

PUBLIC HEALTH REPORTS

VOL. 30

MARCH 12, 1915

No. 11

INTERSTATE MIGRATION OF TUBERCULOUS PERSONS.

ITS BEARING ON THE PUBLIC HEALTH, WITH SPECIAL REFERENCE TO THE STATES OF NORTH AND SOUTH CAROLINA.

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In accordance with official orders and in connection with other duties, an investigation of the interstate migration of tuberculous persons and its bearing on the public health was undertaken in the States of North and South Carolina November 22, 1913. These studies were continued until June 3, 1914, their object being to determine: The extent and direction of such migration; the effects of travel on tuberculous persons themselves; the bearing of the migration of tuberculous persons on the health of other travelers and on employees of common carriers; the conditions under which tuberculous persons live in localities resorted to for change of climate and the effects of these conditions on the progress of their disease; the bearing of the presence of tuberculous persons on the health and the social and economic status of communities to which they have migrated in search of health; and the degree of forced migration of indigent tuberculous persons from communities hostile to their presence.

Climatic Conditions.

Certain sections of North and South Carolina have long enjoyed the reputation of having climates favorable to the treatment of tuberculosis. It was these sections especially that were visited to obtain data relative to the subject under consideration.

They have different climates, depending on whether they are located in the mountains or at lower levels in "the sand-hill region" or "the upper pine belt." In general, it may be said that the climate of these latter regions is dry and balmy, while that of the mountain section is colder and more invigorating.

In the "sand-hill region" of South Carolina, Aiken is the best known resort for the tuberculous, but in recent years its popularity in this respect has waned. In general, the climate of Aiken is representative of this region and is said to be the dryest east of the Rocky

Mountains. Aiken is situated on a plateau between the Savannah and Edisto Rivers at an elevation of 565 feet. The soil is sandy and porous. The mean temperature during the winter months is 48° F., and during the spring and fall months 63° F. The mean relative humidity (9 p. m.) during the winter and spring months varies from 57 to 67 per cent, and the average rainfall for this period is 22.9 inches. Under these conditions and on account of abundance of sunshine, outdoor life is enjoyable during the winter and spring months, but in summer the heat is oppressive, causing the departure of invalids as well as many healthy persons to other places.

"The upper pine belt" of North Carolina may be regarded as an extension to the northeast of the sand-hill region of South Carolina previously mentioned, and their climates are quite similar. The best known resorts in this region are Pinchurst, Southern Pines, and the State Sanatorium for Tuberculosis, located near Montrose.

In the mountain section the best known resort is Asheville, N. C. On account of topography and other conditions, the climate in the mountains varies much, but in general it is dry and bracing, colder both in winter and summer than that of the lower levels of the State and much milder in winter than is a northern climate. Asheville, which may be regarded as having a climate representative of the resorts in this section, is located on a plateau at an elevation of 2,255 feet. This plateau extends from northeast to southeast for a distance of approximately 150 miles, and is bounded on the south and east by the Blue Ridge and on the north and west by the Great Smoky Mountains. The soil in this section is mostly red clay, and in some places sandy. The mountains are covered by a dense growth of forest.

In Asheville the mean temperature in winter is 39° F., in spring 54° F., in summer 71° F., and in fall 55° F. The mean annual relative humidity is about 69°, and the annual rainfall 42.60 inches, which is the smallest of any place in the State of which there is record. By reason of these conditions, an abundance of sunshine, and the attractive mountain scenery, the climate of this section, while bracing, permits of a great deal of outdoor life.

On the whole the climates of the several resorts in North and South Carolina are mild, being warmer and dryer than the climate of the Adirondack region, but not as dry as the southwestern plateaus of Arizona and New Mexico.

Sources of Information.

The sources of information resorted to in studying the various problems of the migration of the tuberculous varied considerably in the different localities visited. Wherever practicable, official records of health departments were consulted both as to morbidity and mortality reports. Data were obtained also from private physi-

cians, the records of hospital and other eleemosynary institutions, and from patients themselves. In addition to these sources of information, employees of common carriers were also interviewed, and in order to gain a knowledge of the extent of such migration observations were made at railroad stations and during actual travel over routes leading to and from sections resorted to by tuberculous persons.

In only one city (Asheville) in either of the States where the investigation was carried on was there a system of registration of cases of tuberculosis. In some localities (Hendersonville, N. C., and Southern Pines, N. C.), although the reporting of cases of tuberculosis is required by law, it was found that there was no compliance on the part of physicians and boarding-house keepers, and no attempt was being made by the authorities to enforce it. In these places the only statistical data available, therefore, were the death certificates in the offices of the registrars.

In other localities it was found that the records of deaths were incomplete. Interviews with practicing physicians, patients, and others were therefore the only means of securing data. Acknowledgment is due and here made to all who furnished information. On account of the number it is impracticable to give personal credit, but it is in large part this information that has had to be depended upon in arriving at conclusions regarding existing conditions.

Causes of Migration.

The principal object of the migration of the tuberculous from one section to another is to secure change of climate. They are led to seek this change for various reasons, among which may be mentioned: Glowing accounts of the climatic advantages of particular resorts, unsatisfactory progress toward recovery in their existing surroundings, the long duration of the disease, and the advice of their physicians.

In some cases, improvement progresses to a certain point and then remains stationary, and when this occurs in the resort to which the patient has migrated physicians there will frequently advise a change to another locality. This change of air and environment oftentimes brings about an improvement in the patient's condition.

In some localities the migration is dependent largely on season, some resorts being favorable only during certain months. For instance, in one locality (Aiken, S. C.) the migration of tuberculous persons to and from this resort occurs at definite periods of the year. The winters in this section are mild and pleasant, while the summers are exceedingly hot. Consequently, the influx of tuberculous persons to Aiken is greatest during the early winter months and as the hot weather of May and June approaches the exodus begins.

The sanatorium for the tuberculous in Aiken is closed during the summer months, so that persons under treatment in this institution are obliged to leave for their homes or other resorts during this time.

This periodic migration also exists to a certain degree in the resort town of Southern Pines, although the sanatorium at this place remains open throughout the year.

Reference may likewise be made to the causes of migration of patients to and from the North Carolina State Sanatorium for the Tuberculous, near Montrose, N. C. In conducting this sanatorium the object is not so much the cure of the tuberculous individual as it is to teach him to live so that he may know how to care for himself and prevent the spread of the infection to others. It would be manifestly impossible for the State of North Carolina to care for all her tuberculous in a single institution, so that it is the purpose of the State to use the sanatorium as a means of education in conjunction with other measures undertaken by the State board of health for the prevention of this disease. Since the sanatorium was established in 1910, 416 tuberculous persons have been admitted.

Extent and Direction of Migration.

In order to ascertain the amount of travel of the tuberculous to and from North and South Carolina, information was sought not only in the well known resorts, but in rural communities as well. It was found, however, that these latter areas were little resorted to and that practically all tuberculous travelers go to or from the resort towns.

Certain sections in the two States have been popular as health resorts for many years. For instance, Aiken, S. C., was advocated as a health station in 1877, and Southern Pines, N. C., in 1886. The popularity of these and other resorts in this section for the treatment of tuberculosis seems to have increased following the discovery of the specific cause of the disease. Some of them, as Asheville, N. C., continue to be a Mecca for the tuberculous, while others, as Aiken, S. C., are not so much resorted to as formerly. The probable explanation of this change is a better knowledge of the relation of climate to the treatment of tuberculosis. Whereas Asheville, for instance, is high, dry, and cool, and favorable for residence all the year, Aiken is at a lower level, the climate is less bracing, and the summers are oppressive.

But in the case of Aiken and certain other sections there are additional and perhaps more important reasons why the foreign tuberculous population has decreased. In recent years this city and vicinity have become popular as the winter residence of healthy persons of wealth from other States. In consequence, these persons

have acquired large properties, and they discourage the coming of the sick. In fact, many of the hotels and boarding houses specifically state that they do not take consumptives, and advertising as a health resort has ceased. From a financial standpoint, tourist travel has been found to be more advantageous, and tuberculous persons find it extremely difficult to secure accommodations of any character.

Asheville, N. C.—Asheville is probably the best known of all the climatic resorts in the South. In former years the city was extensively advertised as a resort for the tuberculous, but now the tendency is to encourage the coming of healthy tourists rather than the coming of the tuberculous.

In an effort to ascertain the tuberculous population the records of the health office were consulted. It was not possible, however, to form an accurate estimate of the number of tuberculous persons in this city, although there is a law requiring physicians, householders, hotel keepers, and boarding-house keepers to report all open cases of tuberculosis. The reason is that this law is not fully complied with.

The following table, compiled from the records on file at the city health office, throws light on the extent and direction of the migration from other localities to the city of Asheville:

TABLE 1.—Showing the localities from which tuberculous patients, registered at Asheville, N. C., had come.

Patients' home State or country.	Number of localities in State represented.	Number of cases.	Patients' home State or country.	Number of localities in State represented.	Number of cases.
North Carolina.....	48	214	Oklahoma.....	3	3
South Carolina.....	39	88	Arkansas.....	3	5
Ohio.....	18	12	Connecticut.....	3	3
Georgia.....	18	65	Maryland.....	2	11
Tennessee.....	18	42	Delaware.....	1	1
Virginia.....	17	57	Colorado.....	1	2
Pennsylvania.....	15	31	District of Columbia.....	1	10
Alabama.....	14	40	Missouri.....	1	5
Indiana.....	13	21	Dakota.....	1	2
Louisiana.....	12	30	Nebraska.....	1	1
Mississippi.....	12	24	Massachusetts.....	1	3
Florida.....	12	28	Iowa.....	1	1
Illinois.....	11	28	California.....	1	1
Kentucky.....	11	21	Minnesota.....	1	2
West Virginia.....	10	27	Canada.....	2	4
New York.....	8	42	West Indies.....	1	1
New Jersey.....	7	10	Residence not given.....	.....	72
Michigan.....	6	11			
Texas.....	5	5			
			Total (35).....	318	968

There were registered at the health office up to the time these studies were made 968 tuberculous persons. These cases represented 318 different localities in 33 States of the Union and two foreign countries, Canada and the West Indies. The origin of 72

of the total of 968 cases reported could not be traced on account of the report cards being incompletely filled out.

The State of North Carolina furnishes the largest number of cases, being represented by 214 persons from 48 different localities in that State. South Carolina comes next with 88 cases from 39 different localities. The neighboring States of Georgia, Tennessee, and Virginia furnished the next largest number of patients, while Ohio had 52 from 18 different localities in that State.

In studying the records of the health office it was noticed frequently that the same patient had been reported to the health office by more than one physician or boarding-house keeper, as the patient changed either his physician or his abode. Whenever duplication of reports occurred it was taken into consideration in making up the table in order that this should be as accurate as possible. This tabulation comprises only "open" cases of tuberculosis, and those patients who are not resident in the licensed boarding houses and those not under the care of a physician are not included, as cases of this kind are not reported to the health authorities.

Hendersonville, N. C.—As a resort for the tuberculous, Hendersonville probably ranks next to Asheville. Like the latter city, it is also an important summer resort for tourists. On account of its altitude the summer months are delightfully cool, and large numbers of tourists, especially those from South Carolina and the neighboring Southern States, go to Hendersonville during the summer months. During the winter months the population of the town is very small, comprising the permanent residents and a certain number of tuberculous who remain there during the entire year.

An accurate estimate of the extent of the migration of tuberculous persons to this locality is impossible, as cases of tuberculosis are not reported to the health authorities.

Hendersonville has an ordinance requiring the notification of tuberculosis and other infectious diseases. This ordinance is modeled after the one in force in Asheville and went into effect several years ago. As far as could be learned, the ordinance has never been complied with by physicians practicing in the town. Inquiry of physicians failed to show that any cases of tuberculosis had ever been notified to the health authorities.

The following table, compiled from data obtained from clinical records of cases occurring in the practice of one of the local physicians, gives some idea of the extent and direction of the migration from other localities to the city of Hendersonville.

TABLE II.—Showing the localities from which tuberculous patients at Hendersonville, N. C., had come.

Patients' homo State.	Number of localities in State represented.	Number of cases.	Patients' home State.	Number of localities in State represented.	Number of cases.
North Carolina.....	13	37	Michigan.....	1	2
Kentucky.....	13	25	Oklahoma.....	1	1
South Carolina.....	11	29	Maryland.....	1	1
Florida.....	5	8	Indiana.....	1	1
Georgia.....	5	7	Illinois.....	1	1
Mississippi.....	4	6	Pennsylvania.....	1	1
Ohio.....	3	8	Connecticut.....	1	1
Tennessee.....	2	3	District of Columbia.....	1	1
Louisiana.....	2	3	Alaska.....	1	1
Alabama.....	2	2			
New York.....	1	3	Total (21).....	71	143
New Jersey.....	1	2			

In the above table it will be seen that North Carolina, Kentucky, and South Carolina are represented by 63.6 per cent of the total number of cases. North Carolina furnished the largest number from any one State. The number of cases from this State was 37, or 25.8 per cent of the total number. In Table I showing the migration to Asheville it will be noticed that the State of North Carolina furnished the largest number of cases, and the same is true of Hendersonville. It is but natural that patients with this disease should seek the resort nearest their homes, which accounts for the States of North and South Carolina furnishing such a large per cent of the total number.

The State of Kentucky is represented by 25 cases (17.4 per cent of the total), coming from 13 different localities in the State. The relatively large number from this State is probably accounted for by the fact that the data from which the table was compiled were obtained from the clinical records of a practicing physician of Hendersonville, who was a native of Kentucky. As noted in other resorts, this factor appears to have an influence in determining the direction of the migration.

South Carolina, owing to its proximity to this resort, furnishes a comparatively large number of cases, being represented by 29 cases, from 11 different localities in the State.

Southern Pines, N. C.—The migration of tuberculous persons to Southern Pines differs from that to the mountain resorts, such as Asheville and Hendersonville, in that it is of a periodic character.

Southern Pines is strictly a winter resort. Situated as it is, at a much lower altitude than the mountain resorts, the winters are generally mild and the summers exceedingly hot. The migration begins in the early winter and continues until May, when the exodus to the North and to the cooler resorts in the mountains take place.

The reason for the periodic migration is not only the fact that the summer months are very hot, but that at the end of the season the hotels and boarding houses close for the year and do not reopen until the following winter.

There is one sanatorium for tuberculous persons in Southern Pines which can accommodate a limited number of patients. The majority of the sick are dependent for accommodations upon the hotels and boarding houses.

The only statistical data in regard to the extent and direction of the migration of tuberculous persons to this resort were obtained by a study of the death certificates on file in the office of the local registrar.

Cases of tuberculosis are not reported to the health authorities, although the town has an ordinance requiring it, similar to the ordinance in effect at Asheville.

TABLE III.—Showing the localities from which tuberculous persons had come, as shown by the records of the registrar of vital statistics at Southern Pines, N. C.

Patients' home State.	Number of cases.	Patients' home State.	Number of cases.
New York.....	31	New Hampshire.....	4
Pennsylvania.....	18	West Virginia.....	3
Virginia.....	14	Maryland.....	3
Massachusetts.....	14	Canada.....	3
North Carolina.....	10	Indiana.....	2
Maine.....	7	District of Columbia.....	2
Vermont.....	7	Michigan.....	1
New Jersey.....	5	Georgia.....	1
Connecticut.....	5	Minnesota.....	1
Great Britain.....	5		
Ohio.....	4	Total (20).....	140

As will be seen from the above table, the migration is largely from the eastern section of the United States, very few of the patients coming from the Central or Middle Western States. From a study of the above table it appears that the migration of tuberculous persons to Southern Pines, N. C., is largely from the Eastern States and Pennsylvania. The statements of physicians and others corroborate the fact that the majority of the tuberculous come from the above-named section of the country.

Aiken, S. C.—Practically the only locality in the State of South Carolina which is resorted to by tuberculous persons in search of health is Aiken. Owing to its location in the long-leaf pine belt of the State, where the altitude is not very high, the winters are mild and the summers exceedingly hot, so that this place has acquired a reputation of being exclusively a winter resort.

The migration of tuberculous persons to and from this resort occurs at definite periods of the year. The travel to Aiken is greatest during the early winter months, and as the hot weather of May and June

approaches the exodus begins. During midsummer the town is practically deserted with the exception of the permanent residents.

The following table, the data for which were obtained from the clinical records of patients treated at the Aiken Cottage Sanatorium, gives a fairly accurate estimate of the extent and direction of the migration from other sections of the country to this resort:

TABLE IV.—*Showing the localities from which tuberculous persons had come, as given by the records of the Aiken Cottage Sanatorium for the years 1896-1914.*

Patients' home State or country.	Number of localities in State represented.	Number of cases.	Patients' home State or country.	Number of localities in State represented.	Number of cases.
Massachusetts.....	29	62	Maine.....	1	3
New York.....	11	19	Alabama.....	2	2
Pennsylvania.....	8	17	Missouri.....	1	1
South Carolina.....	7	20	District of Columbia.....	1	3
Connecticut.....	6	8	Illinois.....	1	1
New Jersey.....	5	6	Tennessee.....	1	1
Maryland.....	4	6	West Virginia.....	1	1
Virginia.....	4	8	North Carolina.....	1	1
Rhode Island.....	3	6	Louisiana.....	1	1
Canada.....	3	3	Peru.....	1	1
Georgia.....	3	5			
Ohio.....	2	2	Total (22).....	97	177

Effect of Travel on Tuberculous Persons.

In studying the effects of travel on tuberculous persons we must take into consideration first the stage of the disease at the time the journey is made; second, the distance traveled; and third, the accommodations available to the patient during travel.

In the course of the investigation, a physician practicing in one of the health resorts of North Carolina was asked whether he had made any observations in regard to the effect of travel on tuberculous persons. His reply was, "Doctor, that is not the kind of patients we want here. We do not want to undertake the treatment of patients upon whom the journey would have an ill effect."

There seems to be a lessened tendency for physicians to send from their homes to tuberculous resorts persons in an advanced stage of the disease. This is probably due to a better recognition of the early symptoms of the disease. Many exceptions to this were noted, however, in the course of the investigation. Many patients undoubtedly do migrate from their homes to health resorts against the advice of physicians, and others on their own initiative without the advice of physicians, while still others are met with in an advanced stage of the disease, neither they nor their physicians being apparently aware of the nature of the disease.

It was found on interviewing patients that their answers varied widely as to the effects of travel upon their condition. Some claimed that they suffered no ill effects whatever. Others stated that they

were greatly fatigued, their cough being increased by the confinement in insufficiently ventilated railroad coaches.

One case was seen in which a severe pulmonary hemorrhage had occurred during a railroad journey. The immediate cause of this complication could be directly traced to the exertion made by the patient in his efforts to catch a train.

During the course of the investigation it was definitely proven that in the majority of cases journeying by railroad had a bad effect upon the physical condition, that an elevation of temperature had occurred, that the cough had increased, and that fatigue was felt at the end of the journey. That these conditions are believed to occur as the result of the journey is shown by the fact that upon arrival of a patient at the resort and upon consulting a physician he is usually ordered to remain in bed for a period of at least a week before any physical examination is made. Unless there is some indication for an immediate examination, the majority of physicians follow this rule in order that the patient may be in as nearly his pretravel condition as possible at the time of the examination.

During the journey from his home to the resort the mental condition of the patient is usually exalted by the hope of regaining health in his new abode.

The distance traveled and the accommodations available have a bearing on the physical condition of the patient upon arrival at the resort. As has been previously shown, the majority of tuberculous persons in the resort towns of North and South Carolina are residents of near-by sections of the country, and the journey to these resorts does not necessitate more than 24 or 36 hours' travel.

The health resorts of North Carolina are easily accessible, Asheville, Waynesville, Black Mountain, Hendersonville, and Tryon being reached from all parts of the country by railroad. Pullman accommodations may be secured to all these points except Waynesville, which is reached by transfer to a local train at Asheville. The only locality in South Carolina which is frequented to any extent by the tuberculous is Aiken. This city is not located on any of the main railroad lines, and to reach Aiken it is necessary to transfer at either Trenton or Blackville, S. C. Therefore travelers can not journey direct to Aiken in a Pullman, but must transfer at one of the above-named junctions.

Bearing of the Migration of Tuberculous Persons on the Health of other Travelers and on Employees of Common Carriers.

In considering the question of the origin of tuberculosis among employees of common carriers, we must take into account as possible sources of infection, contact with passengers traveling during the active stage of the disease, contact with fellow employees who might

be suffering with the disease, and the habitation of employees while off duty. Those employees most exposed to infection from traveling passengers are Pullman porters, ticket collectors, conductors, and flagmen. On account of the nature of their employment, engineers and firemen rarely come in contact with passengers.

Owing to the nature of his work the Pullman porter, on the other hand, comes into closer contact with passengers than any other railroad employee. The porter spends more of his time within the car than either the conductor, ticket collector, or flagman, and in making up berths he is constantly exposed to dust.

The tuberculous person who is not careful in regard to the care of his sputum, coughs without shielding his mouth. The droplets of sputum containing innumerable tubercle bacilli may thus be sprayed about in the car and lodge upon the floor upholstery, bed linen, and blankets. Owing to excessive dryness of the atmosphere in railroad coaches the droplets of sputum quickly dry and may be carried about by the air currents always present.

The Pullman car is not only a sleeping room but a sitting room as well, and on certain runs it also serves as a dining room. Under no other conditions in our daily life, therefore, are we more closely confined than during the time occupied in traveling by railroad. Of course, the opportunities for ventilation and constant change of air in this habitation are better than in a nonmobile dwelling, provided proper provision is made to admit a sufficient amount of fresh air. In this way a movement of air from within outward is brought about.

Many authorities on the subject are of the opinion that tuberculous infection is received during childhood and that months or even years may elapse before symptoms of the disease appear. Tuberculosis is a disease in which, in the majority of cases, the onset is insidious, so that often it is quite impossible to fix the exact date of the beginning of the disease. Not being a disease with a short incubation period, such as the acute exanthemata or a disease like influenza, which follows lines of travel, it is difficult to determine the exact place where the infection is received. Moreover, the time of exposure during a railway journey is so short that it would be difficult to say that the disease in any particular case was contracted from a fellow traveler during such a journey.

It would appear that the danger of infection to other travelers and to employees of common carriers, while present in limited degree, is not great.

Measures Taken by Common Carriers to Prevent Transmission of Disease.

By far the most important measure taken by the railroad companies to prevent the transmission of tuberculosis, as well as other infectious diseases, is the disinfection of railroad coaches, including

Pullman cars, day coaches, baggage, and mail cars. In North Carolina there is no law governing the sanitation of railroad cars nor, as far as could be ascertained, was there any local ordinance covering the subject in any of the cities visited during the investigation.

During the past session of the General Assembly of the State of North Carolina a bill was introduced to provide by law for the sanitation and disinfection of railroad cars, but it failed of passage.

The methods in use at Asheville, N. C., for the sanitation and disinfection of railroad coaches,¹ as carried out by the Pullman and Southern Railroad Cos., have been applied for some time and were instituted by the railroad companies for the protection of their employees and the traveling public.

Disinfection of sleeping cars.—Upon arrival in Asheville and as soon as the passengers have disembarked, the car is shunted to a side-track in the railroad yards. This track is used exclusively by cars undergoing cleaning and disinfection. On each side of the track is a platform several hundred feet long and built on a level with the floor of the car itself. The ventilators and windows of the car are tightly closed, the berths are taken down, the blankets, pillows, and mattresses are spread out so that the formaldehyde gas which is used may have access to the contents of the car. Three galvanized-iron pails are then placed on the floor of each car, one at each end and one in the center of the car. In each pail are placed 500 c. c. of commercial formalin and 250 grams of potassium permanganate, and the doors of the cars are tightly closed. The car remains closed for about 12 hours. The windows and doors are then opened to air the car and to free it from gas, after which all carpets, upholstered seats and backs, blankets and pillows are removed from the car and placed on the platform exposed to the air and sunshine.

Dust is removed from the removable seats, backs, and carpets by means of compressed air, the force of which is so great that it removes practically every particle of dust. The carpets, seats, blankets, etc., are left on the platform until the interior of the car is cleaned. The hose furnishing compressed air is then taken into the interior of the car, and dust is removed from every part of the interior by this means. A force of car cleaners is then put to work with buckets of hot water, and by means of soap and scrubbing brushes the floor of the car is cleaned, the interior woodwork being wiped off with damp cloths.

Drinking-water tanks and spittoons are taken out on the platform, where they are cleaned. The water tanks are scrubbed inside and out with hot water and Sapolio, rinsed with clean water, and then placed over a steam pipe and sterilized with live steam.

¹Car Sanitation—Cleansing and Disinfection of Railroad Coaches—Method Used at Asheville, N. C. Reprint 170 from the Public Health Reports, Mar. 27, 1914.

The spittoons are first cleaned and then sterilized with steam. A small quantity of formalin is then placed in each spittoon.

Once a month the tanks used for storing water for washing purposes in toilet rooms are said to be washed out and cleansed.

After the interior of the car has been thoroughly cleaned, the water tanks are replaced, and carpets, upholstered seats, pillows, and blankets put back into the car, after having had a thorough airing in the sun.

Owing to the care which must necessarily be used in washing woolen blankets, they are periodically shipped to special laundries experienced in this work, where they are washed and combed.

