ABSTRACT OF SANITARY REPORTS.

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UNITED STATES.

SPECIAL REPORTS.

Disinfection of rags from Ghent, Belgium.

TREASURY DEPARTMENT,
Office of the Supervising Surgeon-General M.-H. S.,
Washington, D. C., May 12, 1892.

SIR: I beg leave to inclose herewith a copy of report from the United States consul at Ghent, Belgium, showing the danger of importation of smallpox into the United States by means of rags gathered for exportation at that port, and have respectfully to request that the provisions of Department Circular No. 162, Customs Division, October 9, 1891, be extended to the port of Ghent, as set forth in the proposed circular.

Very respectfully yours,

WALTER WYMAN,
Supervising Surgeon-General M.-H. S.

Hon. SECRETARY OF THE TREASURY.

The following circular has been issued:

Importation of old rags from Ghent, Belgium.

TREASURY DEPARTMENT,
Office of the Secretary,
Washington, D. C., May 12, 1892.

To Collectors and other Officers of the Customs:

The act approved April 29, 1878, entitled "An act to prevent the introduction of contagious or infectious diseases into the United States," provides that "no vessel coming from any foreign port or country where any contagious or infectious disease exists, nor any vessel conveying infected merchandise, shall enter any port of the United States, or pass the boundary line between the United States and any foreign country, except in such manner as may be prescribed under said act."

It having been shown that smallpox prevails in Ghent, Belgium, and that rags gathered or received at this port for exportation to the United States, unless disinfected, are liable to import contagious diseases into the United States, it is therefore ordered that the provisions

contained in Department Circular No. 162, Division of Customs, October 9, 1891, be extended to the port of Ghent, and that no rags imported from Ghent shall be admitted to entry, unless accompanied by a certificate from the United States consul at Ghent that they have been disinfected in accordance with the regulations of this Department, or by a certificate to the like effect from a medical officer of the Marine-Hospital Service, or State or local quarantine officer.

This circular will take immediate effect, but will not apply to rags afloat on or before the date of its issue.

For disinfection, one of the following methods will be used:

1st. Boiling in water not less than one hour; all rags to be unbaled for this purpose.

2d. Exposure to steam not less than one hour, the steam to be of a temperature not less than 100 degrees centigrade (212 degrees Fahrenheit) nor greater than 116 degrees centigrade (239 degrees Fahrenheit).

3d. Exposure not less than six hours to sulphurous acid gas, made by burning not less than three pounds of roll sulphur to each 1,000 cubic feet of space.

4th. Exposure not less than six hours to an atmosphere containing 3 per cent. of sulphurous acid gas liberated from its liquid state (liquid sulphur dioxide).

In methods No. 2, No. 3, and No. 4 the rags must be well scattered upon racks, or so arranged that they can from time to time be turned in such a manner that all shall be exposed to steam or gas.

CHARLES FOSTER,
Secretary.

Arrival of infected bark at Gulf Quarantine.—Assistant Surgeon Perry reports as follows, under date of May 13, 1892:

I have the honor to report the arrival here this day of the Norwegian bark *Alert*, forty-four days from Rio Janeiro, bound for Pascagoula, Miss.

This vessel had seven cases of yellow fever and two deaths at Rio, but none since leaving that port.

The clothing, bedding, etc., of those who died was destroyed.

The vessel is fairly clean, and is held for disinfection.

Treatment given infected vessels at Key West Quarantine Station.

TREASURY DEPARTMENT,
Office of Supervising Surgeon-General Marine-Hospital Service,
Washington, D. C., May 20, 1892.

DEAR SIR: Referring to your letter of the 16th instant, requesting to be informed just what treatment shipping sent by you to Dry Tortugas Quarantine Station would receive, I have the honor to inform you that the station at Tortugas is completely equipped for effective treatment of infected vessels. A large steam chamber and boiler have been placed upon a barge for the disinfection of dunnage, fabrics, etc., and there has recently been provided an improved pattern of sulphur furnace, which is located upon the new wharf recently completed. There is a steam hoisting engine upon the wharf for unloading cargo and ballast, and a steam pump for using the bichloride solution.

Another steam chamber, now being constructed by Valk & Murdoch at Charleston, will soon be placed upon the wharf. The quarantine steamer *Dagmar* is in commission, and the station has a full complement of officers and men. Assistant Surgeon H. D. Geddings is in command.

