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TRANSPORTATION OF MILK.

RESPONSIBILITY OF RAILROAD COMPANY FOR CONDITION OF MILK DURING TRANSPORTATION.

In 1912 the city of Chicago, Ill., adopted an ordinance governing the sale of milk in the city. Certain provisions of this ordinance, which regulated the pasteurization of milk, were declared to be reasonable and valid by the supreme court of the State. (Pub. Health Repts. Reprint 342, p. 96.)

The ordinance prohibited bringing into the city milk the temperature of which was above 55° F. It was also required that the milk should be transported in sealed cans. A railroad company was prosecuted, charged with bringing into the city milk which was above the required temperature. The Illinois Supreme Court decided that, unless it could be shown that it was possible for a railroad company to ascertain the temperature of the milk without having access to the interior of the cans, the ordinance was unreasonable and not enforceable so far as it applied to railroad companies bringing milk into the city.

The court was careful, however, to make it clear that a city has the right to protect the health of its inhabitants by reasonable regulations governing the importation and sale of milk.

The opinion is published in this issue of the Public Health Reports, page 155.

PUBLIC HEALTH ADMINISTRATION IN ST. PAUL, MINN.[1]

By G. B. Young, Surgeon, United States Public Health Service.

DIVISION OF FOOD INSPECTION.

This branch of activity, as supplemental to dairy and meat inspection, was inaugurated in July, 1914, by providing for one inspector at $1,320.

The place was the first one in the department, it is understood, to be filled under the new civil-service law.

[1] Continued from last week's Public Health Reports.

The present employee had been engaged for several years in the grocery and meat business as salesman for packing-house products. He impressed the writer as being zealous, intelligent, and as well informed as to his duties as would be expected in view of the entire lack of instruction.

It was found that there were no prescribed routine of inspections, no rules of procedure, no forms for recording conditions found, no record of orders issued. In short, the entire operations of the food-inspection division consisted of the entries made in a pocket notebook and a weekly report made on the form used by the sanitary police and other field men, which is simply an incomplete summary of the number of inspections made. There has never been any supervision or check on the methods of the inspector. The inspection is, therefore, simply a patrol inspection, confined principally to the more obvious sanitary conditions and the general quality of food.

The inspector states that in 1915 there were a "few prosecutions." No record of these could be found in the bureau. It may be said here as of general application that the bureau has no system of starting or conducting prosecutions and keeps no records on the subject.

The procedure in the case of food prosecutions is substantially the same as in other fields. The inspector decides who shall be sued, swears out a warrant, has it served, and appears in court. In special cases, particularly meat cases, the health officer occasionally appears in court. The court sustains the inspector, on the whole, very well. Sentences are frequently suspended pending compliance, but this is proper, because health bureau prosecutions are primarily corrective and not punitive.

There seems to be some reason to think, however, that the bureau does not interest itself sufficiently in the support of its inspectors through court action or by moving for the revocation of licenses. "Crusades" and similar spectacular methods are almost always objectionable, but the determined "drive" after conspicuous offenders is essential to progress.

The inspector's list of places under his supervision shows:[1]

Bakeries	75
Candy factories	17
Commission houses	36
Peddlers	150
Food shops other than butchers'	650
Butchers	230

He does not inspect the butcher shops except as incidental to inspection of groceries and other food establishments at the same locations. In this connection it must be said that the impression was obtained from both food and meat inspectors that there was a certain

[1] The health bureau does not concern itself with the canned goods in the wholesale houses.

amount of jealousy as to one infringing the territory of the other, especially as to one reporting anything needing correction in cases on the border line of the two jurisdictions. As neither force has any supervision in the field and practically none in the office, the situation opens the way for abuses.

The inspector has no control over pop factories or places for the manufacture and sale of sirups, soft drinks, and bottled waters.

In St. Paul, bakeries are not licensed; they can be located in cellars or in other improper places as far as the city law is concerned. Section 3890 of the State health law provides that they shall be "light, dry, and airy," but fixes no standards except that a floor more than 5 feet below the surface of the ground must not be of wood. It also prohibits sleeping rooms, privies, etc., from opening into bakeries and other similar establishments. The enforcement of this law is the duty of the State dairy and food commissioner, although it does not appear in the official handbook published by that office. It would appear from personal inspection that the State leaves the enforcement of these sections almost wholly to the city authorities.

No attempt was made either in the food work or other field work to make extensive investigations of actual conditions. A moderate number of inspections were made in different parts of the field, some with inspectors and some alone, to get a reasonable line on average conditions. This report is especially concerned with methods, not with especially good or bad individual findings.

It was noted in this connection that manure piles and other refuse and rubbish were present rather often in close proximity to food establishments, that there was a common lack of protection against flies, dirt, and improper handling; that there was a frequent, perhaps general, lack of provision for personal cleanliness; that many illegal toilets existed; that common towels and common drinking cups were in habitual use; and that there were frequently apparent the results of an absence of intelligent control of the sanitary aspects of building construction. For most of these conditions, however, the health bureau can not at present be held responsible.

The present inspection is doing some good, more than might be supposed. It needs first of all to be organized by someone who knows the theory and practice of food inspection, and then to be given close supervision. It does not need more inspectors to run about in a methodless, even if zealous and industrious, but unsupervised manner.

DAIRY DIVISION.

The dairy division consists of a chief dairy inspector and an assistant at $1,500 and $1,080, respectively. The inspector also receives gasoline and oil for his automobile, but no tires or repairs. The

chief has, so far as could be learned, no special training for his position and has acquired very little of the more technical kind of knowledge; he has, however, a large amount of practical experience.

The records of this division are in better shape than any others in the bureau. They are not by any means first class in form, but they are neatly kept, and readily accessible.

Dairy Inspection—Ordinances.

The local ordinances in regard to dairy inspection may be summarized as follows:

(1) Dealers must be licensed.
(2) Applicant must state source of supply and before receiving license must file herd report of tuberculosis test.
(3) Filing application authorizes engaging in business without further ado.
(4) The health officer transmits application with a statement as to whether applicant has complied with ordinance and is "a fit and proper person, etc."
(5) The council considers report and grants license by resolution.
(6) The health department then approves of license by license inspector.
(7) Containers of milk arriving into the city must be marked so as to identify producers.
(8) Cows must be tuberculin tested once a year.
(9) Any "duly licensed veterinary" can give certificate.
(10) Any milk from nontested herd can be seized and destroyed.
(11) Bureau veterinary will test free inside the city limits, and will test outside of city for cost of travel expense.
(12) Prescribes usual standards of chemical purity.
(13) Forbids sale of bulk milk at retail.
(14) Prohibits bottling on wagons, etc.; regulates bottling and refilling.
(15) Bulk milk in transit must be in sealed containers.
(16) Temperature must be kept below 50° and bacteria below 500,000.

The basic ordinance was very distinctly in advance of current practice at the time of its passage, nine years ago. It is true that it is probably partly unenforceable now, certainly was partly unenforceable then, but it contains good provisions. The later amendments are good; the amendment forbidding sale of loose milk is very good, also the temperature standard. The provision authorizing a man to begin business upon application is absurd and the tuberculin testing provision never has been really enforced, nor is there prospect that it will be except within the city limits.

Licenses.

Licenses run for a year, but expire at various dates. No license is issued to dealers other than producing dealers. The producers inside the city are apparently pretty closely looked after by the bureau veterinarian. Outside of the city, most of the producers who retail their own products and a good many producers selling to pasteurizers are tested by the State or by private veterinarians about once a year.

The records are not in shape for readily revealing the amount of milk sold in violation of the testing ordinance.

Results of Tuberculin Tests.

Inside the city limits there have been tested within the year 110 dairy herds with an aggregate of 2,051 cows. Of those tested since November, 1915, at which date the present series began, only 79 are reported as reactors. All these were condemned and slaughtered under United States inspection at the yards, and 20 of them were tanked. The percentage of reactors, less than 4 per cent, seems almost unbelievably low. There is excellent authority for saying that the percentage of reactors in the general dairy field about Minneapolis and St. Paul would be about 40 if the testing were efficiently done.

The city veterinarian has been pushing the tests on the inside herds for some years, so it is probable the percentage of reactors has been greatly reduced, but a reduction from 40 per cent to 4 per cent seems to justify the suspicion that some of the owners are resorting to illegal methods to defeat the purpose of the test.

The reports of the tests have been kept in excellent order and are filed in such a manner as to be readily accessible.

Amount, Source, and Character of Milk Supply.

