

# WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract }  
          { No. 36. }

TREASURY DEPARTMENT,  
OFFICE SUPERVISING SURGEON-GENERAL,  
U. S. MARINE-HOSPITAL SERVICE,  
Washington, D. C., September 6, 1889.

*Abstract of Domestic and Foreign Sanitary Reports received during the week ended September 6, 1889, published in accordance with section 4, Act of Congress, approved April 29, 1878.*

UNITED STATES.

## *Reports from National Quarantine Stations.*

CAPE CHARLES, VA.—During the week ended August 30, there were 28 vessels spoken, 4 inspected, and 1 fumigated. The British steamship Klyde, from Mobile, had 18 of her crew convalescent from malarial fever. American schooner Hamcomb, eight days from Mobile, reports that her crew were attacked with malaria fever at that place.

GULF QUARANTINE (NORTH CHANDELEUR ISLAND), LA.—The Spanish bark Maria was discharged August 23, and the Norwegian bark Southern Queen, August 28. The American schooner Ella Andrews arrived August 29 from Vera Cruz, and was held for disinfection.

SAN DIEGO, CAL.—During the week ended August 28, there were 3 vessels inspected.

## *A preliminary report on Weigert's treatment for phthisis pulmonalis.*

By J. J. KINYOUN, Assistant Surgeon, M. H. S.

On the 1st of June, 1889, a Weigert's hot-air apparatus for the treatment of phthisis was received, and its use began at once; two cases were selected from the number in the hospital; these were, clinically, parallel cases, each presenting about the same physical signs; in neither case were there night sweats nor pyrexia. After several preliminary trials, observations on the treatment were recorded; special attention being paid to the directions accompanying the apparatus.

Both were typical cases of tubercle of lung, having all the physical signs, and by microscopical examination, the sputum was found to contain bacilli in abundance.

The administration to each case was given at about the same time each day. The temperature of the inspired air, at the commencement, was never less than 100° C., and after inspiration for one minute, it usually rose to 180° to 240°. Observations were made on the temperature at intervals of ten minutes. By a special arrangement devised by myself, a thermometer was placed at the expiratory valve, so that the temperature of the expired air could be registered; it was demonstrated that there was a fixed ratio between the inspired and expired air; when the inspired air registered 200° to 230° the expired air was 65° to 75°.

The high temperature secured was partly dependent upon the rapidity and quantity inspired; *i. e.*, the greater the lung capacity, the higher the temperature. As much depended upon this factor as upon the size of the flame. In several instances both patients complained of the intolerable dryness of throat and mouth; this was particularly noticed when the weather was damp, but as a rule the treatment was well borne. The following cases were taken:

CASE I. George Emery; 53 years; native of Maine; was admitted to Marine Hospital, New York in 1887; had been ill for two years prior to that time.

*Condition* on June 7, 1889.—Suffers greatly from dyspnoea; has a cough which troubles him, mostly in the morning soon after rising; expectorates a considerable quantity of muco-purulent material; has no night sweats nor pyrexia; bowels, as a rule, constipated.

*Physical examination*.—Inspection showed the chest flat superiorly and anteriorly; more noticeable on the right side; the right scapula is drawn in toward the median line; chest measurement just above nipple, on forced expiration, 30 inches; forced inspiration, 31½ inches; difference of 1½ inches.

*Percussion*.—Over the right apex, dullness amounting almost to flatness, which extends downward about 2 inches on the anterior portion of lung; left side, dullness at apex, diminution from above downward.

*Auscultation*.—Cavernous breathing heard over the right apex, accompanied by moist râles; small crepitant and subcrepitant râles over the entire side; on left side, vocal resonance increased, crepitant and subcrepitant râles over the entire lung. Sputum contains large number of bacilli.

On June 9 Weigert's treatment was commenced; time, thirty minutes at first, increasing ten minutes each day until an hour was reached. The temperature of the inspired air was from 120° to 230° C., and the expired, 65° to 80°. Weight, 95½ pounds.

June 20. He states that he has less cough, and the expectoration is diminishing; sleeps better at night, and does not suffer so much from dyspnoea; appetite shows no improvement; expansion of the chest has increased  $\frac{1}{4}$  inch; weight, 92 pounds.

July 2. Appetite improving; no increase in weight.

August 1. For the past month he has had the treatment for one hour each day consecutively, and for the past week has been troubled with constant headache, which does not yield to treatment.

August 3. Treatment discontinued for two days; renewed on August 5, and continued for one week, when it had to be abandoned, as it caused great fatigue, and also several paroxysms of coughing. Present condition: chest expansion,  $2\frac{1}{4}$  inches; weight,  $92\frac{1}{2}$  pounds; average temperature of the inspired air,  $180^{\circ}$  to  $230^{\circ}$ , expired air, between  $65^{\circ}$  and  $75^{\circ}$ . There has been from  $\frac{2}{3}$  to  $1^{\circ}$  difference in the body temperature at each treatment, accompanied by increased frequency of the pulse and diminution in number of respirations per minute. (*Vide* Chart I.)