Respectfully yours,

WALTER WYMAN,
Supervising Surgeon-General M.-H. S.

Dr. JOSEPH Y. PORTER,
State Health Officer of Florida, Jacksonville, Fla.

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

CALIFORNIA.—Month of April, 1892. Mortality reports from 117 cities, towns, villages, and localities, having an aggregate population of 789,931, show a total of 1,027 deaths from all causes, including phthisis pulmonalis, 195; enteric fever, 15; scarlet fever, 6; diphtheria, 26; measles, 9; croup, 11; and whooping cough, 11.

The following is extracted from the report of the State board of health for April:

On April 21 a case of varioloid was discovered at Berkeley, Alameda County, in a married man, twenty-five years of age, by occupation a handler of foreign goods. The origin is unknown, but the patient stated to the local health officer, Dr. F. H. Payne, that about ten days before he was attacked, a muffled Chinaman, having sores on his face, took a seat in a car next to him on the local train from San Francisco. No such Chinaman has yet been found. Strict quarantine, isolation, and vaccination were the restrictive and preventive measures adopted, and no new cases have developed yet.

On May 3 a case of varioloid was discovered on a fishing boat on the Sacramento River, 4 miles above Sacramento City. The afflicted person is a native of the Sandwich Islands, aged thirty-seven years, and came directly from San Francisco. Before being sent to the pesthouse he walked with a companion from the wharf through seven blocks of the business portion of the city, and voluntarily presented himself to the local authorities. The isolation of pesthouse regulations has been applied to the patient and his companion.

CONNECTICUT.—Month of April, 1892. Reports to the State board of health from 168 cities and towns, having an aggregate population of 746,258, show a total of 1,132 deaths, including phthisis pulmonalis, 130; influenza, 13; enteric fever, 13; scarlet fever, 40; diphtheria and croup, 31; measles, 3; and whooping cough, 4.

FLORIDA—*Jacksonville.*—Month of February, 1892. Population, 17,201. Total deaths, 67, including phthisis pulmonalis, 7; enteric fever, 3; diphtheria, 1; croup, 1; and measles, 1.

Month of March. Total deaths, 54, including varicella, 1; phthisis pulmonalis, 10; and measles, 1.

Month of April. Total deaths, 47, including phthisis pulmonalis 3 and whooping cough 2.

ILLINOIS—*Chicago.*—Month of April, 1892. Population, 1,099,850. Total deaths, 2,093, including phthisis pulmonalis, 202; varicella, 1; enteric fever, 56; scarlet fever, 42; diphtheria, 62; croup, 40; measles, 14; and whooping cough, 11.

MASSACHUSETTS—*Brockton.*—Month of April, 1892. Population, 27,294. Total deaths, 35, including phthisis pulmonalis 3.

Worcester.—Month of April, 1892. Population, 84,655. Total deaths, 153, including phthisis pulmonalis, 12; enteric fever, 9; scarlet fever, 2.

MICHIGAN.—Week ending May 14, 1892. Reports to the State board of health from 61 observers indicate that diphtheria, cholera morbus, dysentery, membranous croup, inflammation of brain, tonsillitis, and pneumonia increased, and that cerebro-spinal meningitis, typho-malarial fever, puerperal fever, measles, and cholera infantum decreased in area of prevalence.

Diphtheria was reported present during the week at 37 places, scarlet fever at 59, enteric fever at 12, and measles at 16 places.

MINNESOTA.—Month of March, 1892. Reports to the State board of health show a total of 874 deaths in a population of 1,301,826, including enteric fever, 28; scarlet fever, 21; diphtheria, 45; croup, 16; measles, 5; and whooping cough, 9.

MISSOURI—*Kansas City.*—Month of March, 1892. Population, 132,716. Total deaths, 136, including phthisis pulmonalis, 27; scarlet fever, 3; diphtheria, 1; and croup, 1.

Month of April. Total deaths, 130, including phthisis pulmonalis 15 and enteric fever 5.

PENNSYLVANIA—*Allentown.*—Month of April, 1892. Population, 25,228. Total deaths, 40.

Williamsport —Month of April, 1892. Population, 27,132. Total deaths, 24, including enteric fever 1 and whooping cough 1.