No one in the bureau had any authentic data on the amount of milk sold in the city. The chief inspector had been told by some of the large dealers that the amount was 25,000 gallons per day, and he thought that about 40 per cent was pasteurized, but no data on the subject had been collected. Accordingly, all the pasteurizing firms were visited and their output was ascertained, and with the assistance of the chief inspector, whose office records were in excellent shape as far as they went, the following table was compiled as to amount and source of supply and method of receipt:

	Cream.	Milk.
	Gallons.	*Gallons.*
Shipped to various dealers	1,305	10,232
Farms "family cows" (no permit required)	200	400
Produced on farms outside of city and marketed by producers (3,042 cows)	.....	4,100
Produced on farms inside city and marketed by producers (110 farms, 2,051 cows)	.....	6,100
	1,505	20,832
Cream computed as milk, 1,505×6	.....	9,030
Total milk and cream	.....	29,862

These figures are believed to be less than the true total, which, on the basis of consumption elsewhere, is believed to be about 28,000 gallons of milk alone. Approximately 6,500 gallons, or 23.21 per

cent, are handled by the five pasteurizers, and 10,200 gallons, or 35.5 per cent, are sold directly by producer to consumer.

Since there are no bacterial counts and no records of chemical sampling available for the past two years, it is impossible to get any information on the character of the supply. It is believed, however, that on the average it is better than the extent of supervision would lead one at first glance to expect. There are several reasons for this:

1. The practically complete absence of loose milk sales.
2. The low average temperature present for several months of the year and the cheapness of ice for use in summer cooling.
3. The short haul and consequently prompt delivery direct from producer to consumer of more than a third of the total consumption.
4. The percentage of pasteurized milk sold.

Of course pasteurized milk is often of an uncertain quality, but in St. Paul it should be good. All of the plants were visited and the equipment was examined and operation watched. One of the plants was only fair as to operation though reasonably good as to equipment, but the other four were very distinctly above the average in both respects. Carelessness in detail was observed to some extent, but, on the whole, the impression left was satisfactory. Carelessness in handling bottled milk by retailers was observed, but of a kind easily corrected.

Supervision of Production and Sale.

So far as the outside supply is concerned, there seems to be practically no supervision of production, at least no effective supervision. The city does nothing; the State collects a license fee of $1 from each producer and scores most of the farms, it is said, once a year. The State also does a small amount of tuberculin testing. The city authorities complain—with what justice, the writer does not know—that the State does not cooperate actively. Certainly nothing was found in the city files or records to show any cooperation. It is a matter that certainly should receive the prompt attention of those in authority on both sides.

For the past two years all the city effort on milk supervision has been concentrated on the scoring and improvement of the farms inside the city limits.

The scores are neatly and clearly made, and the inspector has them filed in good order and readily accessible. However, no study or tabulation of results had been made. All of the scores for the past two years were critically examined. The scores show the usual defect of untrained scoring, the lack of a true sense of values as to the proportionate importance to be attributed to certain factors, and an overemphasis on equipment. Still, the scoring has undoubtedly been a cause of improvement. The difficulty is, of course, that there is not

a sufficiently frequent inspection to raise the standard of methods to the level of the standard of equipment.

The following table summarizes the scores of 97 inside farms, scored from January to May, 1916:

Farms scoring 20 to 40	0
Farms scoring 40 to 50	5
Farms scoring 50 to 60	13
Farms scoring 60 to 70	34
Farms scoring 70 to 80	33
Farms scoring 80 to 90	10
Farms scoring 90 to 100	2
	97

The maximum score was 96.5; the minimum score, 42; the average score, 69.

This shows that 52 farms, or 53.6 per cent, scored below 70. Certainly, if, as claimed—and it is believed justly—the two years' work has caused a distinct improvement, the conditions must have been pretty bad. It also shows that the farms as judged by scores were either pretty good or very poor.

If 53.6 per cent of the farms in the completely scored territory are below 70, the conditions in the much larger fields outside must be worse.

Comments on Inspection Methods.

The inspector has a record in which are entered the names of all persons handling milk under the following headings:

A. Herds inside.
B. Herds outside.
C. Milk producers marketing own products.
D. Stores.
E. Gone out of business.
F. Pasteurizers' supply.
G. Hotels and restaurants.
H. Not retailing (butter makers, etc.).
I. Out of business.

This record is indexed in the book record, and a card-index file is also maintained. The card is a very good form for the purpose for which it is employed but open to the serious objection common to all the bureau records, that it has been designed to meet an individual opinion as to a particular phase of the work without regard to adaptability to standard filing equipment or, what is much more objectionable, without being coordinated with the general system of record and report. The inspection service is not logical in its methods. It is manifest that the control of the five pasteurizers, by frequent sampling of the raw and finished products, would insure the safety of nearly one-third of the milk consumed in the city with an expenditure of effort much less than would secure the control of any other equal fraction of the supply. A large fraction of the total supply having been made safe by inspection of the pasteurizers,

attention should be shifted to the producing dealers and not so much stress laid upon the inspection of retailers.

Not enough active pressure is used upon dealers and producers. The inspector recalled three prosecutions in a year, but had no record of them.

Chemical sampling is generally of minor importance compared to bacteriological sampling, temperature control, bottling control, etc., and too much attention should not be given it, but to watch a city's milk supply with no recorded chemical or bacteriological sampling and no temperature taking is probably a record achievement.

The first thing for the city authorities to do is to join with Minneapolis in a study of the milk situation and then to go to the legislature for a comprehensive but not too elaborately detailed law applicable to cities of the first class. The details of matters not possible to make uniform because of difference in form of city government or legal conditions could then be handled by individual ordinances.

MEAT INSPECTION.

Field Covered by Inspector.

The meat inspection of the city of St. Paul is in the hands of one inspector at a salary of $1,320.

The inspector has been in the service of the bureau of health for many years, for, as previously stated, the present health department recognized the importance of meat inspection and took an active interest in its development considerably in advance of the general practice of the period.

The inspector estimates that 75 per cent of the meat consumed in St. Paul is United States Government inspected at the South St. Paul yards. The remaining 25 per cent comes from two sources: First, from certain plants at the yards, and second, from the plants at what is known as the Transfer, which is a railroad yard, about midway between St. Paul and Minneapolis. These are customer plants, killing animals purchased for individual customers who buy at the yards. A very few hogs, a few lambs, and about 10,000 head of beef cattle are killed, the product of a third of which goes to St. Paul.

Of the meat killed in these two localities about 25 per cent of that consumed is entirely uninspected, or practically so, since the one city man, besides covering the slaughter houses, has to cover the butcher shops and other places in the city where meat, fish, and poultry are sold.

The inspection consists in the annual license inspection and in patrol inspections taking different sections at irregular intervals.

In the course of his rounds the inspector visits the commission houses handling meats and poultry. There are from five to seven commission houses handling enough meat to require occasional inspection. When meat is condemned the inspector sometimes kerosenes it and sometimes merely notifies the rendering plant to come and get it.

The inspector is not supplied with denaturing materials nor with "condemned," "held for inspection" tags, or other equipment. No monthly report is made as to condemnations and no official record of the condemnations and causes for them is kept. In fact, the records of the meat inspection division are represented by the inspector's notebook. Once each month a return of the number of inspections and of a few other items is made on the general sanitary police report form, and each year the inspector adds up the various items from his notebook and embodies the results in a letter to the health officer, which the latter includes in his annual report.[1]

TABLE 14.—*Inspections, 1915.*

Butcher shops	1,491	Complaints investigated	123
Commission houses	908		
Abattoirs	348	Total	3,098
Licenses recommended	228		

TABLE 15.—*Condemnations.*

Beef	9,110	Poultry	765
Mutton	155	Fish	620
Veal	1,719		
Pork	1,210	Total	13,704
Sausage	125		

The small total of condemnations is quite striking. The inspector states that there has been a great improvement in this respect, as formerly the condemnations sometimes ran as high as 48,000 pounds. There are "about 20" wholesale houses, little and big. These are not licensed.

Prosecutions.

No records are kept of prosecutions. One warrant was taken out during the period of the writer's visit. There has been no other case since the latter part of 1914.

[1] Such letters were found in previous annual reports, but not in the completed manuscript for the unpublished report of 1915. The explanation given by the inspector was that his letter was a little late in getting in, but as the report was still unprinted it would seem that something should have been done about it.

The following summary of work done was taken from the inspector's notes:

	May 15-21.	May 21-27.
Complaints	1	3
License application inspections	3	8
Commission house inspections	15	19
Butcher shops	37	42
Abbattoirs	7	8
Pounds condemned	450	118
Tuberculous cattle inspection	1	.....

