger's small baggage examined as he comes on board, and the larger pieces passed through a separate gangway forward.

There has already been a most noticeable improvement in the sanitary condition of both passengers and vessels; and I have succeeded in having running water put into latrines, lavatories supplied, and other reforms made in ships which have been for years carrying emigrants without these apparently indispensable conveniences.

In several instances condemned bedding has been offered for shipment as "provisions" or "oil," but in every case the fraud was discovered.

The health of Naples is excellent at present, and I have made arrangements by which I think I will have prompt notice of the appearance of anything to give cause for alarm; but should such a thing occur, there would be absolutely nothing to do except to suspend emigration from this port, as there is no way of controlling the isolation of either persons or effects, and the companies positively neglect to make suitable arrangements.

I have secured the assistance of Mr. R. O'N. Wickersham, Mr. P. S. Twells, and Mr. C. D. Stone as assistants in handling baggage and passengers. The companies very gladly pay for their services, as otherwise there would be great confusion and delay. Mr. Wickersham's services as interpreter are invaluable, as he is not only perfectly familiar with Italian, French, and German, but has a thorough knowledge of the numerous obscure dialects spoken in the various provinces of Sicily.

At the time of my cable in regard to Dr. Irwin there were 5 steamships and about 6,500 passengers awaiting examination; but by working overtime I have succeeded in getting all but one of them off. The necessity of the presence of two officers, however, is as great as ever; indeed the need is urgent and permanent.

Respectfully,

G. B. YOUNG,  
*Assistant Surgeon, M. H. S.*

To the SUPERVISING SURGEON-GENERAL M. H. S.

(Reports received through the Department of State and other channels.)

*Cholera at Lorient.*

UNITED STATES CONSULATE,  
*Nantes, April 20, 1893.*

SIR: I have the honor to inclose herewith the sanitary report of Lorient and neighboring cities for the week ending April 16, 1893, inclusive.

In the department of Finistère a few cases of cholera have been reported, especially at the Quimper lunatic asylum, where 5 deaths occurred.

During the month of March 2 deaths from cholera have been recorded at Nantes, and notwithstanding assurances to the contrary, I have reason to believe that there are continually cases of cholera in the city, though they are isolated.

I am, sir, your obedient servant,

H. DE SALLIER DUPIN,  
*United States Consul.*

To Hon. JOSIAH QUINCY,  
*Assistant Secretary of State.*

[Inclosure.]

Week ended April 16, 1893: Lorient, town, 45 cases cholera, 6 deaths; Lorient, district, 135 cases cholera, 33 deaths.

UNITED STATES CONSULATE,  
*Nantes, April 29, 1893.*

SIR: I have the honor to inclose herewith a report stating the sanitary condition of Lorient, together with that of the departments of Finistère and Morbihan.

The sanitary condition of the city of Nantes is good, with but a few isolated cases of cholera, which so far cause no anxiety.

At Chantenay, near Nantes, about 10 cases of typhoid fever were reported during the past week.

I am, sir, your obedient servant,

H. DE SALLIER DUPIN,  
*United States Consul.*

To Hon. JOSIAH QUINCY,  
*Assistant Secretary of State.*

[Inclosure.]

Week ended April 22, 1893: Lorient, town, 51 cases cholera and 7 deaths; Lorient, district, 51 cases cholera and 12 deaths; department of the Finistère, 16 cases and 7 deaths; Department of the Morbihan, 34 cases and 8 deaths.

Week ended April 29, 1893: Lorient, town, 27 cases cholera, 1 death; Lorient, district, 22 cases, 6 deaths; department of the Morbihan, 14 cases, 5 deaths.

*The Russian imperial department of medicine denies the occurrence of cholera in St. Petersburg since December 18, 1892.*

LEGATION OF THE UNITED STATES,  
*St. Petersburg, April 22, 1893.*

SIR: The official organ of the Government in its issue of this day communicates from the imperial department of medicine a statement that in spite of the vague reports which have spread in this city, and indeed throughout Europe, there has not been a single case of cholera at St. Petersburg between December 18 ultimo and the present date. It then goes on to give accounts of 3 cases which, at first, had the appearance of cholera but were found not to be so.