CASE II. Frank Wall; aet 29 years; Norway; was admitted to U. S. Marine Hospital, New York, on April 12, 1889. Patient gives a history of illness for one year previous to admission; of having had a cough, night sweats, and profuse expectoration; had no hemorrhage; he is emaciated; has no appetite; coughs a great deal during the night, and has a distressing dyspnoea; there is a sinking in of the infra and supra clavicular spaces.

*Percussion.*—Dullness over both apices, increasing from above downward.

*Auscultation.*—Bronchial breathing at both apices; cavernous at the left; broncho-vesicular respiration extending downward to both nipples; a slight friction sound heard over the inferior and lateral portion of the left lung; crepitant and subcrepitant râles over the entire chest. Prior to beginning of treatment he had been on a liberal diet; tonics and sedatives administered to allay the cough.

June 14. *Physical examination* shows about same condition as formerly; disseminated râles over the chest; forced expiration,  $32\frac{1}{4}$  inches; inspiration,  $33\frac{1}{4}$  inches; weight, 115 pounds. To-day Weigert's treatment commenced, beginning with thirty-five minutes, increasing ten minutes each day until an hour was reached.

June 19. His cough is not so troublesome at night; sleeps better, and suffers less with shortness of breath; appetite fair.

June 23. During the last ten days he has lost 3 pounds; cough has diminished, and expectoration is less.

July 5. At each seance for the past three days he has been troubled with cough, and expectorates a considerable quantity of mucus; otherwise, he is doing quite well.

July 12. He states that he is feeling so much improved that he would like to have his discharge; he was advised to continue treatment for awhile longer, but refused; his present condition is as follows: There has been no diminution of the area of consolidation; slight increase of the râles over the apices; a decrease of mucous râles in lower lobes of both lungs; sputum shows enormous numbers of bacilli; expansion of the chest has increased to 35 inches—a gain of  $\frac{7}{8}$  inch. 1

NOTE.—August 12. Patient readmitted. Since his discharge, one month ago, he has rapidly grown worse; greatly emaciated, profuse expectoration, and severe diarrhœa; both apices are breaking down; lungs with moist râles; temperature of the inspired air,  $180^{\circ}$  to  $240^{\circ}$ ; expired air,  $60^{\circ}$  to  $75^{\circ}$ . A constant rise of from  $\frac{2}{3}$  to  $1^{\circ}$  body temperature at each treatment, acceleration of the pulse, and diminution of respirations per minute. (*Vide* Chart II.) In connection with the treatment of above cases, a control experiment was made by having another patient use the apparatus, inspiring cold air instead of the heated; the inhalations were made under precisely the same conditions, viz, the rectal temperature, pulse, and respiration taken at commencement and close of each hour.

CASE III. *Control*.—Peter Johnson; aet 29; Norwegian; admitted to Marine Hospital, New York, February 8, 1889.

*Previous history*.—Was ill six months before admission, his chief ailment being a severe pain in the left side, accompanied by a cough and considerable expectoration.

*Present condition*.—June 19, 1889. Considerable emaciation; cough troublesome in the mornings; has distressing dyspnœa on slightest exertion.

*Physical examination* reveals consolidation of both apices, with moist and crepitant râles disseminated over both lungs; has had no sweats nor pyrexia for some time past. There is considerable difference between the expansion of right and left sides, that of the right being greater. Expansion of the chest, forced expiration,  $32\frac{1}{2}$  inches; forced inspiration,  $33\frac{3}{8}$  inches; difference,  $1\frac{1}{8}$  inches. Weight, 126 pounds.

June 19. *Cold-air treatment* commenced, beginning with thirty-five minutes, and increasing ten minutes each day until one hour was reached.

June 29. He states that he sleeps better at night, his cough is less troublesome, and the dyspnœa not so annoying. 'Chest,  $32\frac{1}{2}$  inches

and 34 inches; difference,  $1\frac{1}{2}$  inches. Weight, 126 pounds. Appetite improved.

July 10. Condition unchanged, except that there are fewer râles over both lungs.

July 19. Chest measurement the same; weight,  $124\frac{1}{2}$  pounds. He now coughs less, sleeps well, dyspnoea improved, and appetite fair. Examination shows the tubercular infiltration to be about the same; the mucous râles have disappeared from lower portion of the chest; there has been a rise each time in the rectal temperature of from  $\frac{2}{3}$  to  $1^{\circ}$ ; a diminution of the pulse; little or no effect on respirations. (*Vide* Chart III.)