This gives a total of 143 inspections for 12 days, or, as Saturday is a half day, for 11 days. The abattoir inspections necessarily take considerable time, the sites being several miles apart, so the record may be better than it appears.

Live-Stock Inspection.

This title is misleading. The live-stock inspector is the bureau veterinarian. He receives $1,500 per year, and his duties embrace the inspection of animals for glanders, rabies, and other diseases, and the tuberculin testing of dairy cattle on the farms inside city limits. During the portion of the year when this work is in active progress he is given the assistance of two laborers.

No report for the year 1915 was found, but the 1914 report is as follows:

Horses examined for glanders (negative)	1
Number days held for observations for rabies	173
Case of rabies in dogs	1
Herds tested	73
Cattle tested	1,668
Cattle condemned	70

Comment.

The entire system of foodstuff inspection, including dairy, food, meat, and live-stock, should be grouped in one strong division under a chief food inspector, who should be a graduate from a good school of veterinary medicine, trained in all branches of food work and given a salary of at least $2,500. Sufficient clerical assistance, including a stenographer, should be supplied to handle a proper system of records and correspondence and leave the chief free to study conditions and supervise the field force. Until this is done the food-supply inspection of St. Paul will remain a thing of shreds and patches. Adding more field men will not meet the situation.

DIVISION OF SANITARY INSPECTION.

Management of Office.

The force of this division consists of a chief sanitary inspector and 12 inspectors or sanitary police. The hotel inspector is nominally a part of the force, but practically is independent. The chief receives $1,500 per year and the inspectors $1,080. The force is uniformed and has full police powers. One inspector is permanently assigned to each ward.

The work of this division embraces the control of the varied classes of activity vaguely denominated "sanitation," the institution and maintenance of quarantine, the collection of epidemiological data relating to typhoid, and other diseases, and the taking of terminal cultures in diphtheria. The inspectors report at 8 a. m. and go out on rounds at 9 a. m., return to the office at 1 p. m., go out again at 1.30 and at 4 p. m. telephone to inquire if there is any further need for their services.

The chief inspector, being the executive head of all the office work, has no opportunity for systematic supervision of the field force. He states that each inspector is held responsible for conditions in his district, and that if too many complaints of insanitary conditions come in from an inspector's ward he goes out and "looks him over," but on further inquiry it developed that in many years of service no penalty more severe than an occasional reprimand had ever been imposed. The records giving no real clue to the character or extent of the men's activity, it was impossible to form an accurate opinion of their efficiency. The inspectors are apparently a steady lot of men, but entirely untrained as to the real significance and importance of sanitary inspection. Subject to their inherent limitations they are believed to be as efficient as they could be under the existing system.

The amount of work done is difficult to ascertain, but judging from a summary of all the inspectors' reports for one week, an average of 3.42 inspections were made per day, in addition to the institution and termination of quarantine.

In the May, 1914, report there were 135 cases quarantined for the full month, or 33.7 cases per week, which is believed to be about average, and, roughly, the same number were terminated. This gives an apparent average total of about 7 quarantine inspections per day per man.

On examining at different times the boxes in which are placed memoranda of assignment, etc., for each man, there were frequently found memoranda of quarantine assignments, complaint cards, and other papers indicating either great delay in attending to assignments or, what may be more probable, great carelessness in handling the papers.

The men do not go out on rounds as promptly as they should; one frequently sees them in the office at 9.30 a. m., or even later.

Methods of Handling Complaints.

The great majority of the sanitary complaints are received by telephone and are consequently virtually anonymous; a few come by mail, and a moderate number are made over the counter.

The chief sanitary inspector, or in his absence, the clerk and typist, receives the telephone complaints and enters them on a 2¼ by 3 white card, which goes to a drawer file kept by day upon the desk of the chief inspector. The cases are assigned to the men by the chief inspector, but no assignment record is made, so that the disposition of any case can not be traced. As all hands have free access to the complaint file, and as the cards of both live and dead cases of successive years are kept in the one drawer, the file is always in confusion. No record is kept of inspections or reinspections, or of notices served, abatements secured, or prosecutions. Complaints over the counter are entered and handled as above. If the complaint is in writing the letter is handed to the inspector. When he has made the inspection the letter is destroyed if it was unsigned; if signed, the chief inspector, or in extreme cases the health officer, writes to the complainant and the letter and a carbon of the reply go to letter file in the health officer's office, where they are filed under "Complaint" by wards.

As a matter of fact, only a small percentage of complaint letters ever reach the file. They are usually lost in the process of handling.

Since the present health officer came into office it has been the practice to entrust to the sanitary police the quarantining of communicable diseases, including placarding, inspection of family of patient, supervision of maintaining quarantine, taking cultures in diphtheria, and disinfecting. It is understood that this is a return to the practice of former years, changed later by giving the quarantine work to the medical inspectors, and now resumed.

Each inspector makes a report of the work done, grouped under very vague classifications, and these reports are consolidated into a weekly report to the health officer.

In response to an inquiry as to what use was made of the weekly reports it was stated that they were "just filed"; that it had been the practice to add up the figures from the weekly reports at the end of each year, but that the chief inspector doubted if the practice would be continued, because it seemed useless to retain reports that could not be printed.

The last annual report to contain a statement of the work done by the sanitary division was that of 1910. No allusion to the subject appears in subsequent reports as printed or in the manuscript of unprinted reports.

Enforcement of Law.

To what extent the present methods are successful in securing abatements of nuisances and the improvement of sanitary conditions it is impossible to say, the absence of any system making a study of the work impossible without extensive field investigations. Neglected alley spaces and manure piles were seen with considerable frequency, and it stands to reason that this should be so as long as the division is conducted as at present. With only "about six" prosecutions, as in the past two years, enforcement must get on slowly.

Comment.

There were a number of matters, such as the discontinuance of privy vaults, which it was useless to take up in this report. There were no reliable data concerning these matters discernible anywhere.

The present system of sanitary inspection seems to cost a great deal more than it is worth.

The 12 ward men and the chief cost $14,460 per year, or about 24 per cent of the total appropriation for the bureau of health exclusive of the public baths. This is a large amount to pay for an unsupervised patrol inspection, so run that no one can tell, or at any rate prove, whether things are getting better or worse.

General recommendations are all that are possible here, but it may be said that the whole sanitary policeman scheme should be abandoned. A system of sanitary inspection should be established under a man who understands modern methods of field and office management, at a salary of $2,500, and the present force should be reduced to eight. This system should be based on the idea of inspection by districts, graduated in size on the basis of difficulty of control and covered by rotation of assignment. The present chief should be used as a field supervisor. Reducing the force by four will permit paying the higher salary mentioned and leave a net saving of $1,820 to be used as hereinafter indicated.

The establishment and termination of quarantine should be taken from the hands of the sanitary inspectors.

The inspection of hotels, boarding houses, and restaurants is of a two-fold nature, relating to structural conditions and ventilation and to the methods of operation, including the quality of food served. The former part, now practically independent, should be definitely coordinated with the general sanitary system.

Hotels and Restaurants.

There is one inspector on this duty, which includes hotels, rooming houses, boarding houses, restaurants, and various kinds of lunch places.

Persons desiring to engage in business in any of these lines must make application as explained in connection with the licensing of milk dealers.

The fee for hotel license is $25, for others $5. This is an illogical system. Health bureau licenses are primarily for the purposes of regulation, not for revenue, and the fee should bear some sort of relation to the cost of inspection. It is absurd to charge the same fee for a restaurant with 200 seats as for a lunch stand with 5. The fees should be graded from a minimum of say $2 to $10 or more.

In this connection attention is called to the absurd license situation created by the provisions of the charter as to the duties of the license inspector in the police bureau. The framers of the charter evidently had in mind only licenses as a source of revenue and the enforcement of its collection, but when they made it the duty of the license inspector to "report all violations of license laws" to police, they practically set up an officer with legal authority coordinate with that of the health officer.

The licenses expire one year from issuance and consequently inspection for licensure is going on all the time, which interferes with systematic inspection.

Hotel inspections are also made by police and fire bureaus, the former noting its approval on the margin of the license issued by the health bureau, and the latter using a form of its own. If the department of parks, playgrounds, and public buildings did its full duty there would be another inspection. As mentioned above, it is very doubtful if the present inspection by the bureau of health is legal, because the bureau of buildings is charged with the duty of inspecting hotels, etc., as to compliance with legal requirements "in every regard."