RHODE ISLAND.—Month of April, 1892. Reports to the State board of health from cities and towns having an aggregate population of 313,228 show a total of 472 deaths, including phthisis pulmonalis, 56; scarlet fever, 3; diphtheria, 4; measles, 3; and whooping cough, 1.

Publications received.

Seventh annual report of the State board of health of Kansas, 1891.

Annual report of the board of health of the city of Winona, Minn., year ended March 31, 1892.

The *Sanitary Inspector* for April, 1892, published by the State board of health of Maine.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Population, U. S. Census of 1890.	Total deaths from all causes.	Deaths from—										
				Phthisis pulmonalis.	Yellow fever.	Smallpox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
New York, N. Y.	May 21	1,515,301	854	93	.....	1	.....	.....	.....	5	27	35	38	7
Chicago, Ill	May 21	1,099,850	457	.....	.....	.....	.....	.....	.....	24	9	14	2	2
Philadelphia, Pa	May 14	1,046,964	443	60	.....	.....	.....	.....	.....	8	20	20	2	2
Brooklyn, N. Y.	May 21	806,343	361	42	.....	.....	.....	.....	.....	.....	7	18	8	.....
Boston, Mass.	May 21	448,477	188	18	.....	.....	.....	.....	.....	2	10	11	.....	.....
Baltimore, Md	May 21	434,439	199	27	.....	.....	.....	.....	.....	2	6	11	11	1
San Francisco, Cal.	May 14	298,997	120	20	.....	.....	.....	.....	1	1	3	2	.....	1
Cincinnati, Ohio	May 20	296,908	92	14	.....	.....	.....	.....	.....	.....	3	4	.....	2
Cleveland, Ohio	May 21	261,353	85	9	.....	.....	.....	.....	.....	1	1	.....	.....	1
New Orleans, La.	May 14	242,037	161	26	.....	.....	.....	.....	.....	.....	.....	2	1	.....
Pittsburg, Pa.	May 14	238,617	99	5	.....	.....	.....	.....	.....	11	1	4	1	.....
Pittsburg, Pa.	May 21	238,617	85	13	.....	.....	.....	.....	.....	.....	1	2	.....	.....
Detroit, Mich.	May 21	205,870	92	7	.....	.....	.....	.....	.....	.....	3	12	.....	.....
Milwaukee, Wis.	May 21	204,468	71	7	.....	.....	.....	.....	.....	.....	.....	2	2	.....
Newark, N. J.	May 21	181,830	78	10	.....	.....	.....	.....	.....	.....	5	3	1	.....
Minneapolis, Minn.	May 21	164,738	61	.....	.....	.....	.....	.....	.....	1	3	2	1	.....
Rochester, N. Y.	May 21	133,896	43	5	.....	.....	.....	.....	.....	.....	1	5	.....	.....
Providence, R. I.	May 21	132,146	51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Denver, Colo.	May 7	106,713	29	5	.....	.....	.....	.....	.....	1	4	.....	.....	.....
Denver, Colo.	May 14	106,713	37	4	.....	.....	.....	.....	.....	1	3	4	.....	.....
Toledo, Ohio	May 20	81,434	19	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Richmond, Va.	May 21	81,388	32	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Nashville, Tenn.	May 21	76,168	27	7	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Fall River, Mass.	May 20	74,398	34	2	.....	.....	.....	.....	.....	.....	.....	1	1	2
Portland, Me.	May 21	36,425	13	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mobile, Ala	May 14	31,076	17	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mobile, Ala	May 21	31,076	15	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Galveston, Tex.	May 13	29,084	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	May 21	25,858	12	3	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Newton, Mass.	May 14	24,379	8	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	May 21	24,379	13	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego, Cal.	May 14	16,159	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shreveport, La.	May 14	11,979	9	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	May 14	11,750	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

CORRECTION.—The population of Rochester, N. Y., as published in ABSTRACT of May 20, 1892, is incorrect, and should read 133,896.

Table of temperature and rainfall, week ended May 20, 1892.

[Received from Department of Agriculture, Weather Bureau.]