CASE IV. Patrick Tracy, admitted to U. S. Marine Hospital, New York, April 19, 1889, under diagnosis of acute pneumonic phthisis; was discharged May 10, readmitted on July 10, 1889. He then complained of short breath, persistent cough, and profuse expectoration; been losing flesh rapidly during past two months; has night sweats.

*Physical condition.*—There is marked dullness posteriorly over a circumscribed area of the upper portions of both lungs; anteriorly, the dullness was slight; expiratory sounds prolonged; bronchial breathing at both apices; a small cavity in the right, and general consolidation of the left; mucous râles heard over both lungs.

July 14. Chest expansion 34 and  $32\frac{3}{4}$ ; weight, 120 pounds; pulse, 130; respiration, 35. Weigert's method commenced, with forty-five minutes, fifteen minutes increase to an hour.

July 18. Coughs about the same; expectoration has increased; has less dyspnoea; appetite poor.

July 24. Has lost 8 pounds since beginning of treatment.

July 26. Night sweats have ceased; cough some better; expectoration less; dyspnoea, slightly better than a week ago; he now complains of soreness over both lungs.

July 30. A slight hemorrhage this morning. Weigert's treatment discontinued.

August 8. During the past week he has been improving; sleeps well; cough and expectoration less.

Physical examination shows bronchial breathing over the consolidated areas; over a small area near the cavity a few crepitant râles were heard. Weight, 112 pounds; chest expansion, 33 to 35 inches; difference, 2 inches.

For fifteen consecutive days he has had Weigert's treatment; inhalations could not be taken more than an hour, on account of increased

attacks of coughing. There was an amelioration of the distressing symptoms, but no diminution of the area of consolidation. Temperature of the inspired air ranged between 200° to 240°. The expired was 65° to 75°. Constant rise in rectal temperature of  $\frac{2}{3}$  to 1°. Acceleration of pulse; slight increase of respiration. Patient requests his discharge.

In the three cases receiving the hot-air treatment there was a notable improvement in the acute symptoms proportionate to the increased chest expansion. It is questionable whether the high temperature of the air has any effect upon the tubercular process. There is a possibility that the bacilli that are free within the bronchi are destroyed.

In Case III, used as a control to Cases I and II, there was the same improvement noted: the increase of the bodily temperature, acceleration of pulse, and respirations being the same in each, thereby indicating that the improvement was not due to the high temperature of the inspired air.

More extended observations will be made upon other cases in hopes of obtaining more satisfactory results.

*Reports of States, and Yearly and Monthly Reports of Cities.*

FLORIDA—*Pensacola*.—Month of August, 1889. Population, 15,000. Total deaths, 24, including measles, 1, and enteric fever, 2.

MASSACHUSETTS—*Newton*.—Month of July, 1889. Population, 21,553. Total deaths, 28, including enteric fever, 1.

