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## THE TREATMENT AND PREVENTION OF PELLAGRA.

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Since the publication of the communication on the Cause and Prevention of Pellagra (Goldberger, Public Health Reports, Sept. 11, 1914), a large number of inquiries have been received asking for detailed directions as to the treatment and prevention of the disease. As it has been impracticable to reply to these as fully as appears desirable, it was decided to prepare and publish a brief summary of our conclusions as to the nature of pellagra, and with these as a basis to outline the treatment and means of prevention.

On taking up the study of pellagra one of the first and most insistent questions that confronted us was that of its communicability. Our studies, the general tenor of which was briefly indicated in the letter published September 11, 1914, and the details of which will be embodied in our completed reports, have led us to conclude (1) that pellagra is not a communicable (neither infectious nor contagious) disease, but that it is essentially of dietary origin; (2) that it is dependent on some yet undetermined fault in a diet in which the animal or leguminous protein component is disproportionately small and the nonleguminous vegetable component disproportionately large; and (3) that no pellagra develops in those who *consume* a mixed, well-balanced, and varied diet, such, for example, as that furnished by the Government to the enlisted men of the Army, Navy, and Marine Corps.<sup>1</sup>

### Treatment.

*Diet.*—The experience of reliable observers has over and over again shown that we have no specific medicinal treatment for pellagra. At the same time, we find that even the earliest students of the disease make mention of the value of nutritious food. The early observers were led to feed their patients because they found that, as a general thing, the disease occurred then, as it does now, mainly

<sup>1</sup> So far as can be ascertained, no man in our Army, Navy, or Marine Corps has developed pellagra who did not have it at the time of or before enlistment. Lavinder (Public Health Reports, Sept. 29, 1911, vol. 26) has reported a similar observation relative to the Italian army.

in the poor and the badly nourished. It was not and is not a rare observation, however, to find individuals suffering from pellagra who, to all outward appearance, are perfectly well nourished. Such observations, naturally enough, gave rise to doubts and to skepticism as to any essential causative relation between undernourishment and pellagra. Indeed, such observations justify the inference that pellagra is not a disease of malnutrition, provided that by undernourishment or malnutrition we mean no more than is ordinarily understood, as some degree of starvation.

The comparatively recent studies that have definitely established beriberi as a "deficiency" disease, a disease of "undernourishment" or starvation in a sense hardly dreamed of before, have given a new and added significance to the more recent studies of nutrition and have opened a practically virgin field to the student of epidemiology and therapy.

If now we consider pellagra as a fault of nutrition ("undernourishment" or "starvation") in this new and special sense (that is, as in some way analogous to beriberi or scurvy), or, possibly, as suggested by the recent work of Meyer and Voegtlin<sup>1</sup> as a chronic intoxication with some poison taken in excess in a largely vegetable diet, we at once get a new and more sympathetic tolerance for the reports of beneficial results not only from the use of "nourishing" food alone, but also from those reports of unusually favorable results following the administration of this, that, or the other form of arsenic or other medicine. For on closer inquiry it will be found that in those instances where there seems to be reason for believing that the favorable results claimed for this or that drug appear to have a substantial basis in fact, the credit usually claimed for the medicine alone must, to say the least, be shared by the modification in the diet that is invariably found to have been ordered. Recurrences in such instances are not rare and not hard to understand, when one reflects that, having gotten well, the natural tendency is to go back to one's ordinary diet, and this usually the winter diet, to some of the characters of which we will again refer.

On the basis of the foregoing conclusions and in the light of the general considerations presented we would recommend that as long as clinical evidences of pellagra are manifest the patient should be given and urged to take (if necessary tube fed) an abundance of fresh milk, eggs, fresh lean meat, beans, and peas (fresh and dried, not canned).

We are not to be understood as saying that all cases will, or can, in this or in any other way, be saved. We fear that there will always be patients who even in their first attacks are, and will be, beyond hope of recovery.

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<sup>1</sup> Public Health Reports, June 19, 1914.

*Milk.*—Fresh milk alone, or in alternation with butter milk should be given freely. An adult should be urged to take not less than a pint and a half to two pints in 24 hours.

*Eggs.*—Fresh eggs should be allowed freely. In addition to the milk and meat, an adult should take not less than four eggs a day.<sup>1</sup> In certain of the severer forms it may be necessary to give the eggs in the form of albumin water.

*Meat.*—The meat should be fresh, lean meat. Whether all fresh meats are equally valuable in treatment we do not know; future studies will have to determine this. Our experience has been with beef alone. This may be served as scraped beef, as a roast, or as steak. Where mastication is painful, meat juice may be given instead. An adult should be urged to take at least a half pound of lean meat a day in addition to the milk, eggs, and legumes. It may be necessary in some instances to work up gradually to the point where these quantities can be taken.

*Legumes.*—We have been much impressed with the favorable results following the use of beans and peas alone. The beans and peas should be fresh or dried, not canned. A palatable pea or bean soup should be prepared and may be given freely. In addition to or in alternation with the soup, the beans or peas should be served and eaten in any one of the other well-known forms.

In cases presenting marked gastrointestinal symptoms, the diet of the patient may be limited to the foregoing articles. It may here be emphasized that diarrhea is no contraindication to the full feeding.

In cases presenting only moderate or no gastro-intestinal symptoms there may be added, in restricted amounts, oatmeal, rice, and barley as cereals, potatoes and onions as fresh vegetables, fresh or dried (not canned) fruits, and wheat or rye bread or biscuits.

As long as symptoms of pellagra are perceptible we prefer to exclude all corn products; not that corn is not a wholesome and nutritious food, but because the occurrence of pellagra is commonly, though by no means exclusively, associated with the consumption of a diet in which corn forms a disproportionately large part. Similarly, a reduction in the amount of other carbohyraceous articles, such as molasses, jams, or starch, should, we think, be ordered, if on analysis of the patients prepellagrinous dietary some such articles or combination of articles appear to have formed a very conspicuous portion of the diet.

After all symptoms of pellagra have disappeared corn and other starchy foods in moderation and suitably guarded with milk, meat, and legumes may unhesitatingly be allowed.

<sup>1</sup> Dr. I. W. Cooper, a member of the Mississippi State Board of Health, under date of Sept. 19, writes us as follows: "For the past several years, the only treatment I have given my pellagra patients was a diet of milk and eggs, some taking 16 eggs and one-half gallon of sweet milk during the 24 hours, and in every case where these suggestions were carried out fully there was a marked improvement, and in a majority of cases a complete cure so far."

*Medication.*—As has already been sufficiently indicated, we have no medicine that has any specific value. Tonics may of course be used and may at times be helpful, but as a rule they are not needed. Special disturbing symptoms, particularly pain and insomnia, should be treated on general principles.

For the gastro-intestinal symptoms the best treatment is the diet.

*Climate.*—In the acute stage it is advantageous to protect the patient from the sun. A change of climate is valuable in proportion to the degree and character of the change of diet it involves. It is not essential, for the correction in the diet may equally well be made at home.

#### **Prophylaxis.**

The prevention and eradication of pellagra will depend essentially on the substitution of a mixed, well-balanced, varied diet for the restricted, one-sided diet that the individual will be found to have consumed prior to the development of symptoms.

In a very large proportion, possibly as much as one-half, of the noninstitutional cases in the United States very little change, if any, in the diet *available* to the individual is called for, the point of chief importance being to correct the dietary eccentricity of the affected individual. As a rule, however, in order to increase the "margin of safety," some modification is desirable; some reduction in the amount of the corn ("flakes," grits, meal, molasses, starch), or other starchy foods entering into the family diet may well be insisted on.

Perhaps the most important change in the diet that we would urge is that which relates to the animal and leguminous protein component. An increased consumption of fresh (lean) meat, of fresh milk, of eggs, or of the legumes (beans and peas, fresh or dried, but not canned) and, preferably of all of these, is considered essential to give proper balance to the diet. The cheapest and most readily available of these are the legumes, and the poor, especially the poor of our South, should be instructed and urged to include them in, or materially to increase the proportion in which they enter into, their daily diet, especially during the late fall, winter, and early spring months. There is reason for more than a suspicion that the introduction of, or the increase in, the legumes in the daily dietary coincident with the coming to our tables of the "fresh vegetables" of summer, is in part, at least, responsible for the improvement and recovery of the cases of pellagra that appear annually as a sort of spring crop following a winter diet in which these elements are more or less conspicuously small or altogether absent.

The evidence is daily becoming stronger that the eventual eradication of pellagra from our South will depend largely on the successful introduction of our common dried legumes into the winter dietary. A valuable step in this direction would be an increase in the cultiva-

tion of some of the varieties of beans and peas and their preservation in the dried state for winter consumption.

What has been said concerning noninstitutional cases applies to cases at orphanages, except that here one need concern oneself primarily but little with individual eccentricities of taste. At these institutions a modification of the dietary along the lines indicated will, we believe, be followed by the complete wiping out of the disease. In this connection we may say that we have knowledge of an institution where this has actually happened. The occurrence of 75 cases of pellagra at orphanage "B. H." in the spring of 1913, following apparently milder outbreaks in 1911 and in 1912, led to a modification, along the lines above mentioned, of the diet of the affected group of children, the outbreak having been strictly limited to the boys and girls belonging to one of three groups into which the inmates were divided. Not a single case is known to have developed this year (spring and summer, 1914) among a total of some 234 of the children of this orphanage. We have reason to believe that this is not a unique experience.

At asylums for the insane the problem, though essentially dietary, is complicated and greatly obscured or masked by the varying demeanor of the different mental types, resulting in more or less marked eccentricities of diet that are difficult if not well-nigh impossible to wholly prevent. This applies more particularly to those types of individuals (dements) whose mental condition leads to apathy and indifference, necessitating a special care which, in the overcrowded and undermanned institution, can not be given them.

At nearly if not quite all of these institutions the diet may be said to be adequate, though in some, at least, an increase in the animal and leguminous protein component appears highly desirable. On this point we expect to hear warm protest from asylum officials. We expect to be informed that we must surely be wrong, for at such and such institutions, where an ample allowance of fresh meat is made, there is nevertheless an excessive prevalence of pellagra. We do not know how much meat is "allowed;" indeed, we have no wish to doubt that an "ample allowance" is actually made. From personal observation, however, we know that some, at least, of the inmates do not get an "ample allowance;" the little that they do get on their plates they do not always eat, at times perhaps because of a delusional or other dislike for meat, or by reason of its having been stolen from their plates by another inmate (a "stealer") or, in those who must be specially fed, because the feeding is not properly done.

At asylums for the insane, not only should a mixed, well-balanced, varied diet be furnished, but measures must be taken to see that the individual patient actually eats it. To have a good, rich, mixed, well-balanced, and varied diet "on the family table" is one thing; to eat it is quite another; the former is perhaps greatly to be desired, but the latter alone, we believe, will prevent pellagra.

**POLIOMYELITIS (INFANTILE PARALYSIS).****A PRELIMINARY NOTE ON THE EPIDEMIC IN VERMONT DURING THE SUMMER AND FALL OF 1914.**

By CHARLES S. CAVERLY, M. D., President Vermont State Board of Health.

The following is a very brief general statement of the epidemic of poliomyelitis still prevailing in the State of Vermont (Oct. 9, 1914).

It should be mentioned that during the summer of 1913 an outbreak of this disease occurred in the northeastern section of this State, the chief force of the epidemic being felt in the town of Hardwick. There were in that general locality 37 cases of the disease, 17 of these occurring in Hardwick in a population of about 3,500 people.

Rather late in this epidemic, in the fall, two cases occurred in the town of Barton, about 18 miles from Hardwick. These cases were near some stone sheds and also near the railroad station.

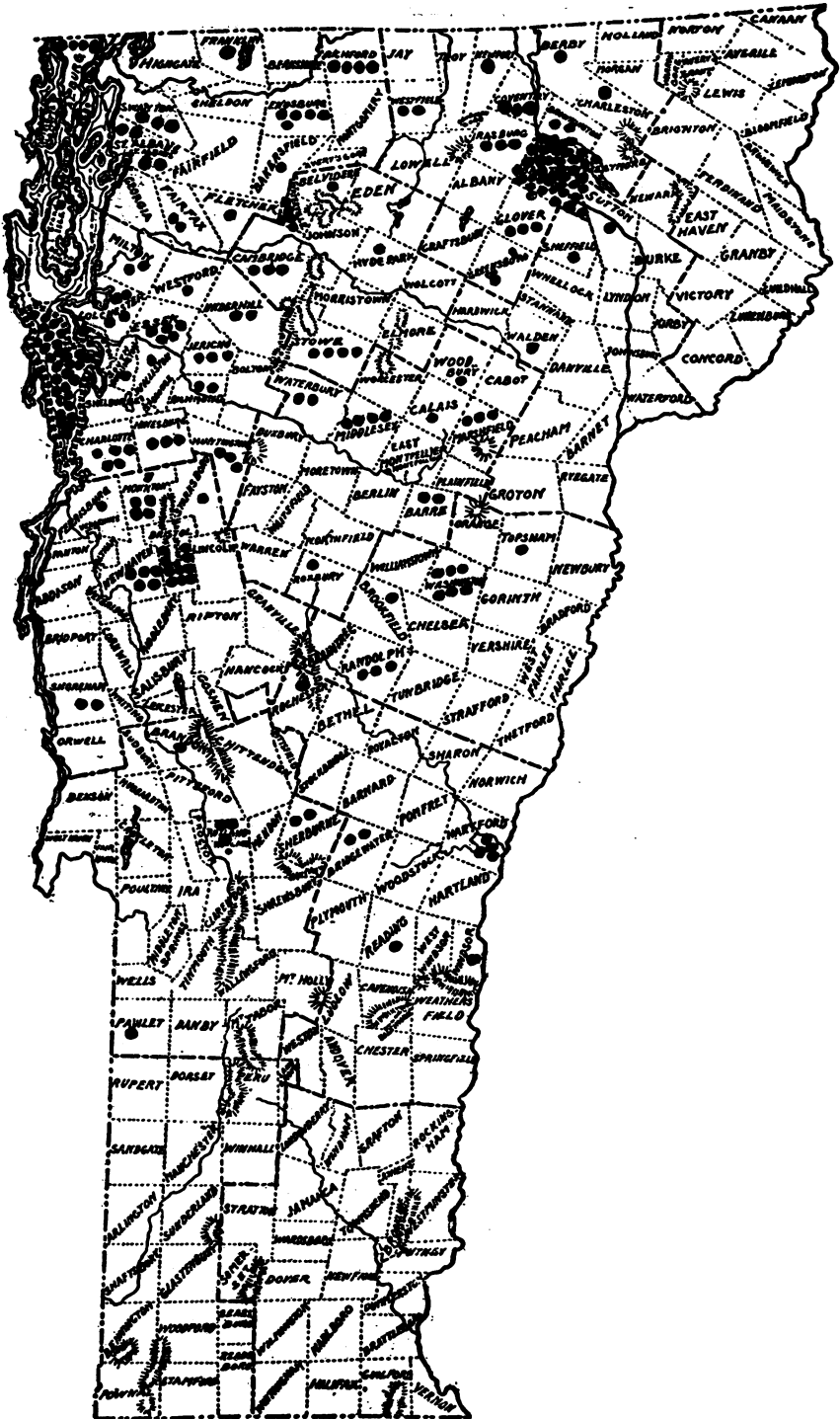
On July 18, 22, 23, 26, and 27, 1914, there occurred five cases of this disease, all in the same neighborhood in which the two cases were reported late last fall in the village of Barton. With this start the disease spread rapidly in Barton and the neighboring country and reached out west and south to other sections of the State.

Reference to the map will show that there now seem to be two main epidemic centers in the State, one at Barton and one at Burlington. The first case in the Burlington group occurred August 14. There was no discoverable connection between this and the Barton focus. On the same date, August 14, a case was reported at St. Albans in Franklin County. A case was reported August 22 at Middlesex (Washington County) and a case on August 24 at Monkton (Addison County). These dates mark the initial cases in various sections of the State.

Of course, it is too early to draw conclusions from this outbreak, which is not yet over, nor has it been possible to connect the different foci in the State. It will be noted by referring to the map that the two southern counties of the State have entirely escaped—that the next two north of these, viz, Rutland and Windsor, have only scattering cases, excepting the four at Hartford, and that the number of cases increases toward the north.

Another fact that should be borne in mind in this connection is that the apparently favorite center of this disease in past years, in and about Rutland, seems this year to be very nearly exempt. Hardwick, the center of last year's outbreak, has had no case this year.

There are no outbreaks of any severity in either of the adjoining States, as far as can be learned from official sources. A few cases have been reported along the northern part of the west shore of Lake Champlain and a few scattering cases are said to have occurred in New Hampshire.



Poliomyelitis (infantile paralysis) in Vermont, 1914 (to Oct. 9).

All told, there have been reported 212 cases to date, with 32 deaths. These cases include only the frankly paralyzed cases. We have seen in a good many places cases that were undoubtedly of the abortive type. These supposedly abortive cases give histories of initial symptoms identical with those in which paralysis is present. The disease seems to spend itself before paralysis appears. Several of these were seen in Barton and were so classed by reason of the very apparent illness of the patients when they were seen, perhaps a week or two weeks after the acute symptoms. In each instance the anemic languid appearance of the child attracted notice. These cases, however, are not included in the statistics here presented. We have no means of even approximating the number of abortive cases that are occurring in this outbreak. It is at least a plausible theory that these ambulatory cases are prolific carriers and do much to keep up the epidemic.

The present year to date does not show unusually high temperature figures. In fact, June, July, August, and September have been cool months. The precipitation figures as given by the Weather Bureau station at Burlington show much less precipitation than the mean since the 1st of May. The summer of 1913 was dry, but the summer of 1914 has been much more so. Hence these figures correspond quite closely with those observed usually in epidemic years.

Some of the vagaries of this disease are well illustrated by the map. The disease, starting in Barton, seems to have spread westward rather than eastward. The lines of communication by highway and railroad are mainly toward the west. The northeastern county of the State is a sparsely settled mountainous region with comparatively little communication with the Barton neighborhood. The disease skipped from Barton to St. Albans and Burlington, two cities on the western side of the State, with scattering cases in smaller towns, while St. Johnsbury, Lyndon, Morristown, Montpelier, and Hardwick entirely escaped. There were six cases with three deaths in the families of the officers at Fort Ethan Allen, 6 miles from Burlington.

The disease in Burlington followed closely on a sharp outbreak of milk-borne typhoid during the first week of August. The first poliomyelitis cases were early considered as beginning typhoid.

The season at which the disease appeared was rather late, and cases are still appearing at the present writing (Oct. 9).

The disease is reportable under our regulations, is treated in every way like scarlet fever or diphtheria, and is subject to a four weeks' quarantine and terminal disinfection. Contacts are quarantined for two weeks after the last known exposure. In places like Burlington and Barton, where the cases were numerous, all public gatherings in which children participate, including the schools, Sunday schools,



and moving-picture entertainments, are closed. These precautions have appeared to have a very favorable effect in stopping the outbreaks.

Several autopsies have been made and many animal inoculations and insect experiments by the pathologist, Dr. Stone. So far there has developed nothing new or significant.

This board is securing all data obtainable about the cases through field work by its inspector, Dr. H. A. Ladd, and a more complete history of the outbreak will be possible later.

## PLAGUE-ERADICATIVE WORK.

### CALIFORNIA.

The following report of plague-eradication work in California for the week ended October 3, 1914, has been received from Surg. Long, of the United States Public Health Service, in charge of the work:

SAN FRANCISCO, CAL.		RATS TAKEN FROM STEAMERS.	
Number of premises inspected.....	1,147	Steamer <i>Matsonia</i> .....	7 <i>mus rattus</i>
Number of premises destroyed.....	28		
Number of nuisances abated.....	259	PORT COSTA, CAL.	
Number of poisons placed.....	29,900	Rats trapped in warehouses.....	26
Average number of traps set daily.....	1,734	Rats trapped on waterfront.....	10
		Rats trapped in sugar refinery.....	66
		Rats examined.....	72
		Amount of poisoned barley placed on hills (pounds).....	5
		Amount of poisoned bread placed in sugar refinery (pounds).....	4
		Amount of poisoned bread placed in warehouses (pounds).....	2
RATS COLLECTED AND EXAMINED FOR PLAGUE.		RATS IDENTIFIED.	
Collected.....	593	<i>Mus norvegicus</i> .....	34
Found dead.....	3	<i>Mus musculus</i> .....	13
Examined.....	434	<i>Mus alexandrinus</i> .....	25
Found infected.....	None.	<i>Mus rattus</i> .....	41
RATS IDENTIFIED.			
<i>Mus norvegicus</i> .....	291		
<i>Mus musculus</i> .....	85		
<i>Mus alexandrinus</i> .....	137		
<i>Mus rattus</i> .....	80		

### Record of plague infection.

Places in California.	Date of last case of human plague.	Date of last case of rat plague.	Date of last case of squirrel plague.	Total number rodents found infected since May, 1907.
<b>Cities:</b>				
San Francisco.....	Jan. 30, 1908	Oct. 23, 1908	None.....	398 rats.
Oakland.....	Aug. 9, 1911	Dec. 1, 1908	do.....	126 rats.
Berkeley.....	Aug. 28, 1907	None.....	do.....	None.
Los Angeles.....	Aug. 11, 1908	do.....	Aug. 21, 1908	1 squirrel.
<b>Counties:</b>				
Alameda (exclusive of Oakland and Berkeley).	Sept. 24, 1909	Oct. 17, 1909 <sup>1</sup>	Aug. 7, 1914	283 squirrels, 1 wood rat.
Contra Costa.....	May 17, 1914	None.....	Aug. 25, 1914	1,563 squirrels.
Fresno.....	None.....	do.....	Oct. 27, 1911	1 squirrel.
Merced.....	do.....	do.....	July 12, 1911	5 squirrels.
Monterey.....	do.....	do.....	Apr. 10, 1914	6 squirrels.
San Benito.....	June 4, 1913	do.....	July 3, 1914	35 squirrels.
San Joaquin.....	Sept. 18, 1911	do.....	Aug. 26, 1911	18 squirrels.
San Luis Obispo.....	None.....	do.....	Jan. 29, 1910	1 squirrel.
Santa Clara.....	Aug. 31, 1910	do.....	July 23, 1913	25 squirrels.
Santa Cruz.....	None.....	do.....	May 17, 1910	3 squirrels.
Stanislaus.....	do.....	do.....	June 2, 1911	13 squirrels.

