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A MILK-BORNE OUTBREAK OF TYPHOID FEVER.¹

ASSOCIATED WITH A CHRONIC AND A NORMAL OR CONTACT CARRIER OF *B. TYPHOSUS*.

By CHARLES F. BOLDUAN and CHARLES KRUMWIEDE, Jr., Department of Health, City of New York.

Since first demonstrated by Conradi and Drigalski, many observers have shown that some individuals exposed to infection subsequently excrete typhoid bacilli in their stools without developing any symptoms of disease. These persons are termed normal or contact carriers. Probably they are mostly temporary carriers. Some undoubtedly become chronic carriers, as evidenced by the existence of chronic carriers with no history of typhoid fever, although many without such history may well have had mild and, therefore, overlooked or forgotten infection.

The interest in the milk-borne outbreak that we report is that a normal or contact carrier and a chronic carrier were found on one of the farms supplying the milk and the former was at first assumed to be the source of the infection.

The facts concerning the outbreak are briefly as follows: Eleven cases of typhoid fever were directly traced to milk from the "B" dairy. Two additional cases were probably infected from the same source. The dates of onset of the cases extended from October 15 to November 16. This dairy distributed about 880 quarts of milk a day, obtaining its supply from six farms. About 160 quarts of the milk from one farm was distributed as "Baby's milk."

The milk received at the dairy was bottled and placed in ice boxes in the order of the numbers given to the farms supplying the milk. An exception was the "Baby's milk," a late afternoon milking, which was usually bottled on its arrival in the freshly sterilized bottling apparatus.

When the drivers started out in the morning, driver "Peter" took his supply first and usually took nearly all of the milk of farm No. 1. The other drivers then took their supply in the order of the farms given. All took their share of "Baby's milk," but "Peter" took as much as the other three drivers together.

All the cases of typhoid fever were on Peter's route, which is explained by his supply coming exclusively from Farm No. 1, the

¹ The authors are indebted to the Board of Health of Morristown, N. J., for the opportunity of studying this outbreak and for permission to report the results.

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source of the infection, as subsequently determined. The contamination of the bottling tank by this milk was evidently not marked, as the milk subsequently bottled was not infectious.

One case of typhoid fever was a child $1\frac{1}{2}$ years of age who, it was claimed, received "Baby's milk" only. As the only mark of identification was a penciled "B" on the cap, accidental substitution of bottles of the ordinary milk was easily possible and probably occurred in this case. The driver, Peter, had worked in the dairy for years, and denied all illness both of himself and members of his family.

All the farms were inspected and blood and feces obtained of all individuals at the farms as well as of those working in the dairy. All examinations were negative except of the specimens of two men on Farm No. 1, S. M. and L. M. The data on these two men at the time of the investigation is as follows:

S. M., employed at the dairy for three months, denies ever having had typhoid fever. Widal reaction November 12, suspicious; fecal examinations, November 17, negative; November 26, negative.

L. M., employed for four months, gives no history of having had typhoid fever. Widal reaction, November 12, negative. Fecal examinations, November 17, positive; December 2, negative.

The above findings, coupled with the mode of distribution of the milk, seemed to us conclusive evidence as to the source of the infection. This deduction, however, was shown by subsequent events to be erroneous. Although we were not quite satisfied with the Widal result in S. M., the two negative fecal examinations seemed to indicate that the slight Widal reaction was probably due to an exceptionally high content in normal agglutinins, a not infrequent finding.

The carrier L. M. left the farm, but we were able to locate him and examined further fecal specimens for a period of six months, none of which was positive. A most rigid inquiry of both L. M. and of his parents failed to elicit any history of an illness which could be considered typhoidal in character.

The helper S. M. left the farm about the same time but returned to work in February. In March we were notified that two cases of typhoid fever had developed, both children receiving milk directly from Farm No. 1, the milk not passing through the dairy. The fact that S. M. had returned and his previous Widal record raised our suspicions at once. A fecal examination revealed the presence of typhoid bacilli. Four other cases were subsequently reported, all attributable to milk from Farm No. 1. The absence of S. M. and not the exclusion of L. M. was the reason that no cases had occurred after the resumption of distribution by the dairy following our investigation.

We believe the following to be the interpretation of these unusual findings. The Widal reaction of S. M. indicates that he was a chronic

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bacillus carrier, but at the time of our investigation was excreting no bacilli or too few to be found by the bacteriological methods employed. Later, on his return, he was excreting bacilli more freely and no difficulty was encountered in isolating them. He then disappeared and we could not observe him further. L. M. was a transient normal carrier infected by the milk or more probably through contact with S. M.

We were in error, therefore, because the carrier first found was a normal carrier, a fact unsuspected at the time. The presence of such a carrier raises interesting possibilities. Had we relied wholly upon the Widal reaction for the selection of fecal specimens and had S. M. given positive fecal results at the time, we would have excluded him and agreed to the resumption of the milk supply. Should L. M. have continued to excrete bacilli, the excretion by normal carrier being not necessarily as transient as it was in his case, we should have left an unsuspected carrier, who might have been the source of infection for subsequent cases.

Although a positive Widal reaction may be absent in chronic carriers, the results indicate that even if a farm helper is found to be excreting typhoid bacilli, any other individual giving a partial or positive Widal reaction should be held under suspicion. At least, fecal examinations should be made over a period of time, as excretion even with chronic carriers is intermittent and negative examinations are not infrequent, and may extend over months or even for a year.

Summary.—The presence on a farm of a normal carrier and a chronic carrier, temporarily fecal negative, is a possible source of error in tracing the source of infection of a milk-borne epidemic of typhoid fever.

VENTILATION AFTER FUMIGATION.

ARTIFICIAL VENTILATION OF SHIPS AFTER FUMIGATION WITH HYDROCYANIC ACID GAS.

By S. B. GRUBBS, Surgeon, United States Public Health Service.

The spread of bubonic plague to all parts of the world in recent years has emphasized the necessity of improving the means used for the destruction of rats on board ships, as it is through these animals that the disease is transmitted. It has been shown that rats are great travelers, and that they may be found in all parts of a vessel, from the costly saloons of the liner to the deepest hold of the freighter,¹ and consequently that no part of a ship should be expected when fumigation is done.

¹ Grubbs and Holsendorf, Public Health Reports, June 20, 1913.

Sulphur dioxide and hydrocyanic acid gas are the fumigants now most used. Sulphur dioxide has been used for many years to destroy the animal carriers of disease. The objections to this agent are the time required and the possibilities of damage by the sulphur fumes. Including the time for dissipation of the fumes, sulphur fumigation consumes rarely less than 16 and often as much as 24 hours.

Hydrocyanic acid gas quickly destroys animal life, does no damage to inanimate objects, and is of but slightly more expense than sulphur, since it has been shown to be efficient in smaller quantities than prescribed by the present quarantine regulations.¹ It is colorless and practically odorless, but, following the rule now in force of testing with small animals,² may be considered fairly safe, especially if a rat is used or other animal sufficiently susceptible to the gas.³

The time necessary to ventilate a ship is variable. On an average the hold of a vessel will be clear of HCN gas in from one to two hours after removing the hatches. This time depends upon the depth and size of the hold, area of the hatchway, velocity of the wind, humidity, etc. With little wind and high humidity a deep hold may easily be unsafe for many hours and Faget has observed that 12 per cent of the vessels fumigated by him were not free from gas at the end of three hours.⁵ It is important that both the quarantine officers and the steamship agents should know in advance when persons may safely return on board. By employing a system of artificial ventilation we secure independence of weather conditions, a saving of time will be effected, and once fumigation has begun the exact time at which the working of cargo may be resumed can be determined.

Acting under bureau instructions an investigation was undertaken at the Boston quarantine station to find, if possible, an efficient means of removing cyanide gas from ships' holds after fumigation so that the uncertainties and delays of natural ventilation could be replaced by a reliable and practicable system.

The plan of pumping the gas from an outside generator into the hold and then aspirating it through the same pipes was first considered. This method, according to Heiser,⁴ is used for house fumigation in India. On account of the difficulty in handling a large rubber hose the application of this method was not attempted; neither was the plan to force in the gas and, after the necessary exposure, to replace the gas by fresh air pumped through the same hose. Studies made on both these principles indicated that they were impracticable for application to ship fumigation.

¹ Creel, Faget, and Wrightson, Public Health Reports, Dec. 3, 1915.

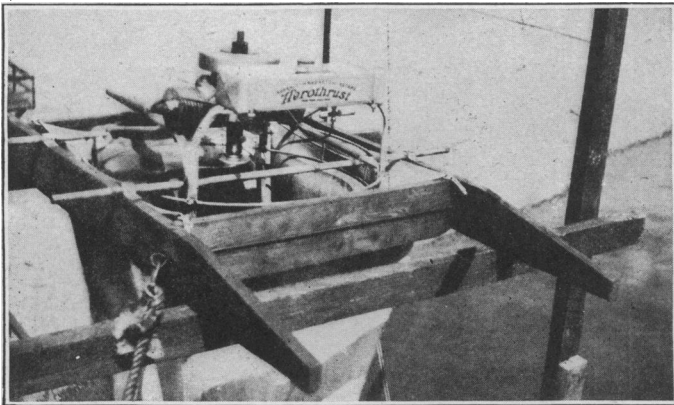
² Bureau circular letter of Nov. 4, 1916.

³ Grubbs, Public Health Reports, Apr. 20, 1917.

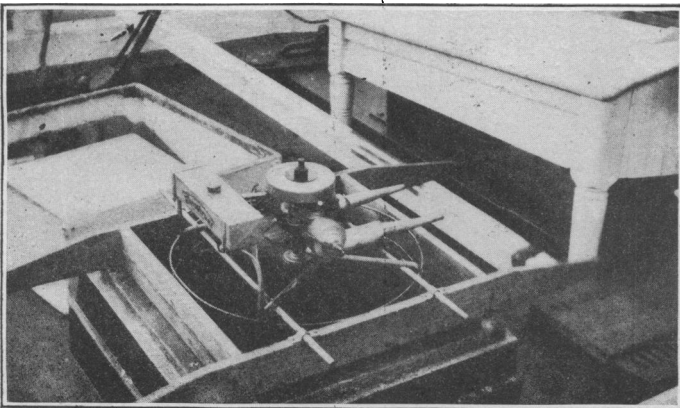
⁴ Personal communication.



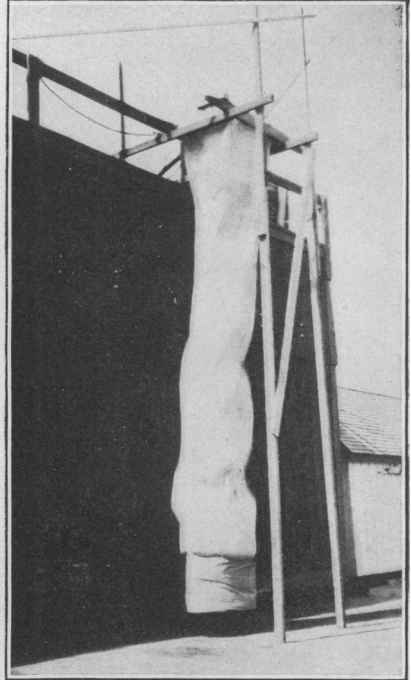
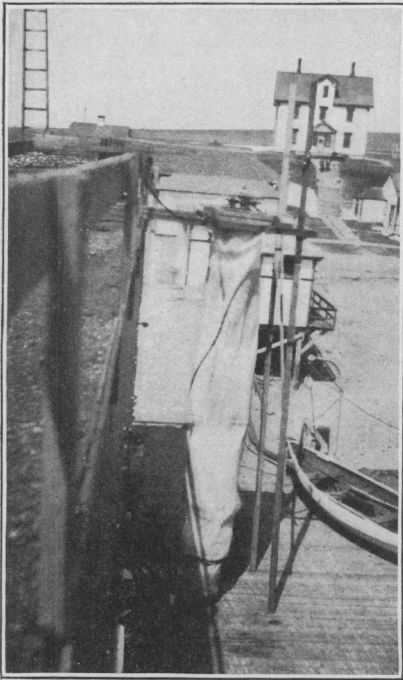
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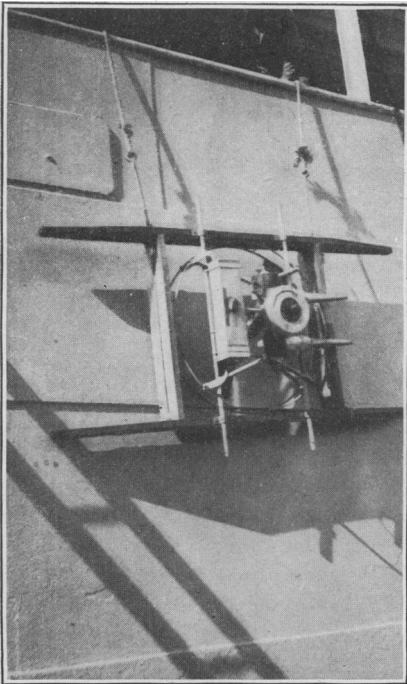
SHOWING DETAILS AND SIMPLE METHOD OF ATTACHING MUSLIN CHUTE.