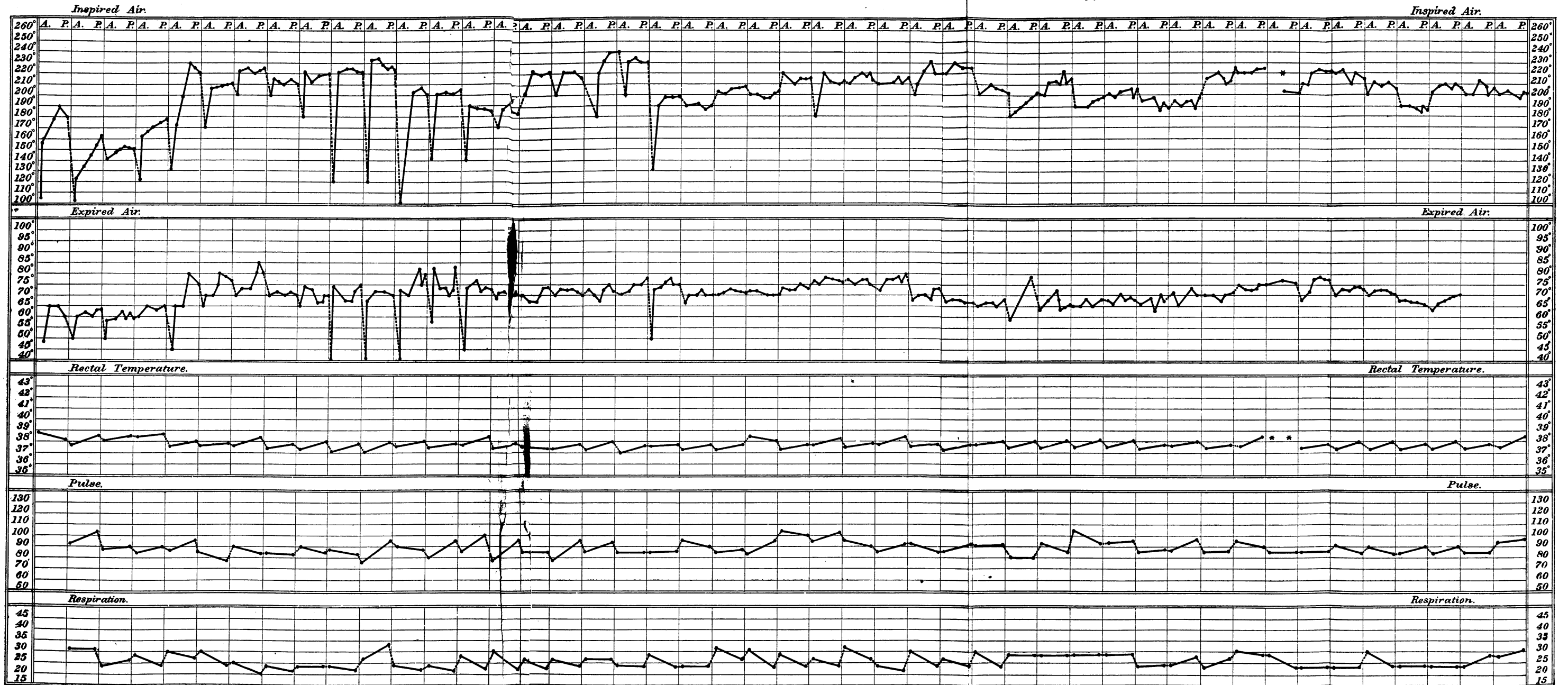
MICHIGAN.—Reports to the State board of health. Lansing, during the week ended August 24, 1889, from 54 observers, indicate that rheumatism, cholera morbus, typho-malarial fever, and pneumonia increased, and inflammation of brain and cholera infantum decreased in area of prevalence. Including reports by regular observers and others, diphtheria was reported present during the week, and since, at 7 places, scarlet fever at 8 places, enteric fever at 11 places, and measles at 3 places.

NEW HAMPSHIRE—*Manchester*.—Month of June, 1889. Population, 42,000. Total deaths, 76; none from contagious diseases. Six cases of diphtheria, 63 of scarlet fever, 1 of enteric fever, and 2 of measles were reported during the month.

Month of July, 1889. Total deaths, 82, including scarlet fever, 2. Nine cases of diphtheria, 76 of scarlet fever, and 1 of measles were reported during the month.

NEW YORK.—Reports to the State board of health show a total of 10,806 deaths during the month of July, 1889. The deaths included

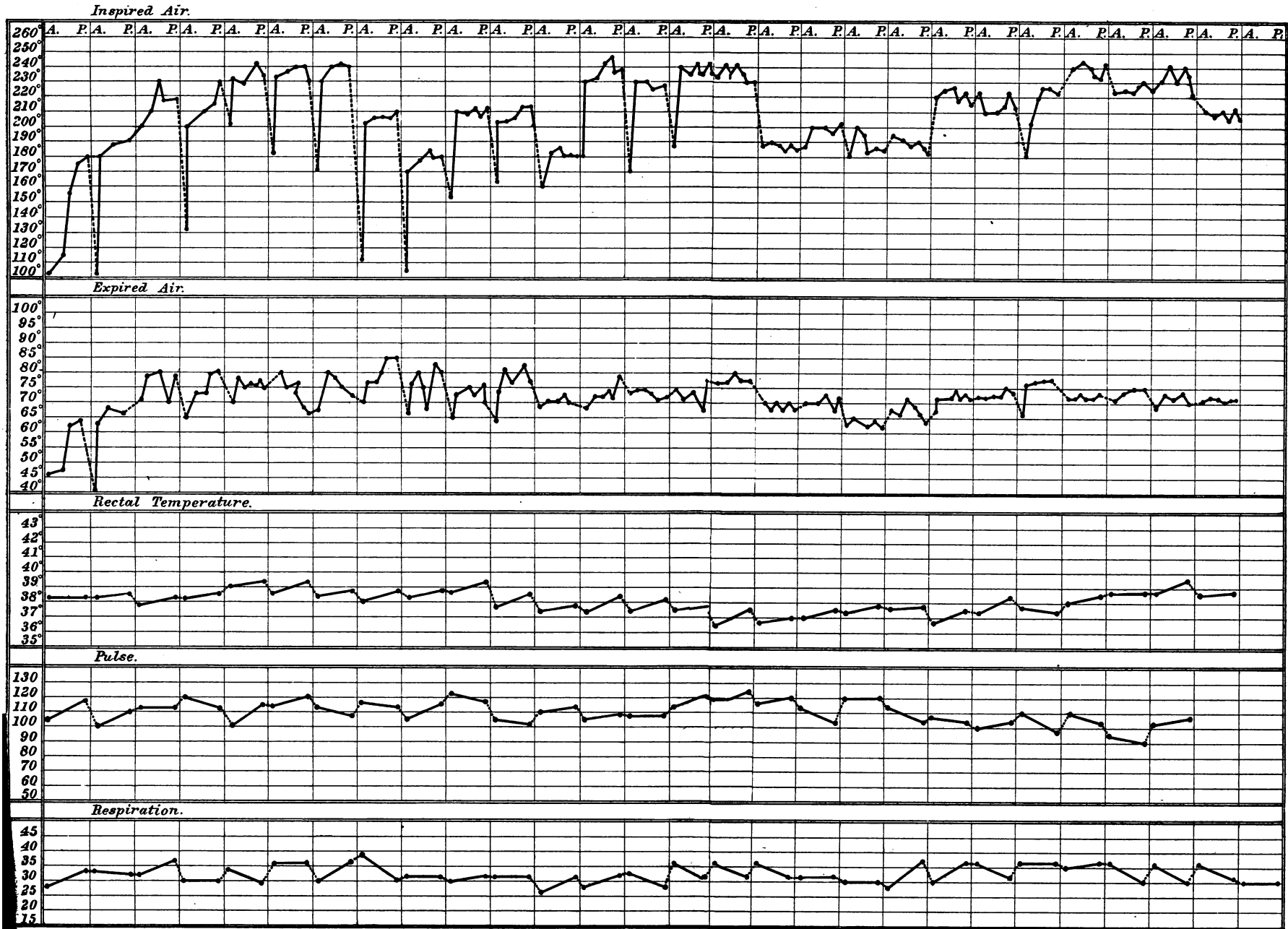
CASE I.—Chart to Accompany Clinical History of George Emery.