<sup>1</sup> Wood rat.

*Squirrels collected and examined for plague.*

County.	Shot.	Examined.	Found infected.
Alameda.....	36	36	None.
San Benito.....	108	108	None.
Contra Costa.....	350	350	None.
Total.....	494	494	None.

*Other animals collected and examined for plague.*

Contra Costa County:

Weasel.....	1
Gopher.....	1

*Ranches inspected and hunted over.*

Alameda County.....	5
Contra Costa County.....	66
San Benito County.....	22
Total.....	93

*Operations on waterfront.*

Vessels inspected for rat guards.....	25
Rainspections made on vessels.....	18
New rat guards procured.....	29
Defective rat guards repaired.....	9
Vessels on which cargo was inspected.....	4

	Condition.	Rat evidence.
<b>Steamer Matsonia from Hilo:</b>		
20 bales hemp.....	O. K.....	None.
150 bunches bananas.....	O. K.....	None.
133 cases pineapples and empty cases.....	O. K.....	None.
<b>Steamers Governor, Admiral Schley, and Congress:</b>		
236 bags raw glue, bran, and flour.....	O. K.....	None.
250 boxes apples.....	O. K.....	None.
300 cases milk, tea, and empty cases.....	O. K.....	None.
20 crates household goods.....	O. K.....	None.
75 bales hides.....	O. K.....	None.
400 sacks flour and wheat.....	O. K.....	None.

Rats trapped on wharves and water front..	23	Poisons placed on water front (pieces).....	16,500
Rats trapped on vessels.....	21	Bait used on water front and vessels, bacon (pounds).....	6
Traps set on wharves and water front....	194	Amount of bread used in poisoning water front (loaves).....	55
Traps set on vessels.....	129	Pounds of poison used on water front.....	27½
Vessels trapped on.....	9		
Vessels searched for dead rats after fumigation.....	2		
Dead rats found on vessels after fumigation.....	7		

Operations are being carried on under Federal supervision on the following-named properties, labor and material being furnished:

Name.	Location.	Acres treated.
<b>Poisoned grain:</b>		
Moraga Co.....	Contra Costa County.....	1,330.58
Hooper Co.....	do.....	794.35
Peoples Water Co.....	do.....	3,260.00
G. A. Cressey ranch.....	Merced County.....	2,320.00
Ramsdell ranch.....	do.....	160.00
Grimes ranch.....	do.....	40.00
Chida ranch.....	do.....	20.00
Birchael ranch.....	do.....	40.00
Holland ranch.....	do.....	40.00
<b>Destructors:</b>		
Southern Pacific Co.....	do.....	14½

1 Miles treated.

#### MERCED COUNTY.

Miles of railroad right of way inspected..... 4½  
Holes treated..... 2,739

The work is being carried on in the following-named counties: Alameda, Contra Costa, San Francisco, San Joaquin, Monterey, Merced, Stanislaus, San Benito, Santa Cruz, and Santa Clara.

#### LOUISIANA—NEW ORLEANS.

The following report of plague-eradication work in New Orleans for the week ended October 10, 1914, has been received from Asst. Surg. Gen. Rucker, of the United States Public Health Service, in charge of the work:

##### OUTGOING QUARANTINE.

Vessels fumigated with sulphur.....	68
Vessels fumigated with carbon monoxide.....	15
Pounds of sulphur burned.....	9,619
Coke consumed in carbon monoxide fumigation (pounds.).....	32,000
Clean bills of health issued.....	26
Foul bills of health issued.....	6

##### OVERLAND FREIGHT INSPECTION.

Cars inspected and passed.....	1,226
Cars rat proofed.....	2,206
Cars condemned.....	18
Total cars inspected.....	3,450

##### DESTINATION AND NUMBER OF RAILROAD CARS INSPECTED WEEK ENDING OCT. 10.

Alabama.....	104
Arizona.....	1
Arkansas.....	26
California.....	44
Carolina, North.....	7
Carolina, South.....	5
Colorado.....	1
Connecticut.....	1
Dakota, North.....	3
Dakota, South.....	2
Delaware.....	3
Florida.....	58
Georgia.....	42

##### DESTINATION AND NUMBER OF RAILROAD CARS INSPECTED WEEK ENDING OCT. 10—continued.

Illinois.....	414
Indiana.....	39
Iowa.....	59
Kansas.....	17
Kentucky.....	30
Louisiana.....	1,259
Maryland.....	3
Massachusetts.....	13
Michigan.....	28
Minnesota.....	4
Mississippi.....	510
Maine.....	2
Missouri.....	160
Nebraska.....	3
New York.....	10
Ohio.....	78
Oklahoma.....	6
Oregon.....	2
Pennsylvania.....	10
Rhode Island.....	2
Tennessee.....	63
Texas.....	217
Virginia.....	2
West Virginia.....	3
Washington.....	4
Wisconsin.....	13
District of Columbia.....	2
Canada.....	4

FIELD OPERATIONS.

Rats trapped.....	6,404
Premises fumigated.....	30
Premises disinfected.....	669
Premises inspected.....	8,948
Poisons placed.....	139,004
Notices served.....	3,482
Buildings rat proofed during week ended Oct. 10.....	124
Buildings rat proofed to date.....	1,550
Abatements, week ended Oct. 10.....	1,442
Abatements to date.....	10,192
Dead inspected.....	148

LABORATORY OPERATIONS.

Rats examined.....	5,069
Mus norvegicus.....	3,516
Mus alexandrinus.....	70
Mus rattus.....	37
Mus musculi.....	2,144
Unclassified putrid.....	427
Total rodents received at laboratory..	6,194
Number of suspicious rats.....	18
Plague rats confirmed.....	4

Plague rats.

Case No.	Address.	Captured.	Diagnosis confirmed.	Treatment of premises.
178	916 Washington Avenue.....	Sept. 27	Oct. 5	Summary destruction of rat harborage. Rat proofing initiated. Intensive trapping and poisoning.
179 180	In sewer St. Claude and St. Ann..... 200 South Rampart Street.....	do Oct. 5	do Oct. 6	Intensive trapping and poisoning. Fumigation. Summary destruction of rat harborage. Rat proofing initiated. Intensive trapping and poisoning.
181	1013 Magazine Street.....	Sept. 26	do	See case 163.

Human plague cases.

Suspicious human cases examined.....	1
Number of human plague cases.....	1
Total number of human cases to date.....	30

Case No.	Name of place of infection.	Date suspicious.	Diagnosis confirmed.	Treatment of premises.
30	1120 Tulane Avenue.....	Sept. 30	Oct. 4	Fumigated. Rat proofing completed.

Total rodents captured to Oct. 10.....	112,716
Total rodents examined to Oct. 10.....	92,104
Rodent cases to Oct. 10, by species:	
Mus rattus.....	6
Mus alexandrinus.....	3
Mus norvegicus.....	172
Total rodents cases up to Oct. 10.....	181

## WASHINGTON—SEATTLE.

The following report of plague-eradivative work in Seattle for the week ended September 26, 1914, has been received from Surg. Lloyd, of the United States Public Health Service, in charge of the work:

RAT PROOFING.		WATER FRONT.	
New buildings inspected.....	70	Vessels inspected and histories recorded....	7
Basements concreted, new buildings (15).....sq. ft..	43,314	Vessels fumigated.....	1
Floors concreted, new buildings (21).sq. ft..	68,972	Sulphur used.....pounds..	1,800
Yards, etc., concreted, new buildings (4).....sq. ft..	2,840	New rat guards installed.....	18
Sidewalks concreted (3).....sq. ft..	304	Fumigation certificates issued.....	1
		Port sanitary statements issued.....	45
		Bills of health for Republic of Panama....	2
		LABORATORY AND RODENT OPERATIONS.	
Total concrete laid, new build- ings.....sq. ft..	115,430	Dead rodenis received.....	10
		Rodents trapped and killed.....	369
		Total.....	379
New buildings elevated.....	8	Rodents examined for plague infection....	300
Old buildings inspected.....	1	Rodents proven plague infected.....	None.
Premises rat proofed.....	40	Poison distributed.....pounds..	20
Floors concreted, old buildings.....	1	CLASSIFICATION OF RODENTS.	
Openings screened.....	32	Mus rattus.....	8
Rat holes cemented.....	28	Mus alexandrinus.....	64
Doors rat proofed.....	6	Mus norvegicus.....	247
Wire screening used.....sq. ft..	850	Mus musculus.....	60
Buildings razed.....	3		

The usual day and night patrol was maintained to enforce fending and rat guarding.

## HAWAII.

The following reports of plague-eradivative work in Hawaii have been received from Surg. Trotter, of the United States Public Health Service:

## Honolulu.

## WEEK ENDED SEPTEMBER 26, 1914.

Total rats and mongoose taken.....	466	Classification of rats trapped:	
Rats trapped.....	441	Mus alexandrinus.....	219
Mongoose trapped.....	3	Mus musculus.....	123
Rats found dead (Mus norvegicus).....	1	Mus norvegicus.....	81
Rats killed by sulphur dioxide.....	21	Mus rattus.....	18
Examined microscopically.....	392	Classification of rats killed by sulphur dioxide:	
Under examination.....	0	Mus alexandrinus.....	21
Showing plague infection.....	0		

## WEEK ENDED OCTOBER 3, 1914.

Total rats and mongoose taken.....	398	Average number of traps set daily.....	1,085
Rats trapped.....	383	Cost per rat destroyed.....cents..	21
Mongoose trapped.....	14	Last case rat plague, Aiea, 9 miles from Honolulu, Apr. 12, 1910.	
Rats found dead (Mus alexandrinus)....	1	Last case human plague, Honolulu, July 12, 1910.	
Examined microscopically.....	340	Last case rat plague Kalopa stable, Paauhau, Ha- wail, Aug. 29, 1914.	
Under examination.....	0	Last case human plague Paauhau Landing, Hawaii, Aug. 17, 1914.	
Showing plague infection.....	0		
Classification of rats trapped:			
Mus alexandrinus.....	186		
Mus musculus.....	122		
Mus norvegicus.....	60		
Mus rattus.....	15		

Hilo.

WEEK ENDED SEPTEMBER 19, 1914.

Rats and mongoose taken.....	2,111	Rats and mongoose plague infected.....	0
Rats trapped.....	2,063	Classification of rats trapped and found dead:	
Rats found dead.....	3	Mus norvegicus.....	504
Mongoose taken.....	45	Mus alexandrinus.....	324
Rats and mongoose examined macroscopically	2,111	Mus rattus.....	577
Rats and mongoose examined microscopically	0	Mus musculus.....	661
Rats and mongoose examined bacteriologically.....	0		

WEEK ENDED SEPTEMBER 26, 1914.

Rats and mongoose taken.....	1,967	Rats and mongoose plague infected.....	0
Rats trapped.....	1,915	Classification of rats trapped and found dead:	
Rats found dead.....	1	Mus norvegicus.....	481
Mongoose taken.....	51	Mus alexandrinus.....	275
Rats and mongoose examined macroscopically.....	1,967	Mus rattus.....	559
Rats and mongoose examined microscopically.....	0	Mus musculus.....	601
Rats and mongoose examined bacteriologically.....	0	Last case of rat plague, Paauhau Sugar Co., Aug. 29, 1914.	
		Last case of human plague, Paauhau Sugar Co., Aug. 16, 1914.	

PORTO RICO.

The following is a summary of reports of plague-eradication work in Porto Rico for the two weeks ended October 3, 1914:

*Rodents examined for infection.*

	Rats.	Mice.
San Juan.....	182	105
Puerto de Tierra.....	45	16
Santurce.....	428	41
Total.....	655	162

# 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.*

## IN CERTAIN STATES AND CITIES.

### RECIPROCAL NOTIFICATION.

#### Minnesota.

*Cases of communicable diseases referred during September, 1914, to other State or Provincial health departments by the Division of Preventable Diseases of the Minnesota State Board of Health.*

Disease and locality of notification.	Referred to health authority of—	Why referred.
<b>Tuberculosis:</b> Pokegama, Pine County . . . . .	Chicago, Cook County, Ill. . . . .	Returned to Chicago from Pokegama Sanatorium.
Do . . . . .	Superior, Douglas County Wis.	Returned to Superior from Pokegama Sanatorium.
<b>Typhoid fever:</b> Dassel, Meeker County . . . . .	Saskatchewan, Canada . . . . .	Taken ill while thrashing at Clay Bank, Sask.
Morgan, Redwood County . . . . .	Morrison, Whiteside County, Ill.	Probably infected at Morrison, Ill.
Minneapolis, Hennepin County . . . . .	Marquette, Marquette County, Mich.	Carpenter at Marquette during three weeks previous to earliest symptoms.
Do . . . . .	Versailles, Morgan County, Mo.	Resident in Versailles three weeks previous to earliest symptoms.
Mankato, Blue Earth County . . . . .	Carterville, Jasper County, Mo.	Fruit dealer at Carterville during three weeks previous to earliest symptoms.
Minneapolis, Hennepin County . . . . .	Malta, Valley County, Mont. . . . .	Farming near Malta during three weeks previous to earliest symptoms.
Do . . . . .	Marmon, Williams County, N. Dak.	On farm at Marmon, during three weeks previous to earliest symptoms.
Do . . . . .	Jamestown, Stutsman County, N. Dak.	Taken ill nine days after leaving Jamestown.
Do . . . . .	Hankinson, Richland County, N. Dak.	A resident of Hankinson during three weeks previous to earliest symptoms.
Belle Plaine Borough, Scott County . . . . .	Watertown, Codington County, S. Dak.	Buying cattle at Watertown during three weeks previous to earliest symptoms.
Austin Township, Mower County . . . . .	Redfield, Spink County, S. Dak.	Resident of Redfield during three weeks previous to earliest symptoms.
Minneapolis, Hennepin County . . . . .	Eau Claire, Eau Claire County, Wis.	Photographer in Eau Claire during three weeks previous to earliest symptoms.
Duluth, St. Louis County . . . . .	Superior, Douglas County, Wis.	Resident of Superior during three weeks previous to earliest symptoms.
Elmore, Faribault County . . . . .	Cable, Bayfield County, Wis. . . . .	Contact with aunt ill with typhoid fever at Cable, Wis.

**CEREBROSPINAL MENINGITIS.**

**State Reports for September, 1914.**

Places.	New cases reported.	Places.	New cases reported.
Maryland, exclusive of Baltimore City:		South Carolina:	
Alegany County—	•	Marion County.....	1
Cumberland R. F. D.....	1	Wisconsin:	
Baltimore County—		Brown County.....	1
St. Helena.....	1	Crawford County.....	1
Calvert County—		Marinette County.....	1
Huntingtown.....	1	Milwaukee County.....	3
Stoakly.....	1	Rock County.....	1
Washington County—		Total.....	7
Downsville.....	1		
Mount Zion.....	1		
Total.....	6		

**City Reports for Week Ended Oct. 3, 1914.**

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Butte, Mont.....		1	Kansas City, Kans.....	1	
Chicago, Ill.....	1		New York, N. Y.....	1	1
Danville, Ill.....		1	Philadelphia, Pa.....	1	
Detroit, Mich.....		1	St. Louis, Mo.....	1	1
Jersey City, N. J.....		1	Schenectady, N. Y.....		1

**DIPHThERIA.**

See Diphtheria, measles, scarlet fever, and tuberculosis, page 2843.

**ERYSIPELAS.**

**City Reports for Week Ended Oct. 3, 1914.**

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Boston, Mass.....		2	New Castle, Pa.....	1	
Buffalo, N. Y.....	1		Passaic, N. J.....	1	
Chicago, Ill.....	5		Philadelphia, Pa.....	2	1
Cleveland, Ohio.....	3		Rochester, N. Y.....	3	
Erie, Pa.....	1		Sacramento, Cal.....	1	
Kansas City, Mo.....	1		St. Louis, Mo.....	1	
Los Angeles, Cal.....		1	San Francisco, Cal.....	2	
Newark, N. J.....		1	York, Pa.....	1	

**LEPROSY.**

**California—Berkeley—Correction.**

A case of leprosy was erroneously reported from Berkeley, Cal., for the week ended September 5, 1914.<sup>1</sup>

**South Carolina—Florence.**

The State Board of Health of South Carolina reports that during the month of September, 1914, a case of leprosy was notified at Florence, S. C.

**MEASLES.**

See Diphtheria, measles, scarlet fever, and tuberculosis, page 2843.

<sup>1</sup>Public Health Reports, No. 39, Sept. 25, 1914, p. 2331.



## PELLAGRA.

## City Reports for Week Ended Oct. 3, 1914.

During the week ended October 3, 1914, pellagra was notified by cities as follows: Ann Arbor, Mich., 1 case; Charleston, S. C., 2 deaths; Nashville, Tenn., 1 death; New Orleans, La., 3 cases; New York, N. Y., 1 death; Wilmington, N. C., 1 death.

## PNEUMONIA.

## City Reports for Week Ended Oct. 3, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Binghamton, N. Y.....	2	2	Reading, Pa.....	1	1
Chicago, Ill.....	63	35	Rochester, N. Y.....	1	4
Cleveland, Ohio.....	19	9	Sacramento, Cal.....	1	1
Los Angeles, Cal.....	3	-----	San Francisco, Cal.....	4	4
Manchester, N. H.....	1	1	Schenectady, N. Y.....	1	1
Philadelphia, Pa.....	9	28	South Bethlehem, Pa.....	2	1

## POLIOMYELITIS (INFANTILE PARALYSIS).

## State Reports for September, 1914.

Places.	New cases reported.	Places.	New cases reported.
Maryland, exclusive of Baltimore City: Prince Georges County— Oxen Hill.....	1	Virginia—Continued. Caroline County.....	1
Minnesota: Benton County— Sauk Rapids.....	1	Carroll County.....	1
Roseau County— Warroad.....	1	Essex County.....	1
Total.....	2	Gloucester County.....	2
New Jersey: Camden County.....	1	Henry County.....	1
Essex County.....	1	Lancaster County.....	1
Mercer County.....	1	Princess Anne County.....	1
Total.....	3	Prince Edward County.....	1
Virginia: Albemarle County.....	3	Rockingham County.....	1
		Southampton County.....	1
		Total.....	14
		Wisconsin: Racine County.....	2
		Rock County.....	1
		Total.....	3

## City Reports for Week Ended Oct. 3, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Boston, Mass.....	1	-----	New Bedford, Mass.....	1	-----
Chicago, Ill.....	5	1	New Castle, Pa.....	1	1
Columbus, Ohio.....	1	1	New York, N. Y.....	6	2
Lowell, Mass.....	1	-----	Philadelphia, Pa.....	3	1
Manchester, N. H.....	1	1			

## SCARLET FEVER.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 2843.

**SMALLPOX.**

**State Reports for September, 1914.**

Places.	New cases reported.	Deaths.	Vaccination history of cases.			
			Vaccinated within 7 years preceding attack.	Last vaccinated more than 7 years preceding attack.	Never successfully vaccinated.	History not obtained or uncertain.
<b>Minnesota:</b>						
Blue Earth County—						
Mankato.....	2				2	
Brown County—						
Sleepy Eye.....	3			1		2
Carlton County—						
Cloquet.....	3					3
Clay County—						
Tansem Township.....	1				1	
Hennepin County—						
Minneapolis.....	2				2	
Kanabec County—						
Grass Lake Township.....	1					1
Martin County—						
Fraser Township.....	1					1
Murray County—						
Fulda.....	4				1	3
Iona.....	1				1	
Otter Tail County—						
Scambler Township.....	1				1	
St. Louis County—						
Duluth.....	2				2	
Stearns County—						
St. Cloud.....	3					3
Swift County—						
Appleton.....	3				3	
<b>Total.....</b>	<b>27</b>			<b>1</b>	<b>13</b>	<b>13</b>
<b>Wisconsin:</b>						
Bayfield County.....	1					1
Columbia County.....	1					1
Douglas County.....	5					5
Milwaukee County.....	14					14
Ozaukee County.....	28		2			26
Polk County.....	1			1		
Rock County.....	2			1		1
St. Croix County.....	2				2	
Sawyer County.....	1			1		
Sheboygan County.....	2			1	1	
Washington County.....	8				8	
Waupaca County.....	3				3	
<b>Total.....</b>	<b>68</b>		<b>2</b>	<b>4</b>	<b>14</b>	<b>48</b>

**Miscellaneous State Reports.**

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Connecticut (Sept. 1-30) <sup>1</sup> .....			<b>Virginia—Continued.</b>		
South Carolina (Sept. 1-30):			<b>Counties—</b>		
Counties—			Henry.....	1	
Charleston.....	2		Lunenburg.....	5	
Orangeburg.....	2		Montgomery.....	2	
Spartanburg.....	1		Nelson.....	1	
<b>Total.....</b>	<b>5</b>		Norfolk.....	1	
Virginia (Sept. 1-30):			Patrick.....	1	
Counties—			Princess Anne.....	12	
Dickenson.....	14		Southampton.....	10	
Floyd.....	4		Wythe.....	13	1
Grayson.....	1		York.....	1	
			<b>Total.....</b>	<b>66</b>	<b>1</b>

<sup>1</sup> No case.

## SMALLPOX—Continued.

## City Reports for Week Ended Oct. 3, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Butte, Mont. ....	1	.....	Racine, Wis. ....	3	.....
Detroit, Mich. ....	2	.....	Springfield, Ill. ....	1	.....
Duluth, Minn. ....	1	.....	Springfield, Ohio. ....	1	.....
Lynchburg, Va. ....	1	.....	Superior, Wis. ....	1	.....
Milwaukee, Wis. ....	9	.....	Toledo, Ohio. ....	1	.....
Nashville, Tenn. ....	1	.....	Wilmington, N. C. ....	1	.....