I have no doubt that this is a correct statement of the case. There is not the slightest alarm here as regards cholera, and while it is generally expected to appear with the warm weather, the measures taken are so thorough that confidence is felt in the ability of the authorities to ward off anything like a severe epidemic.

Vague reports of the kind above referred to are not to be wondered at; the general ignorance of the public at large, and the policy of secrecy which has been so long pursued in public matters, makes this the greatest of all breeding grounds of myths and legends. If to this fact be added the disposition in western Europe to enlarge all unfavorable rumors from Russia, such accounts as have been given in some of the European papers regarding multitudes of cholera cases in this city can be easily understood.

I have the honor to be, sir, your obedient servant,

ANDREW D. WHITE.

To the Hon. SECRETARY OF STATE,  
*Washington, D. C.*

*Sanitary condition of the Turkish Empire—Report of the United States sanitary commissioner.*

[Report No. 66.]

CONSTANTINOPLE, *April 12, 1893.*

The outlook of the sanitary condition of the Turkish Empire is not encouraging. It is true that neither cholera nor plague, for the moment, rages in this country, but the scourge of dearth does a great deal of damage. I have already mentioned in my previous reports that in Bengazi in Cyrenaica the famine is raging and is causing great havoc there. It has been reported officially by the sanitary physician of Bengazi that more than 30,000 oxen, 256,000 sheep, 2,000 horses, and 4,000 camels have been exported from that province in order to prevent their death from starvation. It is not stated how many inhabitants have quitted the province for the same purpose. It is known that at Beirut, in Syria, a few attacks of spotted typhus have occurred, spread by men who came from Bengazi.

In the island of Chio, in the Archipelago, 5 persons, the members of a sailor's family, have died from the same disease. The sailor who died had just arrived from Bengazi, where this epidemic is raging severely, and where for awhile it was considered a plague with buboes. This epidemic, like the famine, has existed since the end of last summer. The Government has forwarded provisions, but unhappily it has not been able to prevent the death of many men and the outbreak of the above-mentioned epidemic. The day before yesterday the sanitary physicians sailed for Bengazi in order to take necessary steps and help the sick.

The epidemic is diminishing and the quarantine which existed in Malta against the arrivals from Bengazi has been abolished.

From Erzroom we receive news that there also dearth exists. The sanitary officials at Beyarid, on the Turco-Persian boundary line, where travelers and caravans from Persia have to undergo quarantine, say that there is not sufficient forage for the beasts of burden which have to stay in the lazaretto during the ten days' quarantine. It is to be feared that in that province also we will have famine and an outbreak of epidemics.

In the capital there are many attacks of influenza and a few cases of typhoid fever.

S. C. ZAVITZIANO.

*The epidemic of typhus fever at Bengazi, Tripoli.*

Under date of April 24, 1893, the United States consul at Malta transmits the following extract from Public Opinion, Malta :

The following report by the chief government medical officer was laid on the council table on Wednesday the 19th instant. It is much to be regretted that, before imposing the "sfratto" against the coast of Barbary, the Government should not have instituted the necessary inquiries as to the sanitary state of Bengazi and the nature of the prevailing epidemic:

"VALLETTA, April 10, 1893.

"SIR: I beg to report my return from Bengazi this evening. Shortly after my arrival at that place, I interviewed Dr. Plancion, the port medical officer, who assured me that the disease which had prevailed there, and at present ceased, was typhus fever. To prevent panic at first he had declared it to be typhoid fever. Emphatically he denied that it had any resemblance to bubonic plague. Later in the day (Saturday) Capt. Hughes and Dr. Vella were, after withdrawal of objections raised by the authorities, allowed to land, taking with them drugs, articles of food, etc. They saw several sick people and conferred with the military medical officers on the nature of the disease that had afflicted the town, and they made the following report to me the same evening:

"That the disease was, in the opinion of the military officers, typhus petichialis, not typhoid, certainly not plague. It was imported by Bedouins in December of last year, who, on account of famine, had flocked in large numbers (22,000) to Bengazi, where they were mostly without shelter, overcrowded, insufficiently fed, and exposed to rain and cold. In consequence they and the Arab inhabitants succumbed to the disease in large numbers, probably from 22 to 50 per cent of the cases, the number of cases being 1,500 to 2,000. The disease spread among the military and European population, but the mortality was much less—from 4 to 8 per cent amongst the former and 15 per cent

amongst the latter. The duration of the disease was on an average fourteen days, and the convalescence of those who recovered was long. The disease is over at Bengazi. For the last twenty days there has been no typical case of it, and for some time before that date the disease had assumed a mild character. The patients seen by Capt. Hughes and Dr. Vella are apparently typhoid, certainly not typhus. Dr. Mizzi, of Tripoli, whose report they read, I believe at H. M. S. consul's, was of the same opinion that the remaining cases are of typhoid fever.

"This fever prevails to a small extent at Bengazi in spring and autumn. Capt. Hughes and Dr. Vella were favorably impressed by the state of Bengazi. It is fairly clean. There is not the slightest panic. The people look healthy, and the members of the Maltese colony requiring help are not many.

"No doubt remaining as to the nature of the disease, I deemed it proper not to stay any longer away, in the hope that as soon as this was reported by me the Government would take the necessary steps for the purpose of raising the unnecessary 'sfreatto' which was enforced against the neighboring coast of Africa.

"I have, etc.

"S. L. PISANI.

"The Hon. The CHIEF SECRETARY."

*Quarantine laws and regulations not strictly enforced.*

UNITED STATES CONSULATE,  
*Puerto Cabello, Venezuela, April 25, 1893.*

SIR: I have the honor to inform you that the quarantine laws and regulations of this port are not strictly enforced, while surrounded as it is with yellow fever, and, while ships arrive daily from the cholera-infected ports of Europe, demand the most rigid discipline on the part of health officers to keep it free from contagious disease, I have often impressed upon the minds of the good people of this city the necessity of good sanitary laws and quarantine regulations, and, to this date, I have succeeded in contributing much to the health of Puerto Cabello, and I shall continue to do so, with an eye to the interests of our country.

I have the honor to be, sir, your obedient servant,

WILLIAM G. RILEY,  
*United States Consul.*

To the Hon. JOSIAH QUINCY,  
*Assistant Secretary of State.*

BAHAMAS—*Green Turtle Cay—Abaco.*—Two weeks ended April 27, 1893. Population, 3,286. One death.

CANADA—*Hamilton.*—Month of April. Population, 50,000. Total deaths, 59. No deaths reported from contagious diseases.

CUBA—*Havana.*—Under date of May 6, 1893, the United States sanitary inspector reports as follows:

There were 547 deaths in this city during the month of April, 1893. Eight of those deaths were caused by yellow fever, 19 by enteric fever, 10 by so-called pernicious fever, 12 by diphtheria and croup, 1 by glanders, and 2 by hydrophobia. During the week ending May 4 there were 140 deaths, 4 of which were caused by yellow fever, with approximately 10 new cases, 1 was caused by enteric fever, 4 by so-called pernicious fever, 6 by diphtheria and croup, and 1 by glanders.

BRAZIL—*Ceara.*—Month of March, 1893. Population, 40,379. Total deaths, 165. No deaths reported from contagious diseases.



FRANCE—*Calais*.—Month of March, 1893. Population, 56,867. Total deaths, 120, including phthisis pulmonalis, 11; enteric fever, 2; croup, 2; and measles, 21.

*Rheims*.—Month of March, 1893. Population, 105,408. Total deaths, 216, including phthisis pulmonalis, 26; enteric fever, 1; scarlet fever, 1; and diphtheria and croup, 3.

*Rouen*.—Month of March, 1893. Population, 111,847. Total deaths, 345, including phthisis pulmonalis, 41; enteric fever, 12; varicella, 1; measles, 9; and croup, 6.

GREAT BRITAIN—*England and Wales*.—The deaths registered in 33 great towns of England and Wales during the week ended April 29 corresponded to an annual rate of 19.7 a thousand of the aggregate population, which is estimated at 10,322,429. The lowest rate was recorded in Croyden, viz, 12.9, and the highest in Preston, viz, 31.7 a thousand.