Locality.	Temperature in degrees Fahrenheit.			Rainfall in inches and hundredths		
	Normal.	*Excess.	*Defic'ncy.	Normal.	Excess.	Deficiency.
New England States:						
Eastport, Me	48	1		.98		.84
Portland, Me	54		2	.77	.92	
Boston, Mass	57		1	.82	.56	
Block Island, R. I	52	1		.89	.55	
Middle Atlantic States:						
Albany, N. Y	60		1	.70	.47	
New York, N. Y	60			.65	.51	
Philadelphia, Pa	62			.64	1.22	
Atlantic City, N. J	57	2		.56	1.90	
Baltimore, Md	65		1	.80	3.02	
Washington, D. C	64	2		.85	.15	
Lynchburg, Va	66	4		.84		.72
Norfolk, Va	67	4		.91		.67
South Atlantic States:						
Charlotte, N. C	69	2		.98		.52
Wilmington, N. C	70	3		1.00		.74
Charleston, S. C	73	2		.91		.55
Augusta, Ga	73	1		.77		.65
Savannah, Ga	74	1		.51		.41
Jacksonville, Fla	75	2		1.00		1.00
Key West, Fla	80		2	.84		.58
Gulf States:						
Atlanta, Ga	69	3		.90		.22
Pensacola, Fla						
Mobile, Ala	74	1		.99		.39
Montgomery, Ala	73	2		.91		.39
Vicksburg, Miss	73			1.05		.99
New Orleans, La	75			1.17		.33
Shreveport, La	74		3	.98	.10	
Fort Smith, Ark	69		4	.98	5.20	
Little Rock, Ark	70		4	1.26	3.38	
Palestine, Tex	72	1		1.58	.76	
Galveston, Tex	76	2		.97		.81
San Antonio, Tex	75	3		.77		
Corpus Christi, Tex	76	1		.82	1.06	
Brownsville, Tex	78	2		.84		.84
Ohio Valley and Tennessee:						
Memphis, Tenn	70		1	.82	.74	
Nashville, Tenn	68			.77	1.13	
Chattanooga, Tenn	68	2		.98	.77	
Knoxville, Tenn	66	3		.84	.30	
Louisville, Ky	67		1	.84	1.04	
Indianapolis, Ind	64		4	.92	1.40	
Cincinnati, Ohio	65		1	.77	1.05	
Columbus, Ohio	62			1.12	1.28	
Pittsburg, Pa	63			.77	.27	
Lake Region:						
Oswego, N. Y	54			.56	.17	
Rochester, N. Y	56	4		.70		.20
Buffalo, N. Y	54	3		.70	.28	
Erie, Pa	56	3		.79	.41	
Cleveland, Ohio	57	3		.76	.18	
Sandusky, Ohio	59	1		.77	.82	
Toledo, Ohio						
Detroit, Mich	59	1		.79	.99	
Port Huron, Mich	53	4		.77		.35
Alpena, Mich	50	2		.84		.61
Marquette, Mich	49	1		.58	.56	
Grand Haven, Mich	55	1		.77		.47
Milwaukee, Wis	54		3	.77	.63	
Chicago, Ill	57		2	.84		.10
Duluth, Minn	49		3	.82	3.33	
Upper Mississippi Valley:						
St. Paul, Minn	57		3	.71	2.03	
La Crosse, Wis	58		4	.71	2.98	
Dubuque, Iowa	60		3	.91	1.68	
Davenport, Iowa	61		6	1.05	.15	

*The figures in these columns represent the average daily departure. To obtain the accumulated excess or deficiency of the week these should be multiplied by seven.

Table of temperature and rainfall, week ended May 20, 1892—Continued.