## TETANUS.

## City Reports for Week Ended Oct. 3, 1914.

During the week ended October 3, 1914, tetanus was notified by cities as follows: Baltimore, Md., 1 death; Charleston, S. C., 1 death; St. Louis, Mo., 2 cases with 2 deaths; Waltham, Mass., 1 case.

## TUBERCULOSIS.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 2843.

## TYPHOID FEVER.

## State Reports for September, 1914.

Places.	New cases reported.	Places.	New cases reported.
Maryland, exclusive of Baltimore City:		Maryland, exclusive of Baltimore City—Continued.	
Allegany County—		Baltimore County—Continued.	
Western Maryland Hospital.....	2	Orangeville.....	2
Frostburg.....	1	Lauraville.....	1
Cumberland.....	15	Freeland.....	1
Allegany Hospital.....	2	Parkton.....	1
Pinto.....	1	White Hall.....	1
Westernport.....	4	Towson.....	1
Linderville.....	1	Rossville.....	1
Cumberland R. F. D.....	1	Hyde.....	1
Mount Savage.....	1	Baldwin.....	1
Mapleside.....	2	Sparrows Point.....	2
Lonaconing.....	1	Highlandtown.....	1
Anne Arundel County—		Cecil County—	
Maryland House of Correction.....	2	Providence.....	1
National Junior republic.....	1	North East.....	3
Curtis Bay.....	1	North East R. F. D.....	1
Annapolis.....	1	Iron Hill.....	1
Brooklyn.....	1	Elkton.....	2
Waterbury.....	1	Elkton Hospital.....	1
Solleys.....	2	Caroline County—	
Baltimore County—		Preston.....	5
Chase.....	1	Denton.....	2
Middle River.....	1	Federalsburg.....	6
Glen Arm.....	2	Federalsburg R. F. D.....	2
Mount Winans.....	2	Greensboro.....	19
Glen Arm R. F. D.....	1	Templeville.....	1
Fullerton R. F. D.....	1	Goldsboro.....	4
Bengies.....	1	Carroll County—	
Roslyn.....	1	Marriottsville.....	3
Arlington.....	2	Sykesville R. F. D.....	2
Timonium.....	1	Hoods Mill.....	3
Howard Park.....	1	Middleburg.....	1
Catonsville.....	3	Uniontown.....	1
White Marsh.....	1	Union Bridge.....	2
Parkton R. F. D.....	2	Springfield Hospital.....	1
Alberton R. F. D.....	1	Charles County—	
Fullerton.....	3	Indian Head.....	9
Raspeburg.....	2	Port Tobacco.....	1
Woodlawn.....	1	Pomfret.....	3
St. Agnes Hospital.....	4		

TYPHOID FEVER—Continued.

State Reports for September, 1914—Continued.

Places.	New cases reported.	Places.	New cases reported.
<b>Maryland, exclusive of Baltimore City—Continued.</b>		<b>Maryland, exclusive of Baltimore City—Continued.</b>	
<b>Charles County—Continued.</b>		<b>Somerset County—Continued.</b>	
Waldorf R. F. D. ....	1	Westover .....	1
Mason Springs .....	1	Champ .....	1
Piscataway .....	3	Oriole .....	1
Marbury .....	1	Habnab .....	1
Rison .....	1	<b>St. Marys County—</b>	
Benedict .....	1	Helen .....	1
Waldorf .....	1	<b>Talbot County—</b>	
<b>Calvert County—</b>		Tighman .....	2
Broomes Island .....	6	Easton (Emergency Hospital)...	3
Huntingtown .....	1	Trappe .....	1
Prince Frederick .....	2	Easton .....	3
Owings .....	1	Easton R. F. D. ....	1
Sunderland .....	1	<b>Washington County—</b>	
Chaney .....	1	Spielman .....	2
<b>Dorchester County—</b>		Hancock .....	2
Cambridge R. F. D. ....	1	Hagerstown .....	10
Secretary .....	1	Big Pool .....	1
Fishing Creek .....	1	Smithsburg .....	2
Hurlock .....	1	Williamsport .....	2
Cornersville .....	1	Brownsville .....	1
Brookview .....	1	Clearspring .....	1
Oak Grove R. F. D. ....	1	<b>Wicomico County—</b>	
Church Creek .....	2	Iruitland .....	2
Cambridge .....	3	Peninsula General Hospital .....	2
Reids Grove .....	2	Salisbury .....	4
Airoy R. F. D. ....	1	<b>Worcester County—</b>	
<b>Frederick County—</b>		Snow Hill R. F. D. ....	3
Emmitsburg .....	1	Snow Hill .....	3
Frederick City Hospital .....	1	Pocomoke City .....	3
Petersville .....	1	Ocean City .....	3
Brunswick .....	5	Berlin R. F. D. ....	1
Knoxville .....	1	Showell R. F. D. ....	1
Frederick .....	16	<b>Total.....</b>	<b>340</b>
Rocky Ridge .....	1		
Thurmont .....	2	<b>Minnesota:</b>	
Middletown .....	2	<b>Becker County—</b>	
Peagaville .....	2	Detroit .....	2
Burkittsville .....	2	Lake Eunice Township .....	1
New Market .....	1	Lake Park .....	1
<b>Garrett County—</b>		<b>Beltrami County—</b>	
Westernport R. F. D. ....	1	Baudette .....	1
Accident .....	3	Bemidji .....	1
Oakland .....	1	Spooner .....	1
<b>Harford County—</b>		<b>Blue Earth County—</b>	
Sharon .....	1	Mankato .....	3
Havre de Grace .....	5	<b>Carlton County—</b>	
Churchville .....	1	Wrenshall Township .....	1
<b>Howard County—</b>		<b>Carver County—</b>	
Ellicott City .....	3	Watertown Township .....	1
Marriottsville R. F. D. ....	2	<b>Clay County—</b>	
<b>Kent County—</b>		Barnesville Township .....	1
Golts R. F. D. ....	1	<b>Cottonwood County—</b>	
<b>Montgomery County—</b>		Storden Township .....	3
Clarksburg .....	1	Windom .....	3
Ashton .....	1	<b>Crow Wing County—</b>	
Bethesda .....	1	Brainerd .....	4
<b>Prince Georges County—</b>		Crosby .....	1
Brentwood .....	4	Riverton .....	2
Seat Pleasant .....	2	<b>Dakota County—</b>	
Berwyn .....	1	Lakeville .....	1
Croome .....	1	South St. Paul .....	2
Westwood .....	1	<b>Dodge County—</b>	
Mount Ranier .....	4	Westfield Township .....	1
Laurel .....	2	<b>Douglas County—</b>	
Fort Foots .....	1	Carlos Township .....	1
<b>Queen Annes County—</b>		Solem Township .....	1
Centreville .....	3	<b>Faribault County—</b>	
Chester .....	1	Elmore .....	1
Fords Store .....	3	<b>Fillmore County—</b>	
Roe .....	2	Fillmore Township .....	1
Stevensville .....	1	Rushford .....	1
<b>Somerset County—</b>		<b>Freeborn County—</b>	
Bedsworth .....	2	London Township .....	1
Eden .....	3	Albert Lea .....	1
Loretto .....	1		

## TYPHOID FEVER—Continued.

## State Reports for September, 1914—Continued.

Places.	New cases reported.	Places.	New cases reported.
Minnesota—Continued.		Minnesota—Continued.	
Hennepin County—		Washington County—	
Brooklyn Center.....	1	Stillwater.....	4
Maple Grove Township.....	1	Watsonwan County—	
Minneapolis.....	53	Madella.....	1
Itasca County—		Nelson Township.....	1
Kewatkin.....	1	St. James.....	2
Jackson County—		Wright County—	
Jackson.....	1	Howard Lake.....	1
Lac Qui Parle County—		Waseca County—	
Augusta.....	1	Smiths Mills.....	1
Riverside Township.....	1		
Lake County—		Total.....	230
Two Harbors.....	2		
Lyon County—		New Jersey:	
Custer Township.....	1	Atlantic County.....	23
McLeod County—		Bergen County.....	15
Hutchinson.....	1	Burlington County.....	36
Marshall County—		Camden County.....	14
East Valley Township.....	1	Cape May County.....	6
Holt Township.....	2	Cumt-erland County.....	18
Mille Lacs County—		Essex County.....	41
Borgholm Township.....	1	Gloucester County.....	5
Mower County—		Hudson County.....	16
Austin Township.....	1	Hunterdon County.....	6
Nicollet County—		Mercer County.....	10
Lafayette.....	1	Middlesex County.....	14
St. Peter.....	1	Monmouth County.....	25
Nobles County—		Morris County.....	2
Adrian.....	1	Ocean County.....	2
Olmsted County—		Passaic County.....	9
Rochester.....	1	Salem County.....	9
Otter Tail County—		Somerset County.....	2
Pelican Rapids.....	1	Sussex County.....	6
Pennington County—		Union County.....	8
Thief River Falls.....	2	Warren County.....	6
Polk County—		Total.....	273
Crookston.....	2		
Fanny Township.....	1	South Carolina:	
Pope County—		Abbeville County.....	14
Starbuck.....	1	Aiken County.....	6
Ramsey County—		Bamberg County.....	3
St. Paul.....	34	Beaufort County.....	1
Red Lake County—		Berkeley County.....	1
Garnes Township.....	1	Charleston County.....	31
Redwood County—		Cherokee County.....	3
Three Lakes Township.....	1	Darlington County.....	10
Renville County—		Fairfield County.....	1
Sacred Heart.....	1	Florence County.....	4
Rice County—		Greenville County.....	12
Faribault.....	27	Kershaw County.....	1
Morrison.....	1	Laurens County.....	7
St. Louis County—		Lee County.....	1
Biwabik.....	1	Marion County.....	3
Buhl.....	2	Oconee County.....	3
Duluth.....	12	Oranget urg County.....	3
Hibbing.....	1	Pickens County.....	10
Pitts Location.....	1	Richland County.....	12
Virginia.....	2	Spartanburg County.....	9
Ely.....	4	Sumter County.....	9
Scott County—		Union County.....	4
Belle Plaine.....	2	Williamsburg County.....	13
Sherburn County—		York County.....	6
Big Lake Township.....	1	Total.....	167
Steele County—			
Owatonna.....	4	Virginia:	
Stevens County—		Albemarle County.....	5
Morris.....	1	Alexandria County.....	1
Swift County—		Alleghany County.....	7
Appleton.....	1	Amelia County.....	8
Benson.....	4	Amherst County.....	4
Kerkhoven.....	1	Appomattox County.....	2
Todd County—		Augusta County.....	9
Staples.....	1	Bedford County.....	5
Traverse County—			
Wheaton.....	1		

TYPHOID FEVER—Continued.

State Reports for September, 1914—Continued.

Places.	New cases reported.	Places.	New cases reported.
Virginia—Continued.		Virginia—Continued.	
Botetourt County.....	6	Powhatan County.....	1
Brunswick County.....	4	Princess Anne County.....	2
Campbell County.....	7	Prince Edward County.....	10
Caroline County.....	10	Prince William County.....	16
Carroll County.....	3	Pulaski County.....	5
Charlotte County.....	3	Richmond County.....	1
Chesterfield County.....	5	Roanoke County.....	5
Clarke County.....	4	Rockingham County.....	10
Craig County.....	2	Russell County.....	11
Culpeper County.....	12	Scott County.....	9
Dinwiddie County.....	12	Shenandoah County.....	22
Elizabeth City County.....	3	Smyth County.....	6
Essex County.....	10	Southampton County.....	3
Fairfax County.....	6	Spotsylvania County.....	2
Fauquier County.....	11	Stafford County.....	3
Floyd County.....	9	Surry County.....	4
Franklin County.....	3	Sussex County.....	1
Frederick County.....	6	Tazewell County.....	24
Giles County.....	6	Warren County.....	5
Gloucester County.....	4	Washington County.....	18
Goochland County.....	2		
Greene County.....	3	Total.....	527
Greensville County.....	17		
Halifax County.....	3	Wisconsin:	
Hanover County.....	5	Ashland County.....	1
Henrico County.....	15	Barron County.....	1
Henry County.....	19	Bayfield County.....	1
Highland County.....	2	Calumet County.....	2
Isle of Wight County.....	10	Douglas County.....	2
James City County.....	3	Eau Claire County.....	1
King and Queen County.....	5	Fond du Lac County.....	4
King George County.....	1	Grant County.....	3
King William County.....	3	Jackson County.....	1
Lancaster County.....	5	La Crosse County.....	5
Lee County.....	16	Marathon County.....	1
Loudoun County.....	9	Milwaukee County.....	7
Lunenburg County.....	3	Monroe County.....	1
Madison County.....	4	Oconto County.....	4
Mathews County.....	1	Oneida County.....	2
Mecklenburg County.....	9	Price County.....	6
Middlesex County.....	5	Racine County.....	1
Montgomery County.....	13	Rock County.....	2
Nansemond County.....	7	Sauk County.....	4
Nelson County.....	7	Shawano County.....	2
New Kent County.....	6	Sheboygan County.....	5
Norfolk County.....	8	Taylor County.....	1
Northampton County.....	6	Vernon County.....	1
Nottoway County.....	3	Winnebago County.....	6
Orange County.....	2	Wood County.....	3
Page County.....	2		
Pittsylvania County.....	8	Total.....	67

City Reports for Week Ended Oct. 3, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Ann Arbor, Mich.....	1		Chicago, Ill.....	27	5
Atlantic City, N. J.....	1		Cincinnati, Ohio.....	7	1
Aurora, Ill.....	2		Cleveland, Ohio.....	7	2
Baltimore, Md.....	31	6	Coffeyville, Kans.....	1	
Beaver Falls, Pa.....	2		Columbus, Ohio.....		1
Binghamton, N. Y.....	2		Cumberland, Md.....	8	
Boston, Mass.....	15	2	Danville, Ill.....	2	
Braddock, Pa.....	2		Detroit, Mich.....	20	1
Buffalo, N. Y.....	14		Duluth, Minn.....	4	
Butte, Mont.....	4		East Orange, N. J.....	2	
Cairo, Ill.....	1		Erie, Pa.....	2	
Cambridge, Mass.....	3		Evansville, Ind.....	2	1
Camden, N. J.....	1		Everett, Mass.....	1	
Charleston, S. C.....	4	1	Fall River, Mass.....	2	

## TYPHOID FEVER—Continued.

## City Reports for Week Ended Oct. 3, 1914—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Galveston, Tex.	1	.....	Norristown, Pa.	4	.....
Grand Rapids, Mich.	3	1	Orange, N. J.	4	1
Harrisburg, Pa.	1	.....	Pawtucket, R. I.	1	.....
Haverhill, Mass.	2	.....	Philadelphia, Pa.	22	5
Jersey City, N. J.	1	.....	Plainfield, N. J.	2	.....
Johnstown, Pa.	14	.....	Portland, Oreg.	1	2
Kansas City, Kans.	2	.....	Providence, R. I.	10	.....
Kansas City, Mo.	1	.....	Reading, Pa.	9	2
Kokomo, Ind.	5	.....	Richmond, Va.	7	1
La Crosse, Wis.	2	.....	Roanoke, Va.	3	.....
Lexington, Ky.	1	.....	Rochester, N. Y.	.....	2
Little Rock, Ark.	1	.....	Rutland, Vt.	3	.....
Los Angeles, Cal.	6	1	Sacramento, Cal.	2	.....
Lowell, Mass.	2	.....	St. Joseph, Mo.	.....	1
Lynchburg, Va.	10	1	St. Louis, Mo.	24	3
Lynn, Mass.	5	.....	San Francisco, Cal.	.....	1
Marinette, Wis.	1	.....	Saratoga Springs, N. Y.	1	.....
Milwaukee, Wis.	3	2	Schenectady, N. Y.	3	.....
Mobile, Ala.	1	.....	Seattle, Wash.	2	.....
Moline, Ill.	7	1	Springfield, Ill.	6	.....
Muncie, Ind.	1	.....	Springfield, Mass.	3	.....
Nashville, Tenn.	13	2	Superior, Wis.	.....	1
Newark, N. J.	1	.....	Toledo, Ohio.	5	2
New Bedford, Mass.	4	.....	Waltham, Mass.	1	.....
New Castle, Pa.	5	.....	Washington, D. C.	15	.....
New London, Conn.	1	1	Wilkes-Barre, Pa.	5	1
New Orleans, La.	7	.....	Wilmington, N. C.	1	1
Newton, Mass.	2	.....	Worcester, Mass.	6	.....
New York, N. Y.	107	12	York, Pa.	3	.....
Niagara Falls, N. Y.	2	.....	Zanesville, Ohio.	1	1
Norfolk, Va.	4	2			

## TYPHUS FEVER.

## New York—New York City.

During the week ended October 3, 1914, a case of typhus fever was notified at New York, N. Y.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

## State Reports for September, 1914.

States.	Cases reported.		
	Diphtheria.	Measles.	Scarlet fever.
Maryland (exclusive of Baltimore city)	38	15	55
Minnesota	298	6	157
New Jersey	512	.....	155
South Carolina	297	2	23
Wisconsin	154	33	94

DIPHThERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

City Reports for Week Ended Oct. 3, 1914.

Cities.	Population as of July 1, 1914. (Estimated by United States Census Bureau.)	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
<b>Over 500,000 inhabitants:</b>										
Baltimore, Md.	579,590	171	30	1	2	3	34	16		
Boston, Mass.	733,902	196	48	5	13	35	37	17		
Chicago, Ill.	2,393,325	565	126	16	14	28	189	56		
Cleveland, Ohio.	639,431	125	55	2	4	5	21	19		
Detroit, Mich.	537,650	138	41	2	2	8	7	9		
New York, N. Y.	5,333,537	1,132	230	14	48	2	405	142		
Philadelphia, Pa.	1,657,810	433	44	6	1	15	82	59		
St. Louis, Mo.	734,667	203	50	2	1	16	32	14		
<b>From 300,000 to 500,000 inhabitants:</b>										
Buffalo, N. Y.	454,112	97	9	2	4	1	37	9		
Cincinnati, Ohio.	402,175	96	19	1	1	14	31	20		
Los Angeles, Cal.	438,914	105	9	3	5	5	55	21		
Milwaukee, Wis.	417,054	91	25	4	2	13	19	9		
Newark, N. J.	389,106	91	20	2	2	7	41	11		
New Orleans, La.	361,221	112	63	3	121	5	32	14		
San Francisco, Cal.	448,502	127	17	3	1	1	33	14		
Washington, D. C.	353,378	90	7	7	1	1	18	11		
<b>From 200,000 to 300,000 inhabitants:</b>										
Columbus, Ohio.	204,567	50	23	1	3	3	13	4		
Jersey City, N. J.	293,921	80	42	3	7	2	28	6		
Kansas City, Mo.	281,911	71	16	1	2	1	1	7		
Portland, Oreg.	260,601	37	1	1	1	3	2	2		
Providence, R. I.	245,090	44	14	1	2	11	7	5		
Rochester, N. Y.	241,518	62	1	2	2	2	7	4		
Seattle, Wash.	313,029	45	14	1	4	1	6	2		
<b>From 100,000 to 200,000 inhabitants:</b>										
Cambridge, Mass.	110,357	24	12	1	6	2	6	3		
Camden, N. J.	102,465	3	3	4	4	5	4			
Fall River, Mass.	125,443	11	9	1	4	3	4			
Grand Rapids, Mich.	123,227	31	9	1	1	3	4			
Lowell, Mass.	111,004	28	4	1	2	4	3			
Nashville, Tenn.	114,899	35	7	6	5	3	3			
New Bedford, Mass.	111,250	31	7	6	9	3	4			
Reading, Pa.	103,361	28	1	1	9	1	9			
Richmond, Va.	134,917	44	9	1	5	1	7			
Springfield, Mass.	100,375	31	2	1	2	2	2			
Toledo, Ohio.	184,126	51	6	1	1	4	5			
Trenton, N. J.	106,831	38	8	2	1	1	3			
Worcester, Mass.	157,732	47	6	1	1	6	5			
<b>From 50,000 to 100,000 inhabitants:</b>										
Atlantic City, N. J.	53,952	6	7	1	1	1	1			
Bayonne, N. J.	65,271	11	7	1	3	5	3			
Binghamton, N. Y.	52,191	12	1	1	3	2	1			
Brockton, Mass.	64,043	9	4	1	1	3	1			
Charleston, S. C.	60,121	43	5	1	5	4	4			
Duluth, Minn.	89,331	3	3	5	1	5	1			
Erie, Pa.	72,401	30	5	1	1	1	1			
Evansville, Ind.	71,284	16	5	1	1	1	4			
Harrisburg, Pa.	69,493	20	9	3	3	3	3			
Johnstown, Pa.	64,642	18	12	2	3	3	3			
Kansas City, Kans.	94,271	5	5	1	8	5	5			
Little Rock, Ark.	53,811	46	9	4	4	4	3			
Lynn, Mass.	98,207	17	9	1	1	4	4			
Manchester, N. H.	75,635	26	1	1	1	1	4			
Mobile, Ala.	53,573	10	4	1	1	1	1			
Norfolk, Va.	66,540	12	3	1	1	1	3			
Passaic, N. J.	66,276	12	3	1	1	1	1			
Pawtucket, R. I.	56,901	16	1	1	1	1	1			
St. Joseph, Mo.	82,712	19	3	2	6	3	2			
Schenectady, N. Y.	90,503	20	2	6	3	5	1			
Springfield, Ill.	57,972	20	1	1	1	1	1			
Springfield, Ohio.	50,058	9	1	3	1	2	1			
Wilkes-Barre, Pa.	73,660	34	8	3	1	2	1			
<b>From 25,000 to 50,000 inhabitants:</b>										
Alameda, Cal.	26,330	2	3	1	2	1	1			
Auburn, N. Y.	36,509	12	3	1	2	2	2			
Aurora, Ill.	33,022	8	3	1	2	2	2			
Austin, Tex.	33,218	6	2	1	5	2	2			
Brookline, Mass.	31,138	5	1	1	2	2	1			
Butte, Mont.	41,781	17	8	1	1	2	1			
Chelsea, Mass.	32,452	8	1	1	2	3	1			





# IN INSULAR POSSESSIONS.

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## PHILIPPINE ISLANDS.