Besides the fumigation with formaldehyde gas, the toilet rooms are cleaned mechanically by scrubbing the floor with hot water and soap, and an acid solution is used to remove the stains from the hoppers in the closets.

Cleaning and disinfection of day coaches.—If carpets are used in the car, they are removed from the car to the platform, where the dust is removed by means of compressed air. The upholstered seats are also cleaned by the same means.

One of the places in a railroad car where dirt is frequently lodged is behind the steam pipes which run along both sides of the car. It is found that compressed air under a pressure of from 80 to 100 pounds is the best means of removing the dust which lodges in these places. On and behind these pipes is the place where passengers are apt to expectorate, and in order to clean these parts of the car thoroughly a hose delivering live steam is carried into the car and the pipes and space between the pipes and sides of the car are thoroughly steamed. After this has been done the floor of the car and toilet rooms are scrubbed with soap and hot water. The hoppers in the closets are steamed and stains removed with a weak acid solution.

The drinking water tanks are removed and scrubbed with hot water and Sapolio, both inside and outside, and are then steamed, care being taken that the steam hose does not come in contact with the interior of the tank.

Cleaning of mail and baggage cars.—Dust is removed from the interior of the car by means of compressed air, after opening all doors and windows. The floors are scrubbed with hot water and soap, and the walls are washed down in the same way.

Since this section of North Carolina is a region much frequented by tuberculous persons, who go to Asheville and neighboring points, the sanitation of railroad coaches is a matter of great importance. Asheville is the terminus of four divisions of the Southern Railroad, and consequently sleeping cars lie over usually about 12 hours, which time affords ample opportunity for disinfection.

Other measures to prevent transmission of disease.—Among other measures taken by common carriers to prevent transmission of disease are the abolition of common drinking cups and common towels, installation of dental lavatories in the toilet rooms, providing spittoons for passengers, and display of signs which warn passengers against expectorating upon the floors and furnishings of cars.

The upholstered seats of railroad coaches could with advantage be replaced by some material, such as pantasote, which would not retain the dust, and which could be cleaned easily by wiping with a damp cloth. This would be an advantage from a sanitary point of view and the seats would be more comfortable to travelers in hot weather. On certain European railroads the seats are covered with removable linen covers, which are easily washed. This might well be adopted by railroads in our own country, and would add to the comfort of the passenger, besides being more cleanly and sanitary than upholstered seats.

The spittoons provided in sleeping cars are available for use only in the daytime, as they are placed underneath the berth at night and out of reach of passengers. Consequently, the occupants of both lower and upper berths are not provided with receptacles at night for sputum, and tuberculous persons should provide themselves with pocket sputum cups.

The writer can not recollect ever having seen, in the course of numerous journeys made by railroad during the investigation, a sputum cup used by a passenger. A patient at the North Carolina State Sanatorium for the Tuberculous had occasion to use his sputum cup on a journey, and a fellow passenger occupying a seat with him arose and changed his seat when he saw him do it. The attitude of the general public toward the tuberculous individual is responsible for the infrequent use of sputum cups by tuberculous persons in traveling.

The installation of dental lavatories in toilet rooms of sleeping cars is a great step forward, not only from a sanitary but an esthetic point of view. They have not come into general use, however, and all railroad lines should be obliged to install them in every sleeping car, and the traveling public should be taught to use them instead of brushing their teeth in the wash basins even in cars having a dental lavatory.

The Conditions Under Which Tuberculous Persons Live in Localities Resorted to for Changes of Climate and the Effect of These Conditions on the Progress of the Disease.

The fact is generally well recognized that a person suffering from tuberculosis who leaves his home for a climatic resort should be able to secure in his new abode accommodations at least as good as, if not

better than, those to which he has been accustomed at home. He also should be free from financial and business worries. These are important factors which may have a bearing upon improvement or retrogression in a case. It frequently happens that tuberculous persons, upon being told that they have the disease and that a change of climate is necessary, leave their homes for their new abode without any definite knowledge as to where they will dwell upon arrival, or even if suitable accommodations are to be had in the locality to which they intend to go.

Tuberculous persons in an advanced stage of the disease find it exceedingly difficult to secure suitable accommodations in the resort towns of North Carolina. In these resorts, hotel keepers, boarding-house keepers, and others become quite expert in detecting those suffering from the disease. Hotels will not admit them, and even boarding houses kept exclusively for the tuberculous dislike to care for advanced cases, owing to the depressing effect of these cases upon patients who are in a less advanced stage of the disease.

A physician practicing at one of the climatic resorts in North Carolina told the writer of the experience of one unfortunate who, after an unsuccessful endeavor to obtain lodging in a small town, was simply allowed to remain overnight in the county jail after promising to move on the next day. Another case cited was that of a man who was refused admission to a sanatorium as not being suitable for treatment on account of the advanced stage of the disease, and was compelled to remain in the railroad station overnight, as he was unable to secure other accommodations.

Six miles from the North Carolina State Sanatorium for Tuberculosis is the town of Aberdeen, N. C. Patients bound for the sanatorium are obliged to transfer at Aberdeen to a small railroad on which the sanatorium is located. It frequently happens that they arrive at Aberdeen after the train for the sanatorium has departed. Accommodations at the only hotel in town are refused all persons who have the appearance of being sick, especially those whose destination is known to be the sanatorium. Those arriving after the departure of the train are obliged to hire a special conveyance to reach the sanatorium. One patient, a woman, stated to the writer that she would have been obliged to remain in the railroad station during the night had it not been for the kindness of the wife of a railroad employee, who furnished her with lodging until the train left the next morning.

The accommodations for housing the tuberculous vary greatly in the different resorts. The only official institution for the care of the tuberculous in either North or South Carolina is the North Carolina State Sanatorium for Tuberculosis, located near Montrose, N. C. This institution admits at the present time only the most favorable cases, although the admission of bed cases is contemplated when the

hospital building is completed. This is not strictly a charitable institution, as a charge of \$7 per week is made for the care and treatment of patients.

At Aiken, S. C., there is a semiphilanthropic institution for the care of the tuberculous—the Aiken Cottage Sanatorium. This is an endowed institution and is enabled to furnish board, lodging, and medical treatment to a limited number of patients at a charge of \$5 per week. Men only are admitted for treatment, and the number that can be accommodated is limited to 16 persons. There is but one other institution in Aiken for the exclusive care of tuberculous persons. This house can accommodate four patients and is kept by a nurse who has had special training in the care of the tuberculous. There are no doubt a considerable number of tuberculous persons in the various hotels and boarding houses in the town, but these persons usually attribute their illness to "asthma," "bronchitis" etc., as the boarding houses that cater to the tourist trade are not supposed to receive tuberculous persons. From this it may be seen that Aiken is preeminently a resort for tourists, and that little provision is made for housing the tuberculous.

At Hendersonville, N. C., there are two sanatoria which afford excellent accommodations for the care and treatment of tuberculous persons. There are also several moderate-priced boarding houses for patients of small means. The hotels in this town claim that they do not accept tuberculous persons as guests, but during the investigation a number of these cases were observed in two hotels in the town.

Asheville, N. C., which is a Mecca for the tuberculous, affords varying accommodations, from the \$5 a week boarding house to the sanatorium where patients may pay as high rates as they would at the finest hotel in the country. Besides accommodations for white persons, there are a number of boarding houses for colored patients. The boarding houses for tuberculous persons are licensed by the joint board of health, and the sanitary conditions in these houses are under the supervision of the local health authorities.

As to the effect of the conditions under which tuberculous persons live in localities resorted to for changes of climate upon the progress of their disease, no definite conclusions can be drawn which will be applicable to all cases. As before mentioned, many factors besides climate are to be considered in the successful treatment of the disease.

The temperament of the patient has considerable bearing upon the outcome of the disease. There are some patients who, although provided with every possible comfort, are unable to bear the separation from their families. This class of patients does not do well even under the most favorable conditions of climate and surroundings. During the investigation numerous cases of this kind were

observed. These are cases which never should have been sent away from home in the first place. The harm done by the continued worry incident to separation from their families more than counterbalances the good effect to be attained by change of climate.

The food obtainable in the resort towns is also an important factor in the treatment of tuberculosis. As all climatic resorts in this section of the country are also places resorted to by the well-to-do tourist, the cost of living is high. Many tuberculous persons spend money for railroad fare, board, and lodging, which, if spent at home for good nutritious food, would be of much greater benefit to them.

In an article published in the Public Health Reports of September 18, 1914, Frazer, of Asheville, N. C., in estimating the cost of a "cure" in that resort, states as follows:

The cost of room and board varies within wide limits. From the observations I have made at Asheville board of fair quality with room costs from \$10 to \$12 a week at the houses which are licensed to take tuberculous cases. The price depends to some extent on the location of the rooms, the more desirable ones on the first and second floors adjacent to baths and porches costing from \$10 or \$12 up; less desirable rooms may be had for \$8. The location of the room is often of great importance, as the trip up and down stairs, if the room is on the third floor, may be more than the patient should undertake. When confined to bed or to the room many of the boarding houses referred to serve trays to the rooms free of charge. Milk is furnished free with meals. Some houses also furnish free of charge a glass of milk and an egg at 11 and 4; others charge extra for these "diets." If these are prescribed it would add approximately a dollar a week to the board. Milk costs 10 cents a quart; eggs can usually be had for from 30 to 40 cents a dozen.

Several of the houses have small shacks which, with board, rent for \$10 a week.

There are some extras which must be considered essentials. Thus, a proper reclining chair is indispensable to the patient. The cheaper ones may be had for \$4 or \$5; the better and more durable ones cost \$15. Allowance must also be made for medicines, for sputum boxes, thermometer, blankets in cold weather, and other adjuncts to treatment. Laundry and incidentals would amount to \$2 a week at the lowest possible estimate.

The amount to be allowed for physicians' services is difficult of estimation. Some patients are so ill as to require a great deal of attention. Others are in such straitened circumstances as to be unable to pay anything. Perhaps \$20 a month may be taken as a fair average. It is a mistake for the invalid to undertake the recovery of his health unassisted. Proper supervision is, indeed, half the battle; care must precede a "cure."

The cost to the patient for a period of 10 months or 43 weeks at \$8, \$10, and \$12 a week would be \$344, \$430, and \$516, respectively, for room and board. Allowing \$100 for incidentals and \$200 for physicians' services, we should have \$644, \$730, and \$816, respectively, not including extras, such as reclining chair, milk, eggs, and other items noted. A minimum of \$700, therefore, exclusive of car fare, would be a more just estimate of the expense for the rather arbitrary period of 10 months. If the patient is accompanied by some member of the family it may be decided to keep house instead of to board. Unfurnished houses run from \$25 to \$60 a month, not including water and light. For the lower figure one should be able to secure a small house with two bedrooms, bath, and porch. Desirable houses at this price are scarce, however. The same house, furnished, would bring \$40 a month. From this as a

minimum, furnished houses rent up to almost any price, depending on the size, number of bedrooms, baths, sleeping porches, location, and other features. The markets are good, though not especially cheap. Good meat, game, and vegetables are to be had at about the usual prices.

The estimate made for room, board, and treatment for a period of 10 months applies especially to those cases that can be benefited by a comparatively brief stay. If the disease has made greater progress the longer duration of the stay necessary to produce results, the cost of extras and perhaps of nursing will be prohibitive and it will be the wiser course to remain at home where suitable food, care, and comforts will more than outweigh the benefits of climatic factors if unassisted by these essentials. In the estimate given an allowance is made for physicians' services. Of course no physician would refuse to treat a patient, no matter what his financial status might be, and every physician in a resort town has such patients who have come with but enough funds to pay a few weeks' board and whom he is glad to treat gratuitously. In the end, however, such patients become dependent on the charity of the town and must either be supported or sent home.

There are many who claim that tuberculosis can be treated successfully in the heart of any great city, and one authority is quoted as stating that a case of consumption which can not be cured at home can not be cured anywhere. In every resort town one meets with cured cases among business and professional men who originally came and located there in order to take the cure. In fact, if careful inquiry were made of the residents of these localities, it would be ascertained that a considerable number of them had migrated there in search of health. It will be found that some of them are obliged to remain in the locality in which they have been cured, and that a return to their former place of residence causes a recrudescence of symptoms of the disease. When we consider how widespread the disease is, and how frequently at post-mortem signs of healed tuberculous lesions are found in those who during life showed no symptoms of the disease, we are apt to question whether climate itself plays a very great part in the cure of the disease. We are more inclined to believe that rest, proper diet, and all the other factors which go to make up the proper regimen of the consumptive's life have a greater influence in determining the outcome of the disease than does climate itself.

The Bearing of the Presence of Tuberculous Persons on the Health, Social, and Economic Status of Communities to Which They Have Migrated.

In order to determine the bearing that the presence of the tuberculous migrants has upon the health of the residents of a community, it is necessary to have accurate morbidity reports upon which to base an opinion. If we take the view, which is held by many authorities, that tuberculous infection is usually received during childhood and that frequently many years may elapse before the symptoms of the disease are manifested, then it is necessary that the

morbidity and mortality records should cover a period of many years in order that we may draw accurate conclusions.

Several of the resort towns, namely, Asheville, Hendersonville, Southern Pines, and Aiken have ordinances requiring the notification of cases of tuberculosis to the health authorities. It was found, however, that only in Asheville was any attempt made to enforce the ordinance. Examination of death certificates on file in the office of the registrar of deaths at Hendersonville, N. C., showed that during the period from November, 1912, to February, 1914, the time at which these studies were carried on, there had been 21 deaths from pulmonary tuberculosis. Of this number, it was found that Henderson County was given as the residence of one of the deceased, and in one Hendersonville was given as the residence. In the latter case it was found that this person had resided in Hendersonville for the past eight years only, so could not be classed as an indigenous case.

At the town of Southern Pines it was found that there had occurred 141 deaths from pulmonary tuberculosis during the period 1900 to 1914. Of this number there was one case in which the deceased was stated to be a resident of the community.

At Aiken, S. C., no data could be obtained regarding the indigenous tuberculous.

According to a report issued by the board of health at Asheville, N. C., from June 1, 1912, to June 1, 1913, there were 97 deaths from tuberculosis in that city. Of this number 75 were of nonresidents and 22 were among residents of the city. During the period June 1 to September 1, 1913, there was a total of 37 deaths from tuberculosis, of which 3 occurred among residents of Asheville.

Inquiry was made of physicians and others in the several resort towns, and it was quite generally stated that indigenous cases were not frequent, although the disease was frequently found among the population of the country districts adjacent to the resorts.

Measures Taken to Protect the Citizens and Others Resident in the City of Asheville Against the Disease.

On June 1, 1913, an ordinance went into effect which provided for the regulation of sanatoria, boarding houses, and other places where tuberculous persons are housed. This ordinance reads as follows:

The joint board of health of the city of Asheville do ordain:

SECTION 1. That section 510 of Bourne's Asheville Code, 1903, be, and the same is hereby, repealed and the following inserted in lieu thereof:

SEC. 2. That no person, firm, or corporation shall keep, run, or operate any hospital, sanatorium, hotel, boarding house, rooming house, or other institution at which any person or persons suffering with tuberculosis are received, lodged, kept, roomed, or boarded in the city of Asheville without having first received a license to conduct such business from the joint health board, and that every person, firm, or corporation wishing to conduct such business shall make application in

writing to the joint board of health for a license, setting forth specifically the location of the property in which such business is proposed to be conducted, together with the name and resident address of the proprietor or owner of such proposed business, also the names and street addresses of all property owners and any other persons residing within 200 feet of the proposed location; and that the application shall contain an agreement that all of the premises in or on which said business is to be conducted may be inspected by the board of health, the health officer, or any other officer of the health department at any or all times, and that such applicant will comply with and obey all the rules and regulations of said board of health or said joint health board; that said joint health board may either grant or refuse a license to any person, firm, or corporation in its discretion; that such license shall be immediately revoked, without any further action by said joint health board, upon such licensee or any other person acting as agent for such licensee being convicted for violating any of the provisions of this or of any other section of this ordinance; that every such license granted shall expire on the 31st day of December of the year in which it is granted; and that the renewal of such license shall be applied for in the same manner as prescribed for in the original license, and that no such license shall be transferred without an order of the joint health board.

SEC. 3. That it shall be unlawful for any person or persons operating or in charge of any hotel, boarding house, rooming or other institution at which persons are received, lodged, kept, or boarded to take any person or persons suffering from tuberculosis when such hotel, boarding house, or other institution advertises or otherwise holds out that it does not take persons suffering from tuberculosis.

SEC. 4. That the board of health shall keep a list of all persons who secure a license under the provisions of this ordinance in the office of the health department of said city, which shall at all times during office hours be open to public inspection.

SEC. 5. That every person operating or in charge of any hotel, boarding house, or rooming house that has not been licensed to receive tubercular persons shall report to the health department or health officer of said city any person at such hotel, boarding house, or rooming house as aforesaid suspected of suffering with tuberculosis; and said health officer may make necessary examination of any or all persons lodging, rooming, or boarding at any hotel or rooming house not licensed as herein provided suspected to be suffering with tuberculosis and ascertain whether or not such person is suffering with tuberculosis; and should said health officer find any such person suffering with tuberculosis, such person must immediately be removed.

SEC. 6. That it shall be unlawful for any person suffering with tuberculosis to gain admittance by false statements or representations to room, lodge, or board at any hotel, boarding house, rooming house, or any other institution in said city not licensed to take tuberculous patients.

SEC. 7. That it shall be unlawful for any person suffering from tuberculosis to teach in any school, work at any soda fountain, in any barber shop, in any meat market, baker shop, grocery store, fruit stand, or any other place in said city where foodstuffs are handled or sold.

SEC. 8. That it shall be unlawful for any tuberculous person to expectorate upon the floor, steps, or other walk ways or porch of any sanitarium, sanatorium, hotel, boarding house, rooming house, or other public hall, bank, public building, public office, courthouse, street car, sidewalk, street, drive, walk, lawn, or other place within said city; that said person shall expectorate in tissue or other paper, in a handkerchief or other cloth, or in a proper sputum cup, which shall be destroyed by burning before depositing in or at any other place.

SEC. 9. For the purpose of this ordinance no person shall be considered suffering with tuberculosis whose sputum for three successive examinations, not less than four days apart, shall be free from tubercle bacilli; and that tuberculous patients who have

been reported to the board of health as cured, arrested, or closed shall submit their sputum for examination to the health department laboratory, and such persons shall submit with the said sputum a written certificate to the effect that the said sputum is of their own expectoration.

SEC. 10. That any person violating any of the provisions of this ordinance shall be subject to a penalty of \$25 for each and every offense.

EVERY CASE OF TUBERCULOSIS IN THE CITY OF ASHEVILLE MUST BE REPORTED.

Section 470 of the city code provides and declares that "pulmonary tuberculosis is a communicable disease and dangerous to the public health." Sections 471 and 472 read as follows:

"That whenever any householder knows that any person within his family or household has a communicable disease, dangerous to the public health, he shall, within 24 hours, report same to the health department of the city, giving the street, number, or location of the house; and any householder failing or neglecting to comply with the provisions of this section shall be subject to a penalty of \$25 for each and every such offense."

"That whenever any physician finds that any person whom he is called upon to visit has a communicable disease, dangerous to the public health, he shall, within 24 hours, report same to the health department, giving street, number or location of the house; and any physician failing to comply with the provision of this section shall be subject to a penalty of \$10 for each and every such offense."

Section 475 reads as follows:

"That no innkeeper, hotel proprietor or manager, or any other person shall rent out, let, or hire any house within said city in which a communicable disease dangerous to the public health has recently existed until the rooms or house and premises therewith connected have been disinfected to the satisfaction of the board of health of said city; and any person violating any of the provisions of this section shall be subject to a penalty of \$25 for each and every such offense."

Upon receipt of notice from the attending physician that a case of tuberculosis exists in a certain household the health department immediately notifies the householder of the existence of such case of tuberculosis in his house, submitting therein a brief of the law on the subject, and this notice is accompanied by a brief résumé of the necessary precautions that should be taken by the patient and those who associate with him, as well as the care and disposal of the sputum, etc., in order to prevent infection of other individuals. The notification card which is turned in to the health office by the physician is filed in a card index. As soon as the patient leaves the room which he occupies in the house, hotel, or boarding house, either by removal to other quarters in the city or by leaving the city, or becomes cured, in accordance with section 475 of the city code quoted above the hotel proprietor, boarding-house keeper, landlord, or householder must notify the health department, and is not permitted to allow anyone else to occupy the room vacated until it has been fumigated by the official fumigator of the health department. The physician in attendance also notifies the health office of the removal of the patient

and to what place, if in the city, he goes. When the fumigator finishes fumigating the room he returns a card showing for what disease the fumigation was done, who occupied the room, and the place to which he has removed.

If the patient has removed to some other point in the city, the routine starts over again. If the patient leaves the city or is reported cured, his card is removed from the active list.

Briefly summarized, the salient points in the law are as follows:

(1) It is a violation of the laws of Asheville for any one to spit on the sidewalk or other public place.

(2) It is a violation of the laws for a person with tuberculosis to spit on any floor, walkway, lawn, driveway, or in any place; but he is required by law, if he spits at all, to spit in a handkerchief or other cloth, or on a paper, or in a sputum cup, all of which must be burned.

(3) It is a violation of the laws for a person suffering with tuberculosis to state that he is not suffering with this disease, in order to gain entrance into a boarding house or hotel or other place.

(4) It is a violation of the laws for a boarding-house keeper to state that she does not take tuberculous people when such statement is not true.

(5) It is a violation of the laws for a hotel, boarding house, or any other place or institution to take people suffering with tuberculosis unless they have a license from the joint health board. A list of places so licensed is on file in the office of the health department and is open at all times to the inspection of any one interested.

(6) It is a violation of the laws for a hotel, boarding house, sanatorium, or other institution to allow a room that has been occupied by a tubercular person to be occupied by another person until the room has been fumigated and disinfected by the official fumigator of the health department.

(7) The laws of Asheville require every hotel keeper, boarding-house keeper, or other head of the house to notify the health department of the existence of a case of tuberculosis in his or her house within 24 hours after he or she has knowledge of the existence of such disease in the house. A like duty is imposed upon every physician treating a case of tuberculosis in the city of Asheville.

DISINFECTION OF MOVING-PICTURE HOUSES.

All moving-picture houses are required to be disinfected once a week by the official fumigator of the health department. Once daily they are required to have the floors and seats wiped with a disinfectant solution designated by the health department.

Bearing of the Presence of Tuberculous Persons on Social and Economic Status of the Community.

In earlier days Asheville was preeminently a resort for the tuberculous. It was extensively advertised as such and the advantages of the climate were set forth in glowing terms. As a result of this, large numbers of tuberculous persons migrated to this section in search of health. Following Asheville, other localities in the same section, such as Waynesville, Black Mountain, and Hendersonville, the climate of which is similar to that of Asheville, also became resorts for this class of patients.

As these localities grew, a tendency to encourage the coming of tourists took the place of efforts to encourage the coming of the tuberculous. At the present time there is a great tendency to discourage the sick from coming to Asheville. This is very evident by the fact that the hotels advertise that they do not take consumptives.

At a meeting of the County Medical Society in Asheville on February 2, 1914, a prominent physician stated that there were licensed accommodations for not more than 300 tuberculous persons, whereas the number of tuberculous in the city far exceeded that number. He also stated that there were cases of (open) tuberculosis living in boarding houses and other places inhabited by well people, and that many of the sick were not under the care of a physician for the reason that if they consulted one they would be reported to the health authorities, compelled to seek other lodgings, and the persons housing them would be brought into court for housing tuberculous persons without a license from the joint health board.

During the present year, at the meeting of this board held for the purpose of considering applications for licenses for the housing of the tuberculous, the renewal of the license of several persons was refused. One case cited was that of the keeper of a large boarding house for tuberculous persons, who had been caring for this class of cases for the past 15 years and who was well versed in the management from a sanitary standpoint. This year a license for only six months was granted by the joint health board, with the understanding that at the expiration of that time the use of the house as a boarding house for tuberculous would be discontinued. The protester to the joint health board in this case was a person who himself came to Asheville several years ago suffering from tuberculosis and who has since apparently recovered. He bought the adjoining property and built a residence within 200 feet of the boarding house, thus gaining the right to protest against its use for the housing of the tuberculous.

Another case cited was that of a resident who protested against the use of a house adjoining his residence and later withdrew his

protest to the joint health board on condition that the sick persons living in the house would refrain from reclining in steamer chairs on the front veranda.

As a result of inadequate facilities for housing and the agitation against the tuberculous individual, there is no doubt that not all cases of tuberculosis are being reported to the health authorities.

It is apparent that the business interests of the city are aiming to make the city a resort for the tourist and not for the consumptive, and that efforts are being made to diminish the number of houses licensed for the care of the tuberculous in order to discourage their coming.

While in Hendersonville, N. C., the writer talked with a woman and her daughter from Savannah, Ga. The daughter had tuberculosis and had been previously under treatment at Saranac Lake, N. Y. They left Saranac Lake and came to Asheville to spend the winter in a milder climate. They remained but a few days in Asheville and then came to Hendersonville. The mother of the patient stated that she would not remain in Asheville for the reason that there were a number of tuberculous persons in the boarding house where they lived. These persons attempted to conceal the fact that they had tuberculosis and made no attempt to properly dispose of their sputum, and so protect others from the disease. She stated that she had no objections to living in the same house with tuberculous patients who observed the ordinary rules of sanitation, but she did object to being in the same house with those who took no precautions to protect others.