In making inspections, no score card or other comparative record is used. There are no prescribed standards or methods of inspection. The inspector devised a form of card record which is in some respects a very good one, but has the defect of trying to cover all possible degrees of quality by "good," "fair," or "poor." It permits, however, of the preservation of a continuous record of inspections at different dates and has a space opposite each entry to be filled in by signature of the man making that particular inspection.

For restaurants and similar places the card is entirely inadequate, but it is impracticable to suggest details of changes in record and inspection forms in this report.

On route the inspector makes entries in a small pocket notebook, and at his leisure transfers them to the record cards kept in a file on his desk, the entries being descriptive of the character, location, etc., and then in the appropriate columns he grades the ventilation,

cleanliness, etc. As some of the entries are based on practically unchanging structural conditions, it seems superfluous to repeat them. The cards are numbered serially and bound in a loose-leaf binder. An index book is bound in with the record cards and completes the system.

The inspector practically never takes up his findings with the health officer, but with the chief of police or license inspector. Like the other special inspectors, the inspector of hotels and restaurants is the head of a little independent system of his own—a system for which the bureau is responsible, but over which it exercises little control.

It is difficult to see just what the license inspector has to do with sanitary findings in regard to an application for the issuance of a license which can be issued only on the approval of someone else.

Revocation of license or other penalty for operation not in accordance with ordinance or law is practically unknown. In over two years of service the inspector has seen but one place of business closed. There were no prosecutions or other special efforts to secure improvement in conditions during the past year. As far as known, no license has ever been revoked through action by the bureau.

Careful examination was made of the entries on all the record cards for 20 months past. Forty-one cards relating to places that had gone out of business were excluded, and the following tabulation was then made in accordance with the classification used by the inspector:

TABLE 16.—*Inspection record for 20 months.*

Kind of establishment.	Number.	Times inspected.	Number of places inspected once.
Cafe	11	15	1
Chop suey	4	9	1
Boarding houses	22	40	11
Wagon	15	31	7
Restaurants	92	150	38
Dairy lunch	2	5	1
Lunch room	189	376	88
Hotel	88	189	34
Cafeteria	9	27	3
Business lunch	101	160	33
Drug store lunch	3	3	3
Rooming house	55	109	17
Total	591	1,114	237

The inspector had stated that there were 160 hotels and 423 other establishments under his care. The writer does not know how he arrived at his figures.

The above table shows some rather singular conditions: For instance, there were 591 places under observation, and in the normal courses of license inspection alone each would be due for inspection

about twice. As far as the record shows, however, there were 237 places or 40 per cent inspected but once. The totals may be as small as they are from failure of the inspector to make entries. Certainly 1,114 inspections in over 500 working days does not seem an excessive amount of work.

The inspector makes a summarized report each month on the entirely uninformative general form used by sanitary police and other employees. This is worthless as an index of conditions. One ground for criticism in this connection is of general application to all the field work: Since no record is made of the conditions found, of the orders issued for improvements or abatements of nuisances or for the result of the orders, it is impossible to ascertain if any progress is being made. Personal inspection as far as made was informative as to existing conditions, but its findings could not be checked.

GARBAGE.

The collection and disposal of garbage was taken from the bureau of health by the new charter and given to the "Bureau of Sanitation." The name has been a source of endless trouble and annoyance to the bureau of health and to the public. The public simply refuses to believe that they have voted to themselves a "bureau of sanitation" unconnected with the bureau of health and blames the latter for any alleged errors of the former, misdirects its letters, etc.

Since St. Paul has apparently definitely decided to keep the bureau of health out of the waste collection and disposal there is no occasion to go into the garbage question in detail in this report. It may be said with propriety, however, that the system of garbage collection and disposal remains as objectionably primitive as formerly and that the manner of its execution has evidently gained nothing in efficiency of control or economy of administration. Indeed, in substituting wooden for iron wagon bodies a distinct step backward has been taken.

HOSPITALS.

Smallpox Hospitals.

The hospitalization of smallpox is not compulsory in St. Paul, though in extremely badly cared for cases it may be enforced; but there are enough cases and accompanying exposed persons voluntarily hospitalized to necessitate the maintenance of some simple provision for their care.

The smallpox hospital, officially known as the Dade Street Infirmary, has a very pleasant location just outside the city limits, about 5 miles from its center. It consists of a group of frame buildings in very good repair, and the furnishings and equipment are of sufficient

quality and in good condition. The state of cleanliness and order is poor for a hospital, but very good indeed for an average city institution of the character. The bedding is clean and the patients are manifestly contented and well fed.

The manner of maintaining and operating the hospital is most unusual:

1. The county shares with the city certain of the expenses of maintenance.

2. The superintendent, not a medical man, combines a variety of functions from chauffeur to nurse. He receives $50 per month and $2 per day for the care of each patient, including food and nursing.

3. One nurse at $750 is provided for in the budget and the place is filled by the wife of the superintendent, not a registered nurse, who acts as housekeeper, cook, and nurse for female patients.

4. A male nurse at $540 is provided for in the budget, but the man is merely a laborer and handy man.

5. The medical attention is provided by the city physician and is therefore entirely outside of the control of the bureau of health.

6. The superintendent has an automobile, used for transporting patients and for ordinary going and coming. He is paid $5 per head for transporting each patient to the hospital and $3 each for returning them when discharged. He also receives an allowance of gasoline.

The system seems to work well enough as long as the cases cared for are of the mild type, but would certainly fail to be adequate if the cases were severe. The expense in 1915 was:

Salaries and wages	$1,860.00
Care of smallpox	2,458.00
Livery	521.00
Repairs	110.26
Total	4,949.26

Adding gasoline and some minor items will run the cost over $5,000.

The plan of saddling the health department with the responsibility for the hospital care of smallpox and not permitting it to control the medical service is to be strongly condemned.

Hospital Care of Contagious Diseases and Tuberculosis.

The city and county cooperate in maintaining a general hospital with which the bureau of health has no connection and a general description of which is outside the scope of this report, but it must be referred to because of its relation to the care of contagious diseases and tuberculosis.

The hospital is widely known for the efficiency of its administration and for the superior quality of its equipment. The medical superintendent, in office 35 years, is recognized as a leader in his specialty.

At this hospital one wing is reserved for diphtheria and scarlet fever. The wing is a good average hospital structure, but not built in accordance with what is believed to be the best practice in contagious disease hospitals. The cleanliness and order are excellent, but the plan for medical attention does not seem to be adequate. A portion of the building is occupied by chronic patients from general wards.

It is difficult to understand the reasoning that would withhold from the bureau of health the care of the patients hospitalized by its orders, the care and discharge of whom involve matters linked directly to the field activities of that bureau.

During 1915, 228 cases of diphtheria and 215 cases of scarlet fever were hospitalized. Measles, whooping cough, and chicken pox are not hospitalized.

Under the State law providing for the maintenance by counties of sanatoria for tuberculosis the county has combined with the city in the provision of a wing at the general hospital for the care of tuberculous patients. It must be said that the result is not a success. The building is an excellent hospital building and the administration that of a high-class hospital, but it is not a sanatorium and never can be one. The limited site and structural limitations absolutely prevent carrying on the true sanatorium care of tuberculosis. Moreover, the psychology of the consumptive predoomed the experiment to be a failure. Everywhere the majority of tuberculosis patients regard a hospital as a place to which consumptives are sent to die and a sanatorium as a place to which consumptives go to get well. A hospital presupposes care under practically uniform conditions until time of discharge. A sanatorium presupposes care under progressively changing conditions.

Sooner or later the city and county will have to provide a real sanatorium. When it is established, it should be under the control of the bureau of health. The city will supply the overwhelming majority of the patients, and the city has the only well organized system of recording and observing tuberculosis. A sanatorium is a logical part of such a service.

PUBLIC BATHS.

The public baths operated by the bureau of health are a very remarkable institution. Their acquisition has been referred to above. They are located on a charmingly situated island (Harriet Island), opposite the central part of the city, and close to the right bank of

the Mississippi. The plant includes swimming baths for both sexes, playgrounds, athletic fields, dancing pavillion, and other features. The island is a very popular and successful institution and a permanent testimony to the foresight and enthusiasm of the present health officer.

The bureau of health operates all parts of the plant, including refreshment supply, dancing, and other recreational features. Owing to a succession of freshets the island was partly under water during all of the time this study was in progress, and therefore no observations could be made of the methods of operation. Except for a superintendent at $1,200 and two watchmen, the force employed is on the payroll only during the summer. The financial statement of the bureau gives the details as to appropriations and expenditures.

As already noted, the appropriation for Harriet Island was $20,700, or 25.57 per cent of the total appropriated for all bureau of health purposes. In addition, the receipts from the restaurant and other sources of revenue ($3,228.60) are expended in operation.