### Cholera in Manila.

In reporting under date of September 3, 1914, Asst. Surg. Duffy, of the United States Public Health Service, acting chief quarantine officer, states:

Cholera continues to occur in Manila. The situation is regarded as much improved. During the week ended August 29, 1914, however, typhoon weather with constant heavy rains greatly interfered with the work of the inspection service of the bureau of health. There occurred during the week in the city 8 new cases and 6 deaths, and delayed reports from previous weeks make an addition thereto of 13 cases and 6 deaths, a total for the week of 21 cases, with 12 deaths.

During the month of July 45 cases occurred in the city of Manila. A table sent herewith shows the residence of the victims, age, occupation, number of contacts, and the number of cholera vibrio carriers found among the contacts. Names are omitted, but the victims in July were all Filipinos except two, who were Japanese. One of the Japanese was a fisherman, but his case did not occur until July 29. In former outbreaks the Japanese fishermen were always among the first, if not the first, to be afflicted with the disease, and the shipping in the bay and river was comparatively free, while in the present epidemic the river and canal craft furnished 9 out of the 45 cases for the month of July. No cases have as yet occurred on steamships or vessels which go outside of the harbor.

The total number of cholera cases in Manila since the appearance of the first case on July 4, 1914, is 113, with 82 deaths.

### Cholera in the Provinces.

The epidemic of cholera in the Provinces has been severe in several towns, but in most places the outbreak seemed to be sporadic, and after active measures for its control were instituted no further spread occurred. So far 30 towns and 8 Provinces have been infected.

A table compiled from the provincial reports, covering July and August figures, is given below. As cases occurred simultaneously in Rizal and Cavite Provinces and in Manila, it would be difficult to determine just where the first case actually occurred.

The total number of cases of cholera in the Provinces from July 4, 1914, the date of the outbreak, to date, is 369, with 239 deaths.

### Cholera Carriers on River and Bay Craft.

To aid the bureau of health in the cholera eradication campaign and to prevent the occurrence of cholera on steamships bound for

interisland and American ports, this office began the examination of the personnel of the small boats, launches, and lighters, which go alongside of the larger steamships in the bay and river, to determine whether or not there were cholera carriers among them. This work was instituted August 19, 1914, and up to the end of July stool specimens were taken from the crews of 87 boats, aggregating 568 persons. Of this number 11 were found to be positive cholera vibrio carriers. The said carriers were all sent to the San Lazaro Cholera Hospital for observation until such time as two negative examinations resulted and then discharged, if in the meantime they did not develop cholera. Each of the boats from which cholera carriers were removed was thoroughly disinfected and the necessary measures were taken. No secondary infections have so far occurred on the craft from which the carriers were removed.

#### Cases of Cholera in the City of Manila During July, 1914.

Date.	Place of occurrence.	Age, in years.	Occupation.	Number of contacts.	True cholera carriers found among contacts.
1914.					
July 4	Not known.....	25	Laborer.....	11	
6	Launch Holdfast.....	18	Sailor.....	14	4
7	Barrio Bacood.....	40	Washerwoman.....		
7	344 Cabildo.....	10	Houseboy.....	46	6
10	571 Misericordia.....	11	Student.....	17	2
11	56 Santa Mesa.....	8½	None.....	10	1
11	57 Bilbao (front).....	½	do.....	2	
12	571 Misericordia.....	67	Seamstress.....		
12	309 Barcelona.....	37	Sailor.....	11	6
12	104 Postigo.....	2½	None.....	29	1
13	141 Lardizabal.....	37	Carpenter.....	4	
13	344 Madrid.....	21	Sailor.....		
13	719 Ascarraga.....	30	Housewife.....	7	
13	335 Asuncion (Int. 3).....	21	Sailor.....	25	4
14	Santa Mesa (Int.).....	2	None.....	9	
14	408 Aviles.....	1½	do.....	12	1
15	703 Almanza.....	32	Peddler.....	18	
15	348 Blumentrit.....	½	None.....	8	
16	Engineer Island beach.....	24	Sailor.....	20	1
17	Acceiteros beach.....	23	do.....	4	
17	1650 Rizal Avenue.....	½	None.....	10	
18	138 Sanchez B. Estagni.....	23	Laundress.....	23	
20	Steamship Pilar, Pasig River.....	25	Sailor.....	48	
21	Ascarraga, near railroad.....		Merchant.....		
23	1069 P. Chavez.....	2	None.....	26	1
24	525 Barcelona.....	60	Driver.....	64	1
25	1634 Felix Huertas.....	45	do.....	11	
26	123 Canal de la Reyna.....	8	None.....	8	
27	641 Bangbang.....	32	Laborer.....		
27	1811 Juan Luna.....	15	Sailor.....	4	
27	850 Velasquez (Int.).....	3	None.....	2	
27	U. S. A. T. Wright.....	49	Seaman.....	10	
28	Pasaje de Pere, Pasig River.....	24	Sailor.....	10	
28	624 Barcelona.....	50	Housewife.....	39	
28	Int. Invernes.....	1	None.....	2	
28	421 Sevilla.....	4	do.....	12	
28	1234 Int. Misericordia.....	25	Housewife.....	1	1
28	1232 Leveriza.....	2	None.....	16	3
29	1151 Mangahan (Int.).....	½	do.....		
29	501 Acceiteros (front).....	22	Fisherman.....		
30	1048 Antonio Rivera (Int.).....	3	None.....		
30	1343 Leveriza.....	2	do.....	12	1
31	1163 Agno (Int.).....	40	Baker.....	88	3
31	315 Barcelona.....	24	Laborer.....	44	
31	507 Soler.....	3	None.....	20	

Cases, 45; died, 37. Recovered 5; in hospital, 3.  
 Contacts examined, 697; positive cholera carriers, 36.  
 Percentage of contacts cholera carriers, 5.18.

Report of Cholera in the Provinces of the Philippine Islands from July 1, 1914, to August 29, 1914.

Province and town.	Date of first case.	Date of last case.	By towns.		By Provinces.	
			Cases.	Deaths.	Cases.	Deaths.
<b>RIZAL.</b>						
Malaban.....	July 4	Aug. 27	18	7		
Pateros.....	July 7	Aug. 2	3			
S. P. Macati.....	July 12	July 20	6	2		
Pasay.....	July 16	Aug. 19	6	2		
Pasig.....	July 17	July 19	4	3		
Laspinas.....	July 21	July 21	1			
Paranaque.....	July 21	July 21	1	1		
Navotas.....	July 26	Aug. 27	19	19		
Calocan.....	Aug. 1	Aug. 25	6	2		
Jalajala.....	Aug. 17	Aug. 23	13	8		
					77	44
<b>BULACAN.</b>						
Paombong.....	July 21	Aug. 17	21	17		
Calumpit.....	July 21	Aug. 23	18	14		
Baliuag.....	July 21	July 21		1		
Hagonoy.....	July 23	Aug. 27	129	77		
Meycauayan.....	July 25	July 25	5	3		
Polo.....	Aug. 2	Aug. 25	9	9		
Obando.....	Aug. 3	Aug. 27	12	9		
Malolos.....	Aug. 10	Aug. 27	44	34		
Bulacan.....	Aug. 16	Aug. 22	2	2		
Bocaue.....	Aug. 23	Aug. 23	1			
					241	166
<b>CAVITE.</b>						
Cavite.....	July 9	Aug. 7	4	5		
Imus.....	Aug. 1	Aug. 1	1	1		
					5	6
<b>ILOILO.</b>						
Iloilo.....	July 20	July 20	2		2	
<b>TAYABAS.</b>						
Luchan.....	Aug. 3	Aug. 3	2		2	
<b>PAMPANGA.</b>						
Minalin.....	Aug. 6	Aug. 7	2	2		
Masantol.....	Aug. 7	Aug. 25	27	15		
Macabebe.....	Aug. 8	Aug. 27	7	1		
Apalit.....	Aug. 10	Aug. 10	1	1		
					37	19
<b>BATAAN.</b>						
Orani.....	Aug. 7	Aug. 7	1	1	1	1
<b>PANGASINAN.</b>						
Binalonan.....	Aug. 23	Aug. 23	4	3	4	3
<b>Total.....</b>			<b>369</b>	<b>239</b>	<b>369</b>	<b>239</b>

**Plague.**

During the week ended August 29, 1914, 1 case of plague with 1 death was notified at Manila.

## FOREIGN REPORTS.

### CUBA.

#### Quarantine Against Certain Ports.

Quarantine measures on account of plague were ordered October 9, 1914, at Cuban ports against arrivals from Barcelona, Spain; Liverpool, Great Britain; and ports in Sicily, as follows:

Vessels arriving at Habana from the ports named and destined to any port in Cuba shall be deratized immediately before departure in open bay according to any of the methods authorized by the sanitary service of Cuba. Vessels not having fulfilled this requirement at the port of departure shall be deratized at the port of arrival by the medical officer of the port before discharging or taking on cargo.

Passengers from the ports of Barcelona and Liverpool and from ports in Sicily shall be carefully examined, and if the examination shows, in the opinion of the sanitary authorities, that there will be no danger to public health in giving liberty to some or all of the passengers, such liberty may be allowed.

### ITALY.

#### Typhus Fever—Leghorn—Correction.

The occurrence of a fatal case of typhus fever at Leghorn, Italy, during the month of April, 1914, was erroneously reported in the Public Health Reports for May 15, 1914, page 1256. This correction is made at the request of the director of the office of hygiene at Leghorn.

### PERU.

#### Status of Plague.

Plague was notified in Peru during the period from July 6 to August 2, 1914, as follows:

Places.	Cases.	Remain- ing Aug. 2, 1914.	Places.	Cases.	Remain- ing Aug. 2, 1914.
Lima (city).....	3	3	Mollendo.....	1	.....
Lima (country).....	1	1	Piura.....	.....	3
Moche.....	2	.....	Trujillo.....	5	5

## TURKEY.

## Quarantine Measures.

Quarantine measures have been ordered by the Superior Council of Health of Constantinople as follows: September 22, 1914, all measures previously in force against arrivals from Piræus, Greece, discontinued. September 23, 1914, arrivals from the coast extending from Saloniki to Kavalla made subject at any Turkish port to medical inspection, disinfection, destruction of rats on board, and five days' quarantine, including period of voyage.

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

## Reports Received During Week Ended Oct. 23, 1914.

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

## CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
Dutch East Indies:				
Celebes—				
Macassar.....	Aug. 16-22.....	17	15	
Sumatra—				
Palembang.....	.....do.....	13	9	
India:				
Bombay.....	Aug. 23-29.....	31	17	
Philippine Islands:				
Manila.....	.....do.....	21	12	Including 8 cases and 6 deaths not previously reported. July 4-31: Cases, 45; deaths, 37.
Do.....	Aug. 30-Sept. 5....	22	11	
Provinces.....				Total July 4-Aug. 27: Cases, 369; deaths, 239.
Bataan.....				Total Aug. 7: Case, 1; death, 1.
Orani.....	Aug. 7.....	1	1	
Rizal.....				Total July 4-Aug. 27: Cases, 77; deaths, 44.
Malaban.....	July 4-Aug. 27....	18	7	
Pateros.....	July 7-Aug. 2....	3	3	
S. P. Macati.....	July 12-20.....	6	2	
Pasay.....	July 16-Aug. 19...	6	2	
Pasig.....	July 17-19.....	4	3	
Laspinas.....	July 21.....	1	1	
Paranaque.....	.....do.....	1	1	
Navotas.....	July 26-Aug. 27...	19	19	
Caboocan.....	Aug. 1-25.....	6	2	
Jalajala.....	Aug. 17-23.....	13	8	
Bulacan.....				Total July 21-Aug. 27: Cases, 241; deaths, 166.
Paombong.....	July 21-Aug. 17....	21	17	
Calumpit.....	July 21-Aug. 23....	18	14	
Baliuag.....	July 21.....	1	1	
Hagonoy.....	July 23-Aug. 27....	129	77	
Meycauayan.....	July 25.....	5	3	
Polo.....	Aug. 2-25.....	9	9	
Obando.....	Aug. 3-27.....	12	9	
Malolos.....	Aug. 10-27.....	44	34	
Bulacan.....	Aug. 16-22.....	2	2	
Bocaue.....	Aug. 23.....	1	1	
Cavite.....				Total Aug. 1-7: Cases, 5; deaths, 6.
Cavite.....	July 9-Aug. 7....	4	5	
Imus.....	Aug. 1.....	1	1	
Iloilo.....				Total July 20: Case, 1.
Iloilo.....	July 20.....	2	2	
Tayabas.....				Total Aug. 3: Cases, 2.
Lucban.....	Aug. 3.....	2	2	
Pampanga.....				Total Aug. 6-27: Cases, 37; deaths, 19.
Minalin.....	Aug. 6-7.....	2	2	
Masantol.....	Aug. 7-25.....	27	15	
Macabebe.....	Aug. 8-27.....	7	1	
Apalit.....	Aug. 10.....	1	1	
Pangasinan.....				Total Aug. 23: Cases, 4; deaths, 3.
Binalonan.....	Aug. 23.....	4	3	

**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.****Reports Received During Week Ended Oct. 23, 1914—Continued.****CHOLERA—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
Straits Settlements: Singapore .....	Aug. 16-22 .....	20	11	
Turkey in Asia: Egrelî, Konieh .....	July 19 .....		1	
Turkey in Europe: Surgun, Tschadalza .....	July 22 .....	1		Village.

**YELLOW FEVER.**

Brazil: Bahia .....	Sept. 13-19 .....	1	1	
Mexico: Progreso .....	Oct. 8 .....	1		

**PLAGUE.**

Brazil: Bahia .....	Sept. 6-19 .....	8	6	
Colombo: Ceylon .....	Aug. 23-29 .....	4	4	
Greece: Piræus .....	Oct. 9 .....	2		Not previously reported.
Syra, island .....	Sept. 3-4 .....	1	1	
India: Bombay .....	Aug. 23-29 .....	20	14	
Peru: Arequipa— Mollendo .....	July 9-Aug. 2 .....	1		
Libertad— Moche .....	do .....	2		
Trujillo .....	do .....	5		
Lima .....	do .....	1		
Lima .....	do .....	3		
Philippine Islands: Manila .....	Aug. 30-Sept. 5 .....	22	11	
Siam: Bangkok .....	Aug. 2-8 .....		5	
Turkey in Asia: Adalia .....	July 19-Aug. 1 .....	2		
Mytilene .....	Aug. 2 .....			Present.

**SMALLPOX.**

Arabia: Aden .....	Aug. 10-16 .....		1	
Brazil: Rio de Janeiro .....	Aug. 30-Sept. 2 .....	482	124	
Canada: Quebec .....	Oct. 4-10 .....	1		
Winnipeg .....	do .....	4		
Dutch East Indies: Borneo .....	Aug. 9-22 .....	161	40	Aug. 22, present in Pontianak. Aug. 9-22: Cases, 245; deaths, 59. Aug. 22, 6 cases were among Europeans.
Java .....	Aug. 9-22 .....	23	6	
Batavia .....	Aug. 9-22 .....			
France: Paris .....	Aug. 30-Sept. 5 .....	1		
Honduras: Puerto Cortez .....	Sept. 1-30 .....		6	
Mexico: Chihuahua .....	Sept. 8-27 .....		10	
Portugal: Lisbon .....	Sept. 20-26 .....	4		
Russia: Moscow .....	Aug. 30-Sept. 5 .....		1	
Siam: Bangkok .....	Aug. 2-8 .....		1	
Spain: Valencia .....	Sept. 13-19 .....	8		

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

**Reports Received During Week Ended Oct. 23, 1914—Continued.**

**SMALLPOX—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
Switzerland:				
Basel, Canton.....	June 21-Sept. 19..	20	.....	
Turkey in Asia:				
Beirut.....	Sept. 6-12.....	10	4	
Damascus.....	Aug. 19-29.....	60	31	
Turkey in Europe:				
Constantinople.....	Sept. 6-12.....	10	4	
Saloniki.....	Aug. 30-Sept. 5.....	.....	4	Sept. 19; Cases, 2.

**Reports Received from June 27 to Oct. 16, 1914.**

**CHOLERA.**

Places.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary:				
Hungary.....				Sept. 26, present in 5 localities. Oct. 1-3: Cases, 378.
Budapest.....	Sept. 26.....	1	.....	
Lower Austria.....				
Vienna.....	Sept. 13.....	1	.....	Oct. 8, still present.
Ceylon:				
Colombo.....	June 14-20.....	1	1	
Uda Pusselawa, district.....	June 7-13.....	.....	.....	Present in Kumbalagamuwa and the neighboring tea estates.
China:				
Amoy—				
Kulangsu.....	Aug. 1.....	1	.....	
Hankow.....	July 12-18.....	1	.....	From up-country districts.
Chaochow fu.....	July 4.....	.....	.....	Present.
Canton.....	Jan. 1-Apr. 30.....	4	.....	
Hongkong.....	May 17-23.....	1	1	
Dutch East Indies:				
Celebes.....	July 19-Aug. 1.....	85	85	June 6-13: In Bali and Lombok; Cases, 44; deaths, 23.
Macassar.....	July 12-Aug. 15.....	58	51	
Java—				
Batavia.....	June 28-July 18.....	2	2	Sept. 22, epidemic.
Moluccas—				
Menado.....	June 21-27.....	42	14	
Sumatra—				
Palembang.....	Aug. 2-18.....	29	11	
India:				
Bassein.....	Apr. 26-June 29.....	84	65	
Bombay.....	May 17-Aug. 22.....	249	156	
Calcutta.....	May 10-Aug. 22.....	.....	263	
Cocnada.....	July 18-Aug. 14.....	.....	18	
Kashmir, province.....				Endemic. Aug. 18, increasing.
Madras.....	May 31-Aug. 29.....	301	220	
Moulmine.....	June 7-13.....	1	1	
Negapatam.....	May 14-Aug. 27.....	30	30	
Rangoon.....	Apr. 1-June 30.....	25	24	
Indo-China:				
Battambang.....	June 11-20.....	4	.....	Jan. 1-June 10: Cases, 146; deaths, 77. May 21-June 20: Cases, 22.
Cholon.....	July 1-10.....	4	.....	
Saigon.....	June 2-Aug. 24.....	39	16	
Japan:				
Nagasaki.....	Oct. 2.....	.....	.....	Present in vicinity.
Persia:				
Anzali.....	June 15.....	1	.....	
Philippine Islands:				
Manila.....	July 4-Aug. 22.....	106	78	
Provinces.....	do.....	.....	.....	Present in 6 Provinces.
Russia:				
Podolia.....				July 19-Aug. 2: Cases, 254; deaths, 85.
Bratzlaw.....	July 26-Aug. 2.....	1	.....	
Jampol.....	July 19-Aug. 2.....	25	8	
Letichev.....	July 10.....	2	2	
Litine.....	July 26-Aug. 8.....	8	3	
Vinnitza.....	July 19-Aug. 2.....	220	74	
Warsaw.....				Aug. 30, present.
Slam:				
Bangkok.....	Apr. 19-July 11.....	.....	277	
Straits Settlements:				
Singapore.....	May 10-Aug. 8.....	121	104	



**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.****Reports Received from June 27 to Oct. 16, 1914—Continued.****CHOLERA—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
Turkey in Europe:				
Adrianople . . . . .	May 14-19 . . . . .		2	
Constantinople . . . . .	July 15 . . . . .	1		
Vizé . . . . .	July 22 . . . . .	1		
Turkey in Asia:				
Eski-Cheri . . . . .	July 23-24 . . . . .	2	1	
Tagadima . . . . .	July 29 . . . . .	2		

**YELLOW FEVER.**

Brazil:				
Bahia . . . . .	May 10-Aug. 29 . . . . .	19	16	
Pernambuco . . . . .	May 1-15 . . . . .		1	
Ecuador:				
Guayaquil . . . . .	May 1-31 . . . . .	3	1	
Do . . . . .	Aug. 1-31 . . . . .	4	2	
Mexico:				
Merida . . . . .	Sept. 14 . . . . .	1		
Venezuela:				
Caracas . . . . .	June 1-30 . . . . .	1	1	
La Guayra . . . . .	Aug. 16-31 . . . . .	1	1	
Maracaibo . . . . .	June 15 . . . . .			Present in light form. No cases since.

**PLAGUE.**

Brazil:				
Bahia . . . . .	May 17-Aug. 22 . . . . .	9	8	
Pernambuco . . . . .	May 1-Aug. 15 . . . . .		5	
Rio de Janeiro . . . . .				Oct. 3, 1 fatal case.
British East Africa:				
Mombasa . . . . .	June 1-July 31 . . . . .		2	
Ceylon:				
Colombo . . . . .	May 19-Aug. 22 . . . . .	128	118	
China:				
Amoy . . . . .	June 20-July 18 . . . . .			Present: July 13, present in inland villages. Aug. 10, diminishing.
Kulangsu . . . . .	May 20 . . . . .	1		
Canton . . . . .	Jan. 1-June 11 . . . . .	1,156		
Chincheu . . . . .	May 30-June 6 . . . . .			Present 30 miles north from Amoy.
Fatsan . . . . .	May 13 . . . . .			Present.
Hongkong . . . . .	May 10-Aug. 29 . . . . .	921	759	Total, Jan. 4-July 25: Cases, 2,127; deaths, 1,679.
Pakhoi . . . . .	June 18 . . . . .	2		From a vessel from Hongkong. Apr. 3-June 18: Cases, 100. In Kan-lai and San-hu, 20 miles distant.
Cuba:				
El Aceite (near El Caney) . . . . .	July 27-Aug. 2 . . . . .	4		Total, Mar. 5-Sept. 17: Cases, 43; deaths, 10. Including 2 cases previously reported from vicinity of El Caney; all removed to and previously reported as from Santiago.
Santiago . . . . .				June 30-Sept. 23: Cases, 12 (case Sept. 17 from El Caney); deaths, 4. One of these deaths was a case from El Aceite.