Each space represents the daily administration of Weigert's treatment for one hour.  
 Observations were taken every ten minutes on the temperature of the inspired and expired air.  
 The rectal temperature, pulse, and respiration were taken at the commencement and close of each seance.

\* Severe headache. Treatment discontinued for the day.

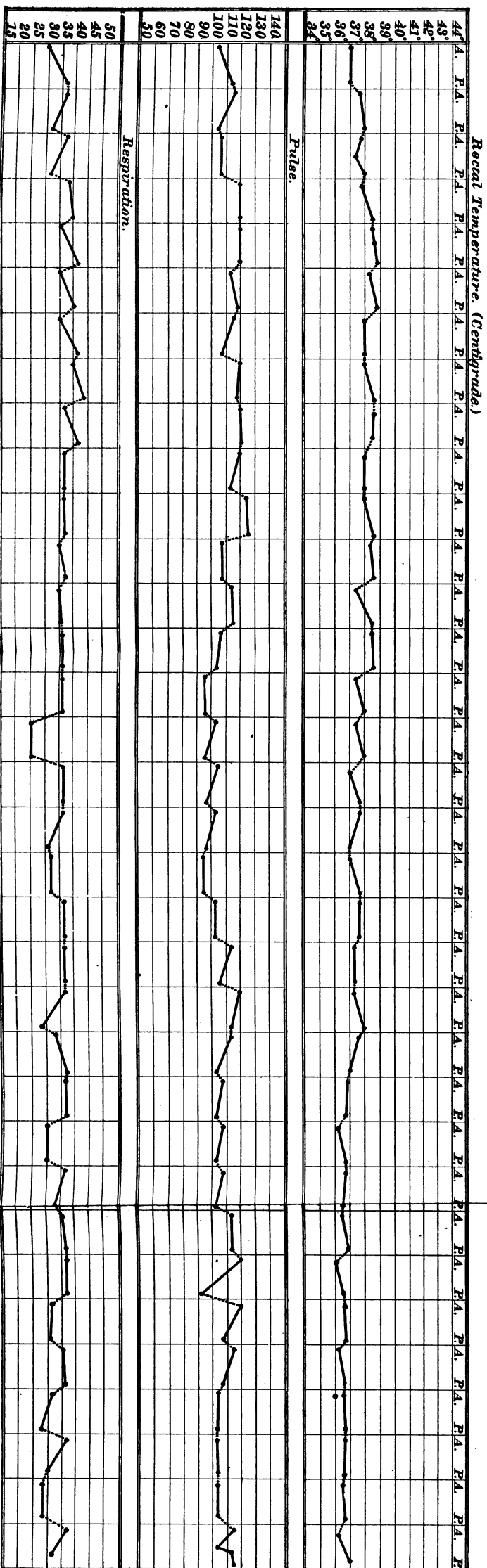
CASE II.—Chart to Accompany Clinical History of Frank Wall. Permit No. 141.