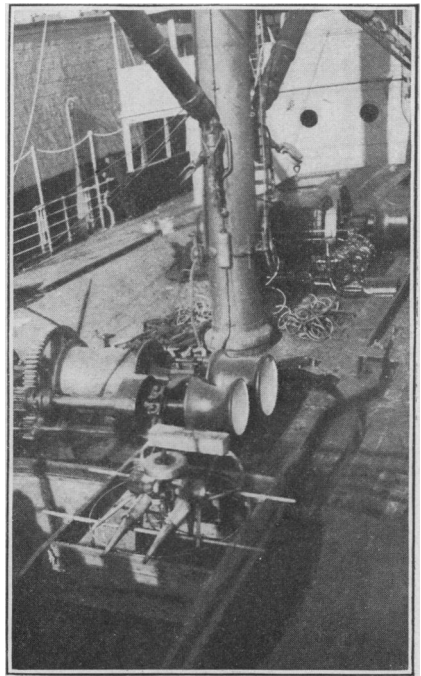
MACHINE PLACED OVER SMALL HATCH IN AFTER PART OF SCHOONER—AIR FORCED IN HERE.



MACHINE WITH MUSLIN CHUTE IN OPERATION SET UP AT STATION FOR TESTING;
CHUTE HAS BEEN DOUBLED BACK AT BOTTOM TO CLEAR.



HOISTING ABOARD SHIP. GASOLINE
TANK SHOULD BE LESS THAN HALF
FULL.



HORIZONTAL FAN OPERATING IN
CORNER OF HATCH WITHOUT
CHUTE.

Our first experiments were with two electric fans, one a 15-inch ventilating fan propelling 1,500 cubic feet per minute, and the other a blower propelling 500 cubic feet per minute, which were placed in various parts of the holds and operated by the dynamo of the quarantine steamer. Small as they were, these fans shortened the time in which both cyanide and SO_2 fumes could be cleared from compartments, as was shown by using the fans in one hold only of a ship being fumigated. These electric blowers possess little power and the wires are troublesome to handle, consequently they have been abandoned in favor of a gasoline driven air propeller designed to propel boats and sleds. This is a two-cylinder, two-cycle, air-cooled, 3-horsepower gasoline engine, driving a two-blade propeller, 32 inches in diameter, at about 1,600 revolutions per minute. According to measurements made at this station it delivers about 22,700 cubic feet of air per minute. This fan has been tried within the holds, where it served the double purpose of circulating the gas and increasing its penetration, but as it must be operated in a vertical position it was most effectively used for ventilation when attached to the hatch combing, the air being introduced into the hold through a muslin shute 28 inches in diameter. Two shutes were tried, one 20 feet and one 30 feet in length. The shorter one delivered 8,340 cubic feet of air per minute at the outlet. It will be seen that this machine will in 10 minutes deliver into the bottom of the hold an amount of air equal to the aerial content of the average ship's hold, but it has been found that gas is rarely expelled in this short time sufficiently to make the hold safe for persons entering.

The original vertical machine has at our suggestion been changed so that it will operate in a horizontal position, thus driving the air directly downward. Mounted on a wooden frame the horizontal machine weighs less than 100 pounds and may be easily hoisted aboard a vessel. When operated it is placed across the corner of an open hatchway and may be carried from one place to another without stopping the motor. Furthermore, it may be used with or without a shute. In holds of less than 30 feet depth it is probably as efficient without as with a shute, but as this latter can be easily attached by means of four snap hooks it may be advisable to use it when the hatchways are small and the holds deep. Anemometer readings at the bottom of an 18-foot shute gave approximately 8,500 cubic feet per minute and practically the same reading was obtained when the anemometer was held the same distance beneath the machine without the shute.

The following experiment will suffice to show that there should be no attempt to substitute artificial for natural ventilation, but only to supplement nature especially when conditions are not favorable. After fumigation of a hold two hatch covers at opposite corners were removed, the remaining covers being left in place. The machine

with shute was operated at one opening, the other being left open for the escape of gas. Rats were lowered at intervals up to 45 minutes, but all were dead when withdrawn after exposure for 5 minutes. In this interval fresh air to the amount of over four times the cubic capacity of the hold had been delivered at the bottom of the hold, and yet the cyanide persisted in dangerous proportions. Ten minutes after the removal of all the hatch coverings rats lowered into the hold were not affected.

In our experience, a hold has always been safe after most of the hatches have been removed and the aerotruss operated 30 minutes. With two machines, one used aft and the other forward, it is then always possible to have a four-hold vessel ready for release in one and one-half hours or a six-hold vessel ready in two hours after removal of the hatches. Naturally if the holds blown out first require 30 minutes the next one will need less time, as it has been ventilating naturally for a half hour. Since we know that in the foggy weather so common in Boston this gas will remain in the holds for from three to eight hours unless removed by mechanical means, this advantage is evident.

All vessels fumigated at Boston now have their entire superstructure treated with hydrocyanic acid gas. Usually this is ventilated easily without any artificial means, but occasionally, owing either to the structure of the vessel or to weather conditions, considerable delay results unless a fan is used. Large ventilators, when available, are made use of by removing the top and placing the horizontal machine over the opening. The large volume of air thus introduced promptly removes the gas in any kind of weather. In the superstructure and in certain other places the machine which operates vertically and drives the air horizontally is of great service. By directing the air current against the open door of a ship's cabin it acts as a strong wind. Frequently the forecabin or store room when below deck and reached by a companion way is difficult to clear of gas. The blast from the machine if directed down the companion way will do more in a few minutes, frequently, than natural ventilation will do in several hours.

Even more time may be saved by the machine when sulphur dioxide is the fumigant. As it is not probable that a man will enter a hold full of sulphur fumes it is not necessary for the quarantine officer to safeguard sulphur fumigation, but the ship loses rarely less than 6 and frequently as much as 12 hours waiting until it is possible for men to work below deck. This is also especially true on humid calm days. An example may be cited. The steamship *Memphian* was fumigated April 12, 1917, HCN being used for superstructure and sulphur (2 pounds for 12 hours' exposure) in the holds. The latter were opened at 3 a. m. April 13, a foggy day with little

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wind. At 9 a. m. the agents telephoned to the station that the sulphur vapors were apparently as thick in the holds as ever, that they had planned to begin loading at 8 a. m., and consequently desired assistance. A man with the aerotruss fan was sent to the ship and in three hours the vessel was clear of fumes. Had the fan been used as soon as the holds were opened loading would have been possible at 8 o'clock as planned. On the other hand if the machine from the station had not been available, loading would undoubtedly have been delayed until the following morning, entailing on the owners a loss of several hundred dollars.

Several times it has been demonstrated that a hold full of sulphur fumes could be cleared in 30 to 40 minutes when other holds, not blown out, were after the same interval apparently as full of the gas as when first opened. On a warm dry day with a good breeze, artificial ventilation is of doubtful advantage after either cyanide or sulphur fumigation, but if any of these conditions are lacking artificial ventilation will save time for all hands. At Boston quarantine the machine is used as a routine after cyanide fumigation regardless of weather conditions, and our experience allows us to recommend the same procedure for other stations. In addition, it is believed that each steamship company whose vessels require fumigation should have at least one horizontal machine for use after sulphur fumigation, as it will save time for their vessels and pay for itself many times over.

Conclusions.

Quarantine stations at which HCN fumigation is practiced should be equipped with mechanical means for artificial ventilation.

The gasoline driven fan as adapted for this use is satisfactory for the prompt ventilation of compartments of vessels after fumigation.

For the expeditious handling of large vessels three machines are recommended, two of the horizontal pattern (downward thrust) and one of the vertical pattern (horizontal thrust).

THE LIGHTING OF INDUSTRIAL ESTABLISHMENTS.

THE NEED FOR SUPERVISION, WITH A SUGGESTED SYSTEM OF MAINTENANCE RATING FOR ARTIFICIAL LIGHT EQUIPMENT.

By DAVIS H. TUCK, Assistant Physicist, United States Public Health Service.

The importance of an adequate, hygienic, and well-distributed system of artificial illumination in industrial establishments is well understood. After such systems have been installed, however, the part played in the upkeep of the illuminating system in maintaining its efficiency at the original level is often slighted. The lack of proper maintenance may reduce the amount of available light by as

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much as 50 per cent. At the present time, when the industrial world is being mobilized, the adequate maintenance of systems of artificial lighting becomes doubly important in view of the increasing necessity for night work and the favorable effect of abundant light upon production.

It is clear, therefore, that not only must the physical lighting equipment of industrial establishments be considered, but attention must be paid also to its maintenance. The importance of adequate upkeep for artificial light equipment may not at first sight appeal to the user. A consideration of the points involved, however, will indicate that if such work is neglected excessive losses of otherwise useful light are bound to result.

The following system of maintenance rating for artificial lighting equipment has been devised by the writer. It is thought that it should prove of distinct utility in enabling manufacturers to keep their lighting systems efficient.

Carbon, metalized, and tungsten filament, mercury vapor, arc, and open-flame and mantle lamps become inefficient, due to the following causes:

1. Continued use.
2. Dirt and dust accumulations on lamps and reflectors.
3. Burn outs and breaks.
4. Reflectors becoming cracked, broken, or missing.
5. Mechanical injury to connections.

Various other items of deterioration take place so gradually that in many cases they are given no special attention in the practical economy of the shop.

1. *Continued use.*—The life of a lamp is not, as generally supposed, the elapsed time between entering into service and when it burns out. The life of a lamp as given by its manufacturers is its economic life. Thus when a lamp burns a certain number of hours it may be shown that its energy consumption per light unit has increased to such a degree that it is economy to replace it with a new one.

2. *Dirt and dust accumulations on lamps and reflectors.*—It has been shown by actual measurement that the loss of light due to absorption by dust and dirt for average conditions is about 50 per cent for equipment that has not been cleaned for four months; also that a small quantity of dust, so small as to be hardly noticeable, will cut down the light by 20 per cent.

3. *Burn outs and breaks.*—It is evident that a burn out or break may cut down the light by 100 per cent. Often, however, a burn out or break may be of such a nature that the light source does not fail entirely, but that the light is greatly diminished.

4. *Reflectors cracked, broken, or missing.*—The addition of a reflector to a lamp generally adds about 50 per cent to the light delivered

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in useful directions. When a reflector is cracked or broken the light from the unit is diminished according to the nature and extent of the damage to the reflector.

5. *Mechanical injury to connections.*—The loss of light due to mechanical injury to the connections will vary with the nature of the injury. Often the injury is of such a nature as to cause a flickering or intermittent light. It may cause a total failure of the light or it may be a source of danger to the workman due to electric shock.