To the casual observer Asheville does not impress one as being a health resort. It is customary to associate the reclining chair and out-of-door sleeping with a resort of this kind. Only in some of the large boarding houses and sanatoria are reclining chairs in use. While the large boarding houses for the tuberculous are provided with open-air sleeping apartments, not all are so provided. Outside of the waiting rooms of physicians' offices and in the boarding houses sputum cups are seldom seen in use. The cups are rarely used in street cars and on the streets. While section 8 of the Sanitary Code provides a penalty for expectorating upon the sidewalk, street, or in fact in any place except upon a handkerchief, tissue paper, or in a sputum cup, it is not an uncommon sight to see men, tuberculous and healthy, standing in the public square and constantly expectorating upon the sidewalk and street. Even the police, whose duty it is to enforce the antisputting ordinance, are constantly violating it.

Indigent tuberculous in Asheville.—As stated previously, it is estimated that a tuberculous person in this locality should have available at least \$75 per month for board and lodging in order to live com-

fortably. There are many in this town who manage to get along on much less than this, as there are boarding houses that furnish board and lodging at \$10 per week or less.

It frequently happens that patients arrive in Asheville with little or no funds and who hope to obtain some employment of a light nature which will enable them to make ends meet while undergoing treatment. It is almost impossible for a tuberculous person to obtain this sort of employment. Any work which would be remunerative enough to furnish him with a living would be detrimental to his physical condition, for the reason that one of the requisites to successful treatment of the disease is absolute rest. It is only toward the completion of the cure that exercise in any form is permitted, and that prescribed is usually in the form of walking a given distance, which is varied to suit the condition of the patient. Any indoor employment or occupation of a sedentary nature is manifestly contraindicated.

Section 7 of the Sanitary Code prohibits the employment of tuberculous persons in certain lines, such as teaching school, working at a soda fountain, in a barber shop, meat market, baker shop, grocery store, fruit stand, or any other place where foodstuffs are handled or sold. The patient is thus excluded by law from performing various kinds of work which his physical condition might permit him to engage in.

Provision for the care of indigent tuberculous persons.—There are several agencies for the care of indigent tuberculous persons in Asheville. These are the Flower Mission and Associated Charities, the Society of the Good Samaritan, and the Salvation Army. The Buncombe County Home maintains cottages for the care of indigent tuberculous residents of this county, although nonresidents as well are occasionally admitted.

The Flower Mission and Associated Charities has been in existence for the past 29 years. The work of this organization is not confined to the relief of the indigent tuberculous but it furnishes aid to all the needy who require assistance. Funds for carrying on the work are obtained from various sources. The county commissioners give \$50 per month, citizens and merchants of Asheville contribute money, clothes, fuel, groceries, furniture, etc., and the city administration contributes \$100 per month. The sale of Red Cross Christmas seals is conducted under the direction of the Associated Charities and the proceeds are expended under the direction of the dispensary physicians and the district nurse for the treatment and support of the indigent tuberculous.

A dispensary is maintained by this society and several of the physicians in the community give their services for the treatment of the sick. The only statistics available in regard to the number of

indigent tuberculous treated at the dispensary were those for the past year, which are as follows:

Total number receiving aid and medical treatment.....	36
White.....	24
Colored.....	12
Cases in which disease was arrested so as to permit of resuming work.....	10
Cases improved but not yet able to work.....	11
Cases unimproved.....	2
Deaths (white).....	5
Deaths (colored).....	8
Total deaths among the indigent.....	13
Native-born indigent tuberculous under treatment.....	24
Indigent from other States.....	12

“*Mission of the Good Samaritan.*”—The object of this organization is to render assistance to strangers in the city, both sick and well. Although occasionally it happens that a well person is in need of financial aid, the work of the society is largely among the indigent tuberculous. The head of the society is a former pastor of one of the churches of Asheville, who gave up his pastorate to devote his time and energies to the relief of the needy. All cases of indigent persons which come to the attention of the city authorities and others are referred to this society. If the person is sick, he is placed in one of the boarding houses for the tuberculous, where he can receive food and shelter. If a nurse is necessary to care for the patient, one is furnished by the society. Medical attendance is furnished free by one of a number of local physicians who have volunteered their services. The fact is impressed upon the patient that he should devote all his energies toward getting well.

Funds for the care of the patient are provided for by the society, although appeals are made to his friends at home. If he has no relatives or friends, his church, if he is a church member, or his lodge, if a lodge member, are appealed to to furnish money for his care. If money is not forthcoming from any of these various sources, business men or well-to-do patients in the city are asked to help, and appeals for aid are responded to very generously by business men and others in the city.

As far as could be learned the purpose of the Mission of the Good Samaritan is to keep the indigent tuberculous in Asheville where he can be cared for and receive treatment, and not to send him on to the next town, where he also would become a burden, nor to send him back to his home as a means of ridding the community of an economic burden.

As to the number of indigent tuberculous who have been aided in this way, there are no statistics available which would indicate the extent of pauperism among this class of people in Asheville.

There is much charity work done by the physicians of the community, the extent of which is unknown.

Buncombe County Poorhouse.—This institution is located about 6 miles from the city of Asheville. In connection with the home the county maintains a number of cottages for the care of indigent tuberculous. Although supposedly maintained for indigent residents of the county, a few nonresident tuberculous have been admitted for treatment.

Previous to 1911 tuberculous persons were treated in the home in the same building with other inmates. In that year a number of separate cottages, well adapted for the purpose, were built for the purpose of housing the indigent tuberculous.

The records of the institution show that 15 indigent persons suffering with tuberculosis have been admitted since 1911. No records previous to that date were available. Of the 15 patients admitted 8 died while inmates of the home. Of the 15, 5 were negroes and 10 were whites.

At the time of my visit there were 3 tuberculous inmates in the institution, 2 females and 1 male. All of these persons were natives of Asheville.

In connection with this study of the migration of tuberculous persons in North Carolina, mention should be made of the resort towns of Waynesville, Tryon, and Brevard. These towns are all located in the mountainous section of the State and have a climate very similar to Asheville. Formerly these towns were resorted to by numbers of tuberculous for the benefit of their health, but as conditions have changed the number of this class of cases coming to these localities has steadily diminished. The reason for this is that the tuberculous have great difficulty in obtaining accommodations. A few miles from Waynesville is located Lake Junaluska, which is the assembly grounds of the Southern Methodist Church. Each summer some thousands of persons from all parts of the South attend the assembly at this place. These people are housed in boarding houses in Waynesville, which furnishes a considerable if not the principal source of revenue for the inhabitants of the town. The presence of tuberculous persons in a boarding house would deter others in health from patronizing the boarding house, and so the tuberculous individual is excluded.

A resident of Waynesville stated to the writer that during the past summer a tuberculous person, after several ineffectual attempts to secure lodgings in the various boarding houses, was finally able to get into a certain boarding house. The next day when the other boarders noticed him among them, 18 of these boarders left and secured accommodations elsewhere.

There is no doubt, however, that there are a certain number of tuberculous persons in Waynesville, some of whom either rent or own their own houses. The number can not be stated, however, as these cases are not reported to the health authorities.

The town of Tryon, N. C., is a well-known winter resort and during the season entertains a large number of tourists. This town also was noted as a resort for the tuberculous, but at the present time there are comparatively few who come to this resort on account of tuberculosis. It is stated that the hotels and boarding houses are unwilling to admit them and they even have difficulty in renting houses. At the present time there is one sanatorium for the tuberculous in Tryon, but owing to lack of patronage it is not a paying proposition. At the time the writer visited this sanatorium there were but four patients in the institution.

The same conditions prevail at Brevard, N. C., which is a resort for tourists during the summer. The same difficulty of obtaining accommodations is met with by the tuberculous. At one time a boarding house for the tuberculous was established in this town, but owing to public opinion it was soon discontinued.

Forced Migration of Tuberculous Persons.

During the investigation, careful inquiry was made in the various resort towns visited into the extent to which the migration of tuberculous persons is forced upon them by communities desiring to rid themselves of economic burdens of such afflicted persons.

Conditions in the resort towns of North and South Carolina differ from like localities in the West and Southwest, where forced migration is said to be not an infrequent occurrence. No cases of this character were learned of by the writer during the investigation. In only two instances that were learned of was transportation furnished to tuberculous persons to enable them to migrate to other localities.

At Aiken, S. C., a case occurred in which a person was furnished by the community with transportation to his home. This was a case of a man who came to Aiken from Savannah, Ga., two years ago. He claimed to have walked the entire distance from Savannah to Aiken and he had but 30 cents in his pockets on arrival. He applied to the local postmaster for aid and was sent to the Aiken Cottage Sanatorium, where he remained until the institution closed for the year. During the time that he remained in the sanatorium his expenses for lodging and medical treatment, amounting to \$5 per week, were paid by a committee of business men of the town. When he left the sanatorium he was given \$2.50 and a railroad ticket to his home in Knoxville, Tenn. This man claimed to have contracted tuberculosis in the Philippines while serving in the Army.

The second case was of a tuberculous woman born in Ireland. She came to Asheville from Florida, and being without means applied to the Associated Charities for assistance. At the request of the society, although the woman was not a resident of Buncombe County, the county commissioners admitted her to the tuberculous ward of the county house. During the time she remained in the county house she improved considerably. She then asked the Associated Charities to send her to New Jersey where she had friends. When asked the reason why she did not go from Florida direct to New Jersey, she replied that she did not wish to go to her friends while sick and so become a burden to them. When she arrived in Asheville and applied to the Associated Charities for aid she denied having either friends or relatives in this country. Transportation to New Jersey was furnished her by the society.

No definite instance could be learned of in which other communities had unloaded tuberculous persons upon any of the resort towns where the investigation was carried on. In practically every case the indigent tuberculous came to the resort of their own accord or else were sent there by their relatives or friends.

Conclusions.

As a result of the studies made in the principal localities in North and South Carolina resorted to by the tuberculous, the following facts appear to be manifest:

1. The migration of the tuberculous is not as extensive as it was formerly. This is especially true of several of the resort towns which formerly were much frequented by the tuberculous but are now almost exclusively tourist resorts.

2. With the possible exception of Asheville, N. C., the problem of the indigent tuberculous does not exist in any of the resort towns visited, nor was evidence found of forced migration of tuberculous persons from one place to another.

3. Ordinarily, travel has a fatiguing effect on tuberculous travelers and in advanced cases may be dangerous.

4. The danger of infection to other travelers and to employees of common carriers, while present in limited degree, is not very great.

5. Tuberculous persons should, under no circumstances, seek changes of climate unless they are financially able to make the required journey in comfort and live in their new environment under conditions of comfort equal to or better than those to which they have been accustomed.

6. Before advising tuberculous patients in respect to change of climate physicians should take into account not only the stage of the disease, but the financial status of the patient and his disposition relative to ability to endure separation from family and friends.

Physicians should also ascertain whether suitable accommodations are available and whether competent medical advice may be obtained in the locality to which the patient is to be sent for climatic treatment. Both of these factors are indispensable in the proper treatment of the disease.

PLAGUE-PREVENTION WORK.

CALIFORNIA—PLAGUE PREVENTION.

The following report of plague-prevention work in California for the week ended February 20, 1915, was received from Passed Asst. Surg. Hurley, of the United States Public Health Service, in temporary charge of the work:

San Francisco, Cal.

RAT PROOFING.		RAT PROOFING—continued.	
New buildings:		Old buildings—Continued.	
Inspection of work under construction.	257	Cubic feet new foundation walls installed	3,862
Basements concreted (18,250 square feet).....	35	Concrete floors installed (37,153 square feet).....	50
Floors concreted (52,124 square feet)...	26	Basements concreted (15,599 square feet).	21
Yards, passageways, etc. (11,756 square feet).....	56	Yards and passageways, etc., screened (22,559 square feet).....	88
Total area of concrete laid (square feet).	32,130	Total area concrete laid (square feet)..	75,316
Class A, B, and C (fire proof) buildings:		Floors rat proofed with wire cloth (5,529 square feet).....	7
Inspections made.....	232	Buildings razed.....	14
Roof and basement ventilators, etc., screened.....	2,425	New garbage cans stamped approved.....	261
Wire screening used (square feet).....	11,950	Nuisances abated.....	450
Openings around pipes, etc., closed with cement.....	9,053		
Sidewalk lens lights replaced.....	13,670	OPERATIONS ON THE WATER FRONT.	
Old buildings:		Vessels inspected for rat guards.....	27
Inspections made.....	679	Reinspections made on vessels.....	23
Wooden floors removed.....	53	New rat guards procured.....	35
Yards and passageways, planking removed.....	22	Defective rat guards repaired.....	6
		Vessels on which cargo was inspected.....	1

AMOUNT OF CARGO INSPECTED AND DESCRIPTION OF SAME.

	Condition.	Rat evidence.
Steamer Congress from Seattle:		
120 cases salmon, milk, and household goods.....	O. K.....	None.
400 sacks flour, hickory nuts, and meal.....	O. K.....	None.
Rats trapped on wharves and water front.....		28
Rats trapped on vessels.....		6
Traps set on wharves and water front.....		149
Traps set on vessels.....		42
Vessels trapped on.....		10
Poisons placed on water front (pieces).....		3,800
Poisons placed within Panama-Pacific International Exposition grounds (pieces).....		7,200
Bait used on water front and vessels, bacon (pounds).....		6
Amount of bread used in poisoning water front (loaves).....		13
Pounds of poison used on water front.....		6½

RATS COLLECTED AND EXAMINED FOR PLAGUE.		RATS IDENTIFIED.	
Collected.....	206	Mus norvegicus.....	92
Examined.....	177	Mus rattus.....	31
Found infected.....	0	Mus alexandrinus.....	50
		Mus musculus.....	33

Squirrels collected and examined for plague.

Contra Costa County.....	127
San Benito County.....	20
Total.....	147

Ranches inspected and hunted over.

Contra Costa County.....	20
San Benito County.....	5
Total.....	25

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.
Cities:				
San Francisco.....	Jan. 30, 1908	Oct. 23, 1908	(1)	398 rats.
Oakland.....	Aug. 9, 1911	Dec. 1, 1908	(1)	126 rats.
Berkeley.....	Aug. 28, 1907	(1)	(1)	None.
Los Angeles.....	Aug. 11, 1908	(1)	Aug. 21, 1908	1 squirrel.
Counties:				
Alameda (exclusive of Oakland and Berkeley).....	Sept. 24, 1909	Oct. 17, 1909 ²	Aug. 7, 1914	286 squirrels, 1 wood rat.
Contra Costa.....	May 17, 1914	(1)	Oct. 23, 1914	1,565 squirrels.
Fresno.....	(1)	(1)	Oct. 27, 1911	1 squirrel.
Merced.....	(1)	(1)	July 12, 1911	5 squirrels.
Monterey.....	(1)	(1)	Apr. 10, 1914	6 squirrels.
San Benito.....	June 4, 1913	(1)	Sept. 26, 1914	36 squirrels.
San Joaquin.....	Sept. 18, 1911	(1)	Aug. 26, 1911	18 squirrels.
San Luis Obispo.....	(1)	(1)	Jan. 29, 1910	1 squirrel.
Santa Clara.....	Aug. 31, 1910	(1)	July 23, 1913	25 squirrels.
Santa Cruz.....	(1)	(1)	May 17, 1910	3 squirrels.
Stanislaus.....	(1)	(1)	June 2, 1911	13 squirrels.

¹ None.² Wood rat.

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

LOUISIANA—NEW ORLEANS—PLAGUE ERADICATION.

The following report of plague-eradication work at New Orleans for the week ended February 27, 1915, was received from Surg. Corput, of the United States Public Health Service, in temporary charge of the work:

OUTGOING QUARANTINE.	OVERLAND FREIGHT INSPECTION.		
Vessels fumigated with sulphur.....	56	Cars inspected; found in good order; permitted to load.....	1,972
Vessels fumigated with carbon monoxide.....	5	Cars ordered repaired before loading.....	1,377
Vessels fumigated with hydrocyanic gas.....	4	Total cars inspected.....	3,349
Pounds of sulphur used.....	8,763	DESTINATION AND NUMBER OF RAILROAD CARS INSPECTED FOR WEEK ENDED FEB. 27.	
Coke consumed in carbon-monoxide fumigation (pounds).....	7,900	Alabama.....	119
Pounds of potassium cyanide used in hydrocyanic-gas fumigation.....	419½	Arkansas.....	39
Pounds of sodium carbonate used in hydrocyanic-gas fumigation.....	460	California.....	25
Pounds of sulphuric acid used in hydrocyanic-gas fumigation.....	420	Carolina, North.....	2
Clean bills of health issued.....	33	Carolina, South.....	5
Foul bills of health issued.....	12	Colorado.....	5
		Connecticut.....	1

DESTINATION AND NUMBER OF RAILROAD CARS INSPECTED FOR WEEK ENDED FEB. 27—contd.

Dakota, North.....	1
Dakota, South.....	1
Florida.....	32
Georgia.....	51
Illinois.....	152
Indiana.....	15
Iowa.....	12
Kansas.....	2
Kentucky.....	18
Louisiana.....	963
Massachusetts.....	2
Mexico.....	1
Michigan.....	15
Minnesota.....	8
Mississippi.....	370
Missouri.....	70
Nebraska.....	3
New York.....	35
Ohio.....	51
Oklahoma.....	8
Pennsylvania.....	18
Tennessee.....	106
Texas.....	264
Virginia.....	4
Washington.....	1
Wisconsin.....	8
Canada.....	2

FIELD OPERATIONS.

Rats trapped.....	6,451
Premises inspected.....	10,345
Notices served.....	1,914

BUILDINGS RAT PROOFED.

By elevation.....	166
By marginal concrete wall.....	134
By concrete floor and wall.....	333
By minor repairs.....	254
Square yards of concrete laid.....	21,792
Total buildings rat proofed.....	887
Total buildings rat proofed to date.....	23,118
Number of abatements.....	250
Number of abatements to date.....	10,605

LABORATORY OPERATIONS.

Rodents examined.....	3,509
Mus norvegicus.....	1,549
Mus rattus.....	138
Mus alexandrinus.....	189
Mus musculus.....	3,361
Unclassified.....	1,228
Putrid.....	105
Total rodents received at laboratory.....	6,465
Number of suspicious rats.....	20
Plague rats confirmed.....	1

Rodent cases.

Case No.	Address.	Captured.	Diagnosis confirmed.	Treatment of premises.
232	Girod, between Fulton and South Peters Streets.	Feb. 19, 1915.	Feb. 26, 1915.	Intensive trapping.

¹ Found dead.

Total number of rodents captured to Feb. 27.....	278,092
Total number of rodents examined to Feb. 27.....	215,345

Total cases of rodent plague to Feb. 27 by species:

Mus musculus.....	4
Mus rattus.....	16
Mus alexandrinus.....	9
Mus norvegicus.....	203

Total rodent cases to Feb. 27.....	232
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Last case of human plague October 4, 1914.

Last case of rodent plague February 26, 1915.

WASHINGTON—SEATTLE—PLAGUE ERADICATION.

The following report of plague-eradication work at Seattle for the week ended February 20, 1915, has been received from Surg. Lloyd, of the United States Public Health Service, in charge of the work:

Hilo.

WEEK ENDED FEB. 6, 1915.

Rats and mongoose taken.....	2,457	Classification of rats trapped and found dead—	
Rats trapped.....	2,408	Continued.	
Rats found dead.....	0	<i>Mus rattus</i>	865
Mongoose taken.....	36	<i>Mus musculus</i>	807
Rats and mongoose examined macroscopically.....	2,450	Last case of rat plague, Paauhau Sugar Co., Aug. 29, 1914.	
Rats and mongooses found plague infected....	0	Last case of human plague, Paauhau Sugar Co., Aug. 16, 1914.	
Classification of rats trapped and found dead:			
<i>Mus norvegicus</i>	381		
<i>Mus alexandrinus</i>	361		

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.

CEREBROSPINAL MENINGITIS.

State Reports for January, 1915.

Places.	New cases reported.	Places.	New cases reported.
California:		Mississippi—Continued.	
Los Angeles County—		Lauderdale County.....	1
Los Angeles.....	2	Montgomery County.....	1
Monrovia.....	1	Total.....	3
Merced County.....	1	New York:	
Orange County.....	2	Albany County.....	1
Fullerton.....	2	Erie County.....	1
San Francisco County—		Jefferson County.....	2
San Francisco.....	1	Oneida County.....	1
Total.....	9	New York City.....	15
Mississippi:		Total.....	20
Jackson County.....	1		

City Reports for Week Ended Feb. 20, 1915.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Buffalo, N. Y.....	1		Pittsfield, Mass.....		2
Dayton, Ohio.....		1	Portland, Oreg.....	1	2
Fall River, Mass.....	2		St. Louis, Mo.....	2	1
Mobile, Ala.....	1	1	San Francisco, Cal.....		1
New Orleans, La.....	1		Seattle, Wash.....		1
New York, N. Y.....	2	2	South Omaha, Nebr.....		1
Philadelphia, Pa.....	2	2			

DIPHThERIA.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 786.

ERYSIPELAS.

City Reports for Week Ended Feb. 20, 1915.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Binghamton, N. Y.....	1	.....	Kansas City, Mo.....	7	1
Boston, Mass.....	.....	2	Milwaukee, Wis.....	1	.....
Brockton, Mass.....	1	.....	New York, N. Y.....	.....	7
Buffalo, N. Y.....	5	1	Philadelphia, Pa.....	15	1
Chicago, Ill.....	26	6	Pittsburgh, Pa.....	7	1
Cincinnati, Ohio.....	5	.....	Rutland, Vt.....	1	.....
Cleveland, Ohio.....	6	1	St. Louis, Mo.....	7	.....
Dayton, Ohio.....	2	.....	San Francisco, Cal.....	4	.....
Duluth, Minn.....	2	.....	Schnectady, N. Y.....	1	.....
East Orange, N. J.....	1	.....	Seattle, Wash.....	2	1
Erie, Pa.....	2	.....	Springfield, Ill.....	1	.....
Harrisburg, Pa.....	1	.....	Superior, Wis.....	.....	1
Kalamazoo, Mich.....	1	1	Zanesville, Ohio.....	1	.....

GONORRHEA.

California Report for January, 1915.

The State Board of Health of California reported that during the month of January, 1915, 48 cases of gonorrhoea were notified in the State of California.

MALARIA.

State Reports for January, 1915.

Places.	New cases reported.	Places.	New cases reported.
California.....	12	Mississippi—Continued.	
Mississippi:		Leake County.....	18
Adams County.....	22	Lee County.....	44
Alcorn County.....	16	Leflore County.....	131
Amite County.....	34	Lincoln County.....	22
Attala County.....	32	Madison County.....	29
Bolivar County.....	343	Marion County.....	71
Calhoun County.....	7	Marshall County.....	29
Carroll County.....	53	Monroe County.....	42
Chickasaw County.....	17	Montgomery County.....	16
Choctaw County.....	26	Neshoba County.....	36
Claiborne County.....	55	Noxubee County.....	31
Clarke County.....	27	Oktibbeha County.....	34
Clay County.....	24	Panola County.....	60
Coahoma County.....	206	Pearl River County.....	7
Copiah County.....	42	Perry County.....	56
Covington County.....	73	Pike County.....	36
De Soto County.....	10	Prentiss County.....	8
Forrest County.....	91	Quitman County.....	40
Franklin County.....	6	Scott County.....	10
George County.....	14	Sharkey County.....	31
Greene County.....	25	Simpson County.....	16
Grenada County.....	23	Smith County.....	28
Hancock County.....	9	Sunflower County.....	301
Harrison County.....	83	Tallahatchie County.....	64
Hinds County.....	68	Tate County.....	83
Holmes County.....	150	Tippah County.....	16
Issaquena County.....	8	Tipton County.....	19
Itawamba County.....	18	Tunica County.....	99
Jackson County.....	39	Union County.....	8
Jasper County.....	25	Warren County.....	205
Jefferson County.....	33	Washington County.....	159
Jefferson Davis County.....	12	Wayne County.....	27
Jones County.....	110	Wilkinson County.....	9
Kemper County.....	45	Winston County.....	46
Lafayette County.....	24	Yalobusha County.....	48
Lamar County.....	34	Yazoo County.....	233
Lauderdale County.....	75		
Lawrence County.....	42	Total.....	4,063

MEASLES.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 786.