Locality.	Temperature in degrees Fahrenheit.			Rainfall in inches and hundredths.		
	Normal.	*Excess.	*Defic'ncy.	Normal.	Excess.	Deficiency.
Upper Mississippi Valley—Cont'd.						
Des Moines, Iowa	62		6	1.14	.93	
Keokuk, Iowa	63		4	.91		.07
Springfield, Ill	63		3	1.16	.74	
Cairo, Ill	68		2	.84	1.74	
St. Louis, Mo	66		2	.91	1.45	
Missouri Valley:						
Springfield, Mo	68		7	1.46	.74	
Kansas City, Mo	64		3	.92		.39
Concordia, Kans	62		5	.98	1.72	
Omaha, Nebr	62		6	1.06	1.59	
Yankton, S. Dak	59		5	.98	1.95	
Valentine, Nebr	57		5	.87		.25
Huron, S. Dak	55		4	.77	2.15	
Pierre, S. Dak	57		6	.50	1.96	
Extreme Northwest:						
Moorhead, Minn	53		3	.56	2.44	
Saint Vincent, Minn	51		2	.42		.02
Bismarck, N. Dak	54		4	.56		.54
Buford, Fort, N. Dak	54		2	.41		.37
Rocky Mountain Slope:						
Assinniboine, Fort, Mont	53			.29		.28
Helena, Mont	53		2	.31		.30
Spokane, Wash	57		1	.28	.06	
Salt Lake City, Utah	59		3	.40		.04
Cheyenne, Wyo	51		4	.49		.07
North Platte, Nebr	58		3	.68		.32
Denver, Colo	57		4	66		.35
Montrose, Colo	57		2	.13		.07
Pueblo, Colo	59		2	.28		.26
Dodge City, Kans	64		6	.88	.05	
Abilene, Tex	72			.98		.98
El Paso, Tex	73		2	.07		.07
Santa Fé, N. Mex	56			.21		.21
Tucson, Ariz	74		2	.07		.07
Pacific Coast:						
Olympia, Wash	55	2		.49		
Portland, Oreg	60	1		.56	.82	
Roseburg, Oreg	58	6		.36		.18
Red Bluff, Cal	68			.23	1.30	
Sacramento, Cal	65	2		.14	1.02	
San Francisco, Cal	58	6		.14	1.00	
Los Angeles, Cal	64	6		.07		.07
San Diego, Cal	62	4		.07		.07
Yuma, Ariz	78	4				

*The figures in these columns represent the average daily departure. To obtain the accumulated excess or deficiency of the week these should be multiplied by seven.

FOREIGN.

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

Sanitary Commission at Constantinople—Report of the United States Commissioner.

REPORT NO. 45.

Since my last report, under date of April 15, nothing new has occurred in the sanitary condition of the Turkish Empire.

The pilgrims are arriving at Camaran, where they undergo five days quarantine before they land at Hejeiz. The sanitary physicians state that they come in good health without cholera symptoms.

Cholera epidemic broke out at Harrar in Abyssinia, and a quarantine of five days has been ordered since the 29th of April to all comers to Turkey from the port of Zeilah.

In the capital the sanitary condition is always the same. There exists always a little epidemic of typhoid fever, several cases of measles, and an epidemic of broncho-pneumonia in children is also raging.

I have already mentioned that two commissioners have been appointed in order to execute improvements in the quarantine lazarettos of the empire and to build new ones. In the meeting of the International Sanitary Commission the Italian sanitary representative has presented the plans of the sanitary lazarettos of Italy—that is to say, the place of the Asinara lazaretto in Sardegna, and that of Genoa, which is in way of construction. On the occasion of this presentation the international sanitary administration begs the different governments which have their representatives at the International Commission to procure, if possible, the drawings of their quarantine lazarettos. I therefore respectfully request the Department of State to transmit to me, for the above mentioned use, the drawings of the American lazarettos.

S. C. ZAVITZIANO.

CONSTANTINOPLE, *May* 6, 1892.

BAHAMAS—*Dunmore Town.*—Two weeks ended May 5, 1892. Population, 1,472. Total deaths, 2.

Governor's Harbor.—Two weeks ended May 7, 1892. Population, 1,117. Total deaths, 2.

Green Turtle Cay—Abaco.—Two weeks ended May 5, 1892. Population, 3,286. One death.

BRAZIL—*Santos—Yellow fever and smallpox.*—The United States consul reports 403 cases of yellow fever and 32 deaths therefrom, and 45 cases of smallpox and 11 deaths therefrom, during the two weeks ended April 16, 1892.

CUBA—*Havana.*—The United States sanitary inspector, under date of May 14, 1892, reports as follows:

There were 136 deaths in this city during the week ending May 12, 1892.

One of those deaths was caused by yellow fever, 6 by enteric fever, 4 by so-called pernicious fever, 2 by paludal fever, and 1 by diphtheria.

Santiago de Cuba.—Two weeks ended February 29, 1892. Total deaths, 43, including 1 from phthisis pulmonalis.