Lighting installations are designed to give desirable initial intensities of illumination at the work and it is assumed that the equipment will be so maintained as to produce this intensity. From cost considerations the initial intensity is made as low as possible for work to be done efficiently, and for prevention of eye strain and accidents. It is readily seen that when deterioration of the lighting equipment sets in, the intensity of illumination falls off and if this deterioration is not arrested, serious efficiency losses follow. Often lighting systems are allowed to deteriorate to an extreme point and nothing is done unless complaints come in from employees after the lighting facilities throughout the shop have become so poor that work has to be temporarily discontinued. The production loss from such circumstances when added up throughout the year greatly exceeds the expense of systematic attention to maintenance in advance.

In making illumination surveys of shops it was found desirable to note how well the lighting equipment was maintained and to arrive at an approximate figure, by inspection, that would denote the degree of maintenance. The term efficiency of maintenance is used to designate the percentage of the initial intensity that a lighting equipment will give, the loss in intensity being due to the lack of proper maintenance.

The following table shows the method adopted of rating artificial lighting equipment. The efficiency of maintenance in each case represents approximately the percentage of light given by the equipment after the loss of light due to the corresponding condition is deducted.

Condition.	Efficiency of maintenance.
	Per cent.
Lamp dirty.....	80
Lamp very dirty.....	70
Lamp blackened due to aging.....	80
Lamp too large or small for reflector.....	80
Lamp missing, broken, or filament shortened.....	50
Reflector dirty.....	80
Reflector very dirty.....	70
Reflector cracked.....	80
Reflector broken or missing.....	50
Connections loose or drop cord bare.....	80

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There follows an example taken from one department of a shop recently inspected.

GENERAL OVERHEAD UNITS. SHOP NO. 3.04, TOOL ROOM.

- 12 units, lamps dirty, reflectors dirty.
- 3 units, lamps dirty, reflectors missing.
- 2 units, lamps dirty, reflectors very dirty.
- 9 units, lamps very dirty, reflectors very dirty.
- 1 unit, lamps very dirty, reflectors missing.
- 1 unit, lamps dirty, reflectors clean.
- 2 units, lamps dirty, reflectors dirty, lamps blackened.

To arrive at the efficiency of maintenance for shop No. 3.04 tool room, it is necessary to multiply the number of units having a given condition by the values of the efficiency of maintenance for those conditions and take a mean.

12 x 0.80 x 0.80.....	7.68
3 x .80 x .50.....	1.20
2 x .80 x .70.....	1.12
9 x .70 x .70.....	4.40
1 x .70 x .50.....	.35
1 x .80.....	.80
2 x .80 x .80 x 0.80.....	1.02
<hr/>	
30	16.57

$$\frac{16.57 \times 100}{30} = 55.2 \text{ per cent efficiency of maintenance.}$$

By measurement with an illuminometer the average illumination was increased by 100 per cent by bringing the efficiency of maintenance up to 100 per cent.

A department of maintenance of artificial lighting equipment should be inaugurated in every factory and workshop. This maintenance work should be made a part of the electrical department, which is in the best position to make periodic inspections of lighting equipment. Reports of inspections, using a system as outlined above, should be made to the factory manager and efficiencies of maintenance of 100 per cent maintained. The ratings given above are liberal and an efficiency of maintenance of 100 per cent is not unreasonable.

By adopting such a practice a large economic waste could be avoided and losses due to decreased production, inferior products, accidents, and defective eyesight minimized.

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PREVALENCE OF DISEASE.

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.

UNITED STATES.

CURRENT STATE SUMMARIES.

California Report for the Week Ended October 13, 1917.

The California State Board of Health reported concerning the status of preventable diseases in California for the week ended October 13, 1917, as follows: Anthrax in animals continued prevalent. Five cases of cerebrospinal meningitis were notified in the State, one in Solano County, three in San Diego County, and one in the city of San Francisco. Of poliomyelitis, one case each occurred in Berkeley, Marysville, and Oakland. Two cases of smallpox were notified in Fresno County, and one case of leprosy in San Francisco city. Typhoid fever diminished during the week with 25 cases scattered throughout the State. There was a minor outbreak of scarlet fever in Monterey County.

ANTHRAX.

Massachusetts.

During the month of September, 1917, 6 cases of anthrax were notified in Massachusetts. The source or suspected source of infection in all cases was the handling of imported hides. Five of the patients had handled hides imported from China and one had handled hides imported from Argentina.

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(1765)

CEREBROSPINAL MENINGITIS.

State Reports for August and September, 1917.

Place.	New cases reported.	Place.	New cases reported.
Alabama (Aug. 1-31): Lawrence County.....	1	Massachusetts (Sept. 1-30)—Continued. Hampshire County— Northampton.....	1
Washington (Aug. 1-31): Lincoln County.....	1	Middlesex County— Cambridge.....	1
Maryland (Sept. 1-30): Baltimore City.....	2	Lowell.....	2
Allegany County— Frostburg.....	1	Norfolk County— Brookline (town).....	1
Baltimore County— Highlandtown.....	1	Suffolk County— Boston.....	1
Total.....	4	Chelsea.....	1
Massachusetts (Sept. 1-30): Essex County— Lynn.....	1	Total.....	9
Salem.....	1	Nebraska (Sept. 1-30): Douglas County.....	1

City Reports for Week Ended Sept. 29, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md.....	1	.....	Memphis, Tenn.....	1	1
Boston, Mass.....	1	.....	New York, N. Y.....	7	2
Chicago, Ill.....	7	9	Pittsburgh, Pa.....	1	1
Columbus, Ohio.....	1	1	Saginaw, Mich.....	1	1
Flint, Mich.....	2	2	Toledo, Ohio.....	1	.....
Indianapolis, Ind.....	1	.....	Troy, N. Y.....	1	1
McKeesport, Pa.....	1	.....		

DIPHTHERIA.

Indiana.

On October 15, 1917, diphtheria was reported to be epidemic at Fort Wayne, Indianapolis, Richmond, and Rushville, Ind.

See also Diphtheria, measles, scarlet fever, and tuberculosis, page 1774.

ERYSIPELAS.

City Reports for Week Ended Sept. 29, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alameda, Cal.....	1	.....	Newark, N. J.....	1	.....
Baltimore, Md.....	1	1	New York, N. Y.....	.....	2
Boston, Mass.....	1	1	Niagara Falls, N. Y.....	1	.....
Brockton, Mass.....	1	.....	Oakland, Cal.....	1	1
Chicago, Ill.....	6	1	Omaha, Nebr.....	1	.....
Cincinnati, Ohio.....	1	.....	Philadelphia, Pa.....	3	.....
Cleveland, Ohio.....	3	.....	Pittsburgh, Pa.....	3	.....
Detroit, Mich.....	1	1	Quincy, Ill.....	1	.....
Lancaster, Pa.....	1	.....	St. Louis, Mo.....	1	1
Lincoln, Nebr.....	1	1	San Diego, Cal.....	1
Los Angeles, Cal.....	2	2	San Francisco, Cal.....	1
Nashville, Tenn.....	1			

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LEPROSY.

City Report for Week Ended Sept. 29, 1917.

During the week ended September 29, 1917, one case of leprosy was reported in New Orleans, La.

MALARIA.

State Reports for September, 1917.

Place.	New cases reported.	Place.	New cases reported.
Maryland:		Massachusetts:	
Carroll County—		Essex County—	
Oakland Mills.....	1	Haverhill.....	2
Charles County—		Middlesex County—	
La Plata.....	3	Newton.....	2
Dorchester County—		Norfolk County—	
Cambridge.....	1	Brookline (town).....	1
Howard County—		Dedham (town).....	2
Annapolis Junction, R. D.....	1	Suffolk County—	
Prince George County—		Boston.....	4
Piscataway, R. D.....	1	Worcester County—	
Townshend.....	1	Worcester.....	1
Total.....	8	Total.....	12

Alabama Report for August, 1917.

Place.	New cases reported.	Place.	New cases reported.
Alabama:		Alabama—Continued.	
Autauga County.....	1	Jefferson County.....	282
Baldwin County.....	4	Lamar County.....	1
Barbour County.....	1	Limestone County.....	1
Bibb County.....	2	Macon County.....	2
Blount County.....	1	Madison County.....	4
Bullock County.....	5	Marango County.....	5
Butler County.....	1	Marion County.....	1
Calhoun County.....	53	Marshall County.....	4
Chilton County.....	2	Mobile County.....	4
Choctaw County.....	11	Monroe County.....	6
Coffee County.....	13	Montgomery County.....	2
Conseuh County.....	1	Morgan County.....	5
Coosa County.....	1	Pickens County.....	2
Crenshaw County.....	1	Russell County.....	2
Elmore County.....	1	Shelby County.....	10
Escambia County.....	14	Sumter County.....	13
Eto wah County.....	14	Talladega County.....	3
Fayette County.....	1	Tuscaloosa County.....	20
Franklin County.....	1	Walker County.....	1
Geneva County.....	6	Washington County.....	4
Greene County.....	3	Wilcox County.....	4
Houston County.....	400	Total.....	932
Jackson County.....	19		

City Reports for Week Ended Sept. 29, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Birmingham, Ala.....	124	1	Portsmouth, Va.....		1
Los Angeles, Cal.....	3		Richmond, Va.....	2	
Memphis, Tenn.....	23	5	Savannah, Ga.....	4	
Mobile, Ala.....	2		Stockton, Cal.....	5	
Newark, N. J.....	2				

¹ The reason that Birmingham had so many cases of malaria reported is not that the disease is more prevalent in Birmingham than in other cities of Alabama and neighboring States, but undoubtedly because of the successful efforts the health department has made in securing the cooperation of the practicing physicians in reporting cases.

ARE YOU SAVING Your Money to Invest in the SECOND LIBERTY LOAN?

MEASLES.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 1774.

PELLAGRA.

State Reports for August and September, 1917.

Place.	New cases reported.	Place.	New cases reported.
Maryland (Sept. 1-30):		Alabama (Aug. 1-31)—Continued.	
Lorchester County—		Greene County.....	1
Fishing Creek.....	1	Hale County.....	3
Massachusetts (Sept. 1-30):		Jackson County.....	2
Hampshire County—		Jefferson County.....	61
Northampton.....	1	Lauderdale County.....	6
Middlesex County—		Lawrence County.....	2
Tewksbury State Infirmiry.....	1	Lee County.....	4
Suffolk County—		Lowndes County.....	2
Boston.....	1	Macon County.....	2
Total.....	3	Marengo County.....	3
Alabama (Aug. 1-31):		Mobile County.....	26
Autauga County.....	1	Monroe County.....	4
Bibb County.....	5	Montgomery County.....	9
Bullock County.....	1	Morgan County.....	1
Butler County.....	2	Perry County.....	1
Calhoun County.....	4	Pickens County.....	2
Colbert County.....	6	Russell County.....	1
Conecuh County.....	1	Shelby County.....	1
Coosa County.....	1	St. Clair County.....	1
Crenshaw County.....	3	Sumter County.....	4
Dekalb County.....	1	Talladega County.....	3
Elmore County.....	2	Tallapoosa County.....	3
Escambia County.....	1	Tuscaloosa County.....	14
Etowah County.....	2	Walker County.....	2
Fayette County.....	1	Washington County.....	2
		Wilcox County.....	1
		Total.....	192

City Reports for Week Ended Sept. 29, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Birmingham, Ala.....	2		Norfolk, Va.....		1
Lynchburg, Va.....		1	Roanoke, Va.....		1
Memphis, Tenn.....	1	3	Wilmingon, N. C.....		1
Mobile, Ala.....		2	Winston-Salem, N. C.....		1
New Orleans, La.....	1	1			

PNEUMONIA.

City Reports for Week Ended Sept. 29, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alameda, Cal.....	1		Lowell, Mass.....	3	
Baltimore, Md.....	4	2	Lynn, Mass.....	1	1
Binghamton, N. Y.....	3	1	Manchester, N. H.....	2	2
Boston, Mass.....	6	15	Newark, N. J.....	21	3
Cambridge, Mass.....	2	1	Newburyport, Mass.....	1	
Chicago, Ill.....	70	41	Newport, Ky.....	2	2
Cleveland, Ohio.....	13	12	Philadelphia, Pa.....	21	14
Detroit, Mich.....	1	22	Pittsburgh, Pa.....	24	24
Fall River, Mass.....	1		Pontiac, Mich.....	1	1
Flint, Mich.....	3	1	Rochester, N. Y.....	9	4
Haverhill, Mass.....	1		San Francisco, Cal.....	8	4
Jacks:n, Mich.....	1	1	Somerville, Mass.....	1	
Lancaster, Pa.....	1		Springfield, Mass.....	6	4
Lawrence, Mass.....	1		Worcester, Mass.....	1	3
Los Angeles, Cal.....	10	6			

ARE YOU SAVING Your Money to Invest in the SECOND LIBERTY LOAN!