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

**Reports Received from June 27 to Oct. 16, 1914—Continued.**

**PLAGUE—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
Dutch East Indies:				
Provinces.....				Total, Apr. 1-July 31: Cases, 4,680; deaths, 4,519.
Kediri.....	Apr. 1-July 31.....	1,064	1,014	
Madison.....	do.....	413	349	
Paseroean.....	do.....	3,358	2,930	
Surabaya.....	do.....	255	229	
Ecuador:				
Guayaquil.....	May 1-Aug. 31.....	15	5	
Egypt.....				Total, Jan. 1-Aug. 16: Cases, 184; deaths, 95.
Alexandria.....	June 2-Sept. 22.....	34	20	
Damietta.....	July 17.....	1		
Port Said.....	June 9-Sept. 9.....	23	9	
Provinces—				
Assiout.....	May 25-June 20.....	5	1	
Charkieh.....	July 13.....	1	1	
Fayoum.....	May 27-Aug. 13.....	8	2	
Garbieh.....	July 24.....	1		
Gizeh.....	May 27-June 24.....	6	3	
Menouf.....	June 17.....	1		
Minieh.....	May 23-July 12.....	10	5	
German East Africa:				
Dar-es-Salaam.....	May 2-June 10.....	7	3	
Muanza.....	Feb. 21-Mar. 18.....	7	5	
Great Britain:				
Liverpool.....	Aug. 8-12.....	9	3	
Greece:				
Piræus.....	Aug. 7-Sept. 9.....	14	2	Sept. 30, ended.
Hawaii:				
Paauhau.....	Aug. 17.....	1	1	
India.....				Total, Apr. 27-Aug. 1: Cases, 47,605; deaths, 41,811.
Bassein.....	Apr. 26-Aug. 8.....	34	34	
Bombay.....	May 17-Aug. 22.....	562	472	
Calcutta.....	May 10-Aug. 22.....		160	
Karachi.....	May 24-July 18.....	28	27	
Maulmine.....	Apr. 26-July 25.....	98	96	
Rangoon.....	Apr. 1-July 31.....	754	646	
Indo-China.....				Total, Jan. 1-June 10: Cases, 1,414; deaths, 1,146. June 11-July 20: Cases, 132.
Cholon.....	Jan. 1-July 20.....	81		
Phanitet.....	Jan. 1-July 10.....	389		
Phanrang.....	do.....	852		
Pnum Penh.....	do.....	24		
Saigon.....	May 19-Aug. 24.....	152	59	
Soctrang.....	May 1-July 10.....	22		
Italy:				
Catania.....				Reported present.
Japan.....				Total, Jan. 1-July 31: Cases, 78; deaths, 64.
Hodogaya.....	June 9-July 3.....	3		Near Yokohama.
O-No district.....	June 9-15.....	1		
Taiwan (Formosa)—				
Kagi.....	May 3-Aug. 8.....	303	273	
Taihoku.....	Aug. 16-22.....		2	
Tokyo.....	June 22-Aug. 8.....	14	4	Total, Apr. 18-July 25: Cases, 45.
Yokohama.....	July 5-Aug. 15.....	4	4	And vicinity. Total, May 23-Aug. 15: Cases, 23; deaths, 19.
Mauritius.....	Apr. 17-23.....	2		
Peru:				
Ancachs.....				No reports of deaths received.
Casma.....				Total, Feb. 9-Mar. 22: Cases, 4, including 2 cases, p. 1319, pt. 1. Present.
Chimbote.....	Mar. 23-May 2.....			Do.
Quarhuay (Huaylas).....	do.....			Do.
Samanca.....	do.....			Do.
Arequipa—				
Mollendo.....	Mar. 23-July 5.....	14		
Cahamarca—				
Contumaza.....	Mar. 23-May 2.....	3		
Lambayeque—				
Chiclayo.....	do.....	3		
Guadalupe.....	do.....	1		
Libertad—				
Ducamarca (Otzuco).....	Mar. 23-May 30.....			Present.
Pichipampa (Otzuco).....	Mar. 24-30.....	4		
Salavarry.....	Mar. 23-May 2.....	1		
San Pedro.....	do.....	8		From Pacasmayo.
Trujillo.....	Mar. 23-June 7.....	16		

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

Reports Received from June 27 to Oct. 16, 1914—Continued.

**PLAGUE—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
Peru—Continued.				
Lima—				
Callao.....	Oct. 8.....	.....	.....	Present.
Unigambal (Santiago de Chuco).	Mar. 23-June 7....	16.....	.....	
Lima.....	Mar. 23-July 5....	17.....	.....	
Surco (Matucana).....	.....do.....	11.....	.....	
Piura—				
Catacaos.....	.....do.....	4.....	.....	
La Huaca.....	June 8-July 5....	1.....	.....	
Piura.....	Mar. 23-July 5....	12.....	.....	
Philippine Islands:				
Manila.....	May 17-Aug. 8....	6.....	6.....	May 17, 1 case from s. s. Taisang from Amoy; May 23, 1 case from s. s. Linan from Amoy; June 12-20, a fatal case from s. s. Linan from Amoy; June 17, a fatal case in the Philippine General Hospital.
Cebu.....				May 20, 1 case on s. s. Rubi from Hongkong.
Portugal:				
Lisbon.....	Oct. 8-9.....	8.....	.....	Pneumonic form.
Russia:				
Astrakhan government.....				Total, May 25-July 15: Cases, 49; deaths, 46.
Kirghis steppe—				
Betas-Tschagal.....	May 25-July 15....	2.....	.....	
Bulanai.....	May 25-June 14....	10.....	10.....	7 of these cases pneumonic.
Manysch-Tschagal.....	.....do.....	5.....	.....	
Kalmuck steppe—				
Archanskoge-Tebe.....	.....do.....	4.....	.....	
Gubia.....	.....do.....	4.....	.....	
Schitkur.....	.....do.....	1.....	.....	
Senegal:				
Dakar.....	May 15.....	12.....	.....	May 17-23, 5 deaths daily among natives.
Siam:				
Bangkok.....	Apr. 19-July 11....	.....	10.....	
Straits Settlements:				
Singapore.....	May 10-16.....	2.....	2.....	
Tripoli.....				July 15, present in Asizia, Tarhuna, and Zanzur, vicinity of Tunis.
Turkey in Asia:				
Basra.....	June 24-July 19....	16.....	8.....	
Beirut.....	June 16-Aug. 23....	5.....	.....	
Chios.....	Aug. 2.....	.....	.....	Epidemic.
Haifa.....	Aug. 29.....	1.....	1.....	
Jaffa.....	June 5-27.....	4.....	3.....	
Kut.....	July 6.....	.....	1.....	From a steamboat from Bagdad to Basra.
Samos.....	Aug. 2.....	.....	.....	Epidemic.
Smyrna.....	July 2-Sept. 9....	8.....	4.....	
Turkey in Europe:				
Saloniki.....	Sept. 15.....	3.....	.....	
Union of South Africa:				
Cape Town.....	Sept. 24.....	.....	.....	"Few cases plague outlying districts reported localized."
Zanzibar:				
Zanzibar.....	July 1-Aug. 21....	8.....	5.....	

**SMALLPOX.**

Algeria:				
Departments—				
Algiers.....	Mar. 31-May 31....	7.....	.....	
Constantine.....	.....do.....	7.....	.....	
Oran.....	.....do.....	57.....	.....	
Arabia:				
Aden.....	June 10-16.....	.....	1.....	
Argentina:				
Buenos Aires.....	June 1-30.....	.....	1.....	

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

**Reports Received from June 27 to Oct. 16, 1914—Continued.**

**SMALLPOX—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
Australia:				
New South Wales—				
Sydney.....				Total May 8-Sept. 3: Cases, 226 in the metropolitan area and 80 cases in the country districts.
Western Australia—				
Bunbury quarantine station.	May 5-June 12....	8	1	From s. s. Kilchattan, from Bombay, including previous report.
Austria-Hungary:				
Galicia.....	May 17-July 25.....	12		
Lower Austria.....	May 31-June 20.....	2		
Styria.....	July 5-11.....	2		
Upper Austria.....	May 17-July 11.....	4		
Belgium:				
Liege.....	June 1-6.....		3	
Brazil:				
Bahia.....	June 1-Aug. 8.....	14		
Para.....	May 24-30.....		1	
Pernambuco.....	May 1-Aug. 15.....		41	
Rio de Janeiro.....	May 10-Aug. 29.....	2,033	332	
Canada:				
British Columbia—				
Vancouver.....	Aug. 18-Sept. 5.....	4		
Manitoba—				
Winnipeg.....	June 14-July 25.....	8		
Ontario—				
Hamilton.....	Aug. 1-Sept. 30.....	6		
Niagara Falls.....	July 15-21.....	1		
Ottawa.....	July 26-Aug. 1.....	1		
Prince Edward Island—				
Charlottetown.....	July 16-22.....	1		
Quebec—				
Quebec.....	July 11-Oct. 3.....	4		
Canary Islands:				
Teneriffe—				
Santa Cruz.....	June 28-Aug. 29.....		14	
Ceylon:				
Colombo.....	May 19-Sept. 19.....	8	2	
Uva district—				
Passara.....	June 7-13.....	39	11	Among coolies from India. May 16-23, present in Kaying and increasing in Choa Chow. Present.
China				
Amoy.....	May 17-June 13.....			
Canton.....	Jan. 1-Apr. 30.....	21		
Chungking.....	May 23.....			Endemic.
Dairen.....	June 7-July 4.....	2		
Hongkong.....	May 10-July 18.....	15	12	Total Jan. 4-May 30: Cases, 93; deaths, 65.
Nanking.....	May 23.....			Always prevalent.
Newchwang.....	June 13.....			Do.
Pakhoi.....	Apr. 17.....			Present, and in San-hu, 20 miles distant.
Shanghai.....	May 18-Aug. 9.....	10	16	Deaths among natives.
Tientsin.....	June 6.....	1		
Tsingtau.....	May 19-July 5.....	21	3	
Dutch East Indies:				
Borneo.....	May 17-July 25.....	440	91	In the western part.
Java.....				In the western part. May 3-Aug. 8: Cases, 1,697; deaths, 379, including Batavia.
Batavia.....	May 3-Aug. 8.....	129	40	
Tegal.....	Aug. 2-8.....	19	6	
Egypt:				
Alexandria.....	June 4-Sept. 2.....	22	13	
Cairo.....	May 21-Aug. 26.....	193	74	
Port Said.....	May 21-June 6.....	4		
France:				
Bordeaux.....	June 7-July 11.....		4	
Marseille.....	May 1-31.....		2	
Paris.....	May 24-Aug. 29.....	30	2	
Germany.....				May 31-Aug. 22: Cases, 10.
Hamburg.....	June 7-27.....	5		
Kehl.....	May 1-31.....		1	
Gibraltar.....	June 8-27.....	1	1	
Great Britain:				
Leeds.....	June 6-July 18.....	4		
Southampton.....	June 29-July 4.....	1		
Greece:				
Athens.....	July 6-12.....		1	
Patras.....	Sept. 2-8.....	3	1	

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

Reports Received from June 27 to Oct. 16, 1914—Continued.

## SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
<b>India:</b>				
Bombay .....	May 19-Aug. 22 .....	81	49	
Calcutta .....	May 10-Aug. 15 .....		230	
Karachi .....	May 24-July 25 .....	13	4	
Madras .....	May 17-Aug. 22 .....	24	1	
Rangoon .....	Apr. 1-July 31 .....	10	1	
<b>Indo-China:</b>				
Saigon .....	May 12-18 .....	2		
<b>Italy:</b>				
Turin .....	July 20-26 .....	2		
<b>Japan:</b>				Total Jan. 1-July 31: Cases, 414;
Kobe .....	June 19-23 .....	1		deaths, 89; exclusive of Taiwan.
Nagasaki .....	May 18-Aug. 30 .....	58	18	
Taiwan (Formosa) .....	May 2-Aug. 8 .....	15	6	
Yokohama .....	June 23-29 .....	1		
<b>Mexico:</b>				
Chihuahua .....	May 18-Sept. 6 .....		45	
Juarez .....	Aug. 1 .....	2		
Mazatlan .....	June 17-Sept. 1 .....		4	
Mexico .....	Jan. 17-Feb. 21 .....	99	16	
Monterey .....	June 30-Sept. 20 .....		9	
Tampico .....	May 11-July 31 .....		70	
Vera Cruz .....	June 1-Sept. 5 .....	16	6	
<b>Norway:</b>				
Trondhjem .....	June 1-Aug. 31 .....	14		
<b>Peru:</b>				June 22 and Aug. 8, present.
Callao .....				Decreased.
Lima .....	June 22 .....			
<b>Portugal:</b>				
Lisbon .....	June 14-Aug. 15 .....	9		
<b>Russia:</b>				
Batum .....	Feb. 1-Apr. 30 .....	7		
Moscow .....	May 10-Aug. 8 .....	45	7	
Odessa .....	May 10-Aug. 4 .....	6		
Riga .....	May 31-July 25 .....	14		
St. Petersburg .....	May 24-July 11 .....	84	28	
Vladivostok .....	Apr. 22-May 13 .....	8	1	
Warsaw .....	Feb. 1-May 2 .....	146	61	
<b>Servia:</b>				
Belgrade .....	May 25-July 19 .....	12	2	
<b>Siam:</b>				
Bangkok .....	June 13-July 11 .....		1	
<b>Spain:</b>				
Almeria .....	July 1-31 .....		1	
Barcelona .....	June 14-July 31 .....		28	
Cadix .....	May 1-31 .....		5	
Madrid .....	June 1-Aug. 31 .....		6	
Valencia .....	June 7-Sept. 5 .....	42	13	
<b>Switzerland:</b>				
Cantons—				
Basel .....	May 31-June 20 .....	14		
Geneva .....	July 5-11 .....	1		
Grisons .....	June 7-13 .....	1		
Zurich .....	July 19-Aug. 8 .....		2	
<b>Turkey in Asia:</b>				
Beirut .....	June 1-Sept. 5 .....	61	26	
Damascus .....	Mar. 15-Aug. 1 .....	845	429	
Jerusalem .....	May 3-July 25 .....	33	2	
Mersina .....	Aug. 2-8 .....	2		
Smyrna .....	May 13-June 13 .....		5	
Trebizond .....	May 19-Sept. 5 .....			Present.
<b>Turkey in Europe:</b>				
Constantinople .....	June 14-Sept. 8 .....		6	
Saloniki .....	May 31-Aug. 29 .....		49	June 6: Present in a mild form
				among 20,000 refugees from
				Asiatic Turkey, Chio, and
				Mitylene.
<b>Union of South Africa:</b>				
Pretoria .....	May 9-23 .....	1		

# SANITARY LEGISLATION.

## MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

### MOBILE, ALA.

#### Stables—Construction and Care—Rat Proofing—Protection of Feed from Rats. (Ord. Oct. 6, 1914.)

1. That every person, firm, association or corporation who shall maintain a horse, mule, or cow within the limits of the city of Mobile shall provide a stable for it such as is hereinafter specified.

2. That every stable, shed, or lot where a horse, mule, or cow is kept in the city of Mobile shall be thoroughly cleaned at least once in each day; and when such animals are kept in a stable, shed, or other building, such building shall have sufficient light to make cleaning practicable, and sufficient ventilation to keep the air of such building pure at all times.

3. That every stable, shed, or other building where a horse, mule, or cow, or other animal is kept shall have either within or immediately adjoining it a fly-proof and rat-proof covered room or box, bin, or barrel, for receiving and holding manure and litter accumulating between the times of removal from the premises. The fitness of said room, box, bin, or barrel shall be passed upon by the city health officer.

4. That all stall floors in stables shall drain into gutters, the said gutters to be connected through catch basins with the sanitary sewerage system of the city, in accordance with section 671 of the Code of Ordinances of the city of Mobile of 1907, provided that where the sanitary sewerage system of the city is not available by reason of being more than 150 yards from said stable, other drainage shall be provided, as may be approved by the health officer of the city of Mobile.

5. *Stables.*—All buildings now or hereafter to be constructed and used for stabling horses, mules, or cows shall be constructed as follows:

*Walls.*—The foundation walls of such building shall be constructed of concrete, brick, stone, or other material impenetrable by rats, laid in cement mortar, and shall be not less than 6 inches thick, and shall extend above the ground a sufficient height to be not less than 1 foot above the floor level, and the extension of such walls upward shall be made of concrete, brick, or other impenetrable material by rats, or of wood, but if of wood, shall contain no inclosed dead spaces. All openings in such foundation walls, except that made for the doors, shall be covered with metal grating having openings not greater than one-half inch between the gratings.

*Floors.*—The floors of stables other than the stalls shall be of concrete not less than 3 inches thick, or of stone, laid in cement mortar, or of other materials and constructed as is hereinafter provided to be used for floors for stalls, in such way as to prevent ingress or egress of rats, and such floors shall have a slope of one-eighth inch per foot to the gutter drains hereinafter provided for.

*Stalls.*—The floors of stalls shall have a slope of one-eighth inch per foot, to the gutter drains hereinafter provided for, and may be of planking, fitting either tightly to a concrete floor of not less than 3 inches thick, or elevated not more than one-half inch from such concrete floor, and so constructed as to be easily removable, or said floors of stalls or other portions of floors on which animals stand may be constructed of creosoted wood blocks, bricks, asphalt blocks, or of some substantial mineral pavement, these to be laid on a concrete foundation, provided that removable planking shall be raised at least once a week, and the said planking and the concrete floor beneath thoroughly cleansed.

6. *Gutters.*—Semicircular or V-shaped gutter drains shall be constructed in such stables in such manner that a gutter shall be placed so as to receive all liquid matter from each stall, and each of these gutters shall connect with the public sewer or with a main gutter of the same construction, which in turn shall be connected with the public sewer or other suitable drain approved by the city health officer. All openings from drains into sewers shall be protected by a metal grating having openings not more than one-half inch between the gratings.

7. *Mangers.*—Each manger shall be constructed so as to have a slope of 2 inches toward the bottom; shall be covered with tin or zinc, and shall be at least 18 inches deep to avoid spilling of food.

8. *Food bins.*—All feed bins shall be constructed of cement, stone, metal, or other material impenetrable by rats or wood, all to have close-fitting doors. If constructed of wood, the bins shall be lined or covered with metal and the whole so constructed as to prevent the ingress or egress of rats. All grain, malt, and other animal food, except hay, stored or kept in any stable, must be kept in such feed bins. Said feed bins must be kept closed at all times, except when momentarily opened to take food therefrom or when same are being filled. No feed shall be scattered about outside such bin or in the stable, and all such feed found on the floor or in the stalls of said stables shall be removed daily and placed in the manure receptacle. No feed stuffs intended for human consumption shall be kept or stored in any stable or any other place where animals are kept.

9. All parts of stables, for the construction of which express provision is not made in this ordinance, shall be rat-proofed in the manner in which buildings are required to be rat-proofed which are used for the purposes enumerated in section 1 of an ordinance adopted September 1, 1914, entitled "An ordinance to provide for the better protection of the city of Mobile against the harboring and multiplication of rats along the maritime front of the said city, and to prescribe rules for rat-proofing houses and for other purposes."

10. The feeding of grain to horses, mules, cows, and other animals in any yards or inclosed spaces not constructed as specified in sections 2, 4, 5, 6, 7, 8, and 9 of this ordinance is prohibited, and all such yards used for exercising said animals shall at all times be kept free from trash or accumulations of manure and must be well drained, and filling or subsoil drainage or both must be installed if required by the health officer of the city of Mobile.

11. That any violation of this ordinance by any person, firm, association, or corporation shall be punished by the recorder by a fine of not less than \$10 nor more than \$100, and each day's failure to comply with this ordinance shall constitute a separate offense and may be prosecuted and punished accordingly.

12. That this ordinance shall be in force and effect from and after December 1, 1914.

HOUSTON, TEX.<sup>1</sup>

## City Health Department—Organization—Officers and Employees—Powers and Duties. (Ord. Mar. 3, 1914.)

**ARTICLE 1. SECTION 1. *Creation of; duties of members.***—That there is created a health department, the officers and employees of which, being charged with the duty of enforcing all the ordinances relating to "health," and such other duties as are now or may hereafter be placed upon them by the mayor or city council or by the ordinances.

**SEC. 2. *Composition of department.***—That the health department shall consist of the board of health, a health officer, an assistant health officer, a city chemist and bacteriologist, a milk inspector, a quarantine inspector, a city scavenger, a superintendent of garbage, a city druggist, a chief sanitary inspector, and such sanitary inspectors and employees as may be necessary and may be allowed by the mayor and city council.

**SEC. 3. *Creation of offices.***—That there is created the office of health officer, assistant health officer, city chemist and bacteriologist, milk inspector, quarantine inspector; city scavenger, superintendent of garbage, chief sanitary inspector, and sanitary inspectors.

**SEC. 4. *Appointment of officers and employees.***—That the health officer shall be appointed by the mayor and confirmed by the city council; that the other officers and employees shall be appointed by the mayor; that each and all of said officers shall, before entering upon the discharge of the duties of his office, take the constitutional oath of office.