Month of March. Total deaths, 67, including yellow fever, 2; phthisis pulmonalis, 1; and diphtheria, 1.

Month of April, 1892. Total deaths, 108, including yellow fever 1 and croup 1.

GREAT BRITAIN—*England and Wales.*—The deaths registered in 33 great towns of England and Wales during the week ended May 7 corresponded to an annual rate of 19.7 a thousand of the aggregate population, which is estimated at 10,185,736. The lowest rate was recorded in Halifax, viz, 14.3, and the highest in Sunderland, viz, 28.3 a thousand.

London.—One thousand five hundred and forty-nine deaths were registered during the week, including smallpox, 1; measles, 158; scarlet fever, 20; diphtheria, 31; whooping cough, 59; enteric fever, 8; and diarrhea and dysentery, 18. The deaths from all causes corresponded to an annual rate of 18.9 a thousand. Diseases of the respiratory organs caused 297 deaths. In greater London 1,969 deaths were registered, corresponding to an annual rate of 17.8 a thousand of the population. In the "outer ring" the deaths included whooping cough 23 and measles 35.

Sunderland.—Two weeks ended April 30, 1892. Population, 132,839. Total deaths, 123, including enteric fever, 2; scarlet fever, 2; and diphtheria, 1.

Ireland.—The average annual death rate represented by the deaths registered during the week ended May 7, in the 16 principal town districts of Ireland, was 28.5 a thousand of the population. The lowest rate was recorded in Armagh, viz, 0.0, and the highest in Sligo, viz, 67.0 a thousand. In Dublin and suburbs 221 deaths were registered, including diphtheria, 1; influenza, 2; measles, 40; and whooping cough, 2.

Scotland.—The deaths registered in 8 principal towns during the week ended May 7 corresponded to an annual rate of 21.4 a thousand of the population, which is estimated at 1,447,500. The lowest mortality was recorded in Leith, viz, 17.1, and the highest in Greenock, viz, 28.9 a thousand. The aggregate number of deaths registered from all causes was 596, including measles, 22; scarlet fever, 5; diphtheria, 1; whooping cough, 30; fever, 3; and diarrhea, 4.

MEXICO—*Paso del Norte.*—Month of April, 1892. Population, 10,000. Total deaths, 32, including typhus fever 1 and diphtheria 7.

NEW ZEALAND—Month of February, 1892. Reports to the registrar-general from the 4 principal cities and towns, having an aggregate

population of 98,233, show a total of 132 deaths, including phthisis pulmonalis, 10; enteric fever, 2; and diphtheria, 2.

SWITZERLAND.—Four weeks ended April 23, 1892. Reports from 15 cities, having an aggregate population of 503,503, show a total of 795 deaths, including phthisis pulmonalis, 147; smallpox, 1; enteric fever, 1; scarlet fever, 3; diphtheria and croup, 22; measles, 7; and whooping cough, 9.

WEST INDIES—*Trinidad.*—Two weeks ended April 30, 1892. Population, 183,486. Total deaths, 48. No deaths from contagious disease.

Turk's Islands.—Five weeks ended April 20, 1892. Population, 4,744. Total deaths, 32.

On the spores of microbes in the animal organism.

[Translated for this Bureau *La Rivista Internationale d'Igiene*, Naples, April, 1892.]

Dr. Trapeznikoff has pursued a series of experimental studies of the spores of anthrax, bacillus subtilis and bacillus megaterium at the Pasteur Institute with a view to ascertaining what becomes of the spores of pathogenic and non-pathogenic microbes introduced into the organism of refractory and non-refractory animals. From the results of his experiments he draws the following conclusions:

1. In certain cases the amoeboid cells may destroy pathogenic spores by incorporation, and exercise on the same a sporicidal action.
2. The pathogenic spores studied by the writer may germinate and produce bacilli in the organism of the refractory animals whether the animals enjoy natural or acquired immunity.
3. As soon as the spores of the pathogenic microbes have penetrated the organism of the refractory animal an aggregation of leucocytes forms and attacks the spores.
4. The spores which have had time to germinate and become transformed within the animal organism and the bacilli and filaments are all equally open to attack by the leucocytes.
5. The spores taken up by the cells before their development do not increase in the same degree as those incorporated within the cell, if these latter are living and active.
6. If, from any cause, the phagocytes become enfeebled or die, the living spores taken up by them germinate and are transformed into bacilli and filaments.
7. These bacilli and filaments may be again absorbed by the leucocytes and destroyed.
8. Spores arrested by the cells are disseminated throughout the organs of the body, carrying with them their vitality and virulence.
9. In most cases the cells do not destroy the spores of the pathogenic microbes, but only impede their development.
10. The fluids of a living animal organism do not possess sporicidal properties.
11. All spores planted in a culture medium do not develop. The same is true of pathogenic spores introduced into a living organism.
12. The spores of pathogenic microbes which have not germinated within the organism retain their vitality for a length of time.
13. In animals which are not immune the pathogenic spores are arrested by the leucocytes; but as the phagocytes are few in number, the spores germinate, pass into the vegetative state, and cause the death of the animal.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
London	May 7	5,752,204	1,969	.....	.....	2	.....	8	21	35	193	.....
Paris	May 7	2,424,705	1,069	.....	.....	1	.....	10	2	22	30	6
Vienna	Apr. 16	1,406,933	779	.....	.....	.....	.....	4	6	34	26	5
Vienna	Apr. 23	1,406,933	701	.....	.....	.....	.....	1	2	23	22	4
Vienna	Apr. 30	1,406,933	729	.....	.....	.....	.....	2	3	37	18	3
Glasgow	May 7	669,059	305	.....	.....	.....	.....	1	3	1	.....	.....
Hamburg	Apr. 16	570,534	275	.....	.....	.....	.....	3	2	6	.....	.....
Hamburg	Apr. 30	570,534	296	.....	.....	.....	.....	2	3	1	.....	.....
Liverpool	May 7	513,790	238	.....	.....	.....	.....	1	2	3	.....	.....
Warsaw	Apr. 30	490,417	220	.....	.....	5	.....	4	.....	7	.....	.....
Brussels	Apr. 30	482,158	190	.....	.....	.....	.....	4	.....	.....	.....	.....
Amsterdam	Apr. 9	426,480	180	.....	.....	.....	1	1	.....	2	.....	.....
Amsterdam	Apr. 16	426,480	167	.....	.....	.....	1	1	.....	2	.....	.....
Amsterdam	Apr. 23	426,480	161	.....	.....	.....	.....	.....	.....	2	.....	.....
Amsterdam	Apr. 30	426,480	143	.....	.....	.....	1	1	.....	1	.....	.....
Amsterdam	May 7	426,480	156	.....	.....	.....	.....	1	.....	2	.....	.....
Lyons	Apr. 30	416,000	174	.....	.....	.....	.....	1	3	5	.....	.....
Munich	Apr. 23	366,000	191	.....	.....	.....	.....	.....	1	4	.....	.....
Copenhagen	Apr. 30	326,000	149	.....	.....	.....	.....	.....	.....	5	.....	.....
Odessa	Apr. 30	302,000	109	.....	.....	.....	.....	3	.....	.....	.....	.....
Cologne	May 7	292,203	129	.....	.....	.....	.....	.....	.....	14	1	2
Dresden	Apr. 30	286,200	109	.....	.....	.....	.....	.....	.....	10	.....	.....
Edinburgh	May 7	264,787	88	.....	.....	.....	.....	.....	1	.....	.....	.....
Belfast	May 7	255,922	144	.....	.....	.....	.....	2	1	2	.....	.....
Palermo	Apr. 30	250,000	109	.....	.....	.....	.....	1	.....	2	.....	.....
Stockholm	Apr. 23	248,051	252	.....	.....	.....	.....	5	19	15	.....	4
Stockholm	Apr. 30	248,051	275	.....	.....	.....	.....	8	32	32	.....	1
Stockholm	May 7	248,051	248	.....	.....	.....	.....	8	28	15	.....	.....
Rotterdam	May 7	216,679	118	.....	.....	.....	.....	.....	2	.....	.....	.....
Hanover	Apr. 30	185,200	64	.....	.....	.....	.....	.....	.....	3	.....	.....
Prague	Apr. 30	183,703	147	.....	.....	3	.....	3	1	2	.....	.....
Prague	May 7	183,703	156	.....	.....	1	.....	.....	1	.....	.....	.....