Toward the end of the year, when the Harriet Island bills have to be paid, balances to the credit of the health fund are transferred to the baths account to cover the deficit. These balances should not exist. With the existing need for all sorts of things substantial balances should not be carried until late in December. On November 1, 1915, $1,000 was transferred to the health fund from "Administration public safety," and on November 11, $1,000 was transferred from "Health account" to "Bath account." Why this transfer was not made directly does not appear. In addition, $600 was taken from "Health account" and transferred to the "Bath account" on November 29. December 28, $1,100 was transferred from "Health account" to the "Bath account" and also $200 from the "Quarantine account." The Harriet Island playground is an institution of which from all accounts St. Paul can be proud, but drawing from the health bureau funds proper for its support does not seem to be sound practice.

EDUCATIONAL ACTIVITIES.

These constitute beyond a doubt potentially the most important part of the duties of a bureau of health. Such a bureau can not be expected to be very much better than the intelligence of the citizens demands. It is the function of the health officer to inspire the public demand for sanitary advances rather than to force them. The only way such popular demand can be created is by arousing popular interest in the problems of personal and community hygiene. This must be done by lectures, bulletins, posters, lantern slides, and moving-picture shows, and similar methods.

The Bureau of Health of St. Paul has no educational activities whatever. If the bureau is reorganized one of the first things provided for should be the educational activities.

Another related matter to which no attention is given at present is the education and training of the bureau's personnel. Twelve dollars per year is spent for technical journals for the laboratory and a reasonable number of technical textbooks are on the laboratory shelves; but there is not a single book or journal supplied for the use of the rest of the force and no system of instruction for the force. A large number of bulletins and other publications issued by United States, State and municipal agencies are received; but as far as could be determined no use is made of them; certainly no files of them are kept, and they mostly find their way to the wastebasket.

MEDICAL DIVISION.

The immediate head of the medical division is the deputy health officer at a salary of $2,500. No provision could be found in the charter or ordinances fixing a standard for the hours of employment of this official different from the one prescribed for city officials generally. With the approval, as understood, of the health officer, however, the deputy health officer gives only a portion of his time to the work in the bureau of health. As near as could be ascertained, from two to three hours of actual presence in the office is the average. No doubt this amount of service is considerably exceeded at times, and it is quite possible that some additional time is spent in activities outside of the office.

The present incumbent has been connected with the bureau for a number of years, off and on, having been in charge of the laboratory for several years, chief health officer for two years, five or six years ago, and deputy for the past two years. He is, therefore, well informed as to the health conditions in the city and the operations of the bureau.

It is not thought necessary to go into the methods of the medical division in very great detail, to discuss very fully the theories of disease control upon which those methods are based, or to set forth the results obtained. To some extent this last has already been done in treating of the communicable disease situation in the city. Only a brief summary of the methods will therefore be given.

The division's work falls into two classes: That in relation to the reportable diseases other than tuberculosis, and the tuberculosis work. The latter has really only a very theoretical subordination to the control of the division; even the office, clerical force, and methods are quite distinct.

Reportable Diseases.

Under the State law physicians are required to report in writing upon a prescribed postcard form the following diseases:

Poliomyelitis,	Rabies,
Cerebrospinal meningitis,	Scarlet fever (scarlatina, scarlet rash),
Chicken pox,	Smallpox,
Diphtheria (laryngeal and membranous croup),	Trachoma,
Erysipelas,	Tuberculosis,
Measles,	Typhoid fever,
Ophthalmia neonatorum,	Whoopingcough.

General Rules for Quarantine Disinfection.

As it does not appear expedient to discuss the detailed procedures of the bureau of health for the control of reportable diseases other than diphtheria, scarlet fever, measles, typhoid fever, and smallpox, the State board rules will not be given in detail. As relating to these diseases the rules will be summarized as follows, the text being that of the official leaflet and placards issued by the bureau of health:

SCARLET FEVER.

The commissioner of health having knowledge of or having reason to suspect the existence of scarlet fever, shall investigate, if necessary, and shall at once place under quarantine all scarlet fever patients and those having the care of or coming in contact with such patients, except the attending physician, medical inspector, sanitary inspector, or, in case of death, a licensed embalmer.

The quarantine period for scarlet fever shall never be less than three weeks, and may be longer. Quarantine must not be released until the medical inspector has satisfied himself that desquamation (or peeling) is completed, and that the condition of the nose and throat is normal.

The apartments occupied by a scarlet fever patient shall be deemed infected, and when vacated by death or removal of the patient shall, together with their contents, be thoroughly disinfected under the supervision of a sanitary inspector. All persons having occupied such apartments during the quarantine period must have their clothing disinfected and take a disinfecting bath before being released from quarantine. All disinfections prescribed in this regulation shall be a part of the control of the disease.

No milk, butter, or other dairy product shall be sold or given to any party, or delivered to any creamery or butter factory, from a house quarantined because of the presence of scarlet fever therein.

Every physician shall immediately report to the commissioner of health in writing the name of every patient under his care having scarlet fever, the state of his or her disease, and his or her place of dwelling. A report must be made for each case as it occurs in a family or household.

DIPHTHERIA.

The commissioner of health having knowledge of or having reason to suspect the existence of diphtheria shall immediately secure a culture from the nose and throat of the suspected individual and submit the same to the laboratory of the department of health for examination. A suspicious case must be quar-

antined as diphtheria until the diagnosis is confirmed or denied by the laboratory findings. An undoubtful clinical case of diphtheria must be quarantined even with negative finding from the first laboratory examination.

The quarantine of diphtheria shall be continued until a negative report has been made from the laboratory of the department of health on cultures from nose and throat of the person quarantined, followed by a negative report on cultures taken from nose and throat, not less than 24 hours thereafter, so as to constitute two successive negative reports on cultures from both nose and throat. Cultures by representatives of the health department shall not be taken until two weeks have elapsed from the date of quarantine and shall be taken by said representatives of the health department twice a week thereafter until quarantine is released. Physicians may submit cultures for patients at any time after quarantine is established provided that when a negative culture is obtained the final culture releasing patient from quarantine shall be taken by a representative of the health department.

A school teacher or pupil released from quarantine at the expiration of the six weeks' period without two successive negative reports from the laboratory of the department of health must not attend private, parochial, church or Sunday school or any public gathering, until two successive negative reports have been made.

A nurse or other person who has been under quarantine with a diphtheria case, and who wishes to be released before the quarantine period has expired, must be separated from the patient, and have cultures taken from both nose and throat for examination in the laboratory of the department of health. When such cultures are reported as negative, the person from whom they are taken may be released from quarantine after having had a full bath and a thorough disinfection of all clothing to be worn or taken from the quarantined house.

The final sections are identical with those for scarlet fever.

The following is an extract from placard, warning milkmen, grocers, and others not to enter house:

"The family will put vessels outside into which milk and cream must be poured by the milkman, who must not handle the vessel or receive tickets or money until this quarantine is released."

SMALLPOX.

The commissioner of health having knowledge of, or having reason to suspect, the existence of smallpox, shall investigate, and at once place upon the house where smallpox exists a sign setting forth the facts. This sign is to serve only as a warning to those who wish to avoid the house and not as an indication of quarantine. When the attending physician considers a smallpox patient as having recovered he shall report the fact in writing to the commissioner of health, who shall thereupon order an examination of the patient by the medical inspector. Isolation restrictions shall be removed only upon order of the medical inspector. The patient must not leave the house until the removal of the warning card.

The apartments occupied by a smallpox patient shall be deemed infected, and when vacated by death, or removal of the patient shall, together with their contents, be thoroughly disinfected under the supervision of the sanitary inspector.

Every physician shall immediately report to the commissioner of health, in writing, the name of every smallpox patient under his care, the state of his or her disease and his or her place of residence. A report must be made for each case as it occurs in a family or household.

VACCINATION.

Following an exposure of smallpox, every individual who can not show evidence of a recent successful vaccination or a recent attack of smallpox must be vaccinated (within three (3) days of the first exposure) or placed under the same isolation restrictions as smallpox patients. Any regular practicing physician may be employed for this purpose, or upon request the medical inspector shall call at the residence for the purpose of vaccinating such persons as require vaccination under this regulation. Medical inspectors shall vaccinate all persons applying at the office of the department of health at 10 a. m. and 2 p. m. every day except Sunday.

If smallpox prevails in a community, or if the disease appears in a school, all unvaccinated teachers and pupils must be excluded from school for a period of three weeks unless vaccinated within three (3) days of first exposure. Failing to comply with this requirement, the school must be closed for a period of three weeks.