*London*.—One thousand five hundred and seventy deaths were registered during the week, including smallpox, 6; measles, 34; scarlet fever, 28; diphtheria, 50; whooping cough, 49; enteric fever, 8; and diarrhea and dysentery, 8. The deaths from all causes corresponded to an annual rate of 20.2 a thousand. Diseases of the respiratory organs caused 351 deaths. In greater London 1,929 deaths were registered, corresponding to an annual rate of 17.2 a thousand of the population. In the "outer ring" the deaths included diphtheria, 9; smallpox, 1; and scarlet fever, 6.

*Ireland*.—The average annual death' rate represented by the deaths registered during the week ended April 29 in the 16 principal town districts of Ireland was 24.7 a thousand of the population. The lowest rate was recorded in Galway, viz, 7.6, and the highest in Dundalk, viz, 50.3 a thousand. In Dublin and suburbs 174 deaths were registered, including measles, 1; whooping cough, 1; and enteric fever, 2.

*Scotland*.—The deaths registered in 8 principal towns during the week ended April 29 corresponded to an annual rate of 20.9 a thousand of the population, which is estimated at 1,447,500. The lowest mortality was recorded in Leith, viz, 12.5, and the highest in Greenock, viz, 25.7 a thousand. The aggregate number of deaths registered from all causes was 588, including measles, 47; scarlet fever, 6; diphtheria, 6; whooping cough, 17; fever, 7; and diarrhea, 9.

MALTA AND GOZO.—Month of January, 1893. Total deaths, 651, including enteric fever, 17; diphtheria, 3; and measles, 147.

*Cholera in the East during the month of March, 1893.*

[Translated in this Bureau from La Revue Médico-Pharmaceutique, Constantinople, March 31, 1893.]

The cholera epidemic in the East, though considerably abated, is not yet extinct.

The disease was not reported from any part of Turkey during the month of March. In January, the steamship *Adana* brought to the

quarantine station at Camaran 1,627 discharged troops from Yemen, who arrived in an incredible condition of demoralization, poverty, and disease. Thirty-nine choleraic deaths occurred among them at the station. The troops were discharged from quarantine in good condition.

The sanitary condition of the Red Sea littoral and the Hedjaz is reported to be satisfactory as regards cholera. Up to March 1, 1893, 10,000 pilgrims from countries bordering on the Indian Ocean had passed through the quarantine at Camaran, and nearly 15,000 had disembarked at the port of Djeddah, their destination being the holy cities of Islam. These numbers indicate that the pilgrimage for this year will be large.

The sanitary condition of the vilayet of Yemen is reported to be favorable, but this statement is to be taken with some reserve, the information received not being exact.

In Persia cholera has notably declined, but it is not extinct. The sanitary officer of the Ottoman Government at Teheran reports 94 choleraic deaths from March 1 to 25. Of this number 53 occurred at Sakkir, 34 at Boukian, and 7 at Tauris. The southeastern provinces of Persia are reported free from cholera.

In Russia the situation is not entirely satisfactory. The following figures are furnished by M. Yacoblew, Russian delegate to the council of health:

In the city of Astrakhan, from March 6 to 10, 1 case of cholera, not fatal, was reported; in the government of Voroneck, from February 13 to 19, 12 cases and 4 deaths; in that of Ekaterinoslaw, from February 13 to 27, 1 case, 1 death; in that of Orel, from March 2 to 4, 2 cases; in Podolia, from February 13 to 28, 305 cases, 59 deaths; Saratow, from February 13 to 27, 20 cases, 13 deaths; Oufa, from February 15 to 22, 20 cases, 16 deaths; in the province of the Don Cossacks, from February 7 to 22, 23 cases, 2 deaths; in the city of Rostow, on the Don, March 6, 1 suspected case, not fatal; in the city of Alexandrovsk (government of Erivan in the Caucasus), March 8, 1 case, no deaths. Total, from February 7 to March 8, 1893, 382 cases of cholera, 3 suspected cases, and 92 deaths. All the Russian ports of the Black Sea are reported to be, and actually are, free from cholera.