POLIOMYELITIS (INFANTILE PARALYSIS).**Illinois.**

During the week ended October 13, 1917, cases of poliomyelitis were reported in Illinois as follows: One case each in Carroll, Dewitt, Ford, Hancock, Henry, Kane, Mason, Ogle, and Schuyler Counties, 2 cases each in Rock Island and Will Counties, and in Cook County 65 cases were notified, 53 of which were in the city of Chicago.

Virginia.

During the period from October 1 to 12, 1917, cases of poliomyelitis were notified in Virginia as follows: In Rockingham County, Penn Laird, Pleasant Valley, and North River, 1 case each; in Tazewell County, Asberrys, 1 case.

West Virginia.

During the week ended October 13, 1917, cases of poliomyelitis were notified in West Virginia as follows: Huntington 1, Rock Oak 1, Parkersburg 2.

State Reports for September, 1917.

Place.	New cases reported.	Place.	New cases reported.
Maryland:		Massachusetts—Continued.	
Allegany County—		Norfolk County—	
Barrellville.....	2	Quincy.....	1
Frostburg.....	3	Plymouth County—	
Green Ridge.....	2	Whitman (town).....	1
Mount Savage.....	1	Suffolk County—	
Old Town, R. D.....	1	Revere.....	1
Westernport.....	1	Total.....	16
Baltimore County—		Nebraska:	
St. Dennis.....	1	Boyd County.....	2
Garrett County—		Butler County.....	1
Accident.....	1	Clay County.....	2
Accident, R. D.....	1	Colfax County.....	1
Dorson.....	1	Cuming County.....	1
Grantsville.....	1	Douglas County.....	7
Grantsville, R. D.....	1	Hamilton County.....	1
Mountain Lake Park.....	1	Merrick County.....	3
Vindex.....	1	Otoe County.....	1
Montgomery County—		Polk County.....	2
Takoma Park.....	1	Richardson County.....	1
Total.....	19	Sarpy County.....	1
Massachusetts:		Thayer County.....	5
Bristol County—		Washington County.....	2
Fall River.....	2	Total.....	30
Essex County—		Vermont:	
Haverhill.....	3	Caledonia County.....	1
Merrimac (town).....	1	Chittenden County.....	1
Franklin County—		Franklin County.....	2
Greenfield (town).....	1	Orange County.....	2
Middlesex County—		Orleans County.....	1
Cambridge.....	1	Washington County.....	28
Lowell.....	1	Windsor County.....	10
Malden.....	1	Total.....	45
Reading (town).....	1		
Somerville.....	2		

ARE YOU SAVING Your Money to Invest in the SECOND LIBERTY LOAN?

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.

Alabama Report for August, 1917.

During the month of August, 1917, cases of poliomyelitis were reported in Alabama as follows: Elmore County, 2; Jefferson County, 4; and Mobile County, 1; making a total of 7 cases.

City Reports for Week Ended Sept. 29, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio.....	2	.....	New York, N. Y.....	3	.....
Canton, Ohio.....	2	.....	Norristown, Pa.....	1	.....
Chicago, Ill.....	70	25	Omaha, Nebr.....	1	.....
Cleveland, Ohio.....	4	1	Philadelphia, Pa.....	1	.....
Davenport, Iowa.....	6	2	Pittsburgh, Pa.....	5	1
Dayton, Ohio.....	1	1	Providence, R. I.....	1	.....
Erie, Pa.....	1	.....	Quincy, Mass.....	1	.....
Kansas City, Kans.....	1	.....	Rock Island, Ill.....	2	.....
Lincoln, Nebr.....	1	.....	San Diego, Cal.....	2	.....
Los Angeles, Cal.....	.....	1	Wheeling, W. Va.....	1	1
Newark, N. J.....	1	.....	Wilkesburg, Pa.....	1	.....
New Castle, Pa.....	2	.....		

RABIES IN ANIMALS.

City Report for Week Ended Sept. 29, 1917.

During the week ended September 29, 1917, one case of rabies in animals was reported in Detroit, Mich.

SCARLET FEVER.

Nebraska—Cedar County.

On October 15, 1917, scarlet fever was reported prevalent in Cedar County, Nebr.

See also Diphtheria, measles, scarlet fever, and tuberculosis, page 1774.

SMALLPOX.

Arizona—Navajo and Moqui Indian Reservations.

On October 16, 1917, outbreaks of smallpox were reported on the Navajo and Moqui Indian Reservations, Ariz.

Indiana—Fort Wayne and Elwood.

On October 15, 1917, epidemics of smallpox were reported at Fort Wayne and Elwood, Ind.

ARE YOU SAVING Your Money to Invest in the SECOND LIBERTY LOAN?

SMALLPOX—Continued.

Miscellaneous State Reports.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alabama (Aug. 1-31):			Washington (Aug. 1-31):		
Chambers County.....	1	.....	King County.....		
Pike County.....	1	.....	Seattle.....	6	.....
Talladega County.....	14	.....	Lewis County.....	1	.....
Total.....	16	.....	Pend Oreille County.....	1	.....
Nebraska (Sept. 1-30):			Pierce County—		
Boyd County.....	1	.....	Tacoma.....	6	.....
Burt County.....	1	.....	Wahkiakum County.....	2	.....
Colfax County.....	1	.....	Whateam County.....	1	.....
Cuming County.....	1	.....	Bellingham.....	2	.....
Dixon County.....	1	.....	Yakima County.....	9	.....
Douglas County.....	36	.....	North Yakima.....	2	.....
Total.....	41	.....	Total.....	30	.....

City Reports for Week Ended Sept. 29, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio.....	2	.....	Evansville, Ind.....	2	.....
Alton, Ill.....	6	.....	Fort Wayne, Ind.....	5	.....
Austin, Tex.....		1	Indianapolis, Ind.....	3	.....
Buffalo, N. Y.....	1	.....	Kansas City, Kans.....	4	.....
Butte, Mont.....	8	.....	Leavenworth, Kans.....	2	.....
Chicago, Ill.....	3	.....	Minneapolis, Minn.....	6	.....
Cleveland, Ohio.....	17	.....	Omaha, Nebr.....	1	.....
Columbus, Ohio.....	3	.....	St. Joseph, Mo.....	1	.....
Dayton, Ohio.....	1	.....	St. Louis, Mo.....	5	.....
Denver, Colo.....	1	.....	Salt Lake City, Utah.....	1	.....
Detroit, Mich.....	8	.....	Sioux City, Iowa.....	1	.....
Erie, Pa.....	1	.....	Toledo, Ohio.....	9	.....

TETANUS.

City Reports for Week Ended Sept. 29, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Buffalo, N. Y.....		1	New York, N. Y.....		1
Charleston, S. C.....		1	St. Louis, Mo.....	2	.....
Chicago, Ill.....	2	.....	San Diego, Cal.....		1
Cleveland, Ohio.....		1	Savannah, Ga.....		1
Columbus, Ohio.....		1	Trenton, N. J.....		2
Mobile, Ala.....		1	Wilmington, Del.....		1
New Orleans, La.....		2			

TUBERCULOSIS.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 1774.

TYPHOID FEVER.

Indiana—Bartholomew County.

On October 15, 1917, typhoid fever was reported present in epidemic form in Union Township, Bartholomew County, Ind.

ARE YOU SAVING Your Money to Invest in the SECOND LIBERTY LOAN?

TYPHOID FEVER—Continued.

Massachusetts.

During the week ended October 13, 1917, cases of typhoid fever were notified in Massachusetts as follows: Tewkesbury State Infirmary 7, making a total of 59 cases reported since August 23; Gardner, 6 cases, making a total of 64 cases reported in the present outbreak; Erving, 3 cases, making a total of 17 recent cases.

State Reports for September, 1917.

Place.	New cases reported.	Place.	New cases reported.
Maryland:		Massachusetts—Continued.	
Baltimore City.....	153	Hampden County—Continued.	
Allegany County.....	25	Palmer (town).....	2
Anne Arundel County.....	31	Springfield.....	11
Baltimore County.....	71	West Springfield (town).....	1
Calvert County.....	5	Hampshire County—	
Caroline County.....	33	Belchertown (town).....	1
Carroll County.....	7	Prescott (town).....	1
Cecil County.....	6	Middlesex County—	
Charles County.....	19	Arlington (town).....	1
Dorchester County.....	38	Cambridge.....	2
Frederick County.....	14	Everett.....	5
Garrett County.....	8	Lowell.....	4
Harford County.....	17	Malden.....	3
Howard County.....	3	Marlboro.....	1
Kent County.....	6	Maynard (town).....	1
Montgomery County.....	22	Medford.....	2
Prince Georges County.....	36	Natick (town).....	1
Queen Annes County.....	7	Somerville.....	5
Somerset County.....	16	Tewksbury State Infirmary.....	22
St. Marys County.....	1	Waltham.....	1
Talbot County.....	13	Westford (town).....	1
Washington County.....	22	Winchester (town).....	2
Wicomico County.....	22	Norfolk County—	
Worcester County.....	21	Brookline (town).....	2
Total.....	596	Dedham (town).....	2
Massachusetts:		Franklin (town).....	1
Berkshire County—		Quincy.....	1
Adams (town).....	6	Plymouth County—	
Great Barrington (town).....	1	Brockton.....	2
Lenox (town).....	1	Hingham (town).....	1
North Adams.....	6	Suffolk County—	
Bristol County—		Boston.....	32
Attleboro.....	1	Chelsea.....	11
Fall River.....	52	Winthrop (town).....	1
New Bedford.....	9	Worcester County—	
Taunton.....	2	Fitchburg.....	1
Dukes County—		Gardner (town).....	9
Oak Bluffs (town).....	1	Leominster (town).....	1
Essex County—		Upton (town).....	1
Andover (town).....	2	Worcester.....	9
Beverly.....	3	Total.....	264
Danvers (town).....	1	Nebraska:	
Gloucester.....	8	Douglas County.....	9
Haverhill.....	5	Ga'e County.....	1
Ipswich (town).....	5	Scotts Bluff County.....	2
Lawrence.....	5	Seward County.....	1
Lynn.....	5	York County.....	2
Methuen (town).....	3	Total.....	15
Newburyport.....	1	Vermont:	
Peabody (town).....	1	Addison County.....	1
Rockport (town).....	1	Chittenden County.....	1
Saugus (town).....	1	Orange County.....	4
Swampscott (town).....	1	Orleans County.....	2
Franklin County—		Rutland County.....	1
Greenfield (town).....	1	Windham County.....	3
Hampden County—		Total.....	12
Agawam (town).....	2		
Holyoke.....	2		
Ludlow (town).....	2		

TYPHOID FEVER—Continued.

State Reports for August, 1917.