Each space represents the daily administration of Weigert's treatment for one hour. Observations on the temperature of the inspired and expired air taken every ten minutes, and of the body, per rectum, at the commencement and close of each seance.



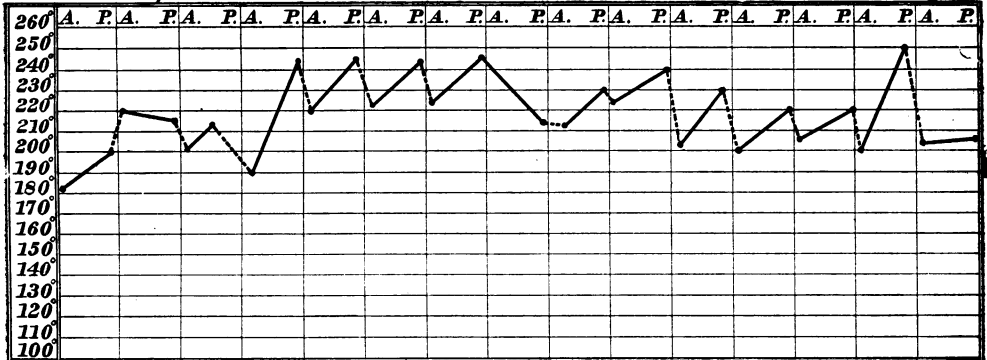
**CASE III.—Chart to Accompany Clinical History of Peter Johnson.**  
 "Control" to George Emery and Frank Wall. Cases I and II.



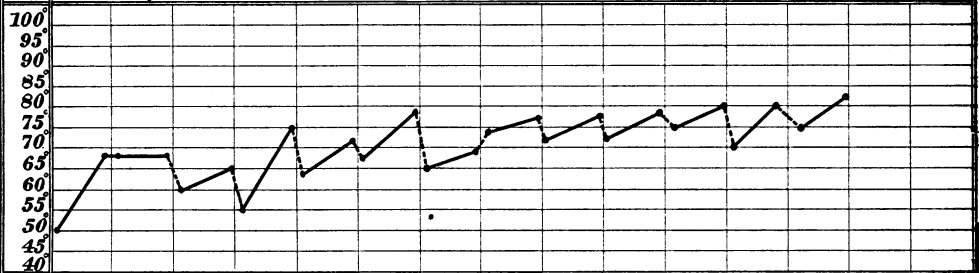
Rectal temperature, Pulse, and Respiration taken at the commencement and close of each hour.

CASE IV.—Chart to Accompany Clinical History of Patrick Tracy.

*Inspired Air.*



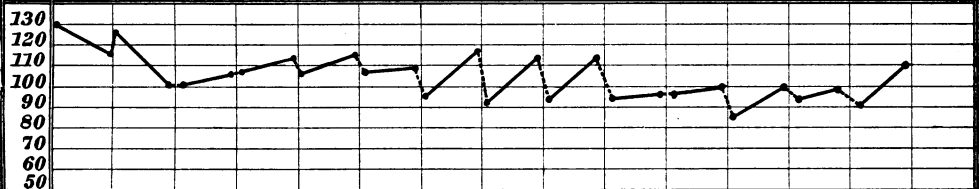
*Expired Air.*



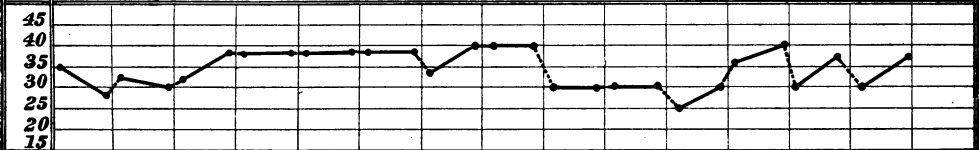
*Rectal Temperature.*



*Pulse.*



*Respiration.*



Each space represents the daily administration of Weigert's treatment for one hour. Observations on the temperature of the inspired and expired air, and of the body, per rectum, taken at the commencement and close of each seance.

enteric fever, 117; small-pox, 1; scarlet fever, 69; measles, 33; erysipelas, 14; whooping-cough, 112; croup and diphtheria, 305; and diarrhœal diseases, 3,092. The Monthly Bulletin says:

July is always the month of greatest mortality in this State. Of 368,000 deaths occurring during the last four years, more than 40,000, or about 11 per cent., occurred in July, and of the 62,700 deaths that have been reported during the seven months of this year, 10,650 occurred in this month. This increase is due to the excess of diarrhœal diseases over that of any other month. During the past four years, 38 per cent. of the mortality from this cause has occurred in July. The infant death rate has corresponded. During four years 37 per cent. of the deaths have occurred under five years of age; 53 per cent. of the July deaths have been infantile. During the present month 51.4 per cent. of the deaths are infantile, and about 28.5 from diarrhœal diseases. There is a rather marked increase of deaths from typhoid fever over the average for July. Scarlet fever, measles, and whooping-cough show considerably less fatality than a year ago. Small-pox has been brought to Albany, contracted from the traveling case from Colorado spoken of in the last Bulletin, and 3 cases have developed. From consumption 93.22 deaths occurred in each 1,000 deaths from all causes, and 190.40 per 1,000 over five years of age. The mortality of several localities, particularly in the maritime district, is much increased by a large transient summer population.

RHODE ISLAND—*Newport*.—The following communication has been received from Henry E. Turner, jr., executive officer of the board of health, under date of August 30, 1889:

The inclosed weekly report contains a large number of cases of typhoid fever reported. This is because no reports had been previously made, and the dates of contraction of the disease date back to August 12. Eight of these 14 cases are reported from Newport Hospital; 5 of which are from U. S. T. S. New Hampshire, and 1 a patient brought to the hospital from the town of Portsmouth, the other 2 are New Yorkers, a groom and a photographer, who undoubtedly contracted the disease before coming here for the season. These 8 cases were admitted to the hospital, respectively, on August 19th, 2; 20th, 1; 22nd, 1; 24th, 1; 26th, 2; 17th, 1; of the remaining 5 cases, one was a young lady of Philadelphia, who had been here but three days when taken sick, on August 12; the 4 others were Newporters, and were taken sick, respectively, on August 12, 14, and 16.

The death reported from typhoid was one of the patients from training ship New Hampshire. Of the 2 cases of diphtheria reported, one was contracted in Connecticut, by a school girl on vacation, who returned home on account of her sickness, the other not yet investigated.

The 2 cases of measles in one house not investigated for cause.

VIRGINIA—*Petersburgh*.—Month of August, 1889. Population, 25,000. Total deaths 50, including enteric fever 4.



## FOREIGN.

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

**GREAT BRITAIN—*England and Wales.***—The deaths registered in 28 great towns of England and Wales during the week ended August 17, corresponded to an annual rate of 19.2 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Derby, viz, 9.0, and the highest in Preston, viz, 42.6 a thousand. Diphtheria caused 3 deaths in Sheffield, 4 in Birmingham, and 2 in Liverpool.

*London.*—One thousand three hundred and eighty-two deaths were registered during the week, including measles, 18; scarlet fever, 13; diphtheria, 36; whooping-cough, 17; enteric fever, 8; diarrhœa and dysentery, 158, and cholera and choleraic diarrhœa, 4. The deaths from all causes corresponded to an annual rate of 16.6 a thousand. Diseases of the respiratory organs caused 162 deaths. In greater London 1,760 deaths were registered, corresponding to an annual rate of 15.8 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 61; whooping-cough, 10; and fever, 5.

*Scotland.*—The deaths registered in 8 principal towns during the week ended August 17, corresponded to an annual rate of 17.8 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Aberdeen, viz, 11.6, and the highest in Perth, viz, 26.9 a thousand. The aggregate number of deaths registered from all causes was 455, including small-pox, 1; measles, 10; diphtheria, 7; whooping-cough, 21; fever, 6; and diarrhœa, 43.

During the month of July, 1889, there were 2,270 deaths registered in these towns, including diarrhœa and dysentery, 139; fever, 30; measles, 89; whooping-cough, 96; diphtheria, 20; and scarlet fever, 14.

During the quarter ended June 30, 1889, there were 18,213 deaths registered in Scotland, corresponding to an annual rate of 17.9 a thousand of the estimated population.

In the principal town districts the death rate was 20.6 a thousand. The deaths from all causes in these districts amounted to 2,562 in April, 2,469 in May, and 2,041 in June. The deaths included measles, 363; scarlet fever, 51; whooping-cough, 504; fevers, 41; and diarrhœa and dysentery, 129.

*Ireland.*—The average annual death rate, represented by the deaths registered during the week ended August 17, in the 16 principal town districts of Ireland, was 23.0 a thousand of the population. The lowest

rate was recorded in Drogheda, viz, 4.2, and the highest in Lurgan, viz, 35.9 a thousand. In Dublin 165 deaths were registered, including diphtheria, 1; measles, 1; enteric fever, 3; diarrhoea, 23; and whooping-cough, 4.