**SEC. 5. *Health officer; official bond.***—That the health officer shall be a duly and regularly licensed physician and surgeon in good standing, and shall, before entering upon the discharge of the duties of his office, execute and deliver to the city of Houston, and thereafter when required so to do by the mayor, a bond in the sum of \$2,000, payable to the said city of Houston, with at least three good and sufficient sureties or a surety company authorized to do business in Texas, to be approved by the mayor, conditioned that the said health officer shall faithfully perform and discharge all of the duties now or which may hereafter be required of him by law, or by the charter or ordinances of the city of Houston, or by the mayor or by the city council, which said bond shall provide that all the conditions of same are to be performed in Houston, Harris County, Tex., and that any suit prosecuted and maintained thereon shall be prosecuted and maintained in said Harris County, Tex., and that in case of any recovery thereon the obligors agree to pay the expense incurred by or imposed upon the said city of Houston in or about the collection thereof, including a reasonable attorney's fee, and that said bond shall not become void until the whole amount thereof has been exhausted.

**SEC. 6. *Health officer; duties; powers.***—That in addition to the duties imposed, and the powers and authority conferred, upon the health officer by the ordinances of the city of Houston, he shall perform the duty and exercise the powers as follows: He shall be the executive officer of the board of health and, as such, be charged with the enforcement of the ordinances of the city of Houston and the rules and regulations of the city and State board of health relating to all matters of health; he shall, with the approval of the mayor and city council, the board of health, and the civil-service commission, make such rules and regulations for the government and control of the officers and employees of his department as he may deem advisable, and as the head of the department, shall have such direction, supervision, and control of such officers and employees. He shall be authorized, with the approval of the mayor, to suspend any officer or employee of the health department for insubordination or inattention to or neglect of duty, or violation of the ordinances or rules and regulations of the board of health until he

<sup>1</sup> From "Health ordinances of the city of Houston, Tex.," compiled by E. P. Phelps.



has been removed, discharged, or reinstated, and during the time of such suspension unless such officer or employee be reinstated without prejudice, he shall not be entitled to the pro rata portion of his salary. He shall keep a careful watch upon the drainage and sewerage system of the city and promptly report to the board of health any needed changes for the promotion and maintenance of public health. He shall make a full report to the city council once each month concerning the sanitary conditions of the city, with a statement of all deaths occurring in the city since the date of his last report; he shall supervise the operation of the garbage crematory as part of his department.

SEC. 7. *Assistant health officer; duties.*—That the assistant health officer shall possess the same qualifications as the health officer, and shall perform and discharge such duties as are or may be prescribed by the ordinances, by the board of health and the health officer, and in the absence or inability of the health officer, discharge and perform the duties and exercise the authority of the health officer.

SEC. 8. *City chemist and bacteriologist; duties.*—That the city chemist and bacteriologist, also called city pathologist, shall be a person skilled in the science of analytical chemistry and bacteriology, and a practical chemist, and he shall be charged with the duty of enforcing the ordinances regulating the sale, etc., and the sanitary conditions, etc., of milk, and milk products; the manufacture of ice cream; the sale of pure food and drugs; the sanitary conditions, etc., of food products, and, generally, of ordinances usually referred to as "pure food and drug ordinances"; and he shall also perform and discharge such other duties as are or may be prescribed by the ordinances, the board of health or the health officer, mayor, or city council.

SEC. 9. *Milk inspector; duties.*—That the milk inspector shall be under the direction, supervision, and control of the city chemist and bacteriologist, and shall be charged with the enforcement of all ordinances regulating the sale of milk and milk products, the sanitary condition of milk and milk products, and all other ordinances wherein he is specially named, and shall perform and discharge such other duties as he may be called upon to perform by the board of health, city chemist, and bacteriologist, health officer, mayor or city council.

SEC. 10. *Quarantine inspector; duties.*—That the quarantine inspector shall be under the direction, supervision, and control of the board of health and the health officer, and shall perform such duties as he may be called upon to perform by it or him, or by the mayor or city council.

SEC. 11. *City scavenger; bond; duties; powers; authority.*—That the city scavenger shall be under the direction, supervision, and control of the health officer and shall perform such duties under his direction and the direction of the board of health as are now or may hereafter be imposed upon him by the ordinances. The said city scavenger shall enter into a bond payable to the city of Houston with three good and sufficient sureties or a surety company authorized to do business in Texas, in the sum of \$2,000, to be approved by the mayor, conditioned that he shall faithfully perform and discharge all of the duties now or which may hereafter be required of him by law, or by the charter and ordinances of the city of Houston, or by the mayor or by the city council, or by the board of health, or by the health officer, and that he shall pay over and promptly account for, all moneys received or collected by him, or his department, for the city. The said bond shall provide that all the conditions are to be performed in Harris County, Tex., and that suit thereon may be prosecuted and maintained in said Harris County, Tex., and that in case of recovery thereon, the obligors agree to pay the expense incurred by, or imposed upon, the said city of Houston in or about the collection thereof, including a reasonable attorney's fee, and that said bond shall not become void until the whole amount thereof has been exhausted. He shall, with the approval of the mayor and health officer, make suitable rules and regulations for the proper working of the scavenger carts or wagons and shall direct, control, and supervise the work of the sanitary inspectors engaged in the scavenger work, and shall look after

the upkeep and care of the harness, tools, and other equipment and animals of said department, and generally oversee and look after the proper working of the sanitary inspectors, and other employees, and carts and wagons, in his branch of the health department.

**SEC. 12. Superintendent of garbage; duties.**—That the superintendent of garbage shall be under the direction, supervision, and control of the board of health and the health officer, and he shall diligently superintend the works of both men and teams engaged in the removal of garbage, and while so doing he shall carefully note the condition of streets, bridges and crossings throughout the city and report the same to the street commissioner, and shall perform such other duties as may be required of him by the board of health, health officer, mayor, or city council.

**SEC. 13. Chief sanitary inspector; duties; authority.**—That the chief sanitary inspector, or chief health inspector, shall be the executive head of the sanitary inspectors, and under the direction, supervision, and control of the health officer and the board of health, and shall have the direction, supervision, and control over them, with the exception of those engaged in the scavenger branch; that he and the sanitary inspectors shall also perform and discharge such other duties as they may be called upon to perform by the board of health or the health officer. The chief sanitary inspector shall have all the power and shall perform all the duties of a sanitary inspector.

**SEC. 14. Sanitary or health inspectors; duties; authority; badges; definition terms; offense to fail or refuse to obey; penalty; bond of those working under scavenger.**—That the sanitary inspectors, in addition to the duties with which they are already charged with performing, and the authority conferred upon them by the ordinances and such other duties as they may be directed to perform by the board of health, or health officer, shall perform and discharge the duties and exercise authority as follows:

(a) They shall have the right and it shall be their duty to enter upon the premises, dwellings, and outhouses of any and all persons in the city of Houston and inspect same and to enter the residences, dwellings, business houses, or places of business, or houses of whatsoever nature where there are water connections to inspect said water connections and premises generally, provided, that application be first made to the owner or occupant of said premises for permission to enter for the inspection of same, and to order the removal of any nuisance or any substance likely to create a nuisance or to be injurious to the public health, and to order any repairs necessary to prevent the waste of water, of any water connections in and upon said premises; said sanitary inspectors or health inspectors shall generally assist in enforcing the health ordinances and the adopted sanitary rules of the city, and shall be vested with all the powers of ordinary policemen or peace officers, with the right and privilege to make arrests for violations of law, and it is made their duty to make said arrests in cases where other police officers of the city of Houston are authorized so to do, and shall perform such other duties as may be required of them by the mayor or city council of the city of Houston.

Upon refusal of any owner or occupant of any premises to allow any sanitary inspector or health inspector to enter same for the purpose of making any inspections, it shall be the duty of said sanitary inspector and health inspector to report said refusal, giving the name and city address of the occupant of said premises to the water commissioner, who is hereby, in addition to other penalties provided by the ordinances, empowered to discontinue the water supply of said owner or occupant so refusing to allow any inspection by a sanitary inspector.

(b) They shall wear a badge of the size and pattern now used by the police officers of said city, on which shall appear the words "sanitary police," together with the number of the badge engraved thereon.

(c) The terms "sanitary inspector," "health inspector" and "sanitary policeman" are used interchangeably and denote and indicate the same officers.

(d) That any person who shall fail or refuse to obey the orders of a sanitary inspector or health inspector, respecting the removal of a nuisance, or the cleaning of premises, or the cutting of weeds and grass, as required in this code of ordinances, after due notice to do so has been given in writing to said person to remove such nuisance, or clean such premises, or cut such weeds and grass, shall, upon the expiration of 24 hours after the time specified in said written notice within which said work shall be done, be subject to a fine of not less than \$1 and not exceeding \$10; said fine to be imposed in the corporation court of the city of Houston, and each day's disobedience of such order or failure to clean such premises, remove the nuisance, or cut the weeds and grass, as may be ordered, shall constitute a separate offense.

(e) That each sanitary inspector working under the city scavenger shall make to him, at the close of each day, a report showing what premises he has inspected that day, and he shall also, each day, report to the city scavenger and pay in to him, all money collected by him for the city; said report shall show the name and address of all persons from whom any money has been collected, and for what purpose the money was collected. That such sanitary inspector so working under the city scavenger shall enter into a bond in the sum of \$500, payable to the city of Houston, executed, conditioned, and payable in all respects as the bond required to be executed by the city scavenger. Said bond shall also provide that if the city scavenger is required to pay to the city of Houston any amount on account of money collected by said inspector, and not paid in to the city, then such city scavenger, his heirs, assigns, or bondsmen shall each have a cause of action for such amount so paid on said bond and against the sureties thereon.

SEC. 15. *City druggist; duties.*—That the city druggist shall be a person skilled in the science of pharmacy and a practical pharmacist and druggist and shall perform and discharge such duties as are now or may be prescribed by the board of health, or health officer, and shall fill the prescriptions of the health officer, and, under the direction, supervision, and control of the health officer, shall have charge of the city dispensary; the keeping of all records and vital statistics, and shall perform the duty of chief clerk to the health officer.

SEC. 16. *Salaries of officers and employees of.*—The monthly salaries of the officers and employees of the health department, beginning with the month of March, 1914, shall be as follows:

Health officer.....	\$300	Quarantine inspector.....	\$115
Assistant health officer.....	125	Superintendent of garbage.....	135
City chemist and bacteriologist.....	150	Chief sanitary inspector.....	125
City scavenger.....	150	Sanitary inspectors.....	100
Milk inspector.....	115	Garbage inspector.....	100
City druggist.....	115	Clerk of the scavenger division.....	100

*Provided*, That hereafter the salaries of the sanitary and garbage inspectors each shall be graduated and paid at the following rate on the following conditions: For the first six months, he shall receive \$75 per month, and if he be able to show a good report for obedience, attention to duty, and efficiency, and can stand the necessary examination prescribed by the civil service commission, he shall then be paid \$82.50 per month, and at the end of a second six months' period, if he is able to show a good report for obedience, attention to duty, and efficiency, and can stand the required examination prescribed by the civil service commission, he shall then be considered a "full-fledged" inspector, and shall thereafter be entitled to be paid the sum of \$100 per month: *Provided*, That the employees now serving the city as garbage and sanitary inspectors will continue to receive during their service the sum of \$100 per month, but they will, nevertheless, be required to stand the examinations prescribed by the civil service commission and be able to show a good report for obedience, attention to duty, and efficiency required above.

**SEC. 17. Compensation of other employees.**—That the compensation of all other employees of the health department shall be such as may be fixed by the mayor and city council from time to time.

**SEC. 18. Bonds may be required of other officers and employees of.**—That the health officer and mayor may require any officer or employee of the health department handling, receiving, or collecting moneys belonging to the city of Houston to execute and deliver to the city of Houston a bond in such sum as they may deem proper and sufficient, which bond shall be payable to the city of Houston, with at least three good and sufficient sureties or a surety company authorized to do business in Texas, to be approved by the mayor and to contain the same conditions and provisions as are provided for in the case of the city scavenger, and further conditioned, giving the city scavenger or other officer responsible for the acts of such officer or employee the same right of suit as provided in case of sanitary inspectors working under the city scavenger.

**SEC. 19. Payment of fees and money received or collected.**—That all fees or moneys collected or received by officers and employees of the health department or coming into their possession belonging to the city of Houston shall be paid over to the assessor and collector of taxes daily, and such daily and monthly reports made as are required by the ordinances.

**SEC. 20. Sanitary or health code to control this article.**—That all ordinances and parts of ordinances in conflict herewith be, and the same are hereby, repealed, but it is not intended hereby to, in any manner, repeal or affect that certain ordinance establishing a sanitary health code passed by the city council on January 26, 1914, but such ordinance is to remain in full force and effect, and this ordinance is only for the purpose of creating and organizing a health department, and in case of any conflict between it and said health code, the latter shall control and govern.

#### **Board of Health—Organization, Powers, and Duties—Health Officer—Chemist and Bacteriologist. (Ord. Jan. 26, 1914.)**

**ART. 2. SEC. 20A. Creation of, composition, appointment, terms of office, health officer, ex officio member.**—There is hereby established for the city of Houston, Harris County, Tex., a board of health to consist of five representative physicians and one layman. No salary or other compensation shall be paid to members of said board. Four members shall constitute a quorum, but a less number may adjourn from time to time, such adjourned meetings to have the same character as the original meeting would have had had it been held. Members of the said board shall be appointed by the mayor, subject to confirmation by the city commissioners, and shall hold office for the term of two years: *Provided*, That after the passage of this ordinance three members shall be appointed for one year and the other three for two years, as vacancies occur. Vacancies occurring in the board shall be filled by the mayor for the unexpired term. The city health officer shall be ex officio a member of the board of health with the same privileges as other members.

**SEC. 21. Meetings; power to make orders at; measures preventing spread of contagious, etc., diseases; no power to create liability against city; health officer to enforce orders.**—Said board shall hold at least one regular meeting each month, at such time and place as they may decide, and shall from time to time hold such special meetings as they may deem necessary, and shall have power at such meetings to make all orders as they deem necessary for the maintenance of the public health, for cleansing or discontinuance of all groceries, breweries, cellars, factories, tanneries, stables, barns, privies, vaults, cesspools, sewers, wells, slaughterhouses, butcher shops, rendering and boiling establishments, pig pens, and all other nauseous or offensive buildings and structures, and the suppression and abatement of all nuisances, whether upon public grounds or private premises, affecting or endangering, in the opinion of the said board, the public health; take all necessary measures to prevent the spread of contagious diseases by

requiring any and all persons to be vaccinated, by the fumigation or destruction of infected buildings, and by the destruction of infected bedding or clothing.

Provided, that no debt or liability against the city shall be incurred by said board of health unless the same be expressly authorized by the mayor and commissioners, by ordinance duly passed for that purpose. All orders of said board shall be executed and enforced by the city health officer in person, or in his name, or under his authority, by any patrolman or policeman of the city, or by the sanitary inspectors.

SEC. 22. *City secretary or deputy to keep records, etc.; board to elect president and vice president.*—The city secretary, or his deputy, shall be secretary of the board of health, and shall keep a full record of all acts, orders, resolutions, rules, regulations, and proceedings of said board. The board shall at its first meeting, after the 1st of May in each year, elect from their number a president and vice president, who shall hold office for the period of one year, or until their successors are elected and installed.

SEC. 23. *Committee on public charities; rules and regulations of; monthly reports by institutions rendering services.*—The president and two members of said board of health shall act as a committee of public charities, and said committee shall prescribe such rules and regulations as they may deem proper, subject to the approval of the mayor and commissioners, concerning the admission and care of patients to be maintained by city appropriations in the charitable institutions of the city. And said committee shall require of all institutions receiving city appropriations a monthly report setting out the services rendered to said city patients.

SEC. 24. *Orders of, executed by health officer and assistants.*—The health officer of the city and his assistants shall execute the orders of the board of health, and the health officer shall be ex officio, a member of the board.

SEC. 25. *Shall make orders and regulations for government of.*—The board of health shall make such orders and regulations as it may deem necessary for its own government.

SEC. 26. *President shall appoint standing committees.*—The president shall appoint such standing committees as the needs may require.

SEC. 27. *Specific duties of.*—The specific duties of the board of health shall be:

- (a) The prevention and abatement or suppression of nuisances.
- (b) Supervision of the collection and disposal of garbage and rubbish, and shall enforce the city ordinances concerning the collection and disposal of night soil.
- (c) Control of contagious and communicable diseases.
- (d) Preservation and classification of vital statistics.
- (e) The supervision of the water and food supply of the city.

ART. 3. *Health officer.*—SEC. 28. *Executive officer, etc., duties.*—Subject to the approval of the city council and board of health, the health officer as executive officer of the board shall enforce the rules and regulations of the local and State boards of health. He shall supervise the work in each branch of the department to the end of securing the best public service. He shall personally visit the market house and private markets, stock yards, slaughterhouses, restaurants, bakeries, etc., to keep in touch with the actual conditions that he may better direct the work of the inspectors. He shall exact a daily report from each official of all the work done outside the office. He shall make special investigations as to the general sanitary conditions, and he shall report to the mayor and the board of health in July and January upon such investigations, the same to include housing of the poor, offensive trades, pollutions of streams, and like matters of sanitary interest. He shall institute prosecutions under the direction of the city attorney for violation of any provision of the sanitary code of the State of Texas or of the city of Houston.

SEC. 29. *Supervisor of laboratory and office work.*—He shall have supervision of the laboratory and office work.

SEC. 30. *Harris County Tuberculosis Association, etc.*—He shall obtain and keep on file monthly reports from the Harris County Tuberculosis Association, and all other

charitable institutions within the city, from the crematory contractor or operator, from the supervisor of hygiene of schools, and he shall embody the material portions of all reports in his monthly report to the board.

SEC. 31. *Dairies, etc., power to grant or refuse permits for.*—He shall, subject to the approval of the city council, grant or refuse to grant permits to establish or conduct dairies, restaurants, bakeries, meat shops, or any other business involving the preparation or sale of food.

SEC. 32. *Nuisances; duties and powers with reference thereto.*—He shall, whenever it is ascertained that any nuisance or other condition detrimental to the public health exists on any premises, or in any building or other place, serve written notice upon the owner or occupant or other person in charge of such premises, building, or other place, to abate or remove said nuisance or condition within a reasonable time, such time to be stated in said notice, and upon refusal or neglect to obey orders he shall take such steps as shall be provided in this code to secure the enforcement of the order.

SEC. 33. *Permits; shall revoke, when.*—The health officer shall, at the direction of the board of health or the mayor, revoke any permit from any person who has failed or refused to comply with the requirements of the provisions of the sections relating to the performance of the act for which the permit was issued.

SEC. 34. *Record inspections and analyses.*—The health officer shall keep and file suitable records of all inspections and analyses provided for in this chapter.

SEC. 35. *Hospitals, etc., shall visit; duties with reference thereto.*—The health officer shall visit all the public wards of the hospitals in the city at least once in each month, and oftener if necessary, and shall note in each: Overcrowding, food, cleanliness, ventilation, and attention, and he shall record, report, and file such notes. He shall visit the eruptive (isolation) hospital at least once in each month, or as often as shall be necessary, and he shall record, report, and file his notes of each visit.

SEC. 36. *Reports to board of health.*—The health officer shall make monthly report to the board of health of all work done by the health department.

SEC. 37. *General duties.*—The health officer shall perform all other acts necessary to the proper enforcement of the several sections of this chapter.

SEC. 38. *Vaccine, antitoxins, and serums; vaccination and administration.*—He shall keep on hand at all times a sufficient quantity of good vaccine matter and vaccinate all individuals presenting themselves for the purpose, and also keep on hand a sufficient supply of antitoxins and serums as have proven efficacious in treatment as his judgment or the judgment of the board of health shall determine to be advisable, and shall administer the same when necessary free of charge. All such vaccines, antitoxins, and serums to be purchased at the cost of the city.

ART. 4. *City chemist and bacteriologist, etc.*—SEC. 39. *The city chemist and bacteriologist.*—(a) The city chemist and bacteriologist shall make such bacteriological and chemical examinations as may be directed by the mayor, city health officer, or city board of health. These shall include examinations for diphtheria, typhoid fever, tuberculosis, meningitis, and such other contagious diseases, and shall examine the water supply, milk and ice cream, meat, fish, and other foods of the city as directed.

(b) He shall be furnished with a well-equipped laboratory at the cost of the city.

SEC. 40. *The Harris County Tuberculosis Society.*—The Harris County Tuberculosis Society shall make monthly reports to the health officer of work done within the city.

SEC. 41. *The supervisor of hygiene of schools.*—The supervisor of hygiene of schools shall make monthly reports to the health officer.

#### Nuisances. (Ord. Jan. 26, 1914.)

ART. 5. SEC. 42. *General definition.*—Whatever is dangerous to human health, whatever renders the ground, the water, the air, or food a hazard or an injury to human health is hereby declared to be a nuisance, and the following specific acts, conditions, and things are, each and all of them, hereby prohibited and made unlawful.

SEC. 43. *Specific nuisances; foul, decaying, putrescent substances, etc.; overflow foul liquids, escape of gases.*—The deposit or accumulation of any foul, decaying, or putrescent substance or other offensive matter in or upon any lot, street, or highway, or in or upon any public or private place; the overflow of any foul liquids or the escape of any gases to such an extent that the same, or any one of them, shall become or be likely to become hazardous to health, or that the same shall by reason of offensive odors become a source of discomfort to persons living or passing in the vicinity thereof.

SEC. 44. *Polluted wells, etc.*—A polluted well, cistern, spring, or stream, or the pollution of any body of water used for drinking purposes.

SEC. 45. *Privy vaults, etc.*—The maintenance of any privy, vault, or cesspool, except as provided in this chapter.

SEC. 46. *Buildings or rooms; uncleanness or crowding; cubic feet of air.*—Keeping any building or room in such a state of uncleanness, or the crowding of persons in any building or room in such a manner as to endanger the health of the persons dwelling therein, or so that there shall be less than 400 cubic feet of air to each adult, and 150 cubic feet of air to each child under 12 years of age occupying such building or room.

SEC. 47. *Cellars as sleeping rooms.*—Allowing cellars to be used as sleeping rooms.