Place.	New cases reported.	Place.	New cases reported.
Alabama:		Alabama—Continued.	
Autauga County.....	1	Tallapoosa County.....	15
Baldwin County.....	2	Tuscaloosa County.....	31
Barbour County.....	2	Walker County.....	21
Bibb County.....	7	Washington County.....	1
Blount County.....	2	Wilcox County.....	4
Bullock County.....	5		
Butler County.....	2	Total.....	831
Calhoun County.....	21		
Chambers County.....	2	Washington:	
Cherokee County.....	4	Adams County—	
Chilton County.....	6	Lind.....	1
Choctaw County.....	1	Benton County.....	3
Clarke County.....	6	Kennewick.....	1
Cleburne County.....	8	Prosser.....	1
Coffee County.....	3	Chelan County.....	3
Colbert County.....	6	Cashmere.....	2
Conecuh County.....	1	Wenatchee.....	4
Coosa County.....	5	Clarke County—	
Covington County.....	2	Camas.....	1
Crenshaw County.....	5	Washougal.....	1
Cullman County.....	7	Yocolt.....	1
Fale County.....	1	Columbia County.....	1
DeKalb County.....	25	Dayton.....	2
Elmore County.....	16	Cowlitz County.....	2
Escambia County.....	4	Island County.....	1
Etowah County.....	24	King County—	
Fayette County.....	4	Issaquah.....	1
Franklin County.....	2	Kent.....	1
Geneva County.....	3	Seattle.....	16
Lale County.....	3	Kittitas County.....	1
Greene County.....	1	Lewis County—	
Henry County.....	1	Chehalis.....	1
Houston County.....	7	Okanogan County.....	12
Jackson County.....	15	Brewster.....	10
Jefferson County.....	425	Omak.....	1
Lamar County.....	7	Pacific County.....	2
Lauderdale County.....	5	Pierce County—	
Lawrence County.....	1	Sumner.....	1
Lee County.....	6	Tacoma.....	4
Limestone County.....	6	Skagit County.....	2
Macon County.....	8	Spokane County—	
Madison County.....	6	Rockford.....	1
Marengo County.....	2	Spangle.....	2
Martin County.....	12	Spokane.....	5
Marshall County.....	7	Stevens County.....	5
Mobile County.....	10	Colville.....	4
Monroe County.....	2	Thurston County—	
Montgomery County.....	6	Tenino.....	1
Morgan County.....	10	Walla Walla County—	
Perry County.....	4	Waitsburg.....	1
Pickens County.....	2	Walla Walla.....	12
Pike County.....	14	Yakima County.....	10
Randolph County.....	5	Grandview.....	1
Seale County.....	7	North Yakima.....	7
St. Clair County.....	3	Zillah.....	1
Sumpter County.....	2		
Talladega County.....	5	Total.....	123

City Reports for Week Ended Sept. 29, 1917.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio.....	1	.....	Camden, N. J.....	2	.....
Albany, N. Y.....	4	.....	Canton, Ohio.....	1	1
Allentown, Pa.....	1	.....	Charleston, S. C.....	1	.....
Alton, Ill.....	2	.....	Chelsea, Mass.....	3	.....
Ann Arbor, Mich.....	1	.....	Chicago, Ill.....	16	.....
Baltimore, Md.....	31	4	Cincinnati, Ohio.....	3	.....
Berkeley, Cal.....	1	.....	Cleveland, Ohio.....	9	.....
Birmingham, Ala.....	24	8	Coffeyville, Kans.....	1	.....
Boston, Mass.....	9	.....	Columbus, Ohio.....	4	2
Buffalo, N. Y.....	4	1	Concord, N. H.....	2	.....
Butler, Pa.....	1	.....	Covington, Ky.....	1	2

ARE YOU SAVING Your Money to Invest in the SECOND LIBERTY LOAN?

TYPHOID FEVER—Continued.
City Reports for Week Ended Sept. 29, 1917—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Cumberland, Md.		1	Nashville, Tenn.	6	
Danville, Ill.	1		Newark, N. J.	7	1
Dayton, Ohio	4	1	New Bedford, Mass.	4	
Denver, Colo.	13		New Castle, Pa.	3	
Detroit, Mich.	25	2	New Haven, Conn.	1	1
Duluth, Minn.	2		New Orleans, La.	6	1
East Orange, N. J.	1		New York, N. Y.	61	5
Elizabeth, N. J.	1		Niagara Falls, N. Y.	2	
El Paso, Tex.	2		Norfolk, Va.	1	
Erie, Pa.	1		Norristown, Pa.	1	
Evansville, Ind.	4	3	Oakland, Cal.	5	1
Everett, Mass.	2		Omaha, Nebr.	1	
Fall River, Mass.	18	2	Perth Amboy, N. J.	1	
Flint, Mich.	3	1	Philadelphia, Pa.	22	3
Fort Wayne, Ind.	1	1	Pittsburgh, Pa.	12	7
Fort Worth, Tex.	3	2	Pittsfield, Mass.	1	
Galesburg, Ill.	10	1	Portland, Oreg.	5	3
Galveston, Tex.	2		Portsmouth, Va.	2	1
Grand Rapids, Mich.	6		Providence, R. I.	6	
Hagerstown, Md.	4		Roanoke, Va.	3	
Hartford, Conn.		1	Rochester, N. Y.	4	1
Haverhill, Mass.	1		Rockford, Ill.	2	1
Indianapolis, Ind.	12		Rocky Mount, N. C.	2	
Jersey City, N. J.	2		Sacramento, Cal.	1	
Johnstown, Pa.	6		Saginaw, Mich.	2	
Kalamazoo, Mich.	1		St. Joseph, Mo.	5	
Kansas City, Kans.	2		St. Louis, Mo.	21	1
Kearny, N. J.	1		Salt Lake City, Utah	6	1
Knoxville, Tenn.	3		Savannah, Ga.	2	
Kokomo, Ind.	2		Seattle, Wash.	6	1
Lancaster, Pa.	2		Somerville, Mass.	1	1
Lawrence, Mass.	2		South Bend, Ind.	29	2
Leavenworth, Kans.	1	1	Springfield, Ill.	2	1
Lexington, Ky.	4		Springfield, Mass.	2	
Lima, Ohio.	2		Springfield, Ohio.	1	
Lincoln, Nebr.	1		Syracuse, N. Y.	2	1
Long Beach, Cal.	1		Tacoma, Wash.	1	
Long Branch, N. J.	8		Terre Haute, Ind.	2	2
Lorain, Ohio.	1		Toledo, Ohio.	6	1
Los Angeles, Cal.	9		Topeka, Kans.	6	
Lynchburg, Va.	1		Trenton, N. J.	2	
Lynn, Mass.	1		Troy, N. Y.	11	2
Malden, Mass.	2		Washington, D. C.	22	3
Manchester, N. H.	2		Watertown, N. Y.	2	
McKeesport, Pa.		1	Wheeling, W. Va.	3	1
Memphis, Tenn.	6	2	Wichita, Kans.	6	
Milwaukee, Wis.	3		Wilkes-Barre, Pa.	3	
Minneapolis, Minn.	15		Wilmington, Del.		1
Mobile, Ala.		1	Winston-Salem, N. C.	7	3
Montclair, N. J.	1		Worcester, Mass.	1	1
Morristown, N. J.	1		York, Pa.	1	

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

State Reports for September, 1917.

State.	Cases reported.			State.	Cases reported.		
	Diphtheria.	Measles.	Scarlet fever.		Diphtheria.	Measles.	Scarlet fever.
Maryland.....	123	82	73	Nebraska.....	30	12	27
Massachusetts.....	728	241	248	Vermont.....	25	24	12

State Reports for August, 1917.

During the month of August, 1917, 56 cases of diphtheria, 157 cases of measles, and 47 cases of scarlet fever were reported in the State of Alabama; and 25 cases of diphtheria, 37 cases of measles, and 30 cases of scarlet fever were reported in the State of Washington.

ARE YOU SAVING Your Money to Invest in the SECOND LIBERTY LOAN!

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS— Continued.

City Reports for Week Ended Sept. 29, 1917.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md.....	589,621	218	15	1	11	1	5	.....	30	35
Boston, Mass.....	756,476	230	78	3	15	.....	16	.....	72	24
Chicago, Ill.....	2,497,722	621	190	14	24	.....	54	4	277	47
Cleveland, Ohio.....	674,073	181	54	5	4	1	6	.....	29	16
Detroit, Mich.....	571,784	184	86	6	.....	.....	29	1	41	10
Los Angeles, Cal.....	503,812	102	9	2	2	.....	10	.....	32	17
New York, N. Y.....	5,602,841	1,322	190	11	64	1	61	1	287	180
Philadelphia, Pa.....	1,709,518	475	53	2	6	.....	12	.....	84	53
Pittsburgh, Pa.....	579,090	193	38	8	3	.....	12	2	15	16
St. Louis, Mo.....	757,309	179	46	.....	2	.....	15	.....	43	22
From 300,000 to 500,000 inhabitants:										
Buffalo, N. Y.....	468,558	221	30	4	4	.....	7	1	24	21
Cincinnati, Ohio.....	410,476	102	19	2	.....	.....	3	.....	25	11
Jersey City, N. J.....	306,345	85	18	.....	6	.....	3	.....	10	9
Milwaukee, Wis.....	436,535	90	11	2	5	.....	19	1	23	9
Minneapolis, Minn.....	333,454	.....	35	.....	1	.....	11	.....	.....	.....
Newark, N. J.....	408,894	.....	22	.....	9	.....	5	.....	40	15
New Orleans, La.....	371,747	112	31	.....	1	.....	1	.....	24	17
San Francisco, Cal.....	483,516	149	9	.....	4	.....	3	.....	26	8
Seattle, Wash.....	348,639	48	5	.....	2	.....	7	.....	4	4
Washington, D. C.....	363,980	119	33	1	4	.....	5	.....	19	11
From 200,000 to 300,000 inhabitants:										
Columbus, Ohio.....	214,878	70	6	.....	.....	.....	14	.....	8	4
Denver, Colo.....	260,800	53	2	.....	5	.....	4	.....	.....	9
Indianapolis, Ind.....	271,708	.....	94	.....	1	.....	12	.....	16	.....
Portland, Oreg.....	295,463	.....	3	2	2	.....	3	.....	10	5
Providence R. I.....	254,960	70	12	3	1	.....	9	3	1	12
Rochester, N. Y.....	258,417	72	3	2	2	.....	14	1	8	6
From 100,000 to 200,000 inhabitants:										
Albany, N. Y.....	104,199	.....	.....	.....	3	.....	.....	.....	6	.....
Birmingham, Ala.....	181,762	66	6	.....	11	.....	5	.....	8	5
Cambridge, Mass.....	112,981	24	6	.....	.....	.....	2	.....	7	3
Camden, N. J.....	106,213	4	4	.....	.....	.....	.....	.....	4	.....
Dayton, Ohio.....	127,224	47	5	.....	.....	.....	2	.....	6	2
Fall River, Mass.....	128,366	36	7	2	1	.....	2	.....	4	4
Fort Worth, Tex.....	104,562	23	5	.....	.....	.....	.....	.....	4	2
Grand Rapids, Mich.....	128,211	30	.....	.....	.....	.....	6	.....	5	.....
Hartford, Conn.....	110,500	54	8	.....	2	.....	3	.....	.....	.....
Lawrence, Mass.....	100,560	23	2	.....	.....	.....	.....	.....	8	2
Lowell, Mass.....	113,245	33	3	.....	.....	.....	.....	.....	2	3
Lynn, Mass.....	102,425	15	2	.....	.....	.....	2	.....	4	.....
Memphis, Tenn.....	148,995	53	19	2	.....	.....	2	.....	30	6
Nashville, Tenn.....	117,037	42	7	.....	.....	.....	7	.....	4	2
New Bedford, Mass.....	118,158	35	3	1	4	.....	3	.....	11	2
New Haven, Conn.....	143,685	5	5	2	.....	.....	1	.....	12	3
Oakland, Cal.....	138,694	35	1	.....	1	.....	1	.....	8	2
Omaha, Nebr.....	165,470	19	10	.....	.....	.....	5	.....	15	4
Reading, Pa.....	101,381	35	4	1	.....	.....	4	.....	3	2
Richmond, Va.....	156,687	53	22	.....	2	.....	5	.....	5	7
Salt Lake City, Utah.....	117,339	20	.....	.....	3	.....	2	.....	.....	.....
Springfield, Mass.....	105,942	36	11	.....	2	.....	6	.....	3	3
Syracuse, N. Y.....	155,624	52	25	.....	2	1	11	.....	2	3
Tacoma, Wash.....	112,270	.....	1	.....	.....	.....	2	.....	.....	.....
Toledo, Ohio.....	191,554	49	5	.....	1	.....	6	1	7	6
Trenton, N. J.....	111,533	44	7	.....	1	.....	.....	.....	2	6
Worcester, Mass.....	163,314	55	10	2	.....	.....	12	.....	4	3
From 50,000 to 100,000 inhabitants:										
Akron, Ohio.....	85,625	.....	13	.....	.....	.....	4	.....	.....	.....
Allentown, Pa.....	63,505	20	1	.....	.....	.....	.....	.....	4	.....
Atlantic City, N. J.....	57,660	.....	1	.....	.....	.....	.....	.....	1	.....
Bayonne, N. J.....	69,833	.....	6	.....	.....	.....	4	.....	3	.....
Berkeley, Cal.....	57,653	.....	.....	.....	1	.....	2	.....	1	1
Binghamton, N. Y.....	53,973	17	2	1	.....	.....	1	.....	1	1
Brockton, Mass.....	67,449	11	1	.....	.....	.....	.....	.....	2	.....
Canton, Ohio.....	60,852	19	.....	.....	1	.....	1	.....	.....	1
Charleston, S. C.....	60,714	32	7	1	.....	.....	.....	.....	.....	1
Covington, Ky.....	57,144	20	7	.....	.....	.....	1	.....	2	4
Duluth, Minn.....	94,495	19	10	2	1	.....	1	.....	3	2
Elizabeth, N. J.....	86,690	37	15	1	1	.....	11	.....	5	9

ARE YOU SAVING Your Money to Invest in the SECOND LIBERTY LOAN?