If smallpox appears in any class in any college in St. Paul, all unvaccinated teachers and students in the class must be excluded from recitations for a period of three weeks unless vaccinated within three (3) days of first exposure. Failing to comply with this requirement the classes attended by such teachers or students must be discontinued for a period of three weeks.

SMALLPOX DISINFECTION.

All persons having been ill with smallpox must have their clothing disinfected and take a disinfecting bath before being released from quarantine.

In accordance with the above regulations, patients shall be isolated in their homes when their quarters are deemed suitable by the inspector from this department.

Wage earners of the family, after complying with the vaccination requirements, are permitted to attend to their usual duties but are not permitted to attend public gatherings such as church, theaters, etc. Children are not permitted to attend school for a period of two weeks after exposure.

When requested by the family, their private physicians will be permitted to attend to the vaccination of the members of the family; otherwise this work shall be done by the medical inspectors of this department.

Patients residing in apartment houses, lodging houses, hotels, etc., shall be removed and cared for at the smallpox hospital at their own expense if they are able to pay for same, but if not, then, at the expense of the city. (This is required by the city charter.)

MEASLES.

In brief, the State board rules provide for notification of the school authorities, placarding, quarantine of patient and susceptible contacts until 10 days after appearance of last case in the house, and permit children who have had the disease to attend school upon written permission of health officer. Terminal disinfection of the premises is not required.

TYPHOID FEVER.

For typhoid the State rules prescribe the usual procedure in regard to general matters of care of the patient, discharges, sale or handling of food products, burials, and school exclusion; and for the placarding of the houses and the screening of the sick room in fly season.

Disinfection.

The rules of the State board provide for gaseous disinfection by formaldehyde, or as an alternative for disinfection of fabrics by chemical solutions, boiling and when applicable aeration and exposure to sunlight followed by intensive mechanical cleaning and chemical disinfection of walls, floors, etc.

No printed or written rules on the subject could be found in the bureau, but the practice is to employ gaseous disinfection by means of paraform candles.

The disinfection is done by the sanitary policemen. As far as could be ascertained these men had been given no instructions in the theory and practice of disinfection. No attention is paid by them to temperature or humidity conditions in using formaldehyde. The important part of disinfection is the treatment of fabrics and the mechanical cleaning of surfaces. Apparently no attention is paid to these matters, nor are the rooms to be disinfected properly sealed. Without giving in detail the reason for the opinion it is believed that the terminal disinfection practiced in St. Paul does not achieve the purpose for which it is employed.

The law requires that people who can afford to do so must pay for disinfection. It would be difficult to establish a more illogical procedure than charging for disinfection. It amounts to imposing a fine on a family for getting sick. The theory is apparently that to have a communicable disease in the family endangers the neighbors, overlooking the fact that there could not have been a communicable disease in the house if the neighbors had not had it first.

The methods of rendering bills and accounting for collections are very unsatisfactory. In 1915 the total receipts were $529.76, an average of $1.35 for each disinfection collected for.

In this connection attention should be invited to the fact that formalin candles are charged to the citizens at 50 cents apiece, although their cost has never been above 12½ cents, and before the war was much less.

Methods of Handling Reportable Disease Records.

Office routine.—The telephone operator is also the clerk and the typist. She receives reports of reportable diseases from (1) any physician by telephone, (2) any citizen, (3) the city hospital (other hospitals transfer their contagious-disease cases to the city hospital without reporting), and (4) the bureau of child hygiene of the board of education.

The school nurse reports by telephone and the report is confirmed the next day by the bureau of education on a form upon which is a memorandum of the facts. These forms are numbered serially and a carbon copy is retained by the bureau of education.

When a report is received from any of the above sources the name, address, and other particulars are entered on a buff card 2½ by 4 inches (Form No. 1). The card is then sent to the chief sanitary inspector, who puts it in the box of the inspector for the wards concerned.

[Form No. 1.]

ST. PAUL, MINN., _____, 191__.

To the BUREAU OF HEALTH:

At number_____Street or Avenue
Exists a case of_____
Name of patient_____. Sex_____. Age_____
Name of patient_____. Sex_____. Age_____
Name of patient_____. Sex_____. Age_____
Reported by_____

INSPECTOR'S QUARANTINE REPORT.

Date of quarantine_____, 191__. Ward_____
Schools attended_____
Phone No_____. Milk supply_____
_____, *Sanitary Inspector.*

Quarantine ordered released_____, 191__.
By_____, M. D., *Attending Physician.*

Release quarantine _____, 191__.
Number of rooms to be disinfected_____
_____, M. D., *Medical Inspector.*

Quarantine released_____, 191__. Result_____
Disinfected by_____. Material used_____. Cost_____
Number of candles used_____. Was disinfection paid for_____
Remarks _____*Sanitary Inspector.*

The bureau of education confirmatory reports referred to above are in the shape of memoranda, such as, "Whooping cough L. O., age 9, at 725 Jones Street." If the case is one of a suspect, "Scarlet fever, A. B., age 10, at 711 Smith Street; kindly investigate." The confirmations of nurse reports of positive cases are kept on a spindle until the sanitary inspector has quarantined case without further investigation and returned Form No. 1 to a box on desk of chief sanitary inspector; from there it goes to the clerk. If it is a bureau of education report it is compared with their slip and then goes into a current case file, in which it is filed under each disease by street and number. If a bureau of education case, their slip is checked and returned to them. If the case was a suspect, Form No. 1 would go to the medical inspector; upon its return it would go to the chief sanitary inspector and thence follow routine as above. The clerk then makes out a "Daily report," giving name, address, school, and disease, and sends copies to bureau of education and public library.

The proceeding in the case of a suspect is in detail as follows:

There is kept on the clerk's desk a long, narrow book which is ruled across both pages at intervals of five or six lines. This is called the "doctors' book." The clerk enters on the left-hand page the name, address, date and origin of report of suspected disease, and any other information.

The medical inspector (there are three inspectors at $1,200 on part time) when he visits office at 10 a. m. and 2 p. m., enters suspects in his district in his notebook and puts his undated initials in the margin of the left-hand page to show that he has taken assignment. He is supposed to see the cases that day. When he has seen the cases he enters at the time of his next visit to the office a pencil memorandum of his findings; this is undated and otherwise unverified. The memorandum may read "Nobody home; see them again to-day," "Positive," etc. When this entry has been made the clerk checks the report with findings to see if address, etc., agree with phone report. If it is a bureau of education case their confirmation slip is returned to them. If report is from other source, the source is notified by phone.

In addition to suspect entries, requests for the termination of quarantine are entered in the doctors' book.

The sanitary inspector when he visits the office at 8 a. m. is supposed to consult the doctors' book to ascertain findings in suspect cases and, without further assignment, he posts cards and establishes quarantine, returning the form No. 1 as above when the assignment has been attended to.

Before filing the card the clerk enters from the card on a post-binder sheet form, the date, name, address, ward, sex, age, reported by, school, quarantine established. She also gives the card a serial number and, when the case is terminated, she enters the date of release, result, disinfected by, material, and cost.

There are separate books for the following: Diphtheria, scarlet fever, measles, smallpox, whooping cough, typhoid, and infantile paralysis. For other reportable diseases, only the card file is kept. The loose leaves are kept in the binder for several years, until the book becomes too heavy to handle, and then go into a consolidated binder for all diseases, with a marginal index tab for each disease.

If secondary cases develop at the same address, the clerk takes the card from the file, enters the fact and date on the margin, and returns the card to the file, after entering on the register, as for other new cases.

When the sanitary inspector calls the chief sanitary inspector at 4 o'clock, the latter notes the call and gives the assignments, suspects report, etc., that have come in since 10 a. m. If the chief is out, the clerk handles the calls.

The sanitary inspector is supposed to keep track for himself of the approaching termination of the cases in his district, going to clerk's desk file and withdrawing the Form No. 1 card. He is supposed to take it with him into the field, but may not do so. He then visits case and takes necessary action, enters his action on card, and returns it to pigeonhole in chief sanitary inspector's desk. The telephone clerk gets it from the pigeonhole, completes register record as above, and files it in vault in a terminated file for all diseases under street name but not number.

Diphtheria.—Practically no written reports of diphtheria are made by physicians and few by the telephone. Sending in a diagnostic culture is accepted as a report. Physicians as a rule make their own diagnostic cultures, but if they request the bureau to make a culture, a sanitary inspector (policeman) is sent to do it. Cultures are from the throat only. The physician usually makes the first terminal culture, but if he has left the case the sanitary inspector makes both first and second terminal cultures.