SEC. 48. *Buildings, etc., as dwellings, not lighted, etc., by one window, not supplied with pure water.*—A building or a portion of a building occupied as a dwelling which is not lighted and ventilated by means of at least one window in each room, said window opening to the outer air, which is not provided with a plentiful supply of pure water.

SEC. 49. *Accumulation of manure.*—The accumulation of manure unless it be in a properly constructed pit or receptacle.

SEC. 50. *Accumulation water breeding mosquitoes.*—The accumulation of water in which mosquito larvæ breed.

SEC. 51. *Roller towels in public places used by more than one.*—The maintenance, in a public place, of a roller towel for the use of more than one person.

SEC. 52. *Slopping, etc., cattle, etc., on distillery swill, in sanitary limits, unless.*—The slopping or feeding of cattle or other animals on distillery swill within the sanitary limits of the city, unless the inclosure wherein such slopping or feeding is done be provided with means for preventing and removing the insanitary conditions associated with such slopping or feeding.

SEC. 53. *Penalties.*—Any person, firm, corporation or agent who causes, suffers or permits any nuisance as defined in the next preceding 10 sections shall be deemed guilty of an offense, and shall, upon conviction be fined not less than \$10 nor more than \$100, and each day's continuance of any such nuisance or condition shall be a separate offense.

#### Stables—Care of. Manure—Care and Disposal. (Ord. Jan. 26, 1914.)

ART. 6. SEC. 63. *Screened receptacle for, to be maintained, etc., into which manure must be placed.*—Every person, firm, corporation, or agent owning or leasing any stable or other building where any horse, mule or any cattle are kept, shall maintain a substantial and sufficient receptacle which must be so constructed and kept as to protect the contents from rain, and to be so screened as to prevent access to flies, and all manure from such horse, mule or cattle must be placed in such receptacle.

SEC. 64. *Removal manure from where more than six head, how often, etc.; manure shall not be thrown in alley, etc.*—All persons owning or leasing any stable where more than six head of horses, mules or cattle are kept shall have all manure from such animals removed from their premises twice in each week, from the 1st of May to the 30th of September, and at no time shall the same be allowed to accumulate in such manner

as to be a nuisance. In no event or circumstance shall any manure be thrown or deposited in any alley, street, or public place, or suffered to remain in such places.

SEC. 65. *Shall be kept in clean condition.*—Every owner or lessee of any stable shall at all times keep or cause to be kept the building and premises in a clean and sanitary condition.

SEC. 66. *In hauling manure shall not allow to litter streets.*—No person hauling manure through the streets shall permit the same to litter the streets.

SEC. 67. *Penalty.*—Any person, firm, corporation, or agent violating any part of the next four preceding sections shall, upon conviction, be fined not less than \$10 nor more than \$100, and each day's continuance of any such nuisance or condition shall be a separate offense.

#### Barber Shops—Sanitary Regulation. (Ord. Jan. 26, 1914.)

ART. 7. SEC. 68. *Regulations governing; copy of this article to be posted in.*—Every barber's shop within the city of Houston shall be open to this board for inspection at any time, and the following rules shall be observed therein:

(a) All barber shops, together with all furniture, shall be kept in a clean and sanitary condition.

(b) Mugs, razors, scissors, clipping machines, pincers, needles, and other instruments shall be sterilized in such manner as may be required by the health officer, after each separate use. Combs, brushes, and shaving brushes shall be sterilized as may be required by the health officer. All hot towels used in shaving shall be first thoroughly sterilized before using.

(c) Clean towels shall be used for each person.

(d) All material used to stop the flow of blood shall be applied on a clean towel or other clean cloth.

(e) The use of powder puffs and sponges is prohibited, except that a sponge or puff owned by a customer may be used on him.

(f) Every barber shall thoroughly cleanse his hands immediately before serving each customer.

(g) Every barber's shop shall be well ventilated and provided with hot and cold water.

(h) No barber's shop shall be used as a sleeping room. No person shall be employed or shall operate as a barber who has any communicable disease.

(i) A copy of this article shall be posted in plain view in every barber's shop.

SEC. 69. *Penalty.*—Any person, firm, corporation, or agent violating any part of the next preceding section, or who shall suffer, cause, or permit the happening or occurring of any of the things mentioned in said next preceding section shall be guilty of an offense and shall, upon conviction, be fined not less than \$10 nor more than \$100, and each day's continuance of any such nuisance or condition mentioned herein shall be a separate offense.

#### Garbage and Refuse—Care and Disposal. (Ord. Jan. 26, 1914.)

ART. 8. SEC. 70. *Portable vessels for reception.*—It shall be the duty of every resident, householder, tenant, hotel keeper, boarding-house keeper, retail dealer, or agent of such persons and all parties or persons occupying dwellings within the city of Houston to provide, or cause to be provided, and at all times to keep or cause to be kept, portable vessels or tanks for holding garbage, said vessels or tanks to be perfectly water-tight, and provided with handles on the outside and a closely fitting cover, which cover shall not be removed except when absolutely necessary. Said vessels or tanks shall be kept in the rear of the premises, or in passageways most accessible to the collector, and shall be of capacity of not more than two bushels. All such vessels, where



not easily accessible, shall be promptly delivered to the collector when called for, and shall be returned by him to their respective places without unnecessary delay, and no person shall in any manner interfere with said vessels or tanks, or the contents thereof, except those authorized for such duty.

SEC. 71. *What shall not be deposited in vessels; when collector may refuse to take.*—No resident, householder, tenant, hotel keeper, boarding-house keeper, or agent of such person, or any other persons shall deposit in the garbage vessel or tank, any ashes, tin from roofs, old gutters, scrap iron, dead yard fowls, dogs, cats, or other animals, or night soil, and the collector shall refuse to collect such garbage or dead animals until all such refuse matter has been removed therefrom, and the collector shall report at once to the health officer all such offenses.

SEC. 72. *Accumulation manure, etc., prohibited.*—No manure or putrescible matter of any kind shall be permitted to accumulate in such a way as to become offensive or objectionable.

SEC. 73. *Rubbish to be removed daily, when.*—Rubbish shall be removed from all business premises every day, and as often as deemed necessary by health officer in residence district.

SEC. 74. *Garbage, etc., not to be deposited, etc., on streets; violation by owner.*—No garbage, ashes, or rubbish shall be thrown or deposited in any street or alley, and the presence of such upon any street or alley shall be held to constitute a violation of this section on the part of the owner or occupant of the property upon whose half of the street or alley such garbage, ashes, or rubbish is permitted to lie for 24 hours.

SEC. 75. *Penalty.*—And every person, firm, corporation, or agent failing to perform the duties required of him, or to comply with the provisions of the next five preceding sections shall for every offense, upon conviction, be subject to a fine of not less than \$5 nor more than \$50, and each day's continuance of any such nuisance or condition shall be a separate offense.

#### Swimming Pools and Natatoriums—Construction and Care—Regulation by Board of Health. (Ord. Jan. 26, 1914.)

ART. 9. SEC. 81. *Regulation, etc., this article to be complied with; duty board of health to enforce.*—It shall be, and it is hereby declared unlawful for any person, firm, corporation, or agent to conduct, manage, or maintain any natatorium, swimming pool, or tank in the city of Houston, or for any person to bathe in, or use any such natatorium, swimming pool, or tank without complying with all the requirements, rules, and regulations in this article contained for the protection and safety of the health and lives of the patrons of such natatoriums, pools, or tanks. The board of health of the city of Houston, or their duly authorized agents, are hereby charged with the enforcement of the provisions of this article.

SEC. 82. *How often cleaned and emptied.*—All pools or tanks shall be thoroughly cleansed at least once each week in a manner and by the use of such disinfecting agents or cleansing materials as may be required by the board of health, and all such pools or tanks shall be emptied and the water therein completely changed twice each week.

SEC. 83. *Sides and bottoms to be white.*—The sides and bottoms of all pools or tanks shall be white, so that objects may be clearly seen, so far as possible in all portions of the pool or tank.

SEC. 84. *Intoxicated persons, and those afflicted with certain diseases, not to be permitted to use.*—No intoxicated person, or one afflicted with tuberculosis, abscesses, venereal or other infectious or contagious disease, shall use or be permitted to use any swimming pool or tank.

SEC. 85. *Persons before entering to thoroughly cleanse the body, etc.*—All persons before entering any public swimming pool or tank, shall be required to thoroughly

cleanse the body through the use of the shower or other similar device maintained and used for such purpose.

SEC. 86. *Changes in construction, how and when made.*—That all the provisions of this article requiring changes or alterations in construction in natatoriums, swimming pools, or tanks, and the installation of filters, shall be carried out as required by the board of health, but all such changes, alterations, and installations must be made and fully completed and installed within six months from the time of taking effect of this article.

SEC. 87. *Hereafter plans to be approved by board of health.*—That hereafter, before the construction of any natatorium, swimming pool, or tank, the plans and specifications for such structure shall be submitted to, and approved by, the board of health before a permit therefor shall be issued by the building department.

SEC. 88. *Smoking and chewing tobacco forbidden around tanks; spitting, etc., in water prohibited; signs to be posted.*—No patron, attendant, instructor, or other person while bathing, or while engaged or working in or about any pool or tank shall smoke or chew tobacco in any form, and it shall be unlawful for any person to expectorate in the water of any tank or pool, or to blow the nose therein, or in any other place than in cuspidors provided for such purpose, and conspicuous signs shall be posted in all such natatoriums, pools, or tanks calling attention to the fact that spitting is prohibited except in cuspidors and showing the places where such cuspidors are located.

SEC. 89. *Copy of this article to be posted.*—That a copy of this article shall be posted and kept in a conspicuous place in all natatoriums, swimming pools and tanks for the guidance and information of the public and patrons of such places.

SEC. 90. *Penalty.*—That any person, firm, corporation, or agent violating or failing to comply with any of the provisions of this article shall be deemed guilty of a misdemeanor, and upon conviction, shall be fined in any sum not less than \$10 nor more than \$100.

#### Street Cars—Cleaning. (Ord. Jan. 26, 1914.)

ART. 10. SEC. 91. *Shall be cleaned daily.*—All city and interurban cars shall be thoroughly cleaned once each day, and shall be kept in a sanitary condition.

SEC. 92. *Penalty.*—Any person, firm, corporation, or agent, violating the next preceding section shall, upon conviction, be fined in any sum not less than \$10 nor more than \$100, and each day's continuance of any such nuisance or condition shall be a separate offense.

#### Sewers—Connection with Required. (Ord. Jan. 26, 1914.)

ART. 11. SEC. 93. *Connection with sewers by buildings, etc., within 300 feet; penalty.*—Every building situate on any street in the city of Houston, where there is a public sanitary sewer supplied with water, shall be connected with said sewer in accordance with the ordinances of the city governing such connections, so that all sewage from the premises shall empty into the sewer, provided that such building is used, or intended to be used, as a dwelling, or in which persons are employed, or intended to be employed, in any manufacture, trade or business. It is hereby made the duty of each owner of any such building to cause the same to be connected with any public sewer. The property owners who own real property within the distance of 300 feet of any public main or lateral sewer shall, upon notice in writing to do so from the city health officer, make proper and permanent sewer connections with said sewers, and remove all surface privies and cesspools; and any person owning such real property, who, after being given reasonable notice by order of the city health officer, shall fail to connect with said sewers, or remove or fill such privies or cesspools, shall be punished by a fine of not less than \$5 nor more than \$50, and each day such failure shall continue shall constitute a separate offense.

**Privies—Location, Care, Inspection, and Removal of Contents. (Ord. Jan. 26, 1914.)**

ART. 12. SEC. 94. *Where no sewer connection, must be privies with water-tight boxes above ground.*—All buildings not connected with sewers, used as residences and occupied by one family, shall be provided with a privy, and all parties having a privy or closet on their premises are required to have suitable water-tight boxes or receptacles overground to receive the night soil or human excrement.

SEC. 95. *Privies, distance from street and party lines.*—No privy or closet shall be constructed within 20 feet of any street, except it be an alley, or within 3 feet of any party line, or within 25 feet of any window or door of a residence.

SEC. 96. *One privy for each family; lodging houses, etc., one for each 10 persons; capacity of boxes.*—All buildings not connected with sewers, used as tenement or apartment houses, and occupied by more than one family, shall be provided with one privy or receptacle to receive the night soil or human excrement, for each family. All buildings not connected with sewer, and used as lodging houses, hotels, or boarding houses, and all such buildings where persons work or are employed, shall be provided with not less than one seat and box or receptacle for each 10 persons usually employed or lodged in such building. All closet boxes or receptacles shall have a holding capacity of not less than 4 cubic feet, preferably 1 foot deep, 1 foot wide, and 4 feet long.

SEC. 97. *Penalty.*—Any person violating either of the next three preceding sections shall be fined in any sum not less than \$1 nor more than \$50.

SEC. 98. *Old vaults, etc., not to be connected with sewer; filling of vaults.*—No old vault, cesspool, or septic tank shall be connected with a sewer. Vaults existing on premises abutting city sewer, and provided with city water, shall be cleaned to within at least 4 feet from the surface and filled with earth and ashes or lime and its use discontinued.

SEC. 99. *City scavenger, etc., only to remove night soil, etc.; penalty.*—It shall be unlawful for any person other than the city scavenger, or those in his employ, to engage in the removal of night soil or pumping or otherwise cleaning any vault, cesspool or septic tank in the city, and any person so offending shall be fined not less than \$10 nor more than \$50 for each offense, to be recovered before the corporation court.

SEC. 100. *Fees for work; notice to pay fees.*—That said city scavenger shall be allowed to charge the following rates and no more: For one barrel, \$1; for any fraction of a barrel, 75 cents; for any fraction of a barrel over one barrel, 75 cents. A barrel, as used in this article, is defined to contain 30 gallons. Said fees to be payable in advance and each sanitary inspector wearing the badge of his office is hereby authorized at the time of the inspection and condemnation of a closet or privy to determine the fee therefor and collect the same, issue a receipt therefor, and in case an occupant or owner is absent or not prepared to pay said fee at that time the said sanitary inspector shall deliver to said owner or occupant, or leave on said premises, a notice to such owner or occupant to call at the city scavenger's office within five days from said date and pay the fee named therein in advance.

SEC. 101. *Fees for pumping cesspools, etc.*—The charges for pumping cesspools and septic tanks shall be 50 cents per barrel of 30 gallons for first 10 barrels, and 25 cents per barrel for each barrel thereafter at any one pumping out.

SEC. 102. *Penalty to be collected for failure to pay.*—If the above charges are not paid to the inspector or to the city scavenger at his office within five days as above provided, or to the wagons when they come, a penalty of 25 cents will thereafter be collected for each barrel or fraction of a barrel as shown on inspector's list.

SEC. 103. *Penalty; city scavenger may look wholly to landlord.*—Any person who refuses or fails to pay the city scavenger for the removal of night soil the rate fixed by law for such removal shall, upon conviction, be fined not less than \$1 nor more than \$100. The city scavenger, in the collection of the above fees for the removal of night soil, shall have the right to look wholly to the landlord and not to the tenant, if he sees fit.

SEC. 104. *City scavenger shall notify parties to clean privies, etc.; penalty; notice by health officer, etc.; sufficiency.*—It shall be the duty of the city scavenger whenever in his judgment it may be necessary to notify parties whose closets and privies, vaults, cesspools, and septic tanks need cleaning to have the same cleaned within a certain time, using his discretion as to the limit, and any person who fails or refuses to have same cleaned within 24 hours by the scavenger, or those in his employ, after the expiration of the time given by the city scavenger in his notice, shall be deemed guilty of committing a nuisance and shall be fined not less than \$1 nor more than \$50; and each day that the closet or privy, vaults, cesspools, and septic tanks shall remain uncleaned after the expiration of the time specified in the notice within which to clean shall be deemed a separate offense and punishable as such; said fines to be recovered before the corporation court.

The above notice to clean may be given by the health officer, or by the health inspector acting for the city scavenger, and it is sufficient either that the notice be left at the residence of the person whose closet is to be cleaned, or delivered to him in person, or mailed to his last known residence.

SEC. 105. *Sanitary inspectors.*—The scavenger department shall be provided with such number of sanitary inspectors as the mayor or city commissioners may from time to time determine is necessary, whose appointment shall be approved by the mayor or city commissioners.

SEC. 106. *Authority of board of health, etc., to enter and examine cellars, etc.; recommendations as to abatement, etc., of nuisances.*—The board of health, or any member thereof, the health officer, or any health inspector, the chief of police, or his subordinates, shall have authority to enter into and examine at any time cellars, cesspools, privies and drains, and all buildings, lots, and places of all descriptions within the city for the purpose of ascertaining the condition thereof, so far as public health may be affected thereby. The board of health shall recommend to the city health officer, and when necessary to the mayor and commissioners, the abatement, removal, or destruction of all nuisances in any building or on such premises.

N. B.—For penalty, see section 198.

### Physicians, Undertakers, and Midwives—Registration Required. (Ord. Jan. 26, 1914.)

ART. 13. SEC. 111. *Shall register name, etc., with health officer; change of address.*—Every practicing physician, undertaker, and midwife shall register his name, address, and the nature of his duties with the health officer, and shall notify the health officer of any change of address, and the health officer shall send to each a copy of the State law on vital statistics, and a copy of article 14 of this chapter.

SEC. 112. *Penalty.*—Any person violating this article shall, upon conviction, be fined not less than \$10 nor more than \$100; and each day's continuance of any such violation shall be a separate offense.

### Communicable Diseases—Notification of Cases—Quarantine—Placarding—Burial—Vaccination—Hospitalization—School Attendance. (Ord. Jan. 26, 1914.)

ART. 14. SEC. 113. *Physicians shall report certain diseases; physicians and midwives shall report infants whose eyes are affected, etc.*—Every physician shall report in writing to the board of health the name of every patient he (or she) may have in the city of Houston with cholera, smallpox, diphtheria, typhus, typhoid or scarlet fever, measles, tuberculosis in any form, varicella, whooping cough, epidemic dysentery, trachoma, ophthalmia-neonatorum, epidemic cerebrospinal meningitis, pellagra, infantile paralysis, hookworm disease, rabies, tetanus, pneumonia or any other communicable disease that may be hereafter declared and published by the board of health to be dangerous to the public health, together with the precise locality where such patient

may be found, immediately after such physician shall have ascertained the nature of such disease.

If any physician or midwife knows, or has reason to believe, that one or both eyes of an infant whom or whose mother he (or she) is called to visit, or treat, has become inflamed, swollen or red, and shows an unnatural discharge within two weeks after the birth of such infant, he (or she) shall, within six hours, give notice thereof to the health officer, or in his absence to the president of the board of health.

SEC. 114. *Placards to be posted by board of health where certain diseases are present.*—It shall be the duty of the board of health to cause a suitable placard to be displayed from the front of any premises where any case of measles, smallpox, scarlet fever, diphtheria, chicken pox, epidemic cerebro-spinal meningitis or whooping cough is present. It shall be unlawful for any person to remove such placard, when so placed, without the permission of the board of health, and it shall be the duty of said board, in conjunction with the attending physician, to issue necessary instructions for the isolation of the patient.

SEC. 115. *Bodies of persons dying of contagious diseases, etc., buried within 24 hours; funeral; persons present.*—Any bodies of persons dying of contagious diseases, the bodies of persons who have died of smallpox, cholera, plague, yellow fever, typhus, diphtheria, scarlet fever, or other dangerous contagious diseases shall be buried within 24 hours after death (except by special permission of the board of health) and no public or church funeral shall be held in connection with the burial of persons who have died with any of the above-named diseases, and the body of any such person shall not be taken into any church, chapel, or any public place, and only the adult members of the family and such other persons as are actually necessary shall be at the burial of such body.

SEC. 116. *Regulations, for management of, in hospitals; isolation of persons.*—The board of health shall have control of the hospitals for contagious diseases and shall adopt rules and regulations for the proper management of same. Said board shall have authority to order and secure the removal and isolation of any person afflicted with a contagious disease.

SEC. 117. *Guards of premises where smallpox patients; penalty; notice of cases of smallpox.*—Any person or persons having smallpox on his or her premises and unwilling to have such person or persons so afflicted moved to the smallpox hospital, shall be required to keep a guard on such premises at his or her expense, to prevent the spread of the disease, and failure to comply with the provisions of this section shall subject the offender to a fine of not less than \$10 nor more than \$100 for each day he or she fails to comply, and any owner or other person having control of any house where there shall be one or more cases of smallpox, and who, knowing the same, shall fail to give notice thereof to the board of health within six hours after discovery, shall, upon conviction, be subject to the penalties of this section.

SEC. 118. *Vaccinations; supervisor of hygiene of schools shall examine children and prevent those not vaccinated from entering; notice to parents, etc.*—No person shall fail or refuse to be vaccinated or permit any minor, under his or her control, to be vaccinated, when visited for that purpose by the physician employed by the city, unless such person or minor has already been effectually vaccinated at the time of said visit, or is vaccinated by some competent physician within 24 hours thereafter. The supervisor of hygiene of the city schools shall examine each pupil not submitting satisfactory evidence of vaccination, or not submitting evidence from a physician that vaccination is dangerous to the health of the child, and prevent the entrance of anyone who has no vaccine mark, and notify the parent or guardian of said pupil that vaccination is an indispensable prerequisite to admission to the public schools of the city.

SEC. 119. *Medical examination may be ordered by board; interference with, etc., with examination.*—Whenever it shall be deemed necessary by the board of health to establish the true character of any disease which is suspected to be communicable;

a medical examination of the person or persons affected by such disease may be ordered by said board. Any person or persons interfering with or refusing to permit such examination shall be guilty of violating this section.

SEC. 120. *Duty of principals, teachers, etc., not to permit attendance of children affected, etc.; certificate of supervisor of hygiene.*—No principal, teacher, or superintendent of any school shall knowingly permit any child sick from any disease mentioned in section 113, or from any other communicable disease, or any child residing in any house in which whooping cough, chicken pox, infantile paralysis, scarlet fever, diphtheria, smallpox, measles, or epidemic cerebrospinal meningitis shall exist to attend any school until such time as the supervisor of hygiene of public schools certifies to such teacher, principal, or superintendent that the said child may attend school without danger of communicating the disease to others.