At the present time there appears to be no immediate cause for alarm; but the Russian Government is applying rigorous preventive measures against an outbreak of cholera. It is an ascertained fact that cholera, like plague and some other epidemics of Asiatic origin, may, by repeated importation, become acclimated in Europe, and may persist there through a term of years. This may prove to be the case with the epidemic of 1892, and, in view of this possibility, the most stringent measures of sanitation should be generally enforced.

#### *Cholera notes.*

[Translated in this Bureau from the Deutsche Medicinische Wochenschrift, Berlin, April 23, 1893.]

FRANCE.—Cholera statistics: The cholera epidemic of 1892 invaded twenty-four departments of France, with a total mortality of 5,223. The highest rate of mortality was reached in the department of the Lower Seine, where the choleraic deaths numbered 943, or 11.2 to 10,000 inhabitants: Paris, 1,878 deaths, or 5.9; Morbihan (Lorient), 231 deaths, or 4.2; Seine et Vise, 212 deaths, or 3.3; La Manche, 130, or 2.5; Boucher du Rhone (Marseilles), 90 deaths, or 1.2; Nord, 155 deaths, or 0.8;

Lower Loire, 49 deaths, or 0.7; Seine et Marn, 14 deaths, or 0.3; Calvados, 20 deaths or 0.4; Somme, 23 deaths, or 1.4; Eure et Loire, 11 deaths, or 0.3.

Choleraic deaths were reported from Lorient during the month of January, 1893. After a cessation of a month and a half, the disease again broke out on March 10 at Lorient, and during the period between March 10 and April 9, the epidemic spread to twenty-five localities in the department of Morbihan, with 476 cases and 178 deaths. Lorient itself numbered 85 cases and 32 deaths; Riantec, 57 cases, 31 deaths; Port Louis, 15 cases, 8 deaths; Gavray, 45 cases, 10 deaths; Poulince, 33 cases, 11 deaths; Ploërmel, 19 cases, 5 deaths; Guiberon, 16 cases, 9 deaths; Auray, 57 cases, 15 deaths; Belty, 33 cases, 5 deaths; Vannes, 6 cases, 2 deaths. Cholera was present in about one-half of the above-named places during the winter. The disease has spread along the railway lines, and the great seaports of St. Nazaire and Nantes are now threatened with cholera importation. Reports of cholera in La Rochelle have been received, but they are not confirmed. The German Government has ordered strict inspection of vessels arriving at German ports from Lorient.

AUSTRIA—HUNGARY—*Galicia*.—From April 11 to 19, 11 cases and 7 deaths from cholera were reported. These occurred along the line of the Zbrucz. Cholera cases are officially reported from Bukowina.

RUSSIA.—No authentic cholera reports are received from Podolia. The St. Petersburg Medical Gazette gives 31 cases and 18 deaths for the government of Tambow from March 1 to 15; for Kasan and Tula, in the Don province, 1 case each. The following reports are received: Government of Tambow, March 13 to 27, 31 cases, 18 deaths; city of Orel, March 27 to April 3, 33 cases, 19 deaths; government of Orel during the same period, 6 cases, 3 deaths.

ITALY.—A case of sporadic cholera is reported from San Rocco, under date of April 14.

ASIA MINOR.—The following is a brief statement of the progress of the cholera epidemic of 1892: The epidemic was imported by travelers from Batoum to Platana, July 27, 1892, and prevailed at the lazaretto at Platana from July 27 to September 4, with 114 cases and 93 deaths. The disease reached the city of Platana August 4, and from that date to January 12, 1893, numbered 63 cases and 38 deaths in the city and suburbs. Isolated cases were observed in the city of Trapezunt during September. The disease became epidemic after October 30, and up to January 9, 1893, it numbered 386 cases and 232 deaths in the city of Trapezunt and in the vilayet up to January 12, 579 cases and 375 deaths. In the vilayet of Erzroom there were 8,095 cases of cholera and 4,542 deaths during the epidemic of 1892, being a morbidity of 18.4 and a mortality of 10.3 of the inhabitants.

In the district of Tassin, with a population of 47,000, there were 2,293 cases and 1,652 deaths, or 4.8 of the inhabitants.