The bureau makes no record of carriers and takes no special action concerning them, except in some special case such as a school outbreak. The culturing of all contacts in a family is required, and if anyone gives a positive he is listed as a case of diphtheria, even though no clinical symptoms are present and cultures a day or two later are negative.

At termination one culture is required from contacts, and if one is positive the whole group, including the original patient, is kept in quarantine, although the latter may have completely recovered and given repeated negative cultures. Quarantine may thus be almost indefinitely prolonged, and in this way some children may be kept out of school for weeks after they have recovered.

Hospitalization is voluntary. In 1915, 228 cases, or 48.4 per cent of the known cases, were hospitalized.

Scarlet fever.—The administrative procedures are the same as given in detail for diphtheria with the exception, of course, as to cultures. About a third of the cases are reported as required by law, the remainder are reported over the telephone by physicians and others, or by school authorities. Hospitalization is voluntary. In 1915 there were 215, or 25.58 per cent, hospitalized.

Measles.—The administration is the same as in scarlet fever and diphtheria. As far as could be ascertained, no attempt is made to give children the benefit of the wise provision of State rules in regard to admission to school of those who have had a previous attack of the disease. The writer found in the box of a sanitary inspector a Form No. 1 card of a family where the quarantine had been prolonged for weeks.

There is no hospitalization.

Typhoid fever.—The only report of typhoid fever made to the department is that made through the laboratory when specimens are sent in for Widals. In nearly every case, therefore, more or less time elapses between the time when the case is first seen and the time when the making of the Widal first brings it to the attention of the department.

If the Widal is negative, the laboratory notifies the doctor. It is only when the Widal is positive that the card comes forward to the desk of the clerk in the health department. This form gives simply the date, name of the reporter, location of the case, and either the name of the patient or the name of the patient's family. There are spaces on the lower part of the card which were formerly supposed to be filled in by the health officer, but this has long been discontinued.

When the clerk receives the card from the laboratory, she writes a letter to the doctor inclosing a return envelope and a State board of health form for epidemiological report on a case of typhoid. The clerk then puts a pencil check on the corner of the card to indicate that the letter has been sent and holds it until the epidemiological report has been received. If not received promptly, she writes a second letter and also makes a telephone inquiry of the doctor.

When the report has been received, she puts the card in a pigeonhole. This is a recent practice instituted by the present clerk. Before her coming to the work a few months ago the cards were thrown away. Before putting the card in the pigeonhole she enters the case in the typhoid register.

If the case is an imported case a copy of the epidemiological report is forwarded to the State board of health.

The epidemiological report is placed on a spindle file and remains on the clerk's desk. There are no orders directing that further use be made of this report, but in practice the milk inspector occasionally goes over the reports.

In looking over reports it is observed that in some cases the space for reporting the source of the milk supply is either not filled in at all or has the entry "Don't know," and perhaps a later notation in pencil has been made indicating the milk supply as "Smith," "Crescent Creamery," etc.

The reports now on the spindle go back to the middle of 1914. Of the last 17 reports there are 7 in which the milk supply is not given and apparently not ascertained. At any rate, it was not entered. In some cases where the milk supply and other data are not given the sanitary inspector is sent out for the information and completes the record more or less accurately.

The deputy commissioner is supposed to study the epidemiological report, but there are no orders in existence to that effect, and both

from observation and internal evidence in the history of cases it is believed that very little study is given to them.

Cases of typhoid are not placarded nor is notice given to the milkman.

There are no printed leaflets of information and instruction available for distribution to the families of patients. No attempt is made to push antityphoid vaccination nor is there any follow-up system as to places of employment, etc.

There is no system of charging cases against the milk dealer supplying a family. In 1915, 90 cases, or 59.5 per cent, were hospitalized. This is an excellent showing if the cases are being accurately reported.

Smallpox.—The rules as previously given are from a letter sheet size leaflet several years old. Vaccination of contacts is not compulsory. Hospitalization is not compulsory. There were 17 cases under quarantine at home at the time the investigation was made. Apparently no earnest attempt is made to get full epidemiological data. Upon visiting a smallpox suspect with a medical inspector it was found that he was not expected to obtain a history or to vaccinate. His duty was to report on the diagnosis and if confirmed the sanitary policeman would visit the case, though possibly not until the next day, post the sign, vaccinate, and obtain the history.

Other reportable diseases.—Except in the case of tuberculosis, as noted below, practically nothing is done in the way of study and follow up of the other reportable diseases. At least so it was gathered from questioning the office force and inspectors and examining records. Quarantine signs are posted for whooping cough and infantile paralysis.

Schools.—In St. Paul the bureau of health has nothing to do with any part of the school medical inspection. Since this report is concerned only with the health bureau no detailed study was made of the school medical inspection.

The system of reporting cases of suspects to the bureau of health has already been indicated.

The school board records show that in the school year of 1914–15 the following cases of reportable diseases, many of which were found outside of school by the school nurses, were reported to the bureau of health by the bureau of education:

Diphtheria	146	Measles	1,192
Scarlet fever	174	Whooping cough	[1] 107

Including the kindergartens and high schools there are about 40,000 children to look after. For this work one medical director

[1] Since May 1, 1916.

and 11 nurses are provided. It is manifest that under such conditions real medical inspection of the school children is impossible.

In this connection, it should be noted that the 11,000 children in the parochial schools are looked after neither by the school inspection system nor by the bureau of health.

Spot Maps.

The St. Paul bureau of health was one of the first it is believed to use the spot-map method of recording the occurrence of contagious disease. The system, however, has not been followed up according to present indications; indeed, it is used very little. When the scarlet fever map, for instance, was checked up it was found that 17 of the current cases had not been entered.

Comment on Contagious-Disease Administration:

The entire system of reporting communicable disease to the St. Paul bureau of health is extremely lax, and as a whole is in direct neglect of the rules of the State board of health, which in Minnesota have the force and effect of law.

It is undoubtedly and regrettably true that similarly defective methods are in quite common use in numbers of other cities, and it is quite possible that the results obtained are reasonably complete. None the less the methods are both careless and illegal. The law gives ample authority to the bureau of health to secure the complete report as required by law, and without the formal written official report as a basis for the development of a good system of recording and following up all contagious diseases no effective control can be secured.

The present Form No. 1 is defective in that it does not show who received the report, how it was made, the day and hour when assigned, where and how reported on, if schools were notified, and when.

The method of using Form No. 1 as a movable record with removal from file at will by anyone, etc., is very faulty and bound to lead to delay and neglect.

The practice of quarantining reported cases without any investigation is to be condemned.

The absence of a regular system of notification to schools, Sunday schools, or employers must be a frequent cause of preventable infection.

The system, if system it can be called, of making assignments to medical inspectors is primitive, there being no real record of assignment of report, and no follow up. The entire system would break down entirely but for the stenographer in the health officer's office.

It is to be noted that no active measures are taken to push the use of diphtheria antitoxin and that no record is made or notice taken of the fact of antitoxin administration or the time when administered. Neither is anything done about pushing immunization of contacts.

Nothing has been done in the direction of using the Schick test for immunity, the most important procedure introduced in connection with diphtheria since the discovery of antitoxin.

The absence of any control of the action taken by the sanitary policemen is apparent. It is not suggested that they do not faithfully discharge their duties to the best of their ability, but there is no check or supervision of their assignments to insure promptness and efficiency.

No attempt is made to make use of the reports made by druggists, under State law, of the sales of antitoxin. Systematic check of these would doubtless reveal unreported cases of diphtheria. At present these reports are bundled up and put away like waste paper.

Delay in diphtheria is dangerous and the present method of getting reports from the laboratory and acting on them causes delay.

It is noted that in making the entry in the register only the physician's last name is given, "Harris," or "Brown," which is entirely too vague.

The absence of any system of recording dates when terminations are due, following up the cases, etc., must result in careless management and frequently impose needless suffering in families in quarantine.

Poor as Form No. 1 is, its usefulness is only partially availed of; the entries on the lower part of the card are not filled in at all.

The record system should tie each part of the record of a given case to every other part of the record in the same case or group of cases. This is entirely neglected; except in the bureau of education reports there is nothing by which the clerk can check the sanitary policeman as to the time and nature of his action.

The method of terminating diphtheria upon throat culture alone is a violation of the State law.

There is no check on the authenticity of the first terminal culture.

The system of having terminal cultures taken by the sanitary policemen is to be condemned. In an undermanned bureau the taking of cultures by the medical inspectors may at times be an undue burden, but there is no possible reason to offer for not utilizing the full-time field nurses under such circumstances.