VENEZUELA.—*Caracas*.—The United States minister, in his dispatch, dated August 9, 1889, says :

Several cases of what has been erroneously reported to be “yellow fever” have been developed here during the past ten days. Some of the premonitory symptoms of the disease are somewhat analagous to those of yellow fever, but it is certainly not a species of that much dreaded plague. If taken in time it yields readily to medical treatment, nor has it, as yet, assumed an epidemic form. It is confined for the most part to districts where the drainage is very defective, and to recently arrived and unacclimated foreigners. Some few deaths have occurred from it, but were among our resident or transient countrymen, though nearly all of them have had it. With proper care and precautions foreigners need have no serious apprehensions in visiting Caracas, even in this, the most sickly season of the year.

*Later*.—August 19, 1889. Since the date of my dispatch of the 9th instant, the fever here seems to have assumed a partially epidemic form, and new cases (especially among foreigners) have been reported almost daily. Two members of my own family have had it, but are now convalescing. As yet there have been no deaths among our resident or transient countrymen.

The disease is known here, in common parlance, as “yellow fever,” but whilst it is not that, it is very little less to be dreaded, and I would not advise foreigners to come hither before the middle or last of October next, at which time the hot season usually changes for the better.

CUBA.—*Havana*.—Week ended August 24, 1889. Nineteen deaths from yellow fever.

*Cardenas*.—August 23, 1889. Good health in town and harbor.

*Cienfuegos*.—August 26, 1889. No more than three cases of yellow fever have occurred during the week. None in town or shipping.

NETHERLANDS.—The deaths registered in the principal cities of the Netherlands, having an estimated population of 1,129,678, during the month of June, 1889, corresponded to an annual rate of 25.2. The lowest rate was in Hertogenbosch, viz, 19.6, and the highest in Haarlem, viz, 39.7. The deaths included enteric and typhus fever, 6; measles, 130; whooping-cough, 34; diphtheria, 16; and diarrhoea and dysentery, 63.

BRAZIL.—*Ceara*.—Month of July, 1889. Population, 29,000; total deaths, 177; none from contagious diseases.

WEST INDIES.—*Barbadoes*.—July 29, 1889. Health of island good.

## MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Paris.....	Aug. 17....	2,260,945	928			2		27	13	18	13	10
Glasgow.....	Aug. 17....	545,678	210					1		2		
Warsaw.....	Aug. 10....	445,770	263			8			6	5		
Calcutta.....	July 20....	433,219	219	17		1				1	1	
Amsterdam.....	Aug. 17....	399,051	142					1		6		
Copenhagen.....	Aug. 16....	307,000	126					1		5		
Rio de Janeiro.....	July 7....	300,000	347		3	2	1	3		1		
Rio de Janeiro.....	July 14....	300,000	316		6	5	4	4				
Rio de Janeiro.....	July 21....	300,000	266		3	3	5	5				
Rio de Janeiro.....	July 28....	300,000	204		2	5	5	2	1			
Rio de Janeiro.....	Aug. 4....	300,000	258		7	7	2	1				
Edinburgh.....	Aug. 10....	266,900	77							2		
Palermo.....	Aug. 17....	250,000	97							2		
Rotterdam.....	Aug. 17....	197,724	81							2		
Genoa.....	Aug. 17....	180,191	81			1	1			1		
Trieste.....	Aug. 10....	154,500	71							2		
Stuttgart.....	Aug. 17....	125,510	41							1		
Pernambuco.....	July 30....	120,000	106				1	2	2			
Pernambuco.....	Aug. 6....	120,000	66									
Barmen.....	Aug. 17....	109,000	56							1	1	
Catania.....	Aug. 18....	108,000	46						1	1		
Leghorn.....	Aug. 18....	103,142	39									
Edinburgh.....	Aug. 10....	76,400	22									
Mayence.....	Aug. 10....	65,802	23									
Cadiz.....	Aug. 17....	65,028	33									
Cienfuegos.....	Aug. 19....	40,655	15		1							
Cienfuegos.....	Aug. 26....	40,655	14		3							
Guayaquil.....	Aug. 14....	35,000	62			1		1				
Vera Cruz.....	Aug. 22....	23,800	22									
Gibraltar.....	Aug. 11....	23,631	12			1				2		
Cartagena, Colombia.....	Aug. 10....	20,000	13									
Cartagena, Colombia.....	Aug. 17....	20,000	8									
Antigua.....	Aug. 4....	15,847	4									
Antigua.....	Aug. 11....	15,847	12									
Antigua.....	Aug. 18....	15,847	10									
St. Thomas.....	Aug. 9....	13,500	12									
St. Thomas.....	Aug. 16....	13,500	10									
San Juan del Norte.....	July 22....	1,250	2									
San Juan del Norte.....	July 29....	1,250	2									
San Juan del Norte.....	Aug. 5....	1,250	2									
San Juan del Norte.....	Aug. 12....	1,250	1									

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