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—
Continued.

City Reports for Week Ended Sept. 29, 1917—Continued.

City.	Popula- tion as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 50,000 to 100,000 inhabit- ants—Continued.										
El Paso, Tex.	63,705						1			2
Erie, Pa.	75,195		2			2		5	18	
Evansville, Ind.	76,078	12	1			2				
Flint, Mich.	54,772	5	5			2				
Fort Wayne, Ind.	76,183	17	15	1						1
Harrisburg, Pa.	72,015	7	7			1		4		
Hoboken, N. J.	77,214	26	3			1		3		3
Johnstown, Pa.	68,529	24	2	2	1			3		1
Kansas City, Kans.	99,437		2	1				2		
Lancaster, Pa.	50,853							3		
Malden, Mass.	51,155	12	16	2				4		2
Manchester, N. H.	78,283	25	3	1			5	3		3
Mobile, Ala.	58,221	16	3	1						1
New Britain, Conn.	53,794	19	1					10		1
Norfolk, Va.	89,612		4		1					2
Oklahoma City, Okla.	92,943	12	2				1	1		3
Passaic, N. J.	71,744	26	11		5			3		1
Pawtucket, R. I.	59,411	15	1				1			
Portland, Me.	63,867	16	4		1					1
Rockford, Ill.	55,185	17	2						1	
Sacramento, Cal.	66,895	25					4	3		3
Saginaw, Mich.	55,642	15	1				2	4		
St. Joseph, Mo.	85,236	21	4	2				1		
San Diego, Cal.	53,330	17	2		1		2	8		3
Savannah, Ga.	68,805	28	15	1	1		1	3		3
Schenectady, N. Y.	99,519	19	4	1	1		2	4		1
Sioux City, Iowa.	57,078			1			1	7		
Somerville, Mass.	87,039	17	3		2		3			2
South Bend, Ind.	68,546	24						2		
Springfield, Ill.	61,120	11			3					1
Springfield, Ohio.	51,550	24	2				1	4		2
Terre Haute, Ind.	66,083	20	8				1	3		
Troy, N. Y.	77,916		5		3					1
Wichita, Kans.	70,722		2				1			
Wilkes-Barre, Pa.	76,776	14	13					2		1
Wilmington, Del.	94,265	36								1
From 25,000 to 50,000 inhabit- ants:										
Alameda, Cal.	27,732	2			2		12			
Auburn, N. Y.	37,385	10	1				1	1		1
Austin, Tex.	34,814	13								
Bellingham, Wash.	32,985	4					6			
Brookline, Mass.	32,730	6						2		
Butler, Pa.	27,632	6	3							1
Butte, Mont.	43,425		3		1		5			
Chelsea, Mass.	46,192	10	2		2			3		1
Chicopee, Mass.	29,319	3	2					2		
Cumberland, Md.	26,074	10	1		2			1		
Danville, Ill.	32,261	8						1		1
Davenport, Iowa.	48,811						1			
Dubuque, Iowa.	39,873		1							4
East Chicago, Ind.	28,743	6	1							
East Orange, N. J.	42,458	5	1		1					1
Elgin, Ill.	28,203	3	1							
Everett, Mass.	39,233	9	7				1	1		
Fitchburg, Mass.	41,781	10	5				4	3		
Galveston, Tex.	41,863	12	4							2
Green Bay, Wis.	29,353	8	2							
Hagerstown, Md.	25,679						3			
Haverhill, Mass.	48,477	17					1			2
Jackson, Mich.	35,363	12						1		
Kalamazoo, Mich.	48,886	12	4		3					1
Kenosha, Wis.	31,576	11	2				7			2
Knoxville, Tenn.	38,676		1				15	1		
La Crosse, Wis.	31,677	14	6	1				1		
Lexington, Ky.	41,097	29	2		9		1			3
Lima, Ohio.	35,384	10	9	1			2			
Lincoln, Nebr.	46,515	9					1		2	1
Long Beach, Cal.	27,587	10					1		2	1
Lorain, Ohio.	36,964		13							
Lynchburg, Va.	32,940	14							1	

ARE YOU SAYING Your Money to Invest in the SECOND LIBERTY LOAN!

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS— Continued.

City Reports for Week Ended Sept. 29, 1917—Continued.

City.	Popula- tion as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 50,000 inhabitants—Continued.										
McKeesport, Pa.	47,521	14	18	1						1
Medford, Mass.	26,234	6	1		2					1
Montclair, N. J.	26,318	5	1				1		2	1
Nashua, N. H.	27,327	7								
Newburgh, N. Y.	29,603	5		1	1		1			
New Castle, Pa.	41,133		4				1			
Newport, Ky.	31,927	12					1	1	2	2
Newport, R. I.	30,108	9	5	1						1
Newton, Mass.	43,715	10	4						1	
Niagara Falls, N. Y.	37,253	2							1	1
Norristown, Pa.	31,401	5	1		1					
Ogden, Utah.	31,704	4	2	1						
Orange, N. J.	33,080	14							3	
Pasadena, Cal.	46,450	16	1				1		3	1
Perth Amboy, N. J.	41,185	7	1				1		1	
Pittsfield, Mass.	38,629	5	2				2		1	
Pittsborough, Va.	39,651	6	5				1			
Quincy, Ill.	36,798	8		1					1	1
Quincy, Mass.	38,136	8			1		1		8	
Racine, Wis.	46,486	7							1	
Roanoke, Va.	43,284	18	6						1	1
Rock Island, Ill.	28,926	9	1						1	
San Jose, Cal.	38,902									
Staubenville, Ohio	27,445	5	1				2			
Stockton, Cal.	35,258		2				3			
Superior, Wis.	46,226	7								1
Taunton, Mass.	36,283	10							1	1
Topeka, Kans.	48,726	13	1	1			1		1	1
Waltham, Mass.	30,570	5	1				1		1	1
Watertown, N. Y.	29,894	2			5		2		8	1
West Hoboken, N. J.	43,139	9	2		3		1		1	1
Wheeling, W. Va.	43,377	19	2						1	1
Williamsport, Pa.	33,809		1	1						
Wilmington, N. C.	29,892	5	5							
Winston-Salem, N. C.	31,155	21		1			4		1	3
Zanesville, Ohio.	30,863	12								
From 10,000 to 25,000 inhabitants:										
Alton, Ill.	22,874	8	1	1	1					
Ann Arbor, Mich.	15,010	5	2							
Braddock, Pa.	21,685		5		1					
Cairo, Ill.	15,794	6								2
Clinton, Mass.	13,075	2								
Coffeyville, Kans.	17,548						1			
Concord, N. H.	22,669	13	9				1			
Galesburg, Ill.	24,276	9								
Kearny, N. J.	23,539	8			3		2		2	2
Kokomo, Ind.	20,920	7					1		1	2
Leavenworth, Kans.	19,363	9								
Long Branch, N. J.	15,395	8	1	1			1			2
Marinette, Wis.	14,610	3								
Morristown, N. J.	13,284	7								
Nanticoke, Pa.	23,126	5	3				2		1	
Newburyport, Mass.	15,243	2	1							
New London, Conn.	20,985	12							1	1
North Adams, Mass.	22,019	8								
Northampton, Mass.	19,926	6	1				10		2	
Plainfield, N. J.	23,403	8	1						1	1
Pontiac, Mich.	17,521	7								
Portsmouth, N. H.	11,666						5			
Rocky Mount, N. C.	12,067	7								
Rutland, Vt.	14,831	3								
Sandusky, Ohio.	20,193	15								
Saratoga Springs, N. Y.	13,821	7								
Steelton, Pa.	15,548	2	2						1	1
Washington, Pa.	21,618						2		1	
Wilksburg, Pa.	23,228								1	
Woburn, Mass.	15,969	4								2

¹ Population Apr. 15, 1910; no estimate made.

ARE YOU SAVING Your Money to Invest in the SECOND LIBERTY LOAN?

FOREIGN.

MADAGASCAR.

Cerebrospinal Meningitis—Tananarive.

During the period from June 24 to July 15, 1917, 25 fatal cases of cerebrospinal meningitis were notified at Tananarive, Madagascar, and from July 22 to August 5, 55 fatalities. The cases occurred mainly among the native population. The disease was reported present in epidemic form at Tananarive during the period from October 1 to December 31, 1916, with 212 cases, and in January and February, 1917, with 199 cases. It continued to be reported present from February 25 to June 3, 1917. The native population of Tananarive is 62,410.¹

UNION OF SOUTH AFRICA.

Plague—Cape of Good Hope State.

An outbreak of plague was reported August 23, 1917, at Cradock, Cape of Good Hope State, Union of South Africa.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.

Reports Received During the Week Ended Oct. 19, 1917.²

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.	
India:					
Bombay	July 29-Aug. 4.	2	1		
Calcutta.....	July 15-28.....		11		
Madras.....	Aug. 5-21.....	30	16		
Philippine Islands:					
Manila.....	Aug. 19-25.....	2		Not previously reported, 1 case. Aug. 19-25, 1917: Cases, 209; deaths, 137.	
Provinces.					
Albay.....	Aug. 19-25.....	8	5		
Bohol.....	do.....	12	8		
Cebu.....	do.....	19	14		
Leyte.....	do.....	62	44		
Mindanao.....	do.....	40	20		
Negros Oriental.....	do.....	29	24		
Samar.....	do.....	24	12		
Sorsogon.....	do.....	8	5		
Surigao.....	do.....	6	4		
Tayabas.....	do.....	1	1		
Philippine Islands:					
Manila.....					Aug. 26-Sept. 1, 1917: 1 case not previously reported. Aug. 26-Sept. 1, 1917: Cases, 293 deaths, 157.
Provinces.					
Albay.....	Aug. 26-Sept. 1....	2	2		
Bohol.....	do.....	10	6		
Cebu.....	do.....	22	14		
Leyte.....	do.....	111	48		
Mindanao.....	do.....	68	39		
Negros Oriental.....	do.....	11	7		
Samar.....	do.....	68	40		
Tayabas.....	do.....	1	1		

¹ Public Health Reports, Sept. 7, 1917, p. 1464.

² From medical officers of the Public Health Service, American consuls, and other sources.

ARE YOU SAVING Your Money to Invest in the SECOND LIBERTY LOAN?

(1778)

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

Reports Received During the Week Ended Oct. 19, 1917—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				July 15-Aug. 4, 1917: Cases, 10,014; deaths, 7,821.
Bombay.....	July 29-Aug. 11...	77	61	
Calcutta.....	July 15-21.....		1	
Madras Presidency.....	Aug. 5-21.....	651	451	
Rangoon.....	July 29-Aug. 11...	86	81	
Siam:				
Bangkok.....	July 29-Aug. 11...	3	3	
Union of South Africa:				
Cape of Good Hope State— Cradock.....	Aug. 23.....			Present.