PERSIA.—From March 13 to 25 there were 22 choleraic deaths at Sak-ir, 15 at Boukian, and 7 at Tebriz.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated popula- tion.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.	
Aix-la-Chapelle.....	Apr. 22.....	107,516	43										
Amsterdam.....	Apr. 22.....	436,914	182					1			4		
Amsterdam.....	Apr. 29.....	436,914	169					1			2		
Antwerp.....	Apr. 29.....	248,296	76			9					1		
Belfast.....	Apr. 22.....	265,123	134					1	1	1			
Belfast.....	Apr. 29.....	265,123	141					1	1		6		3
Belleville.....	May 6.....	10,200	2										
Bremen.....	Apr. 22.....	127,000	70						1	2			
Bristol.....	Apr. 22.....	225,146	111							1			
Brockville.....	May 6.....	8,793	6										
Brockville.....	May 13.....	8,793	9										
Brussels.....	Apr. 22.....	482,158	246					2	2	2			
Calcutta.....	Mar. 25.....	681,560	259	8		1							
Calcutta.....	Apr. 1.....	681,560	311	21		3							
Cardiff.....	Apr. 22.....	142,346	59								3		
Catania.....	Apr. 23.....	111,000	51					2			1	1	
Chatham.....	May 6.....	10,000	2										
Chihuahua.....	May 6.....	29,500	20										
Christiania.....	Apr. 30.....	156,500	52										
Cienfuegos.....	May 6.....	20,000	11										
Cologne.....	Apr. 29.....	299,611	191								11	1	2
Copenhagen.....	Apr. 22.....	334,000	157						1		9		
Crefeld.....	Apr. 29.....	108,000	83								1		
Dresden.....	Apr. 22.....	305,140	134					2	1		5		
Edinburgh.....	Apr. 22.....	267,672	103					1					
Edinburgh.....	Apr. 29.....	267,672	79								3		
Flushing.....	Apr. 29.....	14,000	4										
Frankfort-on-the-Main.....	Apr. 22.....	185,000	81										
Frankfort-on-the-Main.....	Apr. 29.....	185,000	71								3		
Funchal.....	Apr. 15.....	140,000	15								8		
Funchal.....	Apr. 22.....	140,000	13										
Genoa.....	Apr. 29.....	181,861	98					2			4	2	
Ghent.....	Apr. 22.....	153,290	77					2				1	
Ghent.....	Apr. 29.....	153,290	79			1		1		1			1
Gibraltar.....	Apr. 16.....	25,755	11										
Gibraltar.....	Apr. 23.....	25,755	11										
Girgenti.....	Apr. 22.....	23,847	13										
Glasgow.....	Apr. 22.....	677,833	343			1		1		4	3		
Glasgow.....	Apr. 29.....	677,833	324					5		4	1	38	12
Gothenburg.....	Apr. 22.....	105,800	43								1		
Guelph.....	May 6.....	10,695	3										
Guelph.....	May 13.....	10,695	7										
Halifax.....	May 6.....	38,700	1										
Hamburg.....	Apr. 15.....	620,000	217			1				2	5		
Hamburg.....	Apr. 22.....	620,000	209			1				1	7		
Hamilton.....	May 6.....	15,413	3										
Hanover.....	Apr. 22.....	191,400	59								2		
Havana.....	May 4.....	198,620	140					1			6		
Havre.....	Apr. 29.....	116,369	61					2					
Hiogo.....	Apr. 8.....	148,118	58			7		2			1		
Hiogo.....	Apr. 15.....	148,118	53			7		1		1	1		
Kingston, Canada.....	May 12.....	19,264	9										
La Guayra.....	Apr. 22.....	15,000	10										
La Guayra.....	Apr. 29.....	15,000	9										
Leghorn.....	Apr. 30.....	103,285	37										
Leith.....	Apr. 15.....	70,972	17										
Leith.....	Apr. 22.....	70,972	23					1					
Leith.....	Apr. 29.....	70,972	17								1		
Liverpool.....	May 5.....	510,480	225					2		1	1		
London, England.....	Apr. 22.....	5,849,104	2,157			11		7		32	62	44	
London, Ontario.....	May 6.....	35,000	9										
Lyons.....	Apr. 22.....	438,000	291					1		3	10		
Manchester.....	Apr. 29.....	515,567	240					6		1	4	6	2
Mannheim.....	Apr. 22.....	80,000	41								3		
Marsala.....	Apr. 22.....	40,131	26					2					
Matamoras.....	May 5.....	8,000	9										
Mayence.....	Apr. 22.....	72,281	26								1		
Mayence.....	Apr. 29.....	72,281	47								4		
Moncton.....	May 6.....	8,762	3										
Munich.....	Apr. 15.....	380,000	192					1		1	2		
Naples.....	Apr. 30.....	532,527	338					1		1			

MORTALITY TABLE, FOREIGN CITIES—Continued.