PELLAGRA.**State Reports for January, 1915.**

Places.	New cases reported.	Places.	New cases reported.
California	1	Mississippi—Continued.	
Mississippi:		Lowndes County	1
Adams County	5	Madison County	2
Alcorn County	4	Marion County	6
Attala County	6	Marshall County	9
Bolivar County	23	Monroe County	13
Calhoun County	1	Montgomery County	1
Carroll County	8	Neshoba County	6
Chickasaw County	7	Noxubee County	4
Clalborne County	1	Oktibbeha County	2
Clarke County	3	Pearl River County	2
Clay County	2	Pike County	3
Coahoma County	4	Pontotoc County	1
Copiah County	7	Prentiss County	3
Covington County	7	Quitman County	6
De Soto County	1	Scott County	3
Forrest County	20	Sharkey County	1
George County	1	Simpson County	4
Harrison County	9	Smith County	1
Hinds County	17	Sunflower County	19
Holmes County	8	Tallahatchie County	6
Jackson County	1	Tate County	2
Jasper County	2	Tippah County	1
Jefferson Davis County	2	Tishomingo County	4
Jones County	10	Tunica County	8
Lamar County	4	Warren County	16
Lauderdale County	5	Washington County	6
Lawrence County	6	Wayne County	1
Lee County	6	Yazoo County	7
Leflore County	2		
Lincoln County	6	Total	321

PLAGUE.**Louisiana—New Orleans—Plague-Infected Rat Found.**

The finding of a plague-infected rat at New Orleans was reported March 9, 1915. The rat was found at a point 18 squares distant from the nearest known point of infection.

PNEUMONIA.**City Reports for Week Ended Feb. 20, 1915.**

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Alameda, Cal.	1		Muscatine, Iowa	1	
Auburn, N. Y.	2		New Castle, Pa.	3	
Binghamton, N. Y.	5	8	Norfolk, Va.	3	3
Braddock, Pa.	2		Norristown, Pa.	1	1
Chicago, Ill.	273	138	Philadelphia, Pa.	62	65
Cleveland, Ohio	62	31	Pittsburgh, Pa.	30	37
Erie, Pa.	2		Reading, Pa.	1	4
Galesburg, Ill.	2	2	Rock Island, Ill.	2	2
Grand Rapids, Mich.	3	7	San Francisco, Cal.	10	8
Kalamazoo, Mich.	1		Schenectady, N. Y.	8	2
Kansas City, Mo.	3	17	Steelton, Pa.	3	1
Los Angeles, Cal.	15	10	Wilksburg, Pa.	1	
Marinette, Wis.	1	1			

POLIOMYELITIS (INFANTILE PARALYSIS).

State Reports for January, 1915.

Places.	New cases reported.	Places.	New cases reported.
California:		Mississippi:	
Humboldt County—		Adams County.....	1
Eureka.....	1	Calhoun County.....	1
Marin County—		Coahoma County.....	1
San Anselmo.....	1	Oktibbeha County.....	1
Merced County—		Total.....	4
Merced.....	1		
Riverside County—		New York:	
Riverside.....	1	Clinton County.....	1
Sacramento County—		New York City.....	7
Sacramento.....	2	Total.....	8
Total.....	6		

City Reports for Week Ended Feb. 20, 1915.

During the week ended February 20, 1915, poliomyelitis was notified by cities as follows: Chicago, Ill., 2 cases; Newark, N. J., 1 case; Philadelphia, Pa., 1 case; San Francisco, Cal., 1 case.

SCARLET FEVER.

See Diphtheria, measles, scarlet fever, and tuberculosis, p. 786.

SMALLPOX.

California—Imperial County.

Acting Asst. Surg. Richter reported by telegraph March 8, 1915, that during the week ended March 6, 10 cases of smallpox were notified in Imperial County, Cal.

Kansas.

Collaborating Epidemiologist Crumbine reported by telegraph that during the week ended March 6, 1915, cases of smallpox were notified in counties of Kansas as follows: Anderson 5, Brown 1, Butler 4, Clay 24, Comanche 10, Doniphan 6, Pratt 1, Reno 1, Riley 7, Sedgwick 6, Sumner 6, Wyandotte 1.

Kansas—Manhattan—State Agricultural College.

Collaborating Epidemiologist Crumbine reported by telegraph March 5, 1915, that 17 cases of smallpox had been notified at the State Agricultural College, Manhattan, Kans.

Kentucky—Letcher County.

Surg. McMullen reported March 1, 1915, that 30 cases of smallpox had been notified at a mining camp located at the head of Kingdomcome Creek, Letcher County, Ky.

SMALLPOX—Continued.

Minnesota.

Collaborating Epidemiologist Bracken reported by telegraph that during the seven days ended March 8, 1915, new foci of smallpox infection were reported in Minnesota, cases of the disease having been notified as follows: Anoka County, Anoka, 2; Brown County, Cottonwood Township, 1; Carlton County, Red Clover Township, 1; Douglas County, Kensington, 5, Solem Township, 1; Faribault County, Lura Township, 4; Jackson County, Lakefield, 2; Lesueur County, Elysian, 1; Martin County, Westford Township, 1; Murray County, Fenton Township, 1; Nobles County, Leota Township, 1; Saint Louis County, Virginia, 5; Sibley County, Henderson Township, 1; Swift County, Appleton, 2; Todd County, Ward Township, 7; Waseca County, Janesville Township, 1; Winona County, Winona, 1; Yellow Medicine County, Clarkfield, 1.

State Reports for January, 1915.

Places.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
California:						
Humboldt County—						
Eureka.....	3				3	
Imperial County.....	2				2	
Holtville.....	4				4	
Los Angeles County.....	1				1	
Los Angeles.....	2				2	
Orange County.....	13			1	6	6
Santa Ana.....	1					1
San Bernardino County.....	6					6
Colton.....	7				7	
Redlands.....	2				2	
San Bernardino.....	1				1	
San Diego County.....	1				1	
East San Diego.....	2				2	
San Diego.....	26				26	
San Joaquin County—						
Lodi.....	2				2	
Total.....	73			1	59	13
New York:						
Cattaraugus County.....	10			2	8	
Clinton County.....	3				3	
Herkimer County.....	1				1	
Jefferson County.....	1		1			
Monroe County.....	9		3		3	3
Niagara County.....	2			1	1	
Steuken County.....	2				2	
Total.....	28		4	3	18	3

Miscellaneous State Reports.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Mississippi (Jan. 1-31):			Texas (Jan. 1-31):		
Counties—			Archer County.....	5	
Adams.....	16		Bosque County.....	1	
Amite.....	3		Brown County.....	6	
Bolivar.....	5		Cameron County—		
Chickasaw.....	32		Brownsville.....	2	
Clay.....	3		Coleman County—		
Coahoma.....	33		Coleman.....	2	
Franklin.....	2		Collingsworth County.....	12	
Harrison.....	6		Colorado County.....	1	
Hinds.....	26		Concho County.....	6	
Holmes.....	14		Dallas County.....	2	
Jasper.....	6		Dallas.....	11	
Lauderdale.....	10		El Paso County—		
Leflore.....	12		El Paso.....	13	
Lincoln.....	42		Hardeman County.....	1	
Marion.....	3		Haskell County.....	5	
Mourne.....	86		Rule.....	4	
Noxuttee.....	1		Henderson County.....	2	
Rankin.....	2		Hidalgo County.....	18	
Scott.....	46		Hill County.....	7	
Simpson.....	1		Hunt County.....	4	
Smith.....	4		Merard County.....	1	
Sunflower.....	43		Midland County.....	2	1
Walthall.....	3		Navarro County.....	2	
Washington.....	5		Nolan County.....	6	
Total.....	404		Nueces County—		
			Kingsville.....	13	
Oregon (Jan. 1-31):			Runnels County—		
Clackamas County.....	36		Ballinger.....	4	
Douglas County.....	1		Tarrant County—		
Jackson County.....	43		Fort Worth.....	18	
Josephine County.....	5		Throckmorton County.....	1	
Marion County.....	7		Van Zandt County.....	14	
Multnomah County—			Waller County.....	1	
Portland.....	5		Williamson County.....	6	
Union County.....	1		Granger.....	15	
Umatilla County.....	1		Total.....	185	1
Wasco County.....	3				
Total.....	102				

City Reports for Week Ended Feb. 20, 1915.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Butte, Mont.....	3		Moline, Ill.....	1	
Charleston, S. C.....	2		Muncie, Ind.....	7	
Chicago, Ill.....	1		New Orleans, La.....	4	
Cincinnati, Ohio.....	5		Phoenix, Ariz.....	4	
Cleveland, Ohio.....	1		Portland, Oreg.....	4	
Covington, Ky.....	8		Racine, Wis.....	2	
Detroit, Mich.....	4		Rock Island, Ill.....	9	
Elgin, Ill.....	1		St. Louis, Mo.....	14	
Grand Rapids, Mich.....	4		Salt Lake City, Utah.....	2	
Kansas City, Kans.....	1		Seattle, Wash.....	2	
Kansas City, Mo.....	1		Springfield, Ill.....	1	
Knoxville, Tenn.....	3		Superior, Wis.....	1	
La Crosse, Wis.....	1		Toledo, Ohio.....	6	
Milwaukee, Wis.....	7				

SYPHILIS.

California Report for January, 1915.

The State Board of Health of California reported that during the month of January, 1915, 36 cases of syphilis were notified in the State of California.

TUBERCULOSIS.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 786.

TYPHOID FEVER.

State Reports for January, 1915.

Places.	New cases reported.	Places.	New cases reported.
California:		Mississippi—Continued.	
Alameda County—		Jefferson County.....	1
Alameda.....	1	Jefferson Davis County.....	5
Berkeley.....	3	Jones County.....	3
Hayward.....	1	Kemper County.....	1
Oakland.....	1	Lafayette County.....	1
Butte County—		Lamar County.....	2
Oroville.....	1	Lauderdale County.....	3
Colusa County.....	3	Lawrence County.....	7
Fresno County—		Lee County.....	1
Coalinga.....	1	Lefflore County.....	31
Glenn County.....	1	Lowndes County.....	1
Kern County.....	1	Madison County.....	14
Los Angeles County—		Marion County.....	4
Long Beach.....	1	Marshall County.....	4
Los Angeles.....	21	Monroe County.....	2
Pasadena.....	1	Montgomery County.....	1
Watts.....	4	Neshoba County.....	9
Madera County—		Newton County.....	3
Madera.....	1	Noxubee County.....	3
Mendocino County—		Okfuskeena County.....	3
Willits.....	1	Panola County.....	1
Merced County.....	1	Pearl River County.....	8
Placer County—		Pike County.....	4
Colfax.....	1	Pontotoc County.....	1
Plumas County.....	1	Prentiss County.....	5
Sacramento County.....	1	Scott County.....	1
Sacramento.....	6	Smith County.....	5
San Diego County—		Sunflower County.....	4
Chula Vista.....	1	Tallahatchie County.....	15
National City.....	1	Tate County.....	10
San Francisco County—		Tipshah County.....	6
San Francisco.....	8	Tishomingo County.....	7
San Joaquin County—		Tunica County.....	2
Tracy.....	1	Union County.....	13
San Mateo County.....	1	Warren County.....	2
Burlingame.....	1	Washington County.....	1
San Bruno.....	1	Wilkinson County.....	2
Siskiyou County—		Winston County.....	5
Sisson.....	1	Yalobusha County.....	2
Stanislaus County.....	1	Yazoo County.....	2
Tuolumne County.....	1	Waltham County.....	
Total.....	69	Total.....	326
Mississippi:		New York:	
Adams County.....	1	Albany County.....	8
Alcorn County.....	4	Allegany County.....	2
Amite County.....	1	Cayuga County.....	7
Attafoupa County.....	2	Chautauque County.....	4
Benton County.....	2	Chemung County.....	1
Bohar County.....	19	Clinton County.....	3
Calhoun County.....	4	Delaware County.....	2
Carroll County.....	8	Dutchess County.....	4
Chickasaw County.....	2	Erie County.....	12
Choctaw County.....	5	Essex County.....	2
Claborn County.....	1	Franklin County.....	2
Clarke County.....	1	Fulton County.....	1
Clay County.....	2	Genesee County.....	2
Cochosha County.....	1	Greene County.....	1
Copiah County.....	6	Hamer County.....	7
Covington County.....	1	Jefferson County.....	6
De Soto County.....	2	Monroe County.....	2
Forrest County.....	5	Montgomery County.....	7
Franklin County.....	10	Nassau County.....	4
George County.....	2	Niagara County.....	3
Grenada County.....	5	Oneida County.....	1
Hancock County.....	1	Onondaga County.....	2
Harrison County.....	19	Ontario County.....	2
Hinds County.....	6	Orange County.....	6
Holmes County.....	7	Oswego County.....	4
Itawamba County.....	1	Otsego County.....	6
Jackson County.....	5	Rensselaer County.....	5

TYPHOID FEVER—Continued.

State Reports for January, 1915—Continued.

Places.	New cases reported.	Places.	New cases reported.
New York—Continued.		Oregon:	
Rochester County.....	1	Clackamas County.....	1
St. Lawrence County.....	12	Lane County.....	2
Saratoga County.....	4	Marion County.....	1
Schenectady County.....	1	Multnomah County—	
Schoharie County.....	2	City of Portland.....	2
Seneca County.....	1	Umatilla County.....	1
Steuben County.....	2		
Suffolk County.....	1	Total.....	7
Sullivan County.....	1		
Ulster County.....	12		
Warren County.....	1		
Washington County.....	29		
Westchester County.....	5		
New York City.....	107		
Total.....	280		

City Reports for Week Ended Feb. 20, 1915.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Altoona, Pa.....	1	—	Morristown, N. J.....	2	—
Ann Arbor, Mich.....	1	—	Nashville, Tenn.....	—	2
Baltimore, Md.....	4	4	Newark, N. J.....	2	—
Boston, Mass.....	2	1	New Bedford, Mass.....	1	—
Buffalo, N. Y.....	—	2	New Orleans, La.....	1	1
Charleston, S. C.....	2	—	New York, N. Y.....	22	1
Chicago, Ill.....	15	2	Philadelphia, Pa.....	5	1
Cincinnati, Ohio.....	2	—	Pittsburgh, Pa.....	5	2
Cleveland, Ohio.....	3	2	Portland, Me.....	2	—
Columbus, Ohio.....	3	—	Portland, Oreg.....	2	1
Covington, Ky.....	1	—	Providence, R. I.....	3	—
Danville, Ill.....	2	—	Reading, Pa.....	1	—
Dayton, Ohio.....	2	—	Sacramento, Cal.....	8	—
Detroit, Mich.....	4	1	Saginaw, Mich.....	7	1
Erie, Pa.....	1	—	St. Louis, Mo.....	7	2
Everett, Mass.....	2	—	Salt Lake City, Utah.....	2	1
Grand Rapids, Mich.....	5	—	San Francisco, Cal.....	2	—
Hartford, Conn.....	2	—	Saratoga Springs, N. Y.....	1	—
Haverhill, Mass.....	—	1	Schenectady, N. Y.....	—	1
Kansas City, Mo.....	2	—	Spokane, Wash.....	11	—
Los Angeles, Cal.....	5	—	Steelton, Pa.....	2	—
Lowell, Mass.....	1	—	Toledo, Ohio.....	1	—
Lynchburg, Va.....	1	—	Washington, D. C.....	2	—
Lynn, Mass.....	2	—	Wheeling, W. Va.....	2	1
Marquette, Wis.....	1	—	Wilmington, N. C.....	1	1
Mobile, Ala.....	—	1	Zanesville, Ohio.....	1	—

¹ A case from out of town.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

State Reports for January, 1915.

States.	Cases reported.		
	Diphtheria.	Measles.	Scarlet fever.
California.....	345	1,825	455
Mississippi.....	86	355	42
New York.....	1,961	2,524	1,765
Oregon.....	35	7	31

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

City Reports for Week Ended Feb. 20, 1915.

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.
Over 500,000 inhabitants:										
Baltimore, Md.	579,590	176	27	3	8	42	30	34	21	21
Boston, Mass.	733,802	283	57	5	117	1	79	46	30	21
Chicago, Ill.	2,393,325	820	123	14	240	3	92	228	93	93
Cleveland, Ohio.	639,431	196	50	5	17	3	13	30	14	8
Detroit, Mich.	537,650	171	46	3	3	28	1	46	5	5
New York, N. Y.	5,333,537	1,571	359	39	506	6	312	11	557	202
Philadelphia, Pa.	1,657,810	533	90	8	230	8	22	139	60	60
Pittsburgh, Pa.	564,878	159	22	2	97	3	33	25	12	12
St. Louis, Mo.	734,667	215	86	3	58	8	18	36	13	13
From 300,000 to 500,000 inhabitants:										
Buffalo, N. Y.	454,112	134	13	1	3	11	1	35	12	12
Cincinnati, Ohio	402,175	142	15	1	13	14	32	16	16	16
Los Angeles, Cal.	438,914	97	18	1	152	25	50	19	19	19
Milwaukee, Wis.	417,054	98	15	1	3	16	16	12	12	12
Newark, N. J.	389,106	105	24	1	7	14	42	16	16	16
New Orleans, La.	361,221	43	14	1	9	2	33	27	27	27
San Francisco, Cal.	448,502	136	45	5	141	1	6	22	14	14
Washington, D. C.	353,378	140	4	1	25	29	24	10	10	10
From 200,000 to 300,000 inhabitants:										
Columbus, Ohio.	204,567	74	2	2	21	9	16	8	8	8
Jersey City, N. J.	293,921	90	2	2	1	1	1	10	10	10
Kansas City, Mo.	281,911	111	5	5	1	2	1	11	11	11
Portland, Oreg.	260,601	30	3	3	8	17	1	3	3	3
Providence, R. I.	245,690	81	13	2	3	2	1	13	13	13
Seattle, Wash.	313,029	71	2	2	3	3	12	1	1	1
From 100,000 to 200,000 inhabitants:										
Cambridge, Mass.	110,357	33	12	1	11	11	8	2	2	2
Camden, N. J.	102,465	6	6	6	17	13	5	7	7	7
Dayton, Ohio.	123,794	44	7	7	25	5	9	5	5	5
Fall River, Mass.	125,443	2	2	2	9	1	6	4	4	4
Grand Rapids, Mich.	123,227	39	7	7	23	1	25	3	3	3
Hartford, Conn.	107,038	40	7	1	4	2	3	4	4	4
Lowell, Mass.	111,004	34	1	1	4	3	3	3	3	3
Nashville, Tenn.	114,899	37	5	5	1	4	8	4	4	4
New Bedford, Mass.	111,230	29	1	1	9	6	10	4	4	4
Oakland, Cal.	183,002	3	3	3	38	2	5	3	3	3
Reading, Pa.	103,361	37	4	4	1	1	3	4	4	4
Richmond, Va.	134,917	61	3	3	8	8	7	3	3	3
Salt Lake City, Utah.	109,530	24	3	3	1	1	2	1	1	1
Spokane, Wash.	135,657	1	1	1	11	4	3	2	2	2
Springfield, Mass.	100,375	20	1	1	4	4	3	3	3	3
Toledo, Ohio.	184,126	62	6	1	8	6	11	9	9	9
Trenton, N. J.	106,831	40	5	1	2	2	4	4	4	4
Worcester, Mass.	157,732	34	5	1	1	4	4	5	5	5
From 50,000 to 100,000 inhabitants:										
Altoona, Pa.	56,553	2	2	2	11	2	3	2	2	2
Atlantic City, N. J.	53,952	12	1	1	11	2	6	1	1	1
Bayonne, N. J.	65,271	3	3	3	1	2	1	1	1	1
Binghamton, N. Y.	52,191	30	3	3	1	2	5	1	1	1
Brockton, Mass.	64,043	15	9	1	1	6	1	1	1	1
Charleston, S. C.	60,121	33	2	2	2	1	1	1	1	1
Covington, Ky.	55,896	2	2	2	2	1	1	1	1	1
Duluth, Minn.	89,331	1	1	1	2	5	1	3	3	3
erie, Pa.	72,401	31	2	2	3	1	9	3	3	3
Harrisburg, Pa.	69,493	15	3	3	4	1	3	2	2	2
Johnstown, Pa.	64,642	18	4	2	4	1	1	1	1	1
Kansas City, Kans.	94,271	1	1	1	6	1	1	1	1	1
Little Rock, Ark.	53,811	18	1	1	2	9	6	2	2	2
Lynn, Mass.	98,207	17	2	2	1	3	2	2	2	2
Manchester, N. H.	75,635	28	2	2	1	3	2	2	2	2
Mobile, Ala.	55,573	22	1	1	2	2	2	2	2	2
New Britain, Conn.	50,612	6	1	1	1	1	2	7	7	7
Norfolk, Va.	86,540	12	1	1	1	1	1	1	1	1
Passaic, N. J.	66,276	21	1	1	1	1	1	1	1	1
Pawtucket, R. I.	56,901	18	2	2	2	2	2	1	1	1
Portland, Me.	62,161	17	2	2	1	2	2	1	1	1
Saginaw, Mich.	53,988	17	5	1	1	2	2	1	1	1

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

City Reports for Week Ended Feb. 20, 1915—Continued.

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.
From 50,000 to 100,000 inhabitants—Continued.										
Schenectady, N. Y.	90,503	22	3		68		3		4	1
South Bend, Ind.	65,114	14					1			2
Springfield, Ill.	57,972	30	4		86	1	8			1
Wilkes-Barre, Pa.	73,660	33	3		2		1		12	1
From 25,000 to 50,000 inhabitants.										
Alameda, Cal.	26,330	5			2				3	1
Auburn, N. Y.	36,509	10	1						3	
Aurora, Ill.	33,022	6	2							
Austin, Tex.	33,218	11	2							1
Brookline, Mass.	31,138	7			4		3		1	
Butte, Mont.	41,781	9	1						2	1
Chelsea, Mass.	32,452	9	3		1		1			
Chicopee, Mass.	28,057	8								2
Danville, Ill.	30,847	11	1				1			1
East Orange, N. J.	39,852		1						2	
Elgin, Ill.	27,485	8								
Everett, Mass.	37,381	11	2		17		9	1	3	
Fitchburg, Mass.	40,507	8	4				8		4	
Galveston, Tex.	40,289	13	1							1
Haverhill, Mass.	47,071	7	1		8		4		1	
Kalamazoo, Mich.	45,842	13					2		1	1
Knoxville, Tenn.	37,924						1			
La Crosse, Wis.	31,367	11					1		1	
Lancaster, Pa.	49,685		4		1					
Lexington, Ky.	38,819	22					1			2
Lynchburg, Va.	31,830	10			2		2			1
Malden, Mass.	48,979	10			3		2		3	
Medford, Mass.	25,240	8			23		6		1	
Moline, Ill.	26,402	9			17					
Newcastle, Pa.	39,569		2				7			
Newport, Ky.	31,517	3	1				4		1	1
Newport R. I.	29,154	5	1				2			
Newton, Mass.	42,455	10	8		1		3			
Niagara Falls, N. Y.	35,127	13	2		1				1	
Norristown, Pa.	30,265	11								
Orange, N. J.	31,968	15	1	1			1		2	2
Pasadena, Cal.	40,880	8	2	1	26		3		3	1
Perth Amboy, N. J.	38,265	17	4		4		4		2	1
Pittsfield, Mass.	36,531	19	1		33				3	
Racine, Wis.	44,528	10								
Rock Island, Ill.	26,945	6			3				2	1
Sacramento, Cal.	62,717	22	1		4					2
San Diego, Cal.	48,900		4				2		2	2
South Omaha, Nebr.	26,368	11								
Superior, Wis.	44,344	15	3	1			2			1
Taunton, Mass.	35,631	14	1		1				1	2
Waltham, Mass.	29,688	10							3	1
Wheeling, W. Va.	42,817	19	1				5			4
Wilmington, N. C.	27,781	13	1				1			2
York, Pa.	49,430		2						2	
Zanesville, Ohio.	29,949						1			
Less than 25,000 inhabitants:										
Ann Arbor, Mich.	14,948	11	1		1		3		6	
Beaver Falls, Pa.	13,100		1							
Braddock, Pa.	20,935	1								
Cairo, Ill.	15,392	6					1			1
Clinton, Mass.	13,075	6								
Coffeyville, Kans.	15,982		2							
Concord, N. H.	22,291	10								1
Cumberland, Md.	23,846	9					1		1	
Dunkirk, N. Y.	19,607	2								
Florence, S. C.	11	11								2
Galesburg, Ill.	23,570	8								
Grand Haven, Mich.		1								
Harrison, N. J.	16,160		1				1		1	
Kearney, N. J.	21,967	6	1				6		3	
Key West, Fla.	21,150	4								1
Kokomo, Ind.	19,694	6	1							
Marquette, Wis.	14,619	5	1				4	1		

FOREIGN REPORTS.

AUSTRIA-HUNGARY.

Cholera.

Cholera has been notified in Austria-Hungary as follows:

Austria.—Three weeks ended January 23, 1915, 91 cases, of which 10 cases occurred in Vienna.

Bosnia-Herzegovina.—January 4 to 8, 1915, 7 cases.

Croatia-Slavonia.—Three weeks ended January 17, 397 cases.

Hungary.—Three weeks ended January 17, 1915, 406 cases, 19 of the cases notified having occurred in the city of Budapest.

CHINA.

Plague-Infected Rats—Shanghai.

During the week ended January 23, 1915, 202 rats were examined at Shanghai. Of this number 3 were found plague-infected.

Smallpox—Shanghai.

An unusual prevalence of smallpox among foreigners was reported at Shanghai January 23, 1915.

CUBA.

Smallpox Outbreak—Guayos.

On January 12, 1915, a case of hemorrhagic smallpox occurred at Guayos, Cuba, in the person of a passenger who had embarked at Vera Cruz, Mexico, January 1, arriving at Habana January 3, and at Guayos January 4. The case ended fatally. The disease developed in five contacts, and on February 10 a sixth case developed in a contact of one of the secondary cases, making a total of seven cases.