SMALLPOX.

Brasil:				
Rio de Janeiro.....	Aug. 12-Sept. 1...	124	31	
Canada:				
Ontario— Windsor.....	Sept. 30-Oct. 6...	1		
China:				
Changsha.....	Aug. 11-17.....		7	Present. Do. Among native population.
Chungking.....	Aug. 12-18.....			
Mukden.....	Sept. 2-8.....			
Shanghai.....	Aug. 26-Sept. 9...		2	
India:				
Bombay.....	July 29-Aug. 11...	9	4	
Madras.....	Aug. 5-21.....	7	3	
Mexico:				
Mexico City.....	Sept. 16-22.....	8		
Vera Cruz.....	Sept. 9-15.....	1	1	
Philippine Islands:				
Manila.....	Aug. 26-Sept. 1...	1		Varioloid.
Spain:				
Malaga.....	Apr. 1-May 31.....		29	
Valencia.....	Sept. 9-15.....	1		
Union of South Africa:				
Johannesburg.....	July 1-31.....	3		

TYPHUS FEVER.

Algeria:				
Algiers.....	Aug. 1-31.....	1		
China:				
Antung.....	Sept. 3-9.....	2		
Egypt:				
Alexandria.....	Aug. 19-Sept. 2...	20	6	
Japan:				
Nagasaki.....	Sept. 10-16.....	5		
Mexico:				
Mexico City.....	Sept. 16-22.....	100		

YELLOW FEVER.

Mexico:				
Yucatan State— Merida.....	Aug. 8-Sept. 20...	1		
Peto.....	July 1-Sept. 25...	6	1	

ARE YOU SAVING Your Money to Invest in the SECOND LIBERTY LOAN?

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—
Continued.

Reports Received from June 30 to Oct. 12, 1917.

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Bassein	Apr. 1-May 5		8	
Bombay	June 24-30	1	1	
Do.	July 8-28	11	6	
Calcutta	Apr. 29-June 30		347	
Do.	July 1-7		3	
Madras	Apr. 22-June 30	5	4	
Do.	July 1-Aug. 4	63	43	
Mandalay	May 6-June 30		2	
Moulmein	May 13-June 2		3	
Pakokku	Apr. 20-May 5		1	
Pegu	May 27-June 30		5	
Do.	July 1-7		7	
Rangoon	Apr. 21-June 30	31	17	
Do.	July 8-28	9	7	
Indo-China:				
Provinces				Feb. 1-June 30, 1917: Cases, 1,237; deaths, 905.
Anam	Feb. 1-June 30	230	191	
Cambodia	do.	79	51	
Cochin-China	do.	878	543	
Laos	June 1-30	1		
Tonkin	Feb. 1-June 30	36	21	
Saigon	Apr. 23-May 27	163	103	
Java:				
East Java	Apr. 2-8	1		
Do.	July 9-15	1	1	
Mid Java	July 16-22	1	1	
West Java				Apr. 13-July 5, 1917: Cases, 71; deaths, 31. July 6-Aug. 2, 1917: Cases, 100; deaths, 52.
Batavia	Apr. 13-July 5	7	2	
Do.	July 6-Aug. 2	9	3	
Persia:				
Mazanderan Province—				
Amir Kela	Feb. 3	1		
Barfourouche	Jan. 15-17	4		
Hamze Kela	Jan. 17	1		
Machidessar	Jan. 31	3		
Philippine Islands:				
Manila	June 17-23	1		
Provinces.				
Agusan	July 15-24	12	2	May 20-June 30, 1917: Cases, 795; deaths, 506. July 1-Aug. 4, 1917: Cases, 2,064; deaths, 1,271.
Albay	Ma. 20-June 30	113	76	
Do.	July 1-Aug. 4	53	30	
Ambos Camarines	June 3-9	2	1	
Do.	July 22-Aug. 4	20	11	
Bataan	July 8-14	1		
Batangas	June 17-23	1	1	
Bohol	May 20-June 30	368	251	
Do.	July 1-Aug. 4	203	161	
Capiz	June 3-30	62	40	
Do.	July 1-Aug. 4	64	45	
Cebu	June 3-30	231	150	
Do.	July 1-Aug. 4	388	284	
Iloilo	do.	41	22	
Leyte	June 10-30	14	5	
Do.	July 1-Aug. 4	334	223	
Misamis	July 8-Aug. 4	237	117	
Mindanao	July 29-Aug. 4	12	11	
Negros Oriental	July 1-Aug. 4	276	177	
Rizal	June 24-30	1		
Do.	July 1-7	1		
Romblon	July 2-28	1	1	
Samar	July 15-21	4	2	
Sorsogon	June 3-30	196	88	
Do.	July 1-Aug. 4	216	114	
Surigao	July 29-Aug. 4	4	4	
Tayabas	June 3-30	7	7	
Do.	July 1-Aug. 4	11	9	
Zamboanga	July 15-21	11	7	

ARE YOU SAVING Your Money to Invest in the SECOND LIBERTY LOAN?

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

Reports Received from June 30 to Oct. 12, 1917—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Arabia:				
Aden.....	May 3-July 4.....		43	Apr. 8-May 14, 1917: Cases, 69; deaths, 51.
Brazil:				
Bahia.....	June 10-30.....	12	8	
Do.....	July 8-Sept. 8.....	5	1	
Pernambuco.....	July 16-Aug. 15.....	4	1	
Ceylon:				
Colombo.....	Apr. 8-June 23.....	41	33	
Do.....	July 6-21.....	1	4	
China:				
Amoy.....	Apr. 29-May 5.....			Present and in vicinity.
Do.....	July 1-7.....	6	6	Present Aug. 19.
Hongkong.....	May 13-June 30.....	20	13	
Do.....	July 8-Aug. 18.....	4	3	
Kwangtung Province— Ta-pu district.....	June 2.....			Present.
Ecuador:				
Estancia Vieja.....	Feb. 1-28.....	1		
Guayaquil.....	do.....	56	29	
Do.....	Mar. 1-31.....	33	18	
Do.....	Apr. 1-30.....	9	4	
Milagro.....	Mar. 1-31.....	1		
Do.....	Apr. 1-30.....	1	1	
Nobol.....	Feb. 1-28.....	2		
Salitre.....	do.....	1		
Do.....	Mar. 1-31.....		1	
Taura.....	Feb. 1-28.....	3	2	
Egypt:				
Alexandria.....	June 21-27.....	6	4	Jan. 1-Aug. 2, 1917: Cases, 1,251; deaths, 696.
Do.....	July 31-Aug. 19.....	3	1	
Port Said government.....	Apr. 30-May 19.....	4	3	
Port Said.....	June 25.....	1		
Do.....	July 28-29.....	1	1	
Provinces—				
Favoum.....	May 11-June 26.....	14	7	
Galioubch.....	June 28.....	1		
Girgeh.....	May 17.....		1	
Miniéh.....	May 12-June 28.....	4	3	
Do.....	July 29.....	1		
Slout.....	May 12.....	3	1	
Suez government.....	Apr. 30-June 2.....	23	9	
Suez.....	May 12-June 28.....	38	23	
Great Britain:				
Gravesend.....	Aug. 13-24.....	3	1	From s. s. Matiana.
London.....	May 3-8.....	2		2 in hospital at port. From s. s. Sardinia from Australian and oriental ports.
India:				
Bassein.....	Apr. 1-June 30.....		54	Apr. 15-June 30, 1917: Cases, 43,922; deaths, 30,197. July 1-7, 1917: Cases, 1,870; deaths, 1,322.
Do.....	July 1-7.....		6	
Bombay.....	Apr. 22-June 30.....	486	397	
Do.....	July 1-28.....	154	127	
Calcutta.....	Apr. 29-June 2.....		38	
Henzada.....	Apr. 1-June 30.....		35	
Karachi.....	Apr. 22-June 30.....	468	413	
Do.....	June 23-July 23.....	11	8	
Madras Presidency.....	Apr. 22-June 30.....	301	250	
Do.....	July 1-7.....	70	58	
Mandalay.....	Apr. 8-May 12.....		9	
Moulmein.....	Apr. 1-June 30.....		74	
Do.....	July 1-7.....		16	
Myingyan.....	Apr. 1-7.....		1	
Pegu.....	May 27-June 2.....		2	
Rangoon.....	Apr. 15-June 30.....	183	169	
Do.....	July 1-23.....	217	205	
Toungoo.....	Apr. 8-14.....		2	
Indo-China:				
Provinces.....				Feb. 1-June 30, 1917: Cases, 730; deaths, 491.
Anam.....	Feb. 1-June 30.....	232	131	
Cambodia.....	do.....	132	115	
Cochin-China.....	do.....	219	133	
Kwang-Chow-Wan.....	May 1-June 30.....	34	23	
Tonkin.....	Feb. 1-June 30.....	113	89	
Saigon.....	Apr. 23-June 3.....	47	26	

ARE YOU SAVING Your Money to Invest in the SECOND LIBERTY LOAN?

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—
Continued.

Reports Received from June 30 to Oct. 12, 1917—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Java:				
East Java.....				Apr. 2-May 20, 1917: Cases, 29; deaths, 29.
Djoejakarta Residency.....	Apr. 23-May 6.....	1	1	
Kediri Residency.....	do.....	1	1	
Samarang Residency.....	Apr. 23-May 20.....	3	3	
Surabaya Residency.....	Apr. 2-May 20.....	18	18	
Do.....	July 8-28.....	4	4	
Surakarta Residency.....	do.....	6	6	
Peru:				
Departments—				
Are uipa.....	May 16-31.....	4		At Mollendo.
Callao.....	do.....	1		At Callao.
Lambayeque.....	do.....	2		At Chiclayo.
Libertad.....	do.....	7		At Salaverry, San Pedro, and Trujillo.
Lima.....	do.....	1		At Lima.
Siam:				
Bangkok.....	Apr. 22-June 30.....	13	12	
Do.....	July 3-23.....	6	5	
Straits Settlements:				
Singapore.....	June 3-16.....	2	1	
Do.....	July 1-7.....	1	1	
Union of South Africa:				
Cape of Good Hope State—				
Glengrey district.....	Aug. 13.....			Present.
Terka district.....	May 28.....	1	1	At Summerhill Farm.
Queenstown.....	June 6.....	1		
Orange Free State.....				
Winburg district.....	May 28.....		1	Apr. 16-22, 1917: 1 case. Apr. 9-22, 1917: Cases, 26; deaths, 17.
At sea:				
S. S. Matiana.....	July 14-18.....	9	6	En route for port of London.

SMALLPOX.

Australia:				
New South Wales.....				
Brewarrina.....	Apr. 27-June 21.....	6		Apr. 27-July 23, 1917: Cases, 75.
Cessnock.....	July 25-28.....	4		
Comabarabran.....	May 25-July 5.....	13		
Quambyne.....	Apr. 27-June 21.....	2		
Warren district.....	June 22-July 17.....	50		
Queensland—				
Thursday Island Quarantine Station.....	May 9.....	1		From s. s. St. Albans from Kobe via Hongkong. Vessel proceeded to Townsville, Brisbane, and Sydney, in quarantine.
Brazil:				
Bahia.....				
Bahia.....	May 6-June 30.....	4		
Do.....	July 22-Aug. 4.....	2	1	
Rio de Janeiro.....	do.....	126	31	
Do.....	July 1-Aug. 11.....	231	37	
Canada:				
Manitoba—				
Winnipeg.....	June 10-16.....	1		
Do.....	Aug. 19-Sept. 1.....	5		
Nova Scotia—				
Halifax.....	June 18-July 7.....	3		
Port Hawkesbury.....	June 17-30.....			Present in district.
Ontario—				
Ottawa.....	July 30-Aug. 5.....	1		
Ceylon:				
Colombo.....	May 6-12.....	1		
China:				
Amoy.....				
Amoy.....	Apr. 29-May 25.....			Present and in vicinity.
Do.....	July 1-Aug. 19.....			Do.
Antung.....	May 21-June 24.....	4		
Do.....	Aug. 6-12.....	1		
Changsha.....	May 27-June 2.....	5		
Chungking.....	May 6-June 23.....			Do.
Do.....	July 1-28.....			Do.
Dairen.....	May 13-June 30.....	30	4	
Do.....	July 8-28.....	6	1	July 1-7, 1917: Present.