Genoa	May 7	181,401	95	.....	.....	1	.....	.....	1	3	1	.....
Frankfort-on-the-Main	Apr. 20	180,000	84	.....	.....	.....	.....	.....	.....	9	.....	.....
Venice	Apr. 30	161,678	58	.....	.....	.....	.....	1	.....	.....	.....	.....
Trieste	Apr. 30	158,054	98	.....	.....	.....	.....	.....	1	6	.....	.....
Christiania	Apr. 30	151,130	50	.....	.....	.....	.....	.....	1	2	.....	.....
Ghent	Apr. 30	150,208	51	.....	.....	2	.....	.....	.....	2	.....	.....
Nuremberg	Apr. 23	149,506	58	.....	.....	.....	.....	.....	2	1	.....	.....
Stuttgart	May 2	139,659	52	.....	.....	.....	.....	.....	.....	7	.....	.....
Funchal	Apr. 30	133,250	14	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bremen	Apr. 30	126,000	59	.....	.....	.....	.....	.....	.....	4	.....	.....
Havre	May 7	116,369	61	.....	.....	.....	.....	3	.....	.....	.....	3
Stettin	May 11	116,500	58	.....	.....	.....	.....	3	.....	.....	.....	.....
Crefeld	Apr. 7	108,000	80	.....	.....	.....	.....	.....	.....	.....	.....	.....
Aix-la-Chapelle	May 1	106,502	45	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gothenburg	Apr. 30	105,800	.....	.....	.....	1	.....	.....	.....	1	.....	.....
Leghorn	May 1	103,395	47	.....	.....	.....	.....	1	.....	.....	.....	.....
Leghorn	May 7	103,395	37	.....	.....	.....	.....	1	.....	.....	.....	.....
Mannheim	May 7	80,000	31	.....	.....	.....	.....	.....	.....	1	.....	.....
Mayence	Apr. 23	72,281	32	.....	.....	.....	.....	.....	.....	1	.....	.....
Mayence	Apr. 30	72,281	16	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	May 7	72,281	31	.....	.....	.....	.....	.....	.....	.....	.....	.....
Edinburgh	May 7	69,656	23	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jerez de la Frontera	Apr. 23	61,708	28	.....	.....	.....	.....	.....	.....	1	.....	.....
Jerez de la Frontera	Apr. 30	61,708	44	.....	.....	.....	.....	.....	.....	3	.....	.....
Georgetown, Demerara	Apr. 16	53,176	63	.....	.....	.....	.....	1	.....	.....	.....	.....
Merida	Apr. 25	47,400	32	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	May 2	47,400	37	.....	.....	.....	.....	1	.....	.....	.....	.....
Trapani	Apr. 30	43,095	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marsala	Apr. 30	40,131	21	.....	.....	.....	.....	.....	.....	.....	.....	.....
Matanzas	May 11	40,000	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
Schiedam	May 7	25,533	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena	Apr. 23	25,000	16	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	May 13	25,000	12	.....	4	.....	.....	3	.....	.....	.....	.....
Girgenti	Apr. 30	23,947	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	May 20	19,264	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sagua la Grande	May 7	18,109	6	.....	.....	.....	.....	1	.....	.....	.....	.....
Sagua la Grande	May 14	18,109	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hamilton, Bermuda	May 16	15,013	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. George's, Bermuda	May 16	15,013	2	.....	.....	.....	.....	.....	.....	.....	.....	.....

MORTALITY TABLE, FOREIGN CITIES—Continued.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Cape Haitien	Apr. 30	15,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Flushing	May 7	14.000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas, W. I	Apr. 22	12,019	30	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas, W. I	Apr. 29	12,019	29	.....	.....	.....	.....	.....	.....	.....	.....	.....
Matamoras	May 13	12,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sonneberg	May 7	12,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Queenstown	May 14	10,340	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tuxpan	May 7	10,280	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chatham, Ont	May 14	10,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chatham, Ont	May 21	10,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sarnia	May 14	6,600	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clifton	May 14	3,249	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amherstburg	May 14	2,260	1	.....	.....	.....	.....	.....	.....	.....	.....	.....

OFFICIAL:

WALTER WYMAN,

Supervising Surgeon-General Marine-Hospital Service.