Guayos is a village in the vicinity of the city of Sancti Spiritus.

Smallpox—Habana.

A case of smallpox was notified at Habana March 9, 1915.

EGYPT.

Plague.

Six cases of pneumonic plague were notified in Egypt from January 31 to February 4, 1915. The cases occurred in two localities of the Province of Assiout.

Typhus Fever.

Typhus fever was reported present at Cairo and Port Said during the week ended January 14, 1915.

GREAT BRITAIN.**Examination of Rats—Liverpool.**

During the two weeks ended January 30, 1915, 411 rats were examined at Liverpool. No plague-infected rat was found. The total number of rats examined from July 25, 1914, to January 30, 1915, was 5,683. No plague infection was found.

GREECE.**Typhus Fever—Saloniki.**

Typhus fever was reported present at Saloniki during the week ended January 23, 1915.

JAPAN.**Communicable Diseases.**

Communicable diseases have been notified in the Empire of Japan, exclusive of the Island of Taiwan, as follows:

Diseases.	December, 1914.		Total, Jan. 1—Dec. 31, 1914.	
	Cases.	Deaths.	Cases.	Deaths.
Cholera.....			5	4
Diphtheria.....	2,477	708	18,343	4,685
Dysentery.....	500	288	26,126	5,716
Paratyphoid fever.....	354	59	6,893	783
Plague.....	1	1	83	70
Smallpox.....	17	2	485	110
Typhoid fever.....	2,620	653	35,471	6,626
Typhus fever.....	4	2	7,296	1,225

¹ Tokyo.² Nagasaki-ken.³ Aomori-ken, 2 cases with 1 death; Chiba-ken, 1 case; Iwate-ken, 1 case with 1 death.**JAVA.****Plague.**

During the week ended December 26, 1914, 215 cases of plague with 194 deaths were notified in east Java. The cases were distributed in three districts.

Typhus Fever—Batavia.

Five cases of typhus fever occurring in foreigners were notified at Batavia during the week ended December 26, 1914.

MEXICO.

Typhus Fever—Aguascalientes.

Typhus fever was reported present during the week ended January 23, 1915, at Aguascalientes.

RUSSIA.

Typhus Fever—Moscow.

During the two weeks ended January 16, 1915, 21 cases of typhus fever were notified at Moscow.

TURKEY.

Plague—Bagdad.

During the period from January 20 to 27, 1915, inclusive, 15 cases of plague with 4 deaths were notified at Bagdad.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX.

Reports Received During Week Ended Mar. 12, 1915.¹

CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary:				
Austria.....				Total, Jan. 4-23: 91 cases.
Lower Austria--				
Vienna.....	Jan. 4-23.....	10		
Bosnia-Herzegovina.....	Jan. 4-8.....	7		
Croatia-Slavonia.....	Dec. 31-Jan. 17.....	397	147	
Hungary.....	do.....	406	125	
Budapest.....	do.....	19		
Japan.....				Total, Jan. 1-Dec. 31: 5 cases, 4 deaths.
Philippine Islands:				
Manila.....	Jan. 3-16.....	5	4	
Russia:				
Moscow.....	Jan. 10-16.....		1	

PLAGUE.

Brazil:				
Pernambuco.....	Dec. 1-31.....		7	
Dutch East Indies:				
Java--				
Surabaya.....	Dec. 28-Jan. 2.....	5	5	
Egypt.....	Jan. 31-Feb. 4.....	6		In Assiout Province.
Japan.....				Total, Jan. 1-Dec. 31: 83 cases, 70 deaths.
Russia:				
Moscow.....	Jan. 3-16.....	2		
Turkey in Asia:				
Bagdad.....	Jan. 20-27.....	15	4	

¹ From medical officers of the Public Health Service, American consuls, and other sources.

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

Reports Received During Week Ended Mar. 12, 1915—Continued.

SMALLPOX.

Places.	Date.	Cases.	Deaths.	Remarks.
Australia: New South Wales— Sydney.....	Jan. 15-21.....	3		
Austria-Hungary: Austria— Vienna.....	Jan. 17-30.....	211	56	
Brazil: Pernambuco.....	Dec. 1-31.....		17	
Canada: British Columbia— Vancouver.....	Feb. 8-11.....	3		
Ontario— Windsor.....	Feb. 21-27.....	1		
China: Nanking.....				Present Jan. 23.
Cuba: Cruces.....	Jan. 12-Feb. 10.....	7	1	
Habana.....	Mar. 8.....	1		
Great Britain: London.....	Jan. 31-Feb. 13.....	3	1	
Greece: Patras.....	Feb. 1-7.....		1	
Saloniki.....	Jan. 24-30.....		4	
Japan.....				Total, Jan. 1-Dec. 31: 485 cases, 110 deaths.
Narasaki-ken.....	Dec. 1-31.....	17	2	
Mexico: Acapulcantes.....	Jan. 18-Feb. 20.....		3	
Chilualua.....	Feb. 1-15.....	5	5	
Manatlan.....	Jan. 29-Feb. 16.....	10	6	
Russia: Moscow.....	Dec. 27-Jan. 16.....	31	15	
Odessa.....	Dec. 29-Jan. 2.....	15	2	
Spain: Valencia.....	Jan. 31-Feb. 13.....	107	3	
Switzerland: Basel.....	Jan. 24-30.....	4		
Turkey in Asia: Jaffa.....	Jan. 17-23.....	1		
Tripoli.....	Dec. 27-Jan. 1.....	5		

Reports Received from December 26, 1914, to March 5, 1915.

CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary: Austria.....				Total Sept. 15-Dec. 5: Cases 3,467; deaths, 937.
Do.....				Total Nov. 18-Dec. 22: Cases, 741; deaths, 133.
Bohemia.....				Total Sept. 23-Dec. 5: Cases, 176; deaths, 56.
Coast Land— Trieste.....	Nov. 15-21.....	5		
Galicja.....				Total Sept. 23-Dec. 5: Cases, 2,047; deaths, 793.
Kracow.....	Oct. 4-Dec. 5.....	109	4	
Lisko.....	Sept. 23-Nov. 7.....	355	186	
Przemsyl.....	Nov. 1-11.....	132	3	
Lower Austria.....				Total Sept. 1-Dec. 5: Cases, 473; deaths, 67.
Vienna.....	Sept. 1-Jan. 30.....	390	42	
Moravia.....				Total Sept. 15-Dec. 5: Cases, 362; deaths, 93.
Brunn.....	Sept. 15-Nov. 21.....	18	3	
Silesia.....				Total Sept. 23-Dec. 5: Cases, 288; deaths, 39.
Styria.....				Sept. 23-28: Cases, 55; deaths, 16.
Gratz.....	Oct. 3-Nov. 14.....	10		
Upper Austria.....	Oct. 4-Nov. 7.....	3		

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

Reports Received from December 26, 1914, to March 5, 1915—Continued.

CHOLERA—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary—Continued.				
Bosnia-Herzegovina.....				Total Oct. 4-10: Case, 1.
Croatia-Slavonia.....				Total Oct. 4-10: Case, 1; death, 1.
Hungary.....				Total Sept. 15-Nov. 30: Cases 3,024; deaths not yet reported.
Do.....				Total Nov. 18-Dec. 22: Cases, 452; deaths not reported.
Budapest.....	Dec. 25-31.....	1		
Fiume.....	Jan. 25-31.....	1	1	
Ceylon:				
Colombo.....	Sept. 5.....	1	1	
China:				
Nanking.....	Nov. 15-21.....			Present.
Wuchow.....	Nov. 27.....			Do.
Dutch East Indies:				
Banca—				
Muntak.....	Dec. 6-12.....	11	7	
Celebes—				
Menado.....	Oct. 18-Dec. 5.....	425	409	
Java—				
Batavia.....	Oct. 25-Dec. 26.....	361	343	
Sumatra—				
Lamong.....	Nov. 8-14.....	27	7	
Mengals.....	Oct. 18-Nov. 7.....	65	69	
Palembang.....	Oct. 18-Dec. 19.....	175	147	
Telok Betong.....	Nov. 14-Dec. 12.....	47	44	
Germany.....				
Brandenburg.....	Dec. 6-23.....	4		Total Nov. 8-Jan. 16: Cases, 54. Vicinity of Frankfurt on the Oder.
Torgau.....	Jan. 5-16.....	1		At Birnbaum.
Posen.....	Dec. 20-26.....	2		
Zirka.....	Jan. 5-16.....	5		
Silesia.....	Nov. 8-Dec. 26.....	46		In 23 localities.
Rosenberg.....	Jan. 5-16.....	1		
India:				
Bombay.....	Nov. 1-Jan. 9.....	9	3	
Calcutta.....	Nov. 1-28.....		42	Oct. 25-31: Deaths, 17. Not previously reported.
Madras.....	Nov. 9-Jan. 16.....	156	112	
Rangoon.....	Sept. 1-Nov. 30.....	5	2	
Indo-China.....				Jan. 1-Aug. 31: Cases, 259; deaths, 148. Aug. 1-31: Cases, 18; deaths, 15.
Cambodia—				
Pnum Penh.....	Aug. 1-31.....	1		
Cochin China—				
Baria.....	do.....	6	6	And vicinity, Nov. 3-23: Cases, 20; deaths, 10.
Cholon.....	do.....	9	7	Total Jan. 1-Dec. 20: Cases, 151; deaths, 79.
Saigon.....	Aug. 1-Jan. 10.....	177	105	
Laos—				
Pakse.....	Aug. 1-31.....	1	1	
Japan:				
Kyoto fu.....	Oct. 1-31.....	1	1	
Philippine Islands:				
Manila.....	Oct. 25-Jan. 2.....	49	25	
Russia:				
Moscow.....	Nov. 8-14.....		1	
Siam:				
Bangkok.....	Sept. 27-Nov. 28.....		8	
Straits Settlements:				
Singapore.....	Oct. 4-Jan. 2.....	3	3	

YELLOW FEVER.

Brazil:				
Rio de Janeiro.....	Dec. 13-26.....	2	1	
Ecuador:				
Guayaquil.....	Nov. 1-30.....	1		
Venezuela:				
Caracas.....	Dec. 31.....	1		

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

Reports Received from December 26, 1914, to March 5, 1915—Continued.

PLAGUE.

Places.	Date.	Cases.	Deaths.	Remarks.
Bahrein (in Persian Gulf).....	Dec. 29.....			Present.
Brazil:				
Bahia.....	Nov. 16-Jan. 9.....	13	11	
Pe mambuco.....	Oct. 11-Nov. 30.....		5	
Rio de Janeiro.....	Dec. 20-Jan. 5.....	2		
Ceylon:				
Colombo.....	Oct. 25-Jan. 9.....	47	44	
China:				
Canton.....				June 12-July 12: Cases, 325.
Hongkong.....	Dec. 28-Jan. 2.....	1	1	Chinese.
Shanghai.....	Dec. 6-Jan. 2.....		3	Among natives.
Cuba:				
Habana.....	Feb. 9-16.....	3	3	
Dutch East Indies:				
Provinces.....				Total, Oct. 1-Nov. 30: Cases, 2,562; deaths, 2,278.
Kediri.....	Oct. 1-Nov. 30.....	730	673	
Madison.....	.....do.....	128	110	
Pascerean.....	.....do.....	1,405	1,211	
Surabaya.....	.....do.....	299	279	
Do.....	Dec. 13-26.....	29	29	Surabaya city, 27; Surabaya district, 2.
Ecuador:				
Duran.....	Nov. 1-Dec. 31.....	9	4	
Guayaquil.....	.....do.....	236	91	
Milagro.....	Dec. 1-31.....	1	1	
Sanborondon.....	Nov. 1-Dec. 31.....	4	3	
Egypt.....				Total, Jan. 1, 1914-Jan. 28, 1915: Cases, 225; deaths, 116.
Alexandria.....	Nov. 5-28.....	1	1	
Assiout.....	Jan. 28.....	5		
Port Said.....	Oct. 22-Dec. 18.....	8	7	Jan. 1-Dec. 18: Cases, 44.
Greece.....				Sept. 12, present in Drama and Kavala.
Piraeus.....	Jan. 17-27.....	1		
India:				
Bassein.....	Jan. 4-Dec. 5.....	13	10	Not previously reported.
Bombay.....	Nov. 1-Jan. 16.....	13	10	
Karachi.....	Nov. 8-Jan. 16.....	13	10	
Madras.....	Nov. 22-Dec. 12.....	6	6	
Rangoon.....	Sept. 1-Nov. 30.....	99	91	
Indo-China.....				Jan. 1-Aug. 31: Cases, 1,780; deaths, 1,413. Aug. 1-31: Cases, 155; deaths, 121.
Anam--				
Phanrang.....	Aug. 1-31.....	8	7	
Phanitet.....	.....do.....	4	1	
Cambodia--				
Pnura Pohn.....	.....do.....	41	39	
Cochin China--				
Cholon.....	.....do.....	26	11	
Saigon.....	.....do.....	23	15	And vicinity Nov. 3-30: Cases, 5.
Do.....	Jan. 4-10.....	3	2	
Kouang-Tcheou-Wan.....	Aug. 1-31.....	45	45	
Japan:				
Tokyo.....	Dec. 29-Jan. 4.....	1	1	
Libia (Tripoli).....				Present in Derna and Marsa-Susa among native laborers.
Mauritius.....	Nov. 6-Dec. 17.....	46		
Persia:				
Belesavar.....	Oct. 30-Nov. 9.....	80	80	On Caspian coast.
Kasri Shireen.....	Dec. 12.....	1		
Peru:				
Callao.....	Nov. 16-Jan. 3.....	1		Present.
Catacaos.....	.....do.....	25		
Chiclayo.....	.....do.....	8		
Chochope.....	.....do.....			
Ferrenafe.....	.....do.....	2		
Lambayeque.....	.....do.....	5		
Lima (city).....	.....do.....	6		
Lima (country).....	.....do.....	4		
Mollendo.....	.....do.....	16		
Pacasmayo.....	.....do.....	1		
Piura.....	.....do.....	7		
Salaverry.....	.....do.....	4		
San Pedro.....	.....do.....	20		
Trujillo.....	.....do.....	34		

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

Reports Received from December 26, 1914, to March 5, 1915—Continued.

PLAGUE—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Russia:				
Moscow.....	Dec. 6-26.....	4		
Senegal:				
Dakar.....	Dec. 5.....			Present.
Straits Settlements:				
Singapore.....	Nov. 1-Jan. 2.....	11	8	
Turkey in Asia:				
Bagdad.....	Nov. 1-Dec. 3.....	11	9	
Do.....	Dec. 26-Jan. 5.....	12	8	
Do.....	Jan. 12-19.....	11	7	
Union of South Africa:				
Queenstown.....	Feb. 5.....			Present.
Zanzibar.....	Oct. 25-31.....	2	3	

SMALLPOX.

Arabia:				
Aden.....	Nov. 5-Jan. 6.....	12	14	
Argentina:				
Rosario.....	Oct. 1-31.....		1	
Australia:				
New South Wales—				
Penrith.....	Dec. 11-17.....	1		
Sydney.....	Dec. 11-Jan. 7.....	10		Total Nov. 13-19: Cases, 7 in the metropolitan area and 2 in the country districts.
Queen-sland—				
Brisbane.....				Nov. 19, in Colmslie quarantine station, 1 case from s. s. Kano Na from Melbourne, via Sydney.
Austria-Hungary:				
Austria—				
Prague.....	Jan. 17-23.....	1		
Vienna.....	Oct. 31-Jan. 9.....	141	15	
Hungary—				
Fiume.....	Dec. 6-Jan. 24.....	4	1	
Brazil:				
Pernambuco.....	Oct. 1-Nov. 30.....		40	
Rio de Janeiro.....	Nov. 1-Jan. 9.....	735	215	
Sao Paulo.....	Nov. 9-15.....	2		
Bulgaria:				
Sofia.....	June 30-Nov. 28.....	121	2	
Canada:				
Manitoba—				
Winnipeg.....	Jan. 24-30.....	1		
Ontario—				
Hamilton.....	Jan. 1-31.....	3		
Sarnia.....	Dec. 13-Feb. 6.....	5		
Toronto.....	Dec. 6-Feb. 13.....	15	1	
Windsor.....	Jan. 17-Feb. 20.....	3		Jan. 13: Cases, 4 from Grand Trunk ferryboat Lansdowne.
Quebec—				
Montreal.....	Dec. 28-Jan. 9.....	4		
Quebec.....	Dec. 13-Jan. 16.....	3		
Canary Islands:				
Teneriffe—				
Santa Cruz.....	Dec. 6-26.....		2	
Ceylon:				
Colombo.....	Oct. 25-Jan. 9.....	127	34	
China:				
Hongkong.....	Nov. 22-Jan. 16.....	2	1	
Newchwang.....				Nov. 22, present.
Shanghai.....	Nov. 9-Jan. 23.....	25	54	Deaths among natives.
Tientsin.....	Dec. 6-12.....		1	
Dutch East Indies:				
Borneo.....	Nov. 8-14.....	50	30	Oct. 18-24: Cases, 112, deaths, 44, mainly in Pontianak.
Java.....				In the western part, including Batavia, Oct. 18-Nov. 21: Cases, 2,607; deaths, 424.
Batavia.....	Oct. 18-Nov. 21.....	166	44	
Surabaya.....	Nov. 1-7.....	1		
Egypt:				
Alexandria.....	Nov. 19-Jan. 21.....	71	19	
Cairo.....	Dec. 3-31.....	4	1	

¹ One case previously reported for week ended Jan. 14 was reported in error.

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

Reports Received from December 26, 1914, to March 5, 1915—Continued.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
France:				
Havre.....	Dec. 20-26.....	1	.....
Paris.....	Nov. 15-Dec. 26...	4	2	
Germany.....				Nov. 15-Dec. 19: Cases, 14. Jan. 10-16: 11 cases.
Great Britain:				
Cardiff.....	Nov. 30-Dec. 5....	5	.....
Liverpool.....	Dec. 19.....	1	.....
Greece:				
Kavala.....	Nov. 22-Jan. 16....	7	.....
Patras.....	Nov. 23-Jan. 31....		16	Jan. 31: Epidemic.
Saloniki.....	Nov. 15-Jan. 23....	69	52	
India:				
Bombay.....	Nov. 1-Jan. 16....	99	30	
Calcutta.....	Oct. 25-Nov. 28....		37	
Karachi.....	Jan. 3-9.....	1	1	
Madras.....	Nov. 1-Jan. 16....	13	7	
Rangoon.....	Oct. 1-31.....	2	2	
Italy:				
Turin.....	Dec. 21-Jan. 10....	4	.....
Japan.....				Jan. 1-Nov. 30: Cases, 468; deaths, 108, exclusive of Taiwan.
Nagasaki.....	Jan. 18-31.....	3	1	
Nagasaki-ken.....	Oct. 1-Nov. 30....	43	10	
Taiwan.....	Oct. 25-Dec. 5....	8	.....
Mexico:				
Aguascalientes.....	Dec. 7-Feb. 7.....		12	
Chihuahua.....	Nov. 30-Dec. 26....	19	10	
Juarez.....	Dec. 4.....		.....	Provalent.
Mazatlan.....	Dec. 9-Jan. 26....	22	13	
Mexicali.....	Feb. 14-20.....	3	.....
Monterey.....	Dec. 14-20.....		2	Feb. 10: Epidemic.
Nuevo Laredo.....	Jan. 31-Feb. 6....	1	.....
Salina Cruz.....	Nov. 1-7.....	1	.....
Tampico.....	Dec. 1-31.....		6	Prevalent among the military.
Vera Cruz.....	Dec. 1-Feb. 7....	25	38	
Netherlands:				
Rotterdam.....	Jan. 24-30.....	1	.....
Newfoundland:				
St. Johns.....	Jan. 23-29.....	1	.....
Norway:				
Christiansand.....	Nov. 1-30.....	7	2	Including report, vol. 29.
Stavanger.....	Nov. 30-Dec. 5....	1	.....
Philippine Islands:				
Manila.....	Dec. 20-26.....	2	.....	From steamship Ixion.
Portugal:				
Lisbon.....	Nov. 22-Jan. 30....	15	.....
Russia:				
Moscow.....	Nov. 8-Dec. 26....	36	6	
Odessa.....	Oct. 25-Nov. 18....	10	1	
Do.....	Nov. 30-Dec. 19....	53	7	
Petrograd.....	Oct. 25-Jan. 9....	387	90	
Riga.....	Oct. 11-Dec. 12....	69	.....
Spain:				
Barcelona.....	Nov. 22-Feb. 5....		41	
Madrid.....	Nov. 1-Jan. 31....	5	5	
Seville.....	Dec. 1-31.....		1	
Valencia.....	Nov. 15-Jan. 30....	468	22	
Straits Settlements:				
Singapore.....	Oct. 10-Dec. 19....	12	3	
Sweden:				
Stockholm.....	Dec. 13-19.....		1	
Switzerland:				
Basel.....	Nov. 7-Jan. 23....	39	.....
Turkey in Asia:				
Beirut.....	Nov. 1-Jan. 23....	71	24	
Haifa.....	Nov. 2-Dec. 6....	14	6	
Jaffa.....	Jan. 10-16.....	1	.....
Zanzibar.....	Nov. 14-21.....		7	

SANITARY LEGISLATION.

STATE LAWS AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

CALIFORNIA.

Diphtheria—Prevention and Control of. (Reg. Bd. of H., Aug. 1, 1914.)

RULE 1. Notification.—Any person in attendance on a case of diphtheria, or a case suspected of being diphtheria, shall report the case immediately to the local health authority, who shall in turn report at least weekly, on the prescribed form, to the secretary of the State board of health all cases so reported to him.

NOTE.—In the absence of local rules permitting notification by telephone, the report to the local health authority shall be in writing.

RULE 2. Diagnosis.—The local health authority shall require the submission of swabs or cultures from the nose and throat of every case of diphtheria, or case suspected of being diphtheria, for the purpose of examination at a State or municipal laboratory. It shall be the duty of every physician attending a case of diphtheria, or a case suspected of being diphtheria, to take swabs or cultures when required to do so by the local health authority.

RULE 3. Precautions to be observed by the physician.—The physician, having charge of a case of diphtheria, or a cases suspected of being diphtheria, shall take such precautions as may be necessary to avoid the contamination of his hands and clothing.

RULE 4. Instructions to household.—It shall be the duty of the physician in attendance on a person having diphtheria, or suspected of having diphtheria, to instruct the members of the household in precautionary measures for preventing the spread of diphtheria.

NOTE.—The following instructions are required by rule 4:

(1) If the patient is not removed at once to a hospital, he shall have a separate bed in a room screened against flies.

(2) All persons, except those having the necessary care of the patient, shall be excluded from the sick room.

(3) Animals shall be excluded from the sick room.

(4) The persons caring for the patient shall avoid coming in contact with any other persons within the household or elsewhere.

(5) The person having the care of the patient shall wear a washable outer garment and shall thoroughly wash the hands with soap and water after handling the patient or any object which he may have contaminated. On leaving the room in which the patient is isolated, the attendant shall take off the washable outer garment and leave it in the room until disinfected.

(6) All discharges from the nose and mouth shall be burned or disinfected. It is recommended that these discharges be received on pieces of gauze or other soft cloth and be dropped in a paper bag which is conveniently placed. The bag and its contents can easily be burned.

(7) Objects which may have been contaminated by the patient shall be disinfected before being removed to any place where they may become possible sources of infection.

a. Clothing and bedding, including the washable outer garment of the attendant, shall be boiled in water or soaked for one hour in 5 per cent phenol solution or 10 per cent formalin solution before being sent to the laundry.

b. Dishes and other utensils should be boiled in water or soaked for one hour in 5 per cent solution of phenol or 10 per cent solution of formalin.

c. Remnants of food should be burned, or, if liquid, disinfected by boiling, or adding an equal volume of 5 per cent solution of phenol or a 10 per cent solution of formalin and allowing to stand for one hour.

RULE 5. Investigation of case.—Upon being notified of a case of diphtheria, or a case suspected of being diphtheria, the local health authority shall make an investigation which shall include an inquiry regarding the probable source of the infection. If this source of infection is outside his jurisdiction, he shall notify the State board of health, in order that it may inform the health authority (local or State) within whose jurisdiction the infection was probably contracted. The local health authority should determine that the instructions specified in rule 4 are understood and observed, and in the event of their nonobservance shall take proper legal steps for their enforcement.

RULE 6. Isolation.—If the local health authority, upon making the investigation prescribed in rule 5, is satisfied that the case is one of diphtheria or is strongly suggestive of diphtheria, he shall define the limits of the area in which the patient and his immediate attendants are to be officially isolated. A warning notice shall be affixed to all entrances to this area.

NOTE 1.—The warning notice specified in rule 6 shall be as follows:

Diphtheria.—All persons are warned not to enter this room unless directly concerned in the care of the patient.

NOTE 2.—Persons in attendance on the patient must remain in the prescribed area of isolation: *Provided, however,* That persons taking the precautions specified in rule 4 (note) may leave the prescribed area.