ARE YOU SAVING Your Money to Invest in the SECOND LIBERTY LOAN?

CHOLERA, FLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

Reports Received from June 30 to Oct. 12, 1917—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
China—Continued.				
Hankow.....	June 24-30.....	2		
Harbin.....	Apr. 23-May 6.....	7		On Chinese Eastern Ry.
Hongkong.....	May 6-June 16.....	8	7	
Do.....	Aug. 5-18.....	1		
Manchuria Station.....	Apr. 23-29.....	1		Do.
Mukden.....	May 27-June 2.....			Present.
Do.....	July 8-Aug. 11.....			Do.
Shanghai.....	May 21-July 1.....	13	32	Cases foreign; deaths among natives.
Do.....	July 2-Aug. 5.....		9	Among Chinese.
Tsitsihar Station.....	Apr. 16-22.....	1		On Chinese Eastern Ry.
Tsingtao.....	May 22-July 7.....	35	7	At another station on railway,
Do.....	July 30-Aug. 11.....	4	1	1 case.
Chosen (Korea):				
Ghemulpo.....	May 1-31.....	1		
Ecuador:				
Guayaquil.....	Feb. 1-23.....	1		
Do.....	Mar. 1-31.....	1		
Do.....	Apr. 1-30.....	5		
Egypt:				
Alexandria.....	Apr. 30-July 1.....	39	9	
Do.....	July 2-29.....	30	4	
Cairo.....	Feb. 12-Mar. 18.....	19	1	
France:				
Nantes.....	July 30-Aug. 5.....	1		
Paris.....	May 6-12.....	1		
Germany:				
Berlin.....	Mar. 19-Apr. 23.....	106		Mar. 18-Apr. 28, 1917: Cases, 715
Bremen.....	do.....	16		in cities and 32 States and districts.
Charlottenberg.....	do.....	18		
Hamburg.....	do.....	50		
Leipzig.....	do.....	20		
Lubeck.....	do.....	2		
Munich.....	do.....	10		
Stuttgart.....	do.....	1		
Greece:				
Athens.....	July 25-30.....		23	
India:				
Bombay.....	Apr. 22-June 30.....	186	75	
Do.....	July 1-23.....	48	22	
Calcutta.....	Apr. 29-May 26.....		12	
Karachi.....	Apr. 22-July 4.....	27	8	
Do.....	July 8-14.....	1	1	
Madras.....	Apr. 22-June 30.....	80	48	
Do.....	July 1-Aug. 4.....	31	15	
Rangoon.....	Apr. 15-June 30.....	33	5	
Do.....	July 1-28.....	7		
Indo-China:				
Provinces.....				
Anam.....	Feb. 1-June 30.....	1,630	237	Feb. 1-June 30, 1917: Cases, 617,
Cambodia.....	do.....	136	26	deaths, 535.
Cochin-China.....	do.....	1,267	377	
Kwang-Chow-Wan.....	Mar 1-Apr. 30.....	4		
Laos.....	Apr. 1-30.....	5	1	
Tonkin.....	Feb. 1-June 30.....	274	30	
Saigon.....	Apr. 27-June 10.....	199	63	
Italy:				
Turin.....	May 21-June 24.....	32	12	
Do.....	July 12-Aug. 26.....	9	3	
Jamaica:				
Kingston.....	Sept. 9-15.....	1		
Japan:				
Kobe.....	May 27-July 22.....	65	16	
Nagasaki.....	May 28-June 3.....	1		
Osaka.....	May 16-July 5.....	177	55	
Yokkaichi.....	July 25-31.....	1		
Yokohama.....	May 27-July 1.....	1	1	
Java:				
East Java.....	Apr. 2-July 1.....	38	2	
Do.....	July 2-29.....	18		
Mid-Java.....	Apr. 1-July 1.....	88	7	
Do.....	July 2-22.....	23		
West Java.....				
Batavia.....	Apr. 13-July 5.....	30	6	Apr. 13-July 5, 1917: Cases, 239;
				deaths, 44. July 6-Aug. 2, 1917:
				Cases, 68; deaths, 14.

ARE YOU SAYING Your Money to Invest in the SECOND LIBERTY LOAN?

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—
Continued.

Reports Received from June 30 to Oct. 12, 1917—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Mexico:				
Coatepec.....	Jan. 1-June 30.....		116	
Do.....	Aug. 1-14.....		1	Jan. 1-Aug. 14, 1916: 118 deaths.
Jalapa.....	July 1-13.....		1	
Mazatlan.....	July 11-Aug. 7.....		9	
Mexico City.....	June 3-30.....	162		
Do.....	Aug. 5-Sept. 1.....	120		
Monterey.....	June 18-24.....		24	
Orizaba.....	Jan. 1-June 30.....		23	
Do.....	July 1-23.....		1	
Vera Cruz.....	July 1-Sept. 8.....	5	1	
Netherlands:				
Amsterdam.....	Aug. 13-18.....	1	1	
Philippine Islands:				
Manila.....	May 13-June 9.....	6		Varioloid.
Do.....	July 8-Aug. 4.....	4		Do.
Portugal:				
Lisbon.....	May 13-June 30.....	14		
Do.....	July 8-23.....	4		
Portuguese East Africa:				
Lourenço Marques.....	Mar. 1-May 31.....		3	
Russia:				
Archangel.....	May 1-June 28.....	56	4	
Do.....	Aug. 15-23.....	4		
Petrograd.....	Feb. 18-June 23.....	543		
Do.....	July 2-8.....	14		
Riga.....	Mar. 11-June 2.....	4		Jan. 1-Mar. 31, 1917: Cases, 9.
Vladivostok.....	Mar. 15-21.....	23	7	
Siam:				
Bangkok.....	June 9-30.....	16		
Do.....	July 11-17.....	3	5	
Spain:				
Madrid.....	May 1-June 19.....		4	
Malaga.....	Apr. 1-3.....		12	
Seville.....	May 1-June 30.....		11	
Valencia.....	June 3-23.....	5		
Do.....	July 1-Aug. 18.....	12		
Straits Settlements:				
Penang.....	Mar. 18-June 23.....	6	3	
Singapore.....	June 24-30.....	1		
Sweden:				
Malmo.....	Apr. 22-28.....	1		
Stockholm.....	May 20-June 23.....	2	1	
Tunisia:				
Tunis.....	June 2-8.....	2		
Turkey in Asia:				
Trebizond.....	Feb. 25-Apr. 13.....		15	
Union of South Africa:				
Johannesburg.....	Mar. 12-24.....	4		
Uruguay:				
Montevideo.....	May 1-31.....	2		
Venezuela:				
Maracaibo.....	June 19-July 8.....		8	
Do.....	July 9-23.....		1	

TYPHUS FEVER. *

Algeria:				
Algiers.....	June 1-30.....	5	3	
Do.....	July 1-31.....	1	1	
Argentina:				
Buenos Aires.....	Aug. 12-18.....		1	
Austria-Hungary:				
Austria.....				Oct. 22-Dec. 17, 1916: Cases, 2,371.
Bohemia.....	Oct. 22-Dec. 17.....	634		
Galicia.....	do.....	809		
Lower Austria.....	do.....	47		
Moravia.....	do.....	617		
Silesia.....	do.....	16		
Styria.....	do.....	243		
Upper Austria.....	do.....	5		
Hungary.....				Feb. 19-Mar. 25, 1917: Cases, 1,381.
Budapest.....	Feb. 19-Mar. 25.....	83		

ARE YOU SAVING Your Money to Invest in the SECOND LIBERTY LOAN?

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER— Continued.

Reports Received from June 30 to Oct. 12, 1917—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Rio de Janeiro.....	July 29-Aug. 11....	2		
China:				
Antung.....	June 25-July 1....	3		
Do.....	July 9-Aug. 26....	9	1	
Hankow.....	June 9-15.....	1		
Do.....	July 8-14.....		1	
Tientsin.....	June 17-23.....	1		
Tsingtao.....	May 30-July 7....	4		
Do.....	Aug. 5-11.....	1		
Egypt:				
Alexandria.....	Aug. 30-July 1....	1,648	478	
Do.....	July 17-Aug. 19....	286	103	
Cairo.....	Jan. 22-Mar. 18....	90	40	
Great Britain:				
Cork.....	June 17-23.....		1	
Greece:				
Saloniki.....	May 23-June 30....		32	
Do.....	July 1-Aug. 4.....		19	
Japan:				
Hakodate.....	July 22-28.....	1		
Nagasaki.....	June 11-24.....	4		
Do.....	July 9-Aug. 19....	24	2	
Java:				
East Java.....				May 6-July 1, 1917: Cases, 6. July
Surabaya.....	June 25-July 29....	4		9-29, 1917: Cases, 6.
Mid-Java.....				Apr. 1-June 24, 1917: Cases, 38;
Samarang.....	May 5-June 10....	14	2	deaths, 5. July 9-22, 1917:
Do.....	July 2-8.....	5		Cases, 7; deaths, 1.
West Java.....				Apr. 13-July 5, 1917: Cases, 147;
Batavia.....	Apr. 13-July 5....	70	6	deaths, 6. July 6-Aug. 2, 1917:
Do.....	July 6-Aug. 2.....	37	2	Cases, 46; deaths, 2.
Mexico:				
Aguascalientes.....	July 10-16.....		1	
Coatepec.....	Aug. 1-14.....		1	
Jalapa.....	Apr. 1-June 30....		5	
Do.....	July 1-31.....		3	
Mexico City.....	June 3-30.....	431		
Do.....	July 8-Sept. 1....	770		
Orizaba.....	Jan. 1-June 30....		6	
Do.....	July 1-31.....		1	
Netherlands:				
Rotterdam.....	June 9-23.....	3	2	
Do.....	July 15-Sept. 1....	11		
Norway:				
Bergen.....	July 8-28.....	7		
Portuguese East Africa:				
Lourenço Marques.....	Mar. 1-31.....	1		
Russia:				
Archangel.....	May 1-June 28....	11	2	
Do.....	Aug. 15-28.....	9	2	
Petrograd.....	Feb. 18-June 23....	138	3	
Do.....	July 2-8.....	10		
Riga.....	May 31-June 2....	2		Jan. 1-31, 1917: 1 case.
Vladivostok.....	Mar. 29-May 21....	5		
Spain:				
Almeria.....	May 1-31.....		5	
Madrid.....	do.....		2	
Switzerland:				
Basel.....	June 17-23.....	1		
Do.....	July 8-21.....	3	1	
Zurich.....	July 26-Aug. 18....		2	
Trinidad.....	June 4-9.....	2		
Tunisia:				
Tunis.....	June 30-July 6....		1	
Union of South Africa:				
Cape of Good Hope State— East London.....	Sept. 10.....			Present.

ARE YOU SAVING Your Money to Invest in the SECOND LIBERTY LOAN?

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—
Continued.

Reports Received from June 30 to Oct. 12, 1917—Continued.

YELLOW FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
Ecuador:				
Babahoyo.....	Feb. 1-28.....	1	1	
Do.....	Mar. 1-31.....	2	1	
Chobo.....	do.....	1	1	
Guayaquil.....	Feb. 1-28.....	18	7	
Do.....	Mar. 1-31.....	17	9	
Do.....	Apr. 1-30.....	17	9	
Milagro.....	Feb. 1-28.....	1	-----	
Do.....	Mar. 1-31.....	1	-----	
Do.....	Apr. 1-30.....	1	1	
Mexico:				
Campeche State—				
Campeche.....	Aug. 19-25.....	2	1	
Yacatan State—				
Merida.....	Aug. 7-Sept. 1....	7	3	
Peto.....	June 23.....	1	1	In person recently arrived from Mexico City.
Do.....	July 29-Aug. 11....	6	2	
Venezuela:				
Coro.....				Present Sept. 5.

ARE YOU SAYING Your Money to Invest in the SECOND LIBERTY LOAN?