Cities.	Week ended.	Estimated popula- tion.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.	
Newcastle	Apr. 29.	197,026	77										
Nuremberg	Apr. 15.	153,015	62					1	2		2		
Odessa	Apr. 22.	315,000	183			3	1		3	8	3	1	
Palermo	Apr. 22.	250,000	116					1	1		1		
Pará	Mar. 12.	100,000	52		1			3					
Pará	Mar. 19.	100,000	57		3			7					
Pará	Mar. 26.	100,000	44		7		1	2					
Pará	Apr. 2.	100,000	55		10				1				
Pará	Apr. 9.	100,000	54		3			4					
Pará	Apr. 16.	100,000	60		9		1	4					
Pará	Apr. 23.	100,000	49		5			2					
Paris	Apr. 22.	2,424,705	1,673			1	6	13	3	36	23	30	
Paris	Apr. 29.	2,424,705	1,385			3	8	12	2	22	19	16	
Piedras Negras	May 8.	10,000	4										
Port Hope	May 13.	5,042	1										
Prague	Apr. 22.	186,315	134			3		1	1	6			
Prescott.	May 11.	2,980	6										
Quebec	May 6.	70,000	.....							1			
Queenstown	Apr. 29.	9,000	3										
Queenstown.	May 6.	9,000	3										
Rheims	Apr. 8.	105,408	47			1		1					
Rheims	Apr. 15.	105,408	54				1	1		2			
Rheims	Apr. 22.	105,408	59						1	2	3		
Rheims	Apr. 29.	105,408	63					1		1			
Rome	Mar. 11.	440,596	189					3		5			
Rome	Mar. 18.	440,596	183					5		3			
Rome	Mar. 25.	440,596	184					3		1			
Rotterdam	Apr. 29.	222,230	104					2					
Saguala Grande.	Apr. 29.	18,109	12						1				
Saguala Grande	May 6.	18,109	11										
St. Georges	May 8.	15,013	1										
St. John.	May 6.	39,179	14										
St. Petersburg.	Apr. 22.	1,000,000	601			2		11	13	3	5		
St. Thomas, W. I.	Apr. 21.	12,019	31										
St. Thomas, W. I.	Apr. 28.	12,019	43										
Schiedam	Apr. 29.	25,533	11										
Sonneberg	Apr. 23.	12,000	4										
Sonneberg	Apr. 30.	12,000	5										
Southampton.	Apr. 29.	65,621	25										
Stettin.	Apr. 29.	120,000	57							3			
Stockholm.	Apr. 15.	249,246	96					1	2	6		1	
Stockholm.	Apr. 22.	249,246	112					1	3	14		1	
Stockholm.	Apr. 29.	249,246	112					1	3	14		1	
Stuttgart	Apr. 29.	139,659	65					2	1				
Sunderland	Apr. 29.	134,394	55							5			
Trieste.	Apr. 22.	158,054	93			2				2			
Turpan	Apr. 29.	10,280	7										
Venice.	Apr. 15.	162,326	125			1							
Venice.	Apr. 22.	162,326	139					1					
Vera Cruz.	May 5.	25,500	23		4		1	2					
Victoria	Apr. 29.	20,000	7										
Vienna	Apr. 8.	1,364,548	722			1		5	7	33	27	4	
Warsaw	Apr. 22.	500,931	209			1				2	9		
Zurich	Apr. 22.	91,323	34				2		2	6	12	2	

By authority of the Secretary of the Treasury :

WALTER WYMAN,

Supervising Surgeon-General Marine-Hospital Service.