RULE 7. Quarantine.—If the local health authority, upon making the investigation prescribed in rule 5, is satisfied that the case is one of diphtheria or is strongly suggestive of diphtheria, he shall establish a quarantine by affixing a placard in a conspicuous place at the principal entrance to the premises. Until removal of the placard is authorized by the local health authority no persons shall enter or leave the premises or remove any article therefrom without the permission of the local health authority.

NOTE 1.—The placard specified in rule 7 shall be in the following form, in which the name of the disease shall be in letters not less than 2½ inches in height:

Diphtheria.—These premises are declared to be in a state of quarantine. All persons are forbidden to enter or leave these premises or to remove any articles therefrom without the permission of the local health authority.

Date

.....
Local Health Authority.

NOTE 2.—Until such time as a positive diagnosis is made in cases strongly suggestive of diphtheria, the word "Suspected" may precede the word "Diphtheria" on the placard specified in rule 7.

NOTE 3.—Under certain circumstances it will be impractical for the local health authority to define an area of isolation within the quarantined premises. Under such circumstances the areas of quarantine and isolation will be coincident, and all rules regarding quarantine and isolation will hold throughout the quarantined premises, except that the warning notice for the area of isolation will not be posted in addition to the quarantine placard.

NOTE 4.—The quarantined premises will ordinarily be a dwelling house with its surrounding yard. Under certain circumstances it is not necessary to quarantine an entire building, as the part in which diphtheria is present may have a separate front and rear entrance and may be so constructed that persons can not enter directly from another part of the building. If the local health authority upon investigation finds that the conditions are such that the health of the community would be sufficiently safeguarded, he may limit the quarantine to that part of a building which is the separate abode of an entire household, as, for example, a flat or a suite of rooms in a hotel. When removal to a hospital is impossible and isolation can be rigidly enforced, quarantine may be limited to a single room in a hotel or lodging house. When a portion of a dwelling is quarantined, the placard must be conspicuously placed at the principal entrance of the part quarantined.

RULE 8. Contacts.—When isolation and quarantine for diphtheria have been established in accordance with rules 6 and 7, any person living within the quarantined premises, but staying at all times outside the area of isolation, may be given permission by the local health authority to go to and from the premises if the following conditions have been met: Cultures taken from his nose and throat and submitted to a State or municipal laboratory must have been reported as negative for diphtheria.

All other members of his household must, if possible, have had cultures taken from their noses and throats and those persons whose cultures were found positive must be isolated so that there is no contact with him. He must also agree to avoid any occupation or practice which would make him especially dangerous in the event of his becoming a carrier. The local health authority may revoke this permission if the above provisions are not complied with.

In his investigation of a case of diphtheria, the local health authority shall make inquiry regarding those who have come in contact with the patient, and, if any of them contemplate leaving the jurisdiction of the local health authority within two weeks after the last exposure, the local health authority shall notify the State board of health of their names and destinations.

NOTE 1.—Rule 8 permits the wage earner to continue his occupation unless he has already become a carrier or unless his occupation is such that he would probably infect others if he became a carrier. Such occupations are the production or handling of milk and any work which involves contact with large numbers of persons, especially young children.

NOTE 2.—Children will ordinarily not be released under the provisions of rule 8, especially when the quarantined premises contain a yard in which they can get exercise and fresh air. When the local health authority finds that crowding is favoring the transference of infection to the uninfected children of the household, he may permit them to leave the premises under the conditions specified in rule 8. They should not be permitted to attend school or come in contact with other children during the period of quarantine.

NOTE 3.—If contacts who have been released under the provisions of rule 8 will leave the quarantined premises and will not reenter them until the quarantine has been terminated, the local health authority may permit such contacts to attend school or engage in other occupations from which they would otherwise be excluded.

NOTE 4.—The purpose of the establishment of an area of enforced isolation within the quarantined premises is not only to prevent acute cases among the contacts, but especially to diminish the formation of carriers. Under the previous system of enforced quarantine with optional isolation, the formation of carriers frequently occurred. Carriers are much more dangerous to the community, in the aggregate, than the acute cases.

NOTE 5.—Although diphtheria antitoxin is efficient in preventing contacts from contracting diphtheria, it will not prevent their becoming carriers. Therefore no relaxation of the precautions against contact with infectious persons can be permitted to those who have been immunized. Persons immune owing to previous attacks of the disease also may become carriers and must observe the precautions.

NOTE 6.—For the procedure when contacts are found to be carriers, see rule 11.

RULE 9. Release from quarantine.—As soon as a diphtheria patient is free from all symptoms, the attending physician shall notify the local health authority of that fact. The local health authority or his representative shall thereupon make an investigation and, if he finds that the case has made a complete clinical recovery, as reported, he shall take cultures from the nose and throat of the convalescent at intervals of not more than a week and not less than 48 hours and shall submit them to a State or municipal laboratory. Where it is impractical for a local health authority, or his deputy, to take the cultures he may permit the attending physician to represent him for that purpose. As soon as two successive negative cultures from both nose and throat have been obtained, the local health authority shall terminate the quarantine and the isolation. If two successive negative cultures can not be obtained from the convalescent within one month after recovery, he is to be regarded as a carrier and the quarantine is to be terminated, leaving the isolation in force until removed according to rule 10. If the area of isolation and the quarantined premises coincide, the warning card for isolation is to be substituted for the placard for quarantine.

RULE 10. Release from isolation.—At the end of four weeks after complete recovery from diphtheria, as determined by the local health authority in accordance with the provisions of rule 9, if positive cultures are still being obtained, the local health authority shall at once report to the State board of health the circumstances of the case and shall recommend either a continuation of isolation or release from isolation under certain specified restrictions. Isolation is not to be continued for more than six weeks after complete recovery except when specified by the State board of health. When isolation is terminated the objects in the area of isolation must be disinfected.

RULE 11. *Diphtheria carriers.*—Any person who has been free from symptoms of diphtheria for a month or longer and who harbors diphtheria bacilli is a carrier. Any known or suspected diphtheria carrier shall be reported to the local health authority, who shall investigate and report to the State board of health. Pending the receipt of instructions from the State board of health, the local health authority shall isolate or quarantine the carrier if in his judgment the danger to the community necessitates such action. In the event of any known or suspected carrier leaving the jurisdiction of a local health authority, the State board of health shall be notified by the local health authority of the name of the carrier and his destination.

RULE 12. *Epidemiological investigation.*—Whenever a local health authority receives reports of the existence of diphtheria within his jurisdiction, or is notified by the State board of health that cases of diphtheria reported from other communities have probably received the infection within his jurisdiction, he shall conduct an investigation to ascertain the sources of infection, and shall report the results to the State board of health. He shall immediately take such action for the protection of the community as may be indicated by the conditions discovered or suspected in the course of his investigation.

NOTE 1.—*Diphtheria in schools and institutions.*—If diphtheria appears in a school or public institution, and there is reason to suspect that the disease was contracted within the institution, cultures from the noses and throats of all the officers, teachers, pupils, and inmates of the institution, or main division of the institution, shall be taken, in order that the epidemic may be promptly checked by isolation or exclusion of the carriers.

When diphtheria is present in a community, teachers must send home any children who come to school showing symptoms suggestive of infectious disease, and must report at once to the local health authority, so that he can make an investigation and determine whether it is safe for the child to return to school. During an outbreak of diphtheria, teachers shall also report to the local health authority the return to school of any pupil after an unknown illness, so that it may be determined whether he is a diphtheria carrier.

It is illogical to fumigate school rooms, auditoriums, and dining halls after diphtheria. In such rooms all objects with which persons come in contact should be disinfected by mechanical cleansing with soap and water.

NOTE 2.—*Milk supply.*—If it is known or suspected that the infection is derived from a milk supply, the local health authority shall forbid the delivery or use of the milk until such time as it is determined that the supply is safe.

NOTE 3.—*Library and school books.*—Libraries and schools shall not issue books to be taken to homes where diphtheria exists. If books have been used by a diphtheria patient or carrier, they should be destroyed or kept out of circulation and use for one year. If library or school books have been in the household in which there is a diphtheria patient or carrier, and have not been within the area of isolation, and have not been used or handled by the patient or carrier, they may be returned to the library or school. The ordinary methods of disinfection of books are inefficient.

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

SAN ANTONIO, TEX.

City Health Department—Organization—Officers and Employees—Duties and Salaries. (Ord. May 18, 1914.)

SECTION 1. A division of the city government of the city of San Antonio is hereby created, to be known as the health division, which division shall be under the general direction, control, and supervision of the board of health of the city, subject in all respects to the general laws of the State, the code, rules and regulations of the State board of health, and the ordinances and resolutions of the city council.

SEC. 2. The health division shall include the following offices, public institutions, and branches of the public service of the city as hereinafter defined, and all officers, agents, servants, and employees of the city appertaining to the same whether or not herein mentioned, to wit:

- (1) Board of health.
- (2) Secretary of the health division.
- (3) City health officer.
- (4) City physician.
- (5) Assistant city physician.
- (6) City chemist and bacteriologist (being ex officio "milk inspector").
- (7) City veterinarian.
- (8) City Hospital and City Hospital service.
- (9) City cleaning and garbage service.
- (10) Scavenger service.
- (11) Health inspection service.

SEC. 3 Each of said offices, public institutions, and branches of the public service shall be managed and conducted in accordance with such orders, rules, and regulations as may be made by the board of health as shown by its official records, and all officers, agents, servants, and employees of the city in said health division shall observe and conform to such orders, rules, and regulations, provided that no officer, agent, servant, or employee of the city shall be held to account for any disobedience of such orders, rules, or regulations until a copy of such orders, rules, or regulations shall be taken from the minutes of the proceedings of said board, properly certified by the secretary of the health division, and served upon such officer or responsible head of such public institution or branch of the public service to be affected thereby.

SEC. 4. Every appointive officer, agent, servant, and employee of the city, whether or not herein mentioned or referred to, to the extent that his office and the manner in which his duties are performed may affect or concern the health and sanitation of the city or the care of the sick or injured, shall be subject to and shall obey the orders of the board of health regularly made, entered, and certified to such officer, or the head of the branch of the public service to whom such officer, agent, servant, or employee belongs; provided, that the mayor may, for any good and sufficient reason, by his written order filed with the secretary of the health division, revoke or modify any such order of the board in so far as same may apply to any office, public institution, or branch of the public service not expressly included in the health division.

SEC. 5. The board of health of the city of San Antonio is hereby created, and shall consist of a president and three members to be appointed by the mayor, in addition to the mayor, city health officer, and city physician, who shall each be ex officio a member of said board. Each member of said board of seven persons thus constituted, excepting only the mayor, shall be a legally qualified practicing physician who shall have had at least five years' experience in the actual practice of medicine in the State of Texas. The powers, duties, and compensation of the members of said board shall be those given or defined by this or any other existing ordinance not in conflict herewith, and a majority of the members of said board present and voting shall constitute a quorum for the transaction of business by the board.

All rules, regulations, orders, and requirements of the board shall be made in the form of a code, with such amendments thereto and such supplemental orders and such special requirements in individual cases as the board may see fit to order from time to time, which code, rules, regulations, orders, and requirements shall not become effective unless ordered and passed by the affirmative vote of a majority of the members of said board, but upon being so ordered and passed it shall become the duty of the secretary of the health division to record any such code of rules and regulations, supplemental order, or special requirement, or amendments thereto, and also all orders of the mayor with reference thereto, in extenso in the official minutes of said board, and the president shall sign same and the secretary attest the correctness of said record, whereupon the same shall become fully effective as herein provided.

SEC. 6. The board of health, in addition to other powers and authority, and for the purpose of improving the health and sanitary conditions of the city, shall make and establish such reasonable sanitary rules and regulations, orders, and requirements as the board may deem necessary or expedient governing the construction, arrangement, equipment, management, and conduct of slaughterhouses, slaughter pens, and stockyards, bakeries, confectioneries, butcher shops, and meat, fish, or poultry markets; truck farms and gardens, and markets, stands, or wagons for the sale of fruit or vegetables; hotels, restaurants, lunch stands, and eating houses; saloons, dairies, soda fountains, and bottling works, and every other and similar place, trade, or business, wherever same may be located within the limits of the city, where any commodity intended for food or drink for human beings is produced, manufactured, prepared for use or for sale, sold, offered for sale, or dispensed; and also governing in like manner each and every such trade, occupation, or business, though located without the corporate limits of the city, if the product or commodities of such trade, occupation, or business be intended wholly or partly to be brought into or used or sold in the city. And each person conducting any such trade, occupation, or business, or employed in connection therewith, shall obey and conform to every such rule and regulation, order, or requirement of the board of health: *Provided, however,* That no such rule, regulation, order, or requirement shall be effective in so far as same may be contrary to the provisions of any city ordinance or resolution hereafter to be made: *And provided further,* That the mayor shall always have the right, for any reason deemed by him to be sufficient, by his written order filed with the secretary of the health division, to revoke or modify any such rule, regulation, order, or requirement: *And provided further,* That whenever the above-mentioned rules and regulations, orders and requirements of the board of health provide for a fine or imprisonment or carry a penalty the board of health shall prepare or have prepared a penal ordinance incorporating such rule, regulation, order, or requirement and fixing such penalty, and shall recommend same to the city council for passage as a penal ordinance, and such rule, regulation, order, or requirement shall not become effective until passed by the council.

SEC. 7. The office of secretary of the health division is hereby created and the salary of said office fixed at \$75 per month. It shall be the duty of the secretary of the health division to keep and preserve systematically as public records all records,

reports, books, and papers of said division, the board of health, and the city health officer; and he shall perform such further clerical and official duties as may be prescribed by the board of health, the city health officer, or by vote of the council. He shall be ex officio secretary of the board of health and of the city health office, and shall perform all duties heretofore required or performed by the secretary of the board of health and the clerk or secretary of the health department, which offices are abolished.

The secretary of the health division shall collect and receive from each officer, agent, servant, or employee of the city in the health division all fees collected by them and each of them in the performance of the duties of their respective offices, and shall issue proper receipts therefor, and said secretary shall keep a book in which he shall record the amount of each and all such fees collected by him, by whom, when, and for what service such fee or fees were paid, and by what officer or employee of the city such fee or fees were collected and turned in, the date when received by said secretary, and the date when paid by him to the city treasurer.

It shall be the duty of every officer or employee of the city collecting any fees in connection with the performance of any duty in the health division to pay over daily to the secretary of the health division all such fees collected and to file with him at the same time a signed statement in writing showing all the data required by the preceding paragraph, except the date when paid over to the city treasurer. And it shall be the duty of the secretary of the health division to pay over to the city treasurer as required by ordinance all fees so received by him, and at the same time to furnish to the city auditor a statement showing such facts with reference to said matters as the city auditor may require.

Sec. 8. The office of city physician as heretofore existing and established is hereby abolished.

Sec. 9. The office of city health officer is hereby created and the salary of such officer fixed at \$150 per month. The city health officer shall keep regular daily office hours. The health officer shall perform all the duties and exercise all the powers and discretion of the city health officer required of or conferred on him by any laws of the State of Texas and by the State board of health or by any State officer acting under such State laws; and in addition thereto such city health officer shall perform all such duties and exercise such powers with regard to the general health and sanitation of the city, and also all such other professional and official duties, as may now or hereafter be required of such officer by city ordinance or resolution, by the mayor, or by the board of health; and the city health officer shall also perform all such other duties as may heretofore by ordinance have been required of the city physician: *Provided, however,* That the city health officer shall not be required to perform any duty which by this or any ordinance subsequent hereto, or by any order of the board of health consistent herewith, is made the duty of the city physician.

Sec. 10. The office of city physician is hereby created and the salary of such office fixed at \$150 per month. The office of city physician, as hereby created, is and shall be, a new and distinct office from the office of city physician previously existing and also a different and distinct office from the office of city health officer by State law and by this ordinance created and established; and it is hereby made the especial duty of such city physician, under the general control and direction of the board of health, to superintend and manage the city hospital and any other hospitals conducted by the city, together with the medical dispensary of the city, and to attend, treat, and prescribe for all indigent persons within and without any such hospital or dispensary whenever such attention is requisite or whenever in any case the mayor may so direct. The city physician shall admit indigent persons to said city hospital or other hospital for medical, surgical, or other necessary treatment, and shall discharge such persons therefrom whenever such admission or discharge is proper.

He shall keep an office, where he can regularly be found in office hours, at such time and place as may be prescribed by the board of health or by the mayor. He shall promptly report in writing to the mayor the name and street address of each person who may apply to him for, and who may be by him denied, any such attention; treatment, or prescription, specifying in his report in each such case the nature of the trouble complained of or indicated and the reasons for such denial.

The city physician shall keep a record book in which he shall enter the name, age, sex, nativity, race, status (married or single), and place of residence and street address of each and every person treated by him at the expense of the city, together with the length of the residence of each such person in this city, stating also in each case the disease or the nature and cause of the injury, the dates, places, and duration of the treatment given by him, the number of prescriptions ordered, and how the case terminated; and for all persons admitted to the city hospital or other hospitals he shall keep another record book or register in which, in addition to the data above specified, he shall record the date of the admission of such person to such hospital and of his or her discharge therefrom, and shall also keep a case record of each case in accordance with such usual form as may be prescribed by the board of health; all of which books and records shall be and remain the property of the city. The city physician shall each month make a written report of said matters to the mayor, and he shall also make all reports to the city health officer and to the board of health in the same time and manner and under the same circumstances as reports may be required by law or ordinance to be made by other physicians. And the city physician shall also perform such other professional and official duties as may be required of him by city ordinance or resolution or by the board of health or by the mayor; provided, however, that the city physician shall not be required to do anything which is definitely made the special and official duty of the city health officer by or under any provision of the laws of the State.

SEC. 11. The office of assistant city physician is hereby created and the salary of said office fixed at \$125 per month. He shall assist the city physician in attending, prescribing for, and treating the indigent sick or injured of the city, perform such duties as are or may be required of him by city ordinance or resolutions, and such other professional and official duties as may be assigned to him by the city physician, the board of health, or the mayor.

SEC. 12. The office of city chemist and bacteriologist is hereby created and his salary fixed at \$100 per month. It shall be the especial duty of such officer to make chemical, microscopic, and other needful examinations and tests of meats, fish, milk, butter, and other food products. He shall also be ex officio "milk inspector" of the city and shall have all the powers and duties of milk inspector, and all acts of said office shall be valid and binding under whichever of said titles he may act. In addition to such duties as are or may be required of him by city ordinance or resolution he shall perform such other official and provisional duties as may be assigned to him by the city health office, the board of health, the city council, or the mayor. He shall maintain an office and laboratory wherever directed by city ordinance or resolution and shall perform all the duties of his office under the direction of the city health officer and the rules and regulations and orders of the board of health. Said office hereby created is in lieu of the office of "milk inspector and bacteriologist," which office and title shall be hereafter changed as herein declared.

SEC. 13. The office of city veterinarian is hereby created and the salary of said office fixed at \$100 per month. It shall be his duty to inspect all dairies and dairy herds and milch cows within and without the city and to report promptly the condition of such places and animals by a full written report filed with the secretary of the health division; and he shall upon request procure and deliver to the city chemist and bacteriologist samples of milk from any dairies, dairy herds, or milch cow or cows

inspected or examined by him; and he shall also attend and treat and render all requisite veterinary services to all horses of the city fire service, and all other animals belonging to the city, and he shall perform all the duties of his office under the direction of the city health officer and the rules and regulations and orders of the board of health, and in addition to the duties specified he shall perform all such other professional and official duties as may be required of him by any city ordinance or resolution by the board of health, the city health officer, or the mayor.

SEC. 14. The city hospital and city hospital service shall include not only the regularly established city hospital, but also the city dispensary connected therewith and any other hospitals or camps which may be at any time established by the city for the care or treatment of persons who are sick, diseased, wounded, or injured, or for the care and custody of those who may be ordered by the authorities to be held or detained for health inspection purposes; and also such other medical services and attention as may be rendered within the city but without any such hospital under the direction of the city authorities in attending, treating, and prescribing for the indigent sick or injured, or other persons; the city hospital service shall be under the control and direction of the board of health, the city physician, and the city health officer, all in accordance with the terms of the State laws and this ordinance.

SEC. 15. A branch of the public service of the city is hereby created to be known as the city cleaning service, which shall include what has heretofore been known as the street-cleaning service, street-sprinkling service, the storm sewer cleaning service, the garbage service, the service for the general control and supervision of the board of health, by whomsoever and by whatsoever means same may have been or may be performed and accomplished. Said cleaning service shall include the entire work of sweeping or otherwise cleaning the public streets, plazas, and like public places of the city; all sprinkling or flushing of the same with water both for cleaning and for laying the dust; cleaning out all settling basins or pits located in the storm sewers at the place of inflow; and disinfecting, oiling, or otherwise treating same as so directed; all work of the collection of garbage by the city and the work of removing dead animals by the city; and such other special cleaning service as may be at any time ordered by the city authorities, together with the transportation and final disposition of all matter, substances, and things collected in the process of said work or any of it. All of the work of said city cleaning service, and all animals, wagons, or other vehicles, property, tools, and appliances used in connection therewith, and all officers, agents, servants, or employees of the city connected with such service shall, for the purposes of determining the nature, extent, and conduct of said work and the methods to be used therein, be governed by and conformed to such rules and regulations and such orders and requirements as may be made by the board of health not contrary to the city ordinances and resolutions, and subject thereto the city health officer shall have the general direction and control of all the work of said city cleaning service.

The officers, agents, servants, and employees of the city in the city cleaning service shall not charge or receive any fees or compensation for the performance of any of said services.

SEC. 16. The office of the chief of the city cleaning service is hereby created, and the salary of said office is hereby fixed at the sum of \$125 per month. It shall be his duty, under the general direction and control of the board of health and the city health officer, to exercise the immediate and personal direction and control of all of said work of the city cleaning service. He shall report daily to the city health officer and, in addition to the requirements of the city ordinances and resolutions, he shall perform such other duties in connection with said cleaning service as may be required of him by the city health officer or the mayor. Said office as hereby created shall hereafter be the correct title and designation of, and be substituted in lieu of, the office heretofore known as commissioner of the street-cleaning department.

SEC. 17. The scavenger service of the city shall be performed by some person or persons to be appointed by the mayor, each of whom shall be hereafter officially designated a city scavenger. Each city scavenger shall perform the duties of city scavenger and sanitary police officer as defined by ordinance, but no such city scavenger shall have power or authority to make arrests. City scavengers shall receive no salary or compensation from the city, but in lieu thereof shall be permitted to charge for their services not to exceed the rates prescribed by ordinance, to be collected when the service is performed. Each city scavenger shall enter into a bond in amount to be fixed by the mayor, not to be less than \$500, payable to the city and conditioned upon the faithful and efficient performance of his duties and undertakings. City scavengers may hereafter be appointed for the city at large or for any designated portion thereof, as may best serve the purposes of their employment.

City scavengers and all persons employed by them and the means, appliances, vessels, vehicles, disinfectants, and methods used by them, and all matters relating to the conveyance, disposition, and treatment of filth and other substances or things collected by them or any of them, and the disinfection by said city scavengers of the vaults, pits, or places from which they shall remove such filth and other substances and things shall all be done and performed in conformity to such rules and regulations, orders, and requirements as may be made by the board of health, not contrary to the city ordinances or resolutions, and subject thereto the orders and direction of the city health officer shall be obeyed by said city scavengers and each of them.

Each city scavenger shall report each day to the city health officer for orders and shall each day file a report in writing in the office of the secretary of the health division, stating the name of each person who ordered the performance of scavenger services on the preceding day and the place, street, and number where such services were ordered to be performed, and in like manner stating in writing the name of the person for whom and the place, street, and number where all such services were done and performed during such previous day.

SEC. 18. The health inspection service of the city shall include all sanitary inspectors and all inspectors charged with the duty of investigating the sanitary condition of vacant or improved property, buildings, and premises, and any appurtenances thereof, and also all inspectors of live stock and poultry intended for slaughter, meats, fish, poultry, milk and dairy products, fruit, vegetables, groceries, and all other commodities intended for food or drink of human beings, and also all inspectors of places where commodities intended for food or drink of human beings are produced, manufactured, prepared for use or for sale, sold, offered for sale or dispensed, as provided in section 6 of this ordinance; and also, in general, all inspectors charged with the duty of investigating the conditions of personal health and hygienic and sanitary conditions material thereto, whatsoever may be their duties and by whatsoever name they may have been known, including all such special and other health inspectors as may be appointed or employed by the city from time to time for any particular purpose, and all of said inspectors shall be known generally for purposes of reference as "health inspectors," though the board of health may, by its order, designate any class of such inspectors by a more particular and descriptive name, as "sanitary inspector," "meat inspector," "restaurant inspector," etc.

All health inspectors shall wear such uniforms and badge or badges as may be ordered by the board of health, and they shall all be under the immediate and personal direction of the city health officer and subject to his orders consistent with the city ordinances and resolutions, and the rules and regulations, orders and requirements of the board of health.

The city health officer may, from time to time, assign to any member of the health inspection service such inspection duties as he may deem proper, and may assign any such inspector to such special service as, in his opinion, is requisite for the good of the service. The city health officer shall divide all territory in the city limits

into convenient districts, as nearly in the form of a square as is practicable, for the purposes of general sanitary inspection, which districts shall bear distinctive numbers or names, and may, in his discretion, require such inspections to be made and reported complete for each city block in each such district.