SEC. 121. *Persons affected shall not take books, etc., from libraries; board of health to inform librarians.*—No person from any dwelling wherein a disease dangerous to public health exists shall take any book or magazine to or from any circulating library. The board of health shall inform the librarian of all cases of said diseases, and until a written permit is given he (or she) shall allow neither books nor magazines to be taken or returned from a dwelling where such cases exist.

SEC. 122. *Persons with communicable diseases to be isolated; buildings, etc., to be disinfected; premises with diphtheria, when disinfected.*—Any person in the city of Houston having communicable disease shall be isolated, as the board of health may direct, and all buildings, clothing, property, premises, and vehicles which may be infected by emanations from such persons shall be disinfected, as the board of health may direct. No premises will be disinfected after diphtheria until at least two negative cultures, taken on successive days, have been obtained from the throat of the patient, or from the nose if a case of nasal diphtheria.

SEC. 123. *Persons shall not knowingly bring infected persons into city without permit.*—No person shall knowingly bring or cause to be brought into the city of Houston any person infected with any communicable disease except upon a permit granted by the board of health.

SEC. 124. *After placarded, who may enter, smallpox, etc.*—Whenever a placard shall be placed, showing the presence of smallpox, scarlet fever, or diphtheria, no person or persons, except the medical attendant and nurses, shall either enter therein or depart therefrom without permission of the board of health.

SEC. 125. *When tuberculosis patient moves, physician shall notify board of health.*—Whenever a person having tuberculosis moves out of a house or an apartment, the attending physician, if there be one, or the active head of the family, shall notify this board within 24 hours, and both the above-mentioned persons shall be held responsible for a violation of this section.

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SEC. 128. *Penalty.*—Any person violating any provision of this article shall, upon conviction, be fined not less than \$10 nor more than \$100, and each day's continuance of any such nuisance or condition shall be a separate offense.

SEC. 129. *Physicians shall report; penalty.*—Every physician in the city shall report to the health officer, within three hours after the diagnosis of the same, the appearance in his practice of any pestilential, infectious, or contagious disease, and in case of any death from any cause must report the same within six hours to the health officer, with the cause thereof; and any physician offending against the provisions of this section must be fined the sum of \$50. (Code 1904, Art. 390.)

SEC. 130. *Keepers of hotels, etc., must report.*—All hotel, boarding-house, and lodging-house keepers, either public or private, must give immediate information to the health officer of all cases of contagious, pestilential, or infectious disease which may occur on their premises, and no person afflicted with any such disease shall be removed from

one place to another without the permission of the health officer, who must report all such cases to the board of health. Any person violating the provisions of this section must, upon conviction, be fined not less than \$5 nor more than \$50. (Id., Art. 391.)

SEC. 131. *Duty of persons infected or exposed to infection.*—It shall be the duty of all persons infected with any disease of a pestilential, contagious, or infectious character, or who from exposure to contagion from such diseases may be liable to endanger others who may come in contact with them, to strictly observe such commands and injunctions as may be given them by the city health officer, or the health officer of the State, to prevent the spread of such contagious diseases, and it shall be lawful for such health officers, or either of them, to command any person thus infected or exposed to infection to remain within designated premises for such length of time as such health officer may deem necessary.

SEC. 132. *Penalty.*—Any person violating any of the provisions of the next preceding section, or who shall resist or aid any person in resisting the enforcement of said section, shall be fined in the sum of \$100. (Id., Art. 327.)

### Domestic Animals—Communicable Disease—Notification of Cases. (Ord. Jan. 26, 1914.)

ART. 14. SEC. 126. *Veterinarians to report to board of health certain communicable diseases, etc.; contents.*—Every veterinarian or other person who is called to examine or professionally attend any animal within the city of Houston, having glanders or farcy, rabies, tuberculosis, or other communicable disease shall, within twenty-four hours thereafter, report in writing to the board of health the following facts:

- (a) A statement of the location of such diseased animal.
- (b) The name and address of the owner thereof.
- (c) The type and character of the disease.

### Rabies—Prevention of Spread of. (Ord. Jan. 26, 1914.)

ART. 14. SEC. 127. *Animals with hydrophobia confined; diagnosis; bodies of; disposition.*—Every animal which is mad, or which has hydrophobia, or which shows symptoms thereof, shall, if possible, be at once securely confined until the diagnosis is accurately made. Every animal that has been exposed to such disease shall be at once confined in some secure place for such a length of time as to show that such exposure has not given such animal said disease, and the body of any animal that has died of such disease, or which, being suspected to have such disease, has been killed, shall not be disposed of except as directed by the board of health.

### Milk and Milk Products.—Production, Care, and Sale. (Ord. Jan. 26, 1914.)

ART. 15. SEC. 133. *Certain shall not be brought into, etc., in city nor kept, or offered for sale, etc., except.*—No milk, cream, ice cream, or any substitute therefor, which is unwholesome, or which has been watered, adulterated, reduced, or changed in any respect by the addition of water or other substance, or by any removal of cream or butter fat, shall be brought into, held, kept, or offered for sale, at any place in the city of Houston, nor shall any person keep, have, or offer for sale in the said city any such milk, cream, ice cream, or substitute therefor, except as provided for in this chapter.

SEC. 134. *Meaning "adulterated" and "unwholesome."*—The terms "adulterated" and "unwholesome," as used in this ordinance, shall mean: First, milk containing more than 87.50 per cent of water; second, milk containing less than 12 per cent of milk solids; third, milk containing less than 3.25 per cent of fats, or having a specific gravity of less than 1.029; fourth, milk which, notwithstanding these minimum standards, is not up to the standard produced by the complete milking of the cow or cows in

the dairyman's herd; fifth, milk drawn from animals within 15 days before parturition and 7 days after parturition; sixth, milk drawn from animals fed upon wet distillery or brewery waste; seventh, milk from which any part of the cream has been removed without so labeling; eighth, milk which has been adulterated with water or any other fluid or to which has been added or into which has been introduced any foreign substance whatever, except modified milk for infants or invalids, and which shall be labeled to show the nature and name of added substances; ninth, milk which consists, in whole or in part, of a diseased, contaminated, filthy, or insanitary substance, or which has been reduced, transported, or kept in a condition which may render the article diseased, contaminated, or unwholesome.

SEC. 135. *Meaning "cream"; nothing to prohibit sale condensed milk, etc., if labeled.*—The term "cream" in connection with this chapter, shall be held to mean that portion of milk, rich in milk fat, which rises to the surface of milk on standing, or is separated from it by centrifugal force, is fresh and clean, and contains not less than 18 per cent of milk fat: *Provided*, That nothing herein shall prohibit the sale of products from pure condensed milk, milk, skim milk, and wholesome substitutes for the albumen of cream, if so labeled, to each and every purchaser and consumer.

SEC. 136. *Milk with cream removed not to be sold, unless, etc.*—No dealer in milk, by himself or his agent, shall sell, or have in his possession with intent to sell, milk from which the cream has been removed, in whole or in part, unless sold as skim milk, and unless there shall appear in a conspicuous place on the can or other receptacle from which such milk is sold the words "skim milk," distinctly and legibly labeled, and in the case of dealers, restaurateurs, hotel keepers, and other persons offering such for sale, or serving the same, appropriate and plain signs or labels setting forth such facts to the consuming public, nor shall any dealer in milk, or his agent or agents, sell as skim milk milk which has less percentage of casein and solids than that contained in unskimmed milk.

SEC. 137. *Milk sold as certified; after notice shall not be sold, etc.*—Whenever it is found, as a rule, that milk sold as certified milk does not conform to the standard under which it is certified the health officer shall give notice to both the medical milk commission and to the dairyman or dealer in milk, and if the conditions complained of are not corrected and the milk brought within the standard under which it is certified within a reasonable and safe time the health officer shall again notify the medical milk commission and the dairyman or dealer that such milk is not conforming to the standard under which it is certified, and no person or persons, firm, or corporation shall sell or offer for sale milk in the city of Houston as certified milk after such notice and which does not conform to the standard under which it is certified.

SEC. 138. *Penalty; dairyman, etc., barred from holding permit, when.*—Any person, firm, corporation, or agent bringing, sending, having in possession for sale, or selling in the city of Houston any milk or milk products which are adulterated or misbranded, as set forth herein, shall, upon conviction, be fined not less than \$25 nor more than \$200. Any dairyman, milk dealer, or other person who shall have been twice convicted of selling milk to which water has been added, such second conviction shall, ipso facto, act as a bar to the holding of a permit for the sale of milk in the city of Houston.

ART. 16. SEC. 139. *Permits necessary to bring into city milk, etc.*—No person, firm, corporation, or agent shall bring or send into the city any milk or cream or buttermilk without a permit so to do from the milk inspector under the direction of the health officer, said permits to be furnished gratuitously to all applicants, in accordance with section 144 hereof, and to be renewed in the month of April in each year to be valid.

SEC. 140. *Milk vehicles to bear name of owner, number of license, etc.*—All milk vehicles shall bear the name of the owner and the number of the license of the wagon or vehicle tacked thereon plainly and legibly, in letters not less than 3 inches in height.



SEC. 141. *Grocers, etc., offering, etc.; milk, etc., regulations concerning.*—All grocers, bakers, restaurateurs, barkeepers, and other persons having or offering for sale milk or cream or frozen milk or cream shall at all times keep the name or names of the person or dairyman, or dairy, from which the milk or cream was obtained posted in a conspicuous place wherever such product may be sold or kept for sale. All grocers, bakers, restaurateurs, barkeepers, and other persons handling such milk shall keep the cans, refrigerators, bottles, and other receptacles in which the milk is kept stored clean at all times and shall thoroughly wash and sterilize, by boiling or steam, all such vessels before the milk is poured into them.

SEC. 142. *Samples of milk, etc., shall be furnished health department.*—Any person, firm, corporation, or agent who offers for sale milk, skimmed or unskimmed, or cream, in the city of Houston, whether a resident or nonresident, on being tendered the market price, shall furnish a sample of said milk to any officer representing the health department of the city, who may request the same for the purpose of examination or analysis.

SEC. 143. *Removal of bottles, etc., prohibited, etc.; persons with contagious diseases not to work, etc.; proprietors, etc., not to permit.*—No milk dealer, dairyman, or his agents shall remove from any dwelling or house, in which there is a contagious disease, and which has been so plainly placarded, any bottle or receptacle which has been used for the purpose of receiving or storing milk, that has not been disinfected as directed by the health officer. No person suffering from, or who has knowingly suffered from within a period of 20 days, or has been exposed to diphtheria, scarlet fever, erysipelas, cerebrospinal meningitis, smallpox, or other dangerous contagious disease, shall work or assist in or about any dairy or dairy farm; no proprietor, manager, or superintendent shall knowingly permit any person suffering from any of said diseases, or exposed as aforesaid, to work or assist in or about said dairy farm.

SEC. 144. *Permits necessary to sell certain; duties of inspectors; certificates.*—Permits without charge shall be required of any and all persons selling milk or cream in the city of Houston, or bringing the same in for sale. Such permits shall apply to all dairies or other places and to all cattle producing milk for sale in the city of Houston. It shall be the duty of the milk inspectors, acting under the health officer and the health department, to issue such permits, and to see that no milk is sold in the city without permit as herein required. Permits shall be required annually on the first day of April, and at such other times as a new dairy or place begins the sale of milk or cream in the city of Houston, or the production of the same for sale in the city of Houston, and at such other times as such changes in the source of production or the place of sale as shall make the permit no longer apply to the conditions under which the permit was issued. The milk inspector, acting under the health officer and the health department, shall not issue a permit to any person or persons selling or retailing milk or cream in the city of Houston who does not furnish once in every 12 months, and at the time of the beginning of any dairy for supplying milk in the city of Houston, a certificate on form supplied by the health department, which shall apply to and be conditioned as follows:

(a) *Contents certificate.*—Such certificates shall state that the place from which the milk which the dairyman or other person is at present selling, or proposes to sell, is obtained, is free from disease, and that reasonable items of equipment and methods for production and sale of milk are adequate. Such certificates shall also embrace an enumeration of cattle in the dairyman's herd.

(b) *Examination and inspection of dairy cattle may be required; how made; effect of secret injection tuberculosis serum; isolation diseased cattle; tested herd.*—The milk inspector, the health officer, or the board of health may require a veterinary examination of the cattle producing milk for sale in the city of Houston, including the tuberculin test, and other recognized means of veterinary diagnosis, to determine as to whether or not the cattle in any herd are infected with any disease. Such inspection

and examination shall not be required, and the dairyman shall not be put to the expense of such veterinary inspection until after the milk inspector or other agent of the health officer has made a personal inspection of the dairyman's herd. If the dairyman so requests, all such examinations shall be made at the expense of the city, or, should the dairyman so desire, the veterinary inspection may be made by any competent and reliable veterinarian employed by the dairyman. The city of Houston, however, shall have the right, if so desired, to have its milk inspector, or his agent, present at the time of such inspection. Any such certificate of health of animals given by veterinarians, if deemed necessary, may be required under oath of the veterinarian and under oath of the owner or operator of the dairy as to the facts concerning the concealing of disease, and any dairyman who shall, with a secret injection of tuberculin or other means, conceal disease in any animal or any herd supplying milk or milk products in the city of Houston, shall be refused a permit, or having been issued a permit, shall have the same revoked. Whenever any dangerous disease has been found in any cattle supplying milk or milk products in the city of Houston, in order to continue the sale, and hold a permit so to do, the veterinarian shall tag the diseased animal, and the dairyman or other person shall remove such animal or animals from the herd, and shall have the option of quarantining the infected animal at such distance and in such manner as will safely isolate the animal and its milk. When a herd supplying milk to the city of Houston has twice been tested within two years and found to be free from tuberculosis or other disease, and where all cattle added thereafter to such herd are similarly shown by the tuberculin test, and other recognized means of veterinary inspection, to be free from disease, and where the animals are identified by a tag, then any such cattle or herd shall be regarded as a tested herd, and subsequent tests shall not be required except as the health department may have good grounds for believing that any animal in such herd is diseased.

(c) *Notice when tests to be made; milk inspector, etc., right to be present; record of test to be kept and filed; affected animals tagged and isolated; notice from milk inspector.*—All dairymen and other persons offering milk and milk products for sale in the city of Houston, and the veterinarians engaged to make test of animals producing such milk, shall give notice to the milk inspector before the test is made, and the milk inspector, or other agent of the health department, as provided herein, shall not only have the right to be present at such testing, but shall designate or arrange with the veterinarian and the party whose cows are to be tested, a time reasonably convenient at which such milk inspector or agent of the health department can be present. A detailed record of all tests and results with respect to each animal shall be filed by the veterinarian making the test with the milk inspector, and if required shall be filed under oath, as provided. The veterinarian making the test, or the milk inspector or other agent of the health department, shall cause all animals showing tuberculosis to be marked and tagged, as provided under the laws and regulations of the State of Texas. After visiting the herd, as provided herein, the milk inspector shall give notice to the dairyman of the time within which any cattle or herds shall be tested, as a requisite for selling milk in the city of Houston.

(d) *Permits shall not be issued, when; health officer, etc., may revoke permit, when.*—A permit to sell milk shall not be issued to any dairy which has not the reasonable items of equipment necessary for the production and sale of milk in a safe and sanitary manner, or which has not a healthy herd, or whose water supply is in an unsafe condition, or where there are evidences that the employees connected with the production and sale of milk are affected with communicable disease. And, whenever the health officer, his agent, or any member of the board of health shall, by inspection, determine that any such conditions exist, the dairyman shall be notified of the conditions objected to, and if the conditions are not changed within a reasonably safe time, to be stated in such notice, the permit shall be revoked. Provided, however, that if the dairyman can remove his cattle and equipment to another farm and place,

and so as to have his product free from danger of any such conditions found, such permit shall not be revoked.

(e) *Permits shall not be issued, when; before revoking hearing to be given; appeals; temporarily revoked pending appeal.*—No permit shall be issued to any dairyman, or other person whose dairy, equipment, and methods are not open to inspection of any member of the board of health, or any agent of the city of Houston, and any dairyman, or other person refusing such inspection, shall be refused a permit to sell milk in the city of Houston. Provided, however, that before the revoking of such permit, the dairyman or other party interested shall be given a hearing, with the right to appeal to the board of health, the board of commissioners, and to the courts. In cases where there is danger of a contagious or infectious disease, however, the permit shall, after notice, be temporarily revoked, pending such appeal, unless the herd is removed to another place, as provided in subsection (d).

(f) *Cleanliness required.*—Milkers, and those engaged in the handling of milk or cream, shall maintain strict cleanliness of their hands and person while milking or while so engaged. The receptacles for milk and all cans for carrying and delivering the same shall be thoroughly cleaned with hot water and soap, or efficient washing powder, and be sterilized with boiling water, or steamed thoroughly, before such milking or before each use.

(g) *Cows to be kept clean; cleaning of teats, etc.*—Every person keeping cows for the production of milk for sale in the city of Houston shall cause them to be kept clean at all times, and shall cause the teats and udders to be carefully cleaned by brushing, washing, or wiping before milking, and shall cause each of said cows to be properly fed and watered.

(h) *Receptacles for milk; removal; storage of milk and cream.*—Any person using any premises for keeping cows for dairy purposes, shall provide and use a sufficient number of receptacles of nonabsorbent material for the reception, storage, and delivery of milk, and shall keep them clean and wholesome at all times, and at milking time shall remove each receptacle as soon as filled from the room or stable in which the cows are kept; nor shall any milk or cream be stored or kept within any room used for stabling cows or other domestic animals.

(i) *Notice to be given health officer of contagious or infectious diseases; isolation and precaution.*—It shall be the duty of every person having charge or control of any premises upon which cows are kept for the production of milk for sale in the city of Houston to notify the health officer of the city of Houston of the existence of any contagious or infectious disease among such cows by letter delivered or mailed within 24 hours after the discovery thereof, or in person, and to thoroughly isolate any cow or cows so diseased, or which may reasonably be believed to be infected, and to exercise such other precautions as may be directed, in writing to the health department.

SEC. 145. *Keeping milk for sale, regulations; bottles, etc., returned and used.*—Milk dealers, restauranters, hotel keepers, barkeepers, and other persons keeping milk for sale, shall keep and serve the milk at all times free from contamination, in clean vessels; and no consumer of milk shall deliver back to a dairyman or milk dealer, any bottle or can which is not clean, and no dairyman or milk dealer shall use or refill any bottle or other receptacle received from a milk patron until same has been thoroughly steamed and scalded.

SEC. 146. *Physicians to report suspected communicable diseases in employer's family of dairyman, etc.*—It shall be the duty of any physician holding a permit to practice in the city of Houston to immediately report to the health officer whenever such physician shall suspect the existence of any communicable disease existing in the employer's family of any dairyman or milk dealer or other handler of milk for sale.

SEC. 147. *Examination; publication of findings; further examination; six examinations monthly of milk, etc.*—Where a sample of milk or other food or drug has been examined, and where it is the intention of the health officer, or any other city official,

to make publication of the findings, as soon after the examination as possible he shall transmit to the person from whom the sample was taken a copy of the results of the examination, and if such party or parties ask for further examination before publication, such examinations, sufficient in number to determine the actual condition of the product when sold in the market, shall be made, and when published, the publication shall include all examinations or such averages as will show the exact condition of the product as determined by all of the examinations. At least six examinations shall be made monthly of any milk sold in the city of Houston as certified milk, and the product sold as certified milk shall be judged by the standard which is established by the medical milk commission under which the certificate is granted.

SEC. 148. *Bacteriological counts; warnings by health officer; temporarily revoking permits.*—In the enforcement of this and other sections of this chapter if the objection to the milk is based upon the bacteriological count, sufficient bacteriological counts shall be made of milks actually obtained from the market, as well as of milks from different sources in the dairy and distribution, if the dairyman desires, to determine as to whether or not the high count is the exception or the rule in connection with the dairy; provided, however, that nothing in this section, or any other section of this chapter, shall be construed to prohibit the health officer from giving warning concerning certified milk, or other milk sold in the city of Houston when any contagious or infectious disease in connection with the handling of milk, or other dangers to the public health are apparent, or from the immediate revoking, temporarily, of the permit in all instances where such danger is determined.

SEC. 149. *How samples taken.*—In collecting samples of milk and milk products for examination, if the sample is intended for bacteriological examination, the inspector shall take the same in as sterile a manner as possible so as to prevent contamination at the time of taking the sample. If the sample is not taken in the original bottle or other package, it shall be taken from sterile tubes or other sterile instruments, and placed in a sterile receptacle; and all such samples intended for bacteriological examination, unless they are, as in the case of original containers of ice cream, packed in ice containers of their own, shall be immediately put into a box or other receptacle containing sufficient ice, and which shall be so constructed and iced as to maintain a temperature under 56° F., and which such box or other receptacle shall have a close-fitting lid.

SEC. 150. *Penalty.*—Any person, firm, company, or corporation, or agents who shall violate any of the foregoing provisions of this article shall, upon conviction, be fined for such offense not less than \$10 nor more than \$100.

ART. 18. SEC. 165. *Sale, etc., of unwholesome, etc., milk, etc., prohibited, or where infectious diseases; diseased cows, etc.; "skim milk."*—That it shall be unlawful for any person, firm, corporation, or agents, either by himself or agent, to sell or expose for sale or exchange any unwholesome, adulterated, decomposed, or impure milk or swill milk or other substances in a state of putrefaction or other deleterious substances or from cows kept in connection with any family in which there are infectious diseases, or from sick or diseased cows, or milk from which any part of the butter fat has been removed: *provided*, "Skim milk" may be sold if on the can or package from which such milk is sold, the words "skim milk" are distinctly painted in letters not less than 1 inch in length. For the purpose of this article, the character and abundance of bacteria in any milk or cream may be conclusive evidence that such food is decomposed.