And said health inspectors, and each of them shall prepare at the time each inspection is made two or more copies in writing, by carbon duplicates, of the report to be made thereon, which reports shall be signed by the inspector and shall be plainly dated on the day when such inspection is made, and shall show the location, station, city block, and lot numbers of street and street number, name of owner or occupant, the nature of the property and things inspected, the sanitary conditions found and the nature of the warnings or notice given in each case; said reports to be on such printed forms and to contain such other information and to be in other respects as the board of health may prescribe. Each inspector shall file daily in the office of the secretary of the health division two such copies of the inspector's report on each such inspection; and they shall report in person to the city health officer any unusual or especially insanitary conditions found by them, and flagrant or obstinate violation of the health or sanitary laws, ordinances, or rules, regulations, orders, or requirements of the board of health or city health officer.

All health inspectors, unless assigned to special service and otherwise instructed, shall upon making any inspection first state to the owner or occupant, or person in charge, if any, of the premises where the inspection is made the fact that he is making such inspection and the purpose of such inspection. Health inspectors when on duty shall conduct themselves with the utmost courtesy and consideration toward all citizens, and must include in their report of any inspection an account of any offensive language or conduct used either by the inspector or by a citizen or both.

SEC. 19. Each officer or employee of the city heretofore known by the title "assistant market master," shall hereafter be known as a health inspector or as a meat inspector, and he shall be a member of the health inspection service, and shall be subject to the same rules and regulations and orders as other members of the health inspection service.

SEC. 20. The clerk of the health department, the city health officer, the city physician, the assistant city physician, the city chemist and bacteriologist and the city veterinarian shall be present at all meetings of the board of health unless excused by the president of said board.

SEC. 21. In case the board of health may deem it advisable for the good of the service to prefer charges against any officer, agent, servant, or employee of the city in the health division, the board shall file such charges in writing with the mayor, and in case the mayor is satisfied that such officer, agent, servant, or other employee has been guilty of inefficiency, incompetency, drunkenness, or habitual or intentional discourtesy to citizens, the mayor shall take the steps necessary for the discharge of such officer, agent, servant, or employee. The filing of such charges shall in each case ipso facto work the suspension of any agent, servant or employee, and he shall not be entitled to any further pay by the city unless he shall be reinstated.

SEC. 22. All ordinances and resolutions and parts of ordinances and resolutions in conflict herewith are hereby repealed.

SEC. 23. In all the rights, powers, and duties given to them in this ordinance, the board of health and all the other officers mentioned herein, shall be subject to the ordinances and resolutions of the city council and the orders of the mayor.

Foodstuffs—Manufacture, Care, and Sale. (Ord. Aug. 17, 1914.)

SECTION 1. *Definitions and application.*—By "foodstuff" as used in this ordinance is meant any substance or thing, whether solid or liquid, and whether of animal or vegetable origin, intended to be used or commonly used as food or drink for human beings.

The term "restaurant" as used herein includes also lunch counters and other eating houses or places.

A "hotel" within the meaning of this code is any hotel, lodging house or inn in the city of San Antonio having three or more rooms where transient guests are fed or lodged for pay.

The word "business" hereinafter used shall be deemed to include any business, occupation, industry, and all operations incident thereto, of the several kinds herein mentioned or referred to.

The word "room" as hereinafter used shall be deemed to include any room, apartment, or place inclosed on one or more sides used for the purposes of any such business.

This ordinance and code shall apply to every business of any kind known or described as a slaughterhouse, meat market, butcher shop, fish market, dairy, bakery, confectionery, ice cream factory; place for the handling, preparation or sale of dairy products or cooked and prepared foodstuffs; hotel, restaurant, grocery store, fruit market, vegetable market, vegetable and fruit peddlers, by wagon or otherwise; soda fountains, bottling works, saloon, bar room, brewery and all similar business handling or having to do with foodstuff.

And also to every room used for the purposes of any such business, in the keeping, storing, manufacturing, preparing, handling, distributing, selling, serving or offering for sale, any meat, fish or slaughtered poultry, meat products, bread, cakes, pastry, confectionery, milk, butter, or other dairy products, fruit, vegetables, groceries, or other foodstuff, whether raw or cooked, or otherwise prepared, or any liquid intended as food or drink for human beings whether of an alcoholic or nonalcoholic nature;

And also as herein provided to all places and premises connecting with any such rooms;

And also to each and all of the fixtures, furniture, receptacles, utensils, machinery, implements, and other things used within or without any such place of business for the purposes of any such business;

And also to all persons owning or conducting or employed in or about any such business;

And each business, room, place, matter, and thing herein mentioned or referred to shall be, respectively, governed, managed, conducted, constructed, arranged, equipped, and cared for in accordance with the following ordinance; and it shall be unlawful to conduct any such business, occupation, or industry except in the due observance of the respective requirements of this ordinance and the following code of general provisions:

CODE REGULATING THE HANDLING OF FOODSTUFFS.

1. *Light and ventilation.*—No room shall be used unless the same shall be well lighted and ventilated.

2. *General cleanliness.*—Each such room and the floors, walls, ceilings, windows, and doors thereof, and all the fixtures, furniture, receptacles, utensils, machinery, implements, and other things (excepting receptacles used to hold refuse) in each such room, or used in connection with any such business, shall at all times be kept free from dirt, adhering foreign matter, unwholesome odors, decaying substances, cobwebs, trash, scraps, etc., and in a clean and sanitary condition.

3. *Scrubbing floors.*—The floor in each such room shall be well washed or scrubbed at least three times each week, and all other parts of such room or thing contained therein as often as may be needed to maintain cleanliness.

4. *Wire screens.*—Each such room shall have at all times good and sound wire screens completely covering all doors, windows, and other openings from such room, which screen wire shall be of not less than 14 meshes to the square inch; and all such screens and the frames thereof shall be tight fitting and shall be kept closed and in good repair,

and, when intended to be opened to permit use of such opening, such screens shall be provided with good springs, so constructed as to close the same automatically, tightly, and securely against flies and other insects: *Provided, however,* That such screens are not hereby required to be used for soda fountains, bottling works, saloons, barrooms, or breweries, unless some other business or some operations for which screens are hereby required be carried on in the same room, rooms, or place, in which case such screens shall be used.

5. *Insects and vermin.*—Each such room shall be kept free from flies, rats, roaches, and other insects and vermin.

6. *Other business in same room.*—No person owning or managing any such business shall permit, and no other persons shall conduct, in any such room any other occupation or business if the same be of a nature or be conducted in a manner whereby food-stuffs may be exposed to unsanitary conditions or pollution; and the provisions of this ordinance shall apply to each such business hereinbefore mentioned or referred to, and to the room or place where and the persons by whom same is conducted, and in the same manner as if such room, rooms, or place were wholly occupied by such business, even though such room, rooms, or place may be used or occupied in part for any other business or occupation, and regardless of whether such other business or occupation be under the same or different ownership.

7. *Water, etc.*—The place where any such business may be conducted shall be constantly provided with an ample and convenient supply of water and a suitable lavatory, soap, and a reasonable supply of towels for use of employees and operators.

8. *Cuspidors and spitting.*—Each such room shall be provided with a cuspidor or cuspidors, which shall be cleaned frequently and kept partly filled with a good and disinfectant solution, such as shall be prescribed or approved by the city health officer; and no person shall spit or expectorate in such room or apartment elsewhere than in such cuspidor: *Provided,* That hotels, restaurants, and lunch counters shall not be required to have cuspidors in their dining rooms.

9. *Sawdust, etc.*—No person owning or managing any such business shall permit the use of sawdust, shavings, or other dust-creating or filth-collecting covering on the floor of any such room: *Provided,* That butcher shops may have clean sawdust on the floor if same be removed once each 24 hours, such sawdust not to be used more than once.

10. *Clothing, etc.*—Each owner or manager of any such business and each employee thereof, when engaged in the work of making, handling, selling, preparing, serving, or distributing any such foodstuff, whether within or without any such room or place of business, shall at all times be cleanly in appearance and habits, and shall have and wear only such aprons, frocks, and other outer garments as are of a nature and texture to be easily cleaned and rendered sanitary, and only clean garments shall be worn by any such person.

11. *Diseased persons.*—No owner or manager of any such business shall permit any person who is afflicted with any contagious or infectious disease to be employed or to work in connection with any such business; and no owner or manager of any such business shall employ any person, and no person shall work or accept employment, if making, handling, selling, preparing, serving, or distributing any such foodstuffs, who shall have or be convalescent from diphtheria, pneumonia, tuberculosis, variola, scarlet fever, typhoid, or meningitis; or who shall have had any such disease within the period of 90 days, unless and until written permission to engage in such work be first obtained by such person from the city health officer.

11B. It shall be the duty of all meat cutters in butcher shops and all slaughterhouse employees to submit themselves to the health officer at such times and place as the health officer may designate, for physical examination. Should any meat cutter or slaughterhouse employee be found diseased, he shall discontinue such work until such time as the health officer may designate.

12. *Handling meat, fish, etc.*—Each person owning, managing, or conducting any such business where meat, fish, or dressed poultry is slaughtered, kept, handled, sold, or offered for sale, or is prepared or cooked, shall keep all meat hooks, receptacles, implements, machinery, counters, tables, fixtures, and cutting blocks perfectly clean; and shall cleanse the same thoroughly at least once each day.

13. *Cure of meat, fish, and dairy products.*—No meat, fish, slaughtered poultry, or meat products, and no milk, butter, cheese, or dairy products, shall be left open or exposed to contamination by dust, air, insects, or other extraneous matter, either within or without any such room or place of business; and all fresh or uncured meat, fish, slaughtered poultry, and all milk and butter shall be immediately placed and kept in a refrigerator or ice box or cold-storage room except when removed therefrom for the immediate purposes and operations of the business.

14. *Scraps and garbage.*—Scraps of meat, offal, bones, or other garbage or discarded organic matter, animal or vegetable, or slops or refuse of any character whatsoever, shall not be left exposed to the atmosphere of any such room, but shall be immediately deposited and kept in a closed container or receptacle which shall be emptied and cleansed at least once each day. No container or receptacle shall be used except such as may have the approval of the city health officer. And all refuse and tainted or decaying meat, fish, poultry, cheese, or other organic matter, whether animal or vegetable, shall be removed from the room without delay.

15. *Care of prepared foods, etc.*—Bread, cakes, pastry, confectionery, and other cooked or prepared foodstuff, shall not be left exposed to contamination by dust, air, insects, or any extraneous substance, either within or without any such room, but if not securely and constantly wrapped or inclosed and sold in original packages and coverings, same shall be kept in a secure and closed container such as shall afford complete protection from such contamination, except when removed from such case or container for the immediate purposes and operations of such business.

16. *Refrigerators.*—Each refrigerator, ice box, or cold-storage room used for the purpose of any such business shall be well-constructed and drained, tight and secure, and shall be kept reasonably dry on the inside and free from foul odors, mold, and slime, and shall be at all times well supplied with ice or other refrigeration. Each such refrigerator or ice box shall be well scoured with lye and hot water at least once each week, and oftener if necessary, to keep same wholesome and free from taint and odors. No refuse or tainted or decaying meat, fish, or other substance shall be kept in any such refrigerator, ice box, or cold-storage compartment. Meats and fish shall not be kept in the same compartment with milk or butter.

17. *Grinding meats.*—All sausage meat or other ground or chopped meat shall be made and prepared from wholesome meat under the most sanitary conditions, and if the place of business where same is made have double screening, same shall be prepared within the second screened inclosure.

18. *Toilet rooms.*—No such room shall have any water-closet or "toilet room" in the same, and any water-closet or "toilet room" which opens into such room, or place of business, shall be kept in a strictly clean and sanitary condition and shall be well lighted and ventilated and wholly separated from such room by walls, and shall have a solid door, kept tightly closed and provided with an automatic spring, securely separating such water-closet or "toilet room" from any room where foodstuff is kept or handled.

19. *Connecting apartments and places.*—The entire yard and premises occupied by any such place of business shall be well drained, and all back rooms, sheds, or yards, or other places connected by any opening with any such room shall at all times be kept in a cleanly and sanitary condition, and free from filth, exposed refuse or garbage, and free from trash and old plunder.

20. *Vehicles, etc.*—All vehicles, wagons, and carts used for delivering or transporting any foodstuffs from one part of the city to another shall be kept in a clean and sanitary

condition; and all meat, fish, and meat products and dairy products placed in such vehicles shall always be carried in good closed containers or wrappings; or in case of meat in large pieces or wholesale quantities, same must be inclosed or completely and securely wrapped in clean, sound, white cloth. No meat, fish, or slaughtered poultry shall be carried or peddled on the streets, unless same be so inclosed or wrapped.

The interior of the bed or box of each such vehicle used for the purpose of delivering or transporting meat or fish shall have a substantial, sound, and smooth lining or surface of sheet metal, constructed so that same shall have no cracks, recesses, or projections, and same shall be constantly kept free from all foul and decaying substances.

21. *Slaughterhouses.*—Every room or place where any cattle, hogs, sheep or goats are slaughtered or where in connection with any such slaughtering business the carcasses, or any part of said animals, are dropped, cut up or rendered, or otherwise submitted to any process leaving refuse, animal juices, offal or other refuse substance, shall (1) have a good, sound floor of concrete, or of brick, tile or stone laid in cement, with a wall or curb of like material at least 4 inches higher than any part of said floor and entirely surrounding the same; and (2) said floor and curb shall be constructed in combination or so joined by cement as to form a trough or basin and said floor shall be so constructed as to drain toward and into a trap connected with the city sewers; and (3) each building, room and place in which such operations are carried on shall in all cases be connected with the city sewers and with the waterworks system supplying water for the city so that each such floor, room, or place may be cleansed with a hose and ample supply of water, draining from said floor into said trap, which cleansing process shall be performed thoroughly at least once each day, after each day's use of such room or place; and same shall also be scrubbed or scraped whenever necessary to remove adhering substances so as to keep said floor in the condition required by this ordinance.

21A. Any person desiring to establish or maintain a slaughtering establishment within the limits of the city of San Antonio, shall file written application to the city council of said city for a license. Such application shall state the name of the owner and manager of the proposed establishment, the location of same, character and size of building and material of which the floor whereon animals are to be slaughtered is constructed; whether connected with the city waterworks system and the city sewers; the means to be employed in disposing of blood, offal, etc., and such other information as may be required by the board of health or city council.

22. *Fruit and vegetable wagons.*—All wagons, vehicles, and carts used for peddling fruit or vegetables, and all the contents thereof, shall always be kept in a wholesome and sanitary condition, and no person owning, using, or driving such wagon shall permit same to contain any unwholesome, fermenting, or decaying fruit, vegetable, or other substance; and the contents of each such wagon, vehicle, or cart shall be securely covered and protected from flies, insects, and dirt by clean and sound wire screens of not less than 14 meshes to the square inch, which screens and the frames thereof shall be tight and kept securely closed except when opened for the immediate operations of such business; and flies shall always be driven out and shall not be allowed to be or remain under such wire screens.

22-A. *Fruit and vegetable stands or stalls.*—All fresh fruit and all vegetables grown above ground, if not kept in a refrigerator or other inclosed container, shall be kept at least 18 inches above the floor or ground of the room or place where same may be exposed for sale; and when not kept within a room screened as herein required shall be kept in a screened case except when the same may be removed for the immediate purposes of such business; and such screened case shall have good and sound screen wire of not less than 14 meshes to the inch set in tight-fitting frames; and all doors or frames into the same shall be kept closed and be so constructed as to close automatically, tightly, accurately when not held open; and no flies, insects, or vermin and no decaying or fermenting substances, refuse, or trash shall be permitted to

enter or remain in such screened case. All refuse, trash, and discarded organic matter in any such place or left on the sidewalk or sidewalks abutting thereon shall be taken up immediately by the person who owns or conducts such business and shall be deposited and kept in a closed garbage can or receptacle which shall be emptied and cleaned at least once each day. Such container shall be substantially constructed of metal and of a pattern such as may be approved by the city health officer. The person who owns or conducts such business shall also keep the street or streets adjacent to such place free from all scraps, refuse, and litter accumulating on account of such business, or dropped or left by any person from articles kept or procured at such place.

22B. Before such application is granted, it shall be referred to the city health officer and head meat inspector, who shall jointly make an examination of the proposed establishment and make a written report to the city council whether said proposed establishment is properly constructed and provided with all necessary sanitary safeguards as required by this ordinance. A record shall be kept by the city clerk in a book for the purpose of all establishments licensed by the city, and shall issue to same a license certificate, for which license a fee of \$5 shall be charged and collected.

23. *Tainted, fermented, decaying, or adulterated foodstuffs.*—No person who owns, manages, or is in charge of any such business hereinbefore mentioned or referred to shall have or permit to be kept or used at any time in or about any room or place or vehicle used in connection with such business, or expose or offer for sale, sell, prepare, deliver or serve, or permit to be exposed or offered for sale, sold, prepared or delivered or served to any person in any part of the city of San Antonio, any meat, poultry, eggs, or other meat-food product, or any fish or oysters, or any foodstuff of any animal nature, or any fruit, vegetable, or other thing or substance ordinarily used for human food, which is tainted, diseased, fermented or decaying or otherwise unwholesome or unclean, or which contains any drug, preservative, or adulterant; and no person who owns or is in charge of any such business or place shall expose for sale, sell, offer for sale, prepare, deliver, or serve to any other person any foodstuff, or permit same to be done, without first examining same to see whether same is fresh and wholesome for food: *Provided*, That the foregoing shall not be deemed to require the examination of goods inclosed in any original package and sold or delivered unopened.

SEC. 2. *Inspection.*—The city health officer and each inspector of the city acting under the authority of the city health officer or the city council is, for the purpose of protecting the public health and enforcing this ordinance, hereby authorized and directed at any or all reasonable times when inspection may be deemed proper, to enter any premises, room, apartment, or place in the city of San Antonio (or if no objection be made without the city of San Antonio) wherein any such business or operations herein mentioned or referred to are carried on, or where any such foodstuffs are kept, produced, prepared, or handled, and also each and every room, place, premises, vehicle, or appurtenance used in connection with such business or operations, and to make a complete inspection of each such room, place, premises, or vehicles, and all machinery, equipment, furniture, fixtures, and things found therein; and also to make a thorough inspection and examination of all foodstuffs and other things therein found which are used or kept for the purposes of such business, and which are named herein or are reasonably within the purpose and intent of this ordinance; and all such inspectors are also hereby authorized and directed to stop and inspect within the city, or by permission without the city, any wagon or vehicle which appears to be used for the purpose of transporting or delivering any such foodstuff and such inspector shall also be authorized to require, and the person in charge of any such business, place, or vehicle shall furnish to the inspector such reasonable and proper samples as he may demand for making any tests of such foodstuffs: *Provided, however*, That no inspector shall be authorized to enter any guest room of any hotel at any time when his presence might disturb or annoy any guest then present in such room or

rooms; and that no person shall interfere with or refuse to permit any such officer or inspector to make any inspection hereby authorized; and if any person shall refuse permission or bar or obstruct such inspection, then any license or permit or certificate issued by the city for such business shall become subject to revocation and shall become null and void on written order of the city health officer; and every person who owns, manages, or conducts any such business, and each agent or employee of such person, shall answer truly such questions, and render such information and assistance and to give such written statements or certificates, as may be asked or required by the city health officer or any such inspector for the purpose of facilitating any inspection or examination under the provisions of this ordinance; and shall also upon request of such officer exhibit to such officer, and permit him to examine upon request, any license or permit or certificate relating to such business, and also any bill or delivery ticket evidencing the purchase or delivery of any foodstuffs and showing the name of the person from whom same was had or purchased.

SEC. 3. Responsibility and reports of inspectors.—Every person now or hereafter to be appointed, or acting by or under the authority of the city of San Antonio (including the "market master" and "assistant market master"), who is charged with the duty of inspecting such rooms, places, or things, or any meat or other foodstuffs, or any operations in connection therewith, or the conduct of any business herein mentioned or referred to, shall perform all such duties under the direction of the city health officer and shall make all such inspections, examinations, and reports and in such manner and form as may be required and directed by the city health officer.

SEC. 4. Condemnation.—When the city health officer or any inspector or other person charged with the duties of such inspection of foodstuff shall find in the city of San Antonio any meat, fish, or other foodstuff, whether animal or vegetable and of whatsoever nature, which is unfit for human food by reason of being adulterated, tainted, diseased, fermented, decaying, or otherwise unwholesome or unclean, or the use, keeping, or sale of which is prohibited by this or any other ordinance of the city or law or regulation of the State, he shall promptly condemn the same, and the owner, manager, or other person in charge of the same shall thereupon immediately and in the presence of the inspector destroy such meat, fish, or other foodstuff, unless such owner, manager, or other person shall notify such inspector of his desire to appeal and shall immediately comply with the requirements of the proviso to this section. Such destruction of meat, fish, or other foodstuff shall be effected by slashing or otherwise separating the substance of same, after which same shall be immediately saturated with kerosene or such chemical compound as may be approved by the city health officer: *Provided, however,* That in case such owner, manager, or other person in charge of such foodstuff shall desire to appeal from the judgment of any such inspector, such owner, manager, or other person shall immediately transport such foodstuff to such place as said inspector may designate or approve and shall there store such foodstuff, and the city health officer or the city veterinarian or city chemist and bacteriologist, if designated by the city health officer, shall promptly, on the written request of such owner or may on his own motion, make a further inspection and examination of such foodstuff, and the judgment of said city health officer or the judgment of such other officer who may make such examination shall be final and conclusive, and if such judgment be that said foodstuff shall be condemned, then same shall be immediately destroyed as aforesaid or in such manner as the city health officer may direct, but if such judgment be that said foodstuff should not be condemned, then the owner thereof may remove the same again to his place of business, but he shall not otherwise do so.

SEC. 5. It shall be unlawful for any person to bring into said city for sale or delivery, or to sell or deliver or to offer to sell or deliver within said city, any such foodstuff produced, handled, or manufactured in any such business conducted within the county of Bexar or any contiguous county, but without the confines of said city, unless and

until the person, association of persons, firm, or corporation owning or conducting such business or operations shall first apply in writing to the city health officer of this city for inspection by said city health officer or under his direction, of the plant, rooms, and premises and all places and things and substances used for the purposes of such business or operations both within and without said city; and such applicant shall produce evidence to the satisfaction of the city health officer that the business in question and all operations thereof conducted within or without this city are managed and conducted in all respects in the same manner and under the same conditions and with the same safeguards as are in the ordinances of this city specified and required; and if the city health officer shall be satisfied that the operations of such business are being conducted as aforesaid, then he shall issue to the applicant a permit to sell and deliver such foodstuff within the city of San Antonio; but if the person, association of persons, firm, or corporation making such application shall thereafter at any time hinder or refuse to permit such inspection, examination, and interrogation as is provided by this ordinance for any similar business or operations conducted within this city, or if it be found at any time that applicant is not observing and complying with this ordinance or other ordinances of this city relating to the manufacture, handling, or production of foodstuff, or that such operations are not being conducted under the same conditions and with the same safeguards as therein required, then and thereupon it shall be the duty of the city health officer to revoke said permit and to forward by registered mail or personal service to such person, associations of persons, firm, or corporation notice of such revocation of said permit; and no such person, association of persons, firm, or corporation, or any person acting for the same shall sell or deliver or offer to sell or deliver, or bring into said city for the purpose of sale or delivery, any such foodstuff unless such person, association of persons, firm, or corporation shall hold such permit issued by the city health officer, and unless the same be and remain unrevoked as aforesaid: *Provided, however*, That for business or operations conducted without said city it shall not be necessary to have connections with the water supply or sewers of said city, but other corresponding means shall be used and provided whereby an ample supply of good water under pressure and sanitary disposal of sewers and slops by means of sewers shall be effected in a manner corresponding to that hereby required, all of which shall be done and provided to the satisfaction of said city health officer.

SEC. 6. Penalty for violation.—Every person who owns, keeps, manages, or conducts any such business, industry, or occupation, or any of the places or things hereinbefore mentioned or referred to, who shall violate any of the rules, requirements, or provisions of this ordinance, and every person whomsoever who shall violate any of the provisions of this ordinance or who shall fail or refuse to observe or comply with any rule, requirement, or provision herein set forth for the conduct and guidance of such person or business or who shall conduct any such business or operations otherwise than under the conditions herein specified, shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than \$5 nor more than \$200, and each day during which any such person shall continue so to violate or fail or refuse to comply with any such rule, requirement, or provision of this ordinance shall constitute a separate and distinct offense: *Provided, however*, That should a different punishment be prescribed in any case by any State law for any offense included in this ordinance, and should the punishment prescribed by the State law be the only punishment which can lawfully be adjudged for any such offense, then the punishment prescribed by the State law for such offense shall be adjudged by the corporation court against such offender in lieu of the penalty hereinbefore stated.

SEC. 7. Repealing clause.—All ordinances or parts of ordinances in conflict herewith are hereby repealed.

SEC. 8. Saving clauses.—In the event any part or provision of this ordinance shall be found to be in conflict with any law of the State, or to be for any reason void or

unenforceable, such defect shall extend only in so far as to avoid such conflict or other objection, and shall not invalidate any other provision or any other and lawful application of the same provision of this ordinance.

Hotels and Restaurants—Sanitary Regulation. (Ord. Aug. 17, 1914.)

24. *Sanitation in hotels.*—Every person who owns, manages, or conducts any hotel or restaurant in the city of San Antonio, shall at all times keep and maintain the same, and each and every room, apartment, or place, and all fixtures, furniture, bedding, and other things used in connection with such business in a thoroughly clean and sanitary condition. And each such hotel and restaurant and persons engaged in conducting the same, in addition to these special provisions, shall be subject to all provisions of the code regulating the handling of foodstuffs.

25. *Cups and towels.*—No common or public drinking cup, and no roller towel, except a sanitary roller paper towel, shall be permitted to be placed or kept in any room or apartment used in common by the guests of any hotel or restaurant.

26. *Water coolers, etc.*—Every hotel and restaurant shall provide an abundant and convenient supply of pure water for kitchen and table use and for drinking purposes. All water coolers and drinking fountains and vessels shall be kept in a strictly clean and sanitary condition.

27. *Dishes, utensils, etc.*—All dishes, tableware, and kitchen utensils which have been used shall be thoroughly washed with water and soap, or by other approved process, and then rinsed with clean water before using same again.

28. *Screens.*—Every hotel shall have each of its bedrooms and each hotel or restaurant shall have each room used for kitchen, dining room, pantries, etc., screened as provided in rule or requirement 4 of section 1 of this ordinance.

29. *Contagious diseases in hotels and boarding houses.*—It shall be the duty of every person keeping, managing, or operating any hotel or boarding house in which any room or bed has been occupied by any person known to such hotel keeper, manager, or operator, or known to any employee of such hotel, to have any infectious, contagious, or communicable disease at the time of such occupancy, to disinfect thoroughly each such room and bed in the method prescribed by the State board of health before permitting such room or bed to be assigned to or to be occupied by any other person; and each hotel keeper, manager, or operator shall truly report each such matter to the city health officer immediately upon the same coming to his knowledge or to the knowledge of any person employed in such hotel; and all employees in any hotel shall promptly report all such matters to the manager of such hotel.

Milk and Milk Products—Production, Care, and Sale. (Ord. Dec. 14, 1914.)

SECTION 1. That the following are the definitions adopted for this ordinance, viz:

Definitions.—The term "registered milk," as used in this ordinance, shall be understood as meaning raw, clean milk, taken from healthy cows, such healthiness to be determined by a veterinarian approved by the board of health of this city, and from dairies which score 80 or over on the official score card of the United States Department of Agriculture. And the milk shall be cooled immediately after taking from the cows to 50° F. or lower, and shall immediately be put in sterilized containers and sealed in such containers for delivery to the consumer. The milk shall contain not more than 100,000 bacteria per cubic centimeter, and shall be free from pathogenic bacteria. And all such milk shall be delivered to the consumer not later than 24 hours after the milking thereof. And the term "registered cream," as used in this ordinance, shall include the definitions of "registered milk," above given, and of "cream," given below.

The term "pasteurized milk," as used in this ordinance, shall be understood as meaning milk that has been heated above 145° F. and maintained at or above such

temperature for not less than 20 minutes and immediately cooled to 50° F. or lower, and maintained at or below 60° F. at all times prior to delivery thereof to a consumer or consumers. The term "pasteurized cream," as used in this ordinance, shall include both the definitions of "pasteurized milk," above given, and "cream," given below.

The term "cream," as used in this ordinance, shall be understood as meaning that portion of the milk, rich in fat, which rises to the surface of the milk on standing or is separated by centrifugal force, is fresh and clean, and contains not less than 18 per cent milk fat.

The term "milk" as used in this ordinance, shall be understood as meaning such milk as conforms to the following requirements, viz:

- (a) Shall contain not more than 88 per cent of water or fluids.
- (b) Shall contain not less than 12 per cent of milk solids.
- (c) Shall contain not less than 3.25 per cent of milk fats.
- (d) Shall have a specific gravity of not less than 1.02 per cent.
- (e) Shall not contain any dirt or other foreign matter or sediment.
- (f) Shall not contain any boracic or salicylic acid, formaldehyde, hydrogen-peroxide, or other foreign chemicals.
- (g) Shall not contain any pathogenic bacteria.
- (h) Shall not contain bacteria of any kind in excess of 500,000 per cubic centimeter.
- (i) Shall not have been drawn from any cow having a communicable disease or showing clinical symptoms of tuberculosis, nor have been drawn from a cow out of a herd of cattle having any diseased animal therein, or any animal therein which is afflicted with or has been exposed to any communicable disease.
- (j) Shall not have been drawn from any cow which has been fed on garbage, refuse, swill, moist distillery waste, or other unwholesome food.
- (k) Shall not have been drawn from any cow suffering with sore and inflamed udders or teats, or from a cow diseased.
- (l) Shall not have been drawn from any cow within 15 days before or 9 days after parturition of such cow.
- (m) Shall contain all the cream therein.
- (n) Shall not have been drawn, handled, kept or delivered under conditions contrary to any of the provisions of this ordinance relating thereto.

The term "skim milk" or "skimmed milk," as used in this ordinance, shall be understood as meaning such milk as conforms to every requirement of "milk" as defined above, excepting, however, therefrom the subdivisions (a) and (b) and (c) and (m); and shall be understood as meaning milk from which any portion of the milk fat has been extracted and which does not contain less than 9.25 per cent total milk solids.

The term "dairy" or "dairies," as used in this ordinance, shall be understood as meaning a place or places where two or more cows are kept for the production of milk or milk products, a portion or all of which milk or milk products is to be sold or exchanged for another commodity.

The term "filthy" applied to milk, as used in this ordinance, shall be understood as meaning such milk as is not securely protected against flies, dust, dirt, and, as far as is possible by all reasonable means, from all foreign or injurious contaminations.

SEC. 2. *Permit must be obtained.*—No person, association of persons, firm, or corporation shall engage in the sale of milk or cream of any kind or quality, or of any milk products, within the limits of the city of San Antonio unless and until he, they, or it shall have first obtained a written permit so to do, with a number, from the board of health of this city. Any permit so issued is nontransferable.

SEC. 3. *Fee for permit.*—A fee of 50 cents shall be paid to and collected by the secretary of the board of health of this city for each permit issued by it under the provisions of this ordinance.

SEC. 4. *Life of permit, etc.*—Each such permit shall have a life of one year or fractional part thereof only, and shall be issued annually to cover the period beginning January 1 each year, and shall bear a distinctive number.

SEC. 5. *Application in writing before issue of permit, etc.*—Each such permit, however, shall be issued only after written application is made therefor (the form of such application to be given by the board of health of this city upon a printed blank furnished by it), which written application shall state:

First. The name, residence, post-office address, location of place or places of business, and, if the applicant's employer or principal has headquarters at a place other than the said residence or post-office address, to then give the name of the employer or principal and the place of headquarters.

Second. The number of cows from which milk is obtained for sale and the kind of food which such cows are fed.

Third. The names and addresses of all persons, firms, or corporations from whom milk or cream of any kind or quality is obtained for the purpose of sale and the routes of transit of such milk or cream.

Fourth. The said application shall be signed by such applicant and shall be accompanied by the permit fee hereinbefore provided for.

SEC. 6. *Inspection of business premises also required before issue of such permit.*—Before the issuance of any permit hereinbefore provided for there shall be made, by a duly authorized representative of the board of health of this city, an inspection of the business premises of the applicant, or principal or employer of the applicant, both as to the place of production and the place of distribution, to determine whether such premises are sufficiently clean and sanitary with regard to the stables, cows, wagons, store, and utensils thereof, and whether the food and water provided therein are pure and wholesome, and whether the cows and other animals therein are free from any contagious or infectious diseases, and whether all persons engaged in the care, handling, or delivery of the milk or cream obtained on or handled at any such premises are free from any contagious or infectious diseases, and whether such persons use due cleanliness in their said work; and said board of health must be satisfied, after such inspection, that the proper conditions exist to entitle the applicant to the permit hereinbefore mentioned.

SEC. 7. *Certificate of tuberculin test also to accompany such application for permit.*—A certificate of tuberculin test from a veterinarian recognized by the Texas Livestock Sanitary Commission must accompany the application for the permit to sell milk or cream or any milk products within the city of San Antonio.

SEC. 8. *List of recognized veterinarians to be posted in office of department of health of city.*—A list of the names of veterinarians recognized by the Texas Live Stock Sanitary Commission shall be posted by the board of health of this city in the office of the department of health of this city.

SEC. 9. *Two convictions for violation of State law or this ordinance shall automatically forfeit permit.*—Any person, association of persons, firm, or corporation who shall be convicted twice for having sold, offered for sale, exposed for sale, had on hand for sale, or delivered any adulterated milk or cream or any milk products within the limits of the city of San Antonio, as such offense is defined and denounced under the present or any subsequent provisions of the laws of this State, or who shall be convicted twice for any violation of any provision of this or any subsequent ordinance of the city of San Antonio relating to the production, care, handling, delivery, and sale or exchange of any milk or cream or any milk products, shall thereby immediately and automatically forfeit his, their, or its permit issued under the provisions of this ordinance.

SEC. 10. *Change of location of business must be reported.*—If any person, association of persons, firm, or corporation having the permit hereinbefore mentioned shall change his, their, or its place or places of business after the issuance thereof, a written notice

of such change or changes shall be forthwith delivered to the board of health of this city, and, before such person, association of persons, firm, or corporation shall be allowed to carry on their said business further the premises at such new location or locations shall be first inspected by a duly authorized representative of the board of health of this city, and the written permission of the said board of health (it being satisfied that the conditions exist at the new location or locations which are required by this ordinance) shall be obtained therefor.

SEC. 11. *Scores required of dairies; pasteurized milk or cream excepted.*—No milk or cream or any milk products shall be sold, offered or exposed for sale, or had on hand for sale, or delivered within the city of San Antonio, except such milk or cream or milk products has come from a dairy which has obtained a score of not less than 50 points, according to the score card of the Dairy Division of the Department of Agriculture of the United States, such score to be decided by, notified to, and recorded as hereinafter provided: *Provided, however,* That the aforesaid score of not less than 50 points shall be permitted for a period of three months only after this ordinance has become effective, after which time the score required shall be not less than 60 points: *Provided, however,* That milk or cream obtained from any dairy not so inspected and scored, and which is shipped into this city by railroad, freight or express, may be sold, exposed, or offered for sale or delivered within the city of San Antonio if the same has first been pasteurized in the manner provided in this ordinance.

SEC. 12. *Representative of board of health to inspect and give scores.*—The score or scores herebefore required to be made by dairies shall be obtained through a duly authorized representative of the board of health of this city, and no other person, after a thorough inspection and examination by him made and conducted.

SEC. 13. *Examinations for scores to be made when deemed advisable by board of health.*—Examinations of dairies for the purpose of giving scores shall be made as often and conducted in such manner as the board of health of this city shall determine.

SEC. 14. *Scores to be recorded and book of such scores deemed public record of which notice is required to be taken.*—After such examination the report of such score shall be made in writing to the board of health of this city, which report shall be signed by the representative thereof so making, and shall be recorded in a well-bound book to be kept for that purpose by the secretary of the board of health of this city. And such record shall be deemed a public record, open to the inspection of all persons on demand within office hours. And all persons, associations of persons, firms, or corporations engaged in the business of selling or delivering milk or cream or any milk products within the city of San Antonio, either to the consumer or to middlemen, shall take notice of all scores made and recorded in such book of record.

SEC. 15. *Dairy stables—Conditions required and cows therein.*—Dairy stables shall be so constructed as that there is allowed ample air and light for the cows therein, and shall be painted in some light color or whitewashed once each year. The stables shall be kept free from dust, dirt, cobwebs, and foul odors, and the ceilings thereof shall be dust-tight. If horses are kept in the same stable buildings, they shall be separated from the cows by a tight and substantial partition. No other animals or any fowls shall be allowed in dairy stables. The floors of all dairy stables shall be so constructed that they can be kept sanitary and clean. The urine and manure thereon shall be removed twice daily, and be taken at least 50 feet from such dairy stables and placed where the cows can not get at it. Manure shall not be thrown out of the dairy stable windows. The manure and waste from cows shall be placed in substantial receptacles and removed from the premises of the dairy stables at regular and short intervals of time. Food and water for cows in such dairy stables shall be ample and wholesome. No such cows shall be fed swill, garbage, or other unwholesome substances. If malt is used for such cows, the same shall not be fed when sour. The surroundings of such dairy stables shall be kept in a sanitary condition. Cows in dairies shall not be allowed

to stand in manure or filth. Such cows shall be kept clean, and no manure, litter, or other noxious substances shall be allowed to become caked or dried on them.

SEC. 16. Dairy stables—Milkers, their utensils, etc.—All milkers in dairies shall thoroughly wash with clean water and wipe their hands, and shall wash with clean water and wipe the cow's udders before they begin to milk, and their outer garments shall be clean. They shall not use the pails, cans, or other necessary dairy utensils which come in contact with the milk unless the same shall have been thoroughly washed in clean, hot water and soap or hot water and soda, and shall afterwards be sterilized with boiling water or steam. Care shall be taken that the seams and faucets of such vessels are thoroughly cleansed with a brush. Milkers shall refrain from milking or handling milk in any way when in themselves or their families there is even a suspicion of any contagious or infectious disease, such as smallpox, scarlet fever, diphtheria, typhoid fever, tuberculosis, or the like. All employees in such dairies shall be subject to physical examination at any time by a duly authorized representative of the board of health of this city.

SEC. 17. Tuberculin test required of certain cattle.—All cows, fresh or dry, and all cattle over one year of age, in dairies from which milk or cream or any milk products are furnished to the persons residing in the city of San Antonio for consumption, shall be tuberculin tested and inspected for all contagious and infectious diseases at the city's expense.

SEC. 18. How tuberculin test shall be made, etc.—All dairy cattle hereinbefore named shall be tuberculin tested once each year, and in case any reactors are found, such cow or cows shall be retested within six months thereafter. All cows reacting to the tuberculin test shall be indelibly marked with the branded letters "TB" on the left shoulders thereof by the duly authorized representative of the board of health of this city, and shall be separated by the owner or person in charge thereof, from the other cow or cows, if any, and shall be kept permanently apart from them, and no milk shall be taken from such reacting cow or cows to be used for the purpose of sale or manufacture of milk products.

SEC. 19. Cows tuberculin tested shall be marked by method adopted by board of health.—All cattle which shall be tested as hereinbefore provided shall be marked by some method adopted by the board of health of this city.

SEC. 20. Representatives of board; their powers of inspection, etc.—All persons who are duly authorized representatives of the board of health of this city are hereby empowered to examine all dairy herds or cows, utensils for handling milk or cream, and to open any can, vessel, or package containing milk or cream, or any milk products, whether sealed, locked, or otherwise, and take samples of the milk or cream or any milk products for testing or analysis; and if, upon inspection or analysis, the milk or cream is found to be filthy or the can or other container is in an unclean condition, the said representative may then and there condemn the same and pour out such milk or cream, whatever its kind or quality, upon the ground; or if, upon such inspection or analysis, any milk products are found to be insanitary or filthy, the same may then and there be destroyed by such representative; and he shall, if this be done in good faith, be held harmless in damages therefor in any suit or demand, as likewise shall be the city or any of its officers or employees and the members of said board of health.

SEC. 21. Care of milk after milking.—Immediately after milking the milk shall be removed from the stable into a milk room securely screened from all flies and other harmful insects, and aerated and cooled to at least 60° F., and shall be put into perfectly clean containers. Such milk room shall at all times be kept in a clean and sanitary condition.

SEC. 22. Raw milk or cream: when considered insanitary.—Raw milk, or cream showing an abnormal fermentation, shall be considered insanitary and unfit for consumption as human food, even when pasteurized.

SEC. 23. *What pasteurized milk or cream shall or shall not contain.*—Pasteurized milk or cream shall contain not more than 50,000 bacteria per cubic centimeter nor more than 1 per cent of the number of bacteria contained in the product before pasteurization, and shall not contain any pathogenic bacteria.

SEC. 24. *Pasteurized milk or cream to be sold only in bottles, etc.*—Pasteurized milk or cream shall be sold only in bottles which have been sterilized in live steam or boiled.

SEC. 25. *Temperature required for milk or cream from time of production to delivery.*—All milk or cream, of whatever kind or quality, which is sold or delivered shall, from the time of leaving the dairy to the time of the sale and delivery to the consumer, be kept at a temperature of not more than 70° F.

SEC. 26. *Milk container to be used only for that purpose.*—No milk container shall be used for any other purpose than the reception of milk.

SEC. 27. *Cap to bottles to bear name, permit number, and quality or kind of milk or cream.*—The cap of all bottle milk or bottle cream shall bear the name and permit number of the producer or seller thereof, and shall also bear the kind or quality of the milk or cream therein contained.

SEC. 28. *No water shall be carried on milk wagons.*—No water for any purpose whatever shall be carried on milk wagons operating within the city of San Antonio in the delivery or sale of any of the different kinds or qualities of milk or cream provided for in this ordinance.

SEC. 29. *Pasteurized milk or cream—When to be delivered.*—Pasteurized milk or cream shall be delivered to the consumer not more than 30 hours after the completion of the process of pasteurization thereof.

SEC. 30. *Where milk or cream shall be bottled and capped.*—All milk or cream of any kind or quality, put up in bottles, shall be bottled and capped at the dairy building regularly used for that purpose and nowhere else.

SEC. 31. *Disease in families of dairymen or employees to be reported, etc.*—Should scarlet fever, smallpox, diphtheria, typhoid fever, or other contagious or infectious disease occur in the family of any dairyman, or among any of his employees or their families, or in any house or building in which milk or cream of any kind or quality is kept for sale, such dairyman, or his employees, or other person so concerned, shall immediately notify the health department of this city at its office of such fact, and a representative of the board of health of this city shall thereupon immediately investigate and order the sale and delivery of such milk or cream stopped, or order the same sold under such regulations as the board of health of this city shall deem best.

SEC. 32. *Failure to so notify shall authorize destruction of milk, etc.*—Should any dairyman, vender or shipper of any milk or cream, of whatever kind or quality, fail to notify the board of health of this city, as hereinabove provided, of any contagious or infectious disease suffered by themselves or any members of their families or member of their households, or by any of their employees or any member of any of the families of their employees, or who, after such information is given, shall fail to comply with the directions of said board of health, any duly authorized representative of said board of health is hereby authorized to seize and to destroy all such milk or cream coming from any such dairyman, vender or shipper, wherever the same may be found within the city of San Antonio, and such representative of the said board of health, the members of said board of health, the city of San Antonio, and any and all of its officers and employees or servants, when acting in such matters in good faith, are hereby released and held harmless from all damages that may result from such action.

SEC. 33. *Delivery wagons to be so constructed as to protect milk and cream.*—All vehicles used for the delivery of milk or cream or any milk products shall be covered with some substantial material so that the milk or cream or any milk products handled therein shall be thoroughly protected against sun and rain.

SEC. 34. Delivery wagons to be used for no other purpose.—Milk-delivery vehicles shall not be used for any purpose which will render them unsuitable for the proper or sanitary delivery of any milk or cream or any milk products.

SEC. 35. Milk-delivery vehicles to be kept clean and sanitary.—Milk-delivery vehicles shall be kept in a cleanly condition at all times, and shall be kept free from any substance liable to contaminate the milk or cream placed therein.

SEC. 36. Delivery vehicles required to have painted thereon name, location of dairy, and number of permit.—No person, association of persons, firm, or corporation shall use any vehicle for the delivery of milk or cream or any milk products within the city of San Antonio which has not painted thereon, on both sides of the body thereof, in legible letters at least 3 inches in height and placed in such a position on such vehicle as to be plainly visible to ordinary sight, the name and location of his, their, or its dairy, and the number of his, their, or its permit.

SEC. 37. No milk bottle shall be opened and recapped after once filled and capped.—No bottle containing any kind or quality of milk or cream shall be opened or emptied wholly or partially, or recapped, after once having been filled and capped, except it be the consumer thereof.

SEC. 38. Premises not to be entered in delivery of milk or cream where there is any infectious or contagious disease.—In delivering any kind or quality of milk or cream to any house, room, or building in which any person therein is suffering from any contagious or infectious disease, the party so delivering shall not knowingly enter the premises whereon such house, room, or building is situated, neither shall he permit his bottles of milk or cream or milk or cream in other vessels to be taken into such premises, but he shall pour such milk or cream into vessels furnished by the person residing in or at such premises and not otherwise.

SEC. 39. Milk or cream to be delivered only in bottles; excepting only when same is consumed at place where sold, and in case of bona fide wholesale dealers in milk, etc.—No person, association of persons, firm, or corporation, shall sell, deliver, offer for sale, expose for sale, or keep on hand for sale or delivery any milk or cream of any kind or quality whatever, except it be contained in bottles which are sanitary and tightly closed and capped, or be contained in receptacles of a similar character which have first been approved by the board of health of this city: *Provided, however,* When any such milk or cream is sold or delivered on the premises of the sale or delivery for the immediate consumption thereof thereon, the same need not be sold or delivered in bottles as aforesaid: *And provided further,* That this requirement shall not apply to bona fide dealers in milk or cream, of whatever quality or kind, at wholesale, who sell in a single sale and delivery a quantity of not less than 1 gallon of milk or 2 quarts of cream, and which dealers then and there have a substantial refrigerator, lined with metal or porcelain, in a tight and sanitary condition and with suitable ventilation thereto, from which such sale and delivery of such milk or cream is made; and that such wholesale dealer shall then and there have in a room separate and apart from the room in which such refrigerator is located suitable and adequate cleansing vats, steam pipes, and jets or hot-water containers for the sterilization of all milk utensils, and substantial and adequate drain racks, and substantial and adequate tables for the draining of large quantities of milk utensils, respectively; and that such wholesale dealers shall then and there have, and shall at all times keep, the refrigerator room or distributing room or salesroom and the wash room used in connection with the business thereof, in a clean and sanitary condition with regard to the ceilings, walls, and floors thereof, and that the windows or doors or other openings in such rooms shall be securely screened against all flies or other harmful insects from without, and that the same on the inside shall be at all times kept free from all flies or other harmful insects; and that such wholesale dealers shall use utensils in the handling of such milk or cream which shall at all times be kept clean, free from rust and

rough surfaces, and shall be sterilized on the inner and outer surfaces, before using, by exposure to a temperature of not less than 212° F.; and that such wholesale dealers shall not store or place any substance or article other than milk or cream (excepting, however, only butter), in the refrigerator hereinbefore mentioned, and that such refrigerator shall be constantly kept at a temperature of 50° F. or less.

SEC. 40. *Places of business where milk or cream is sold, to be furnished, how.*—No milk or cream, of whatever kind or quality, shall be sold, offered for sale, exposed for sale, kept on hand for sale, or delivered at any store or other place of business, unless such places are furnished with a substantial tight and sanitary refrigerator, in which such milk or cream shall be kept and maintained at a temperature of 50° F. or lower. And such refrigerator shall not contain articles of food or substances other than such milk or cream, excepting, however, only butter. And such refrigerator shall be well lined on the inside with porcelain or metal.

SEC. 41. *Grocers, etc., selling milk and cream required to label containers and to post names and addresses of milk producers.*—All grocers, bakeries, restaurants, or other places selling milk or cream or pasteurized milk or skimmed milk over their counters, shall keep the names and addresses of the sellers to themselves of such milk or cream or pasteurized milk or skimmed milk posted and plainly visible to the ordinary eye and in a conspicuous place in such business premises, and shall also post opposite the said names and addresses the kind or quality of said milk or cream furnished by such sellers, so that the same may be plainly discerned by the patronizing public.

SEC. 42. *Pasteurized milk or cream sold must be produced in manner and under conditions provided for in this ordinance.*—No person, association of persons, firm or corporation, or any person for him, them or it, shall sell, offer for sale, expose for sale, or have on hand for sale, or deliver any pasteurized milk or cream, or what purports to be pasteurized milk or cream, unless the same shall have been produced, transported, stored, and pasteurized in accordance with the provisions of this ordinance relating thereto.

SEC. 43. *Applications to be made by those desiring to pasteurize milk or cream.*—Any person, association of persons, firm, or corporation desiring to pasteurize milk or cream for sale within the city of San Antonio shall first make application in writing to the board of health of this city for and obtain from it a permit so to do, which permit shall be granted by said board upon the compliance of such applicant with all the requirements of this ordinance which can be complied with antecedent to the actual pasteurization and sale of such milk or cream.

SEC. 44. *Penalty.*—Any person, association of persons, firm, or corporation selling, delivering, or offering for sale, or exposing for sale, or having on hand with the intention of selling, any milk or cream, according to the various definitions given in this ordinance, which fails or refuses to comply with any provisions of this ordinance or violates any provision of the same, shall, upon conviction, for such offense be fined in any sum of money not less than \$25 nor more than \$200; and each day's violation of any of the provisions of this ordinance shall constitute a separate and distinct offense.

SEC. 45. *If one provision void, this not to invalidate other provisions.*—If any provision of this ordinance, or any portion or clause thereof, shall be determined by a competent court to be void because unreasonable or in conflict with the State laws, or for any other reason the same shall be declared to be unenforceable, such holding or declaration of the court shall not invalidate or affect any other provision or clause of this ordinance.