The termination of scarlet fever by the sanitary policemen on the basis of desquamation alone must result in the spread of infection. Termination on desquamation alone has long been out of date.

In this connection it is to be noted that two-thirds of the fatal cases in previous years were secondary, or household infections.

The practice of keeping recovered cases of diphtheria and measles in quarantine because other cases, or carrier cases, develop in the family is quite indefensible. The most earnest efforts of the bureau should be constantly exerted to shorten and humanize quarantine, to get children out of doors and back into school. They are not to be treated as criminals but as victims of the community's failure to protect them. The probabilities are, of course, that such quarantine produces endless evasions.

There is no apparent reason for such long quarantine in measles for there are few things better established than that measles is communicable only during the first few days of the disease.

The method of obtaining epidemiological data in typhoid fever and the lack of definite responsibility for such data as are obtained are bound to result badly. There was an illustration of this during the past year. Several cases of typhoid were reported on the service of one milk producer without anybody making investigations. When finally a medical inspector undertook to investigate on his own responsibility, one of the dairymen was found to have walking typhoid. It is alleged that the milk inspector objected to shutting up the plant on the ground that it would ruin the man's business. There were said to be 75 cases with 7 deaths from this source.

It is to be noted in this connection that the Supreme Court of Minnesota has ruled that a municipality is liable for damages if it can be shown that typhoid resulted from its neglect.

There seems to be no apparent reason for the lack of leaflets and other educational matter for distribution to the families where cases of typhoid and other diseases occur; certainly the lack of funds can not be the reason if there were considerable sums of unexpended money to the credit of the health fund in last December when the transfer was made to the bath fund.

Attention is called to the fact that when blood specimens submitted for Widal tests, etc., are reported as negative the question of the duration of illness at the time the specimen was taken should receive consideration and some attempt made to follow up the cases.

A physician takes a Widal for diagnostic purposes, the report is negative, but perhaps the case by that time is unmistakably typhoid so no second specimen is sent in and the case remains unreported. It is believed that this must frequently happen. The same thing applies to diphtheria. The records show that cases giving a negative culture are treated as not diphtheria even when a competent man has reported the case as clinically positive.

TUBERCULOSIS DIVISION.

The tuberculosis division of the St. Paul Bureau of Health is in what may be called the intermediate stage of development of antituberculosis activities; that is to say, that, having passed through the stage of inauguration and maintenance by private agencies, it has passed into the stage where it is maintained and operated by the municipality but is not as yet fully operative as a subordinate branch of the central bureau.

The situation as to the division presents another characteristic phenomenon in that, when the city took over the private agency, it took it as a going concern and had to provide for a standard of expenditure at least equal to that previously maintained by the private agency. The immediate consequence of this, of course, is that this antituberculosis work gets a disproportionately large share of the total appropriation for health purposes. The tuberculosis division gets appropriations for salaries as follows:

Head nurse	$1,500
Six visiting nurses, at $1,080	6,480
One clerk	600
One sanitary inspector	1,080
One medical inspector (part), estimated	600

Adding probable expense for printing and incidentals, it is seen that the total is just about 20 per cent of the total sum appropriated for all the office and field activities of the bureau of health.

The conviction can not be avoided that the city must either at once correct this disproportion or get rid of the delusion that there is something sacrosanct about antituberculosis work that requires a subordination of all other public-health activities to its demands.

Organization and Administration.

The division occupies attractively located office space in the Wilder Building. The force consists, as above noted, of a head nurse, six "visiting nurses," a clerk and typist, and one sanitary inspector. In addition, one of the medical inspectors puts in an average of two hours at the dispensary, his regular field district for work under the medical division being proportionately reduced in area. The office and administrative methods are substantially those which have become pretty well standardized throughout the United States through the agency of the national association.

In brief, the forms consist of the case-report card, the laboratory-report card, the form of institutional report, the form for report to the State, the form for report of history and physical diagnosis as recorded at the dispensary, and the field-card form, for use in obtaining the social history.

The office forms include the standard 8 by 8 case card, a form letter to physicians calling attention to unreported cases evidenced by death certificates, a similar form as follow up on sputums submitted, a form for nurses' daily report, a consolidated monthly report blank, and the usual colored index cards for active cases, deaths, and infected houses.

In addition there are the forms used in connection with work of the sanitary inspector, viz, complaint and inspection report, notices to owner or agent to renovate insanitary premises, and the large yellow placard warning of tuberculosis and forbidding occupation of premises until renovated. There are also the usual educational leaflet forms and small cards of instructions for care of premises.

The system of records and forms throughout is well designed, well arranged, and neatly kept. The tabulations of annual returns by ages, sexes, and occupations for living and fatal cases are informative and valuable for statistical study. The office is well furnished and equipped and maintained in an orderly manner.

The dispensary is not well located.

Registration.

The physicians in St. Paul are said to be very negligent of the State law requiring prompt report of cases of tuberculosis. Of the 306 fatal cases of tuberculosis in 1915, 90 cases, or 29 per cent, were reported for the first time by the death certificate, and of the 477 living cases registered in 1915 only 229, or 48 per cent, were reported by physicians.

The registration figures were:

Reported by—	
Physicians	229
Positive sputums	4
Individuals	28
City and county hospitals	68
Other hospitals	54
	383
United charities	6
Wilder charities	1
At dispensary	87
	477

The fact that the indicated case rate per 1,000 inhabitants was 1.97 in 1915, and the number registered only at death 1.56 tells its own story of imperfect registration.

At the present time the active file contains records of only 1,050 cases, and yet the work of the division seems to be actively and efficiently conducted.

Field and Dispensary Work.

When a case is reported from any authoritative source, it is entered on an assignment book and the clerk makes out the assignments from this. A separate register is kept for suspects and contacts with serial numbers corresponding to the case card number. If the case is a dispensary one or one visited by the nurse, she makes out the 8 by 8 inch record card and turns it in to the stenographer, who makes out the index card and returns the case card to nurse for her individual case record file.

The nurses are not uniformed. They are called "visiting nurses," and they not only make calls to obtain data and give instructions, but give active nursing care to bed cases and dress surgical cases.

As noted the division has six nurses in field force, but in 1915 there was one privately supported nurse working with the division for the entire year and another for two months. The nurses made 17,846 calls in 1915. The dispensary is open from 1 to 4 p. m., or if necessary all day. As a matter of fact it averages about two hours a day active work.

The sanitary inspector follows up the nurse report and other complaints of insanitary conditions, and while these are supposed to be connected directly with the antituberculosis work alone the work insensibly grades off into ordinary sanitary inspection. The inspector orders alterations and improvements of various kinds, and if the conditions are extremely bad he may placard house as not to be occupied until released.

The division has no hospital or sanatorium accommodations under its control. There is a camp for children maintained by private agencies, a small sanatorium maintained in the same way, and the wards in the city and county hospital already referred to.

Comment.

It is not thought that the present detached position of the tuberculosis division is an advantageous one for either the bureau or division. It seems a pity to give up the present pleasant offices and move to the city hall, but it should be done or the bureau can never have the direct administrative control of the tuberculosis work or coordinate it with its other work. Moreover, the employees of the tuberculosis division need to have it impressed upon them that they are an integral part of the bureau of health and not an annex.

The title "visiting nurse" seems most inappropriate. "Visiting nurse" has a definite recognized meaning in medico-sociological nomenclature; the proper name for the corps is "field nurse bureau of health," or "field nurse" for short.

The corps should be in uniform. The usual objections are raised, all based upon the idea of deferring to the phthisiphobia of ignorant

people and not a little strengthened by the prejudices of the nurses themselves. The city uniform would be a protection, an introduction, an aid to supervision, and a badge of authority.

It will be observed that the division forms contain no provision for a weekly or monthly report to the health officer. This should be corrected. It was clearly apparent that the central office was in but faint touch with the work of its largest and most efficient division.

It is to be noted that no cases are registered as reported by the school authorities and that there is no evidence of any active work by the division in connection with the schools. If the city of St. Paul had only $11,000 to spend per year on tuberculosis, it would get more for its money by spending it on school children than in any other way.

The incompleteness of the registration is manifest—with only about one and one-half cases recorded for each death there can be no dispute on that point. The indicated case rate per 1,000 inhabitants was 1.971 in 1915. In Minneapolis it was 3.324. Both are woefully incomplete, of course, but there is no reason for the St. Paul reporting being only about two-thirds as complete as that of its neighbor.

There seems to be reason to think that it is a mistake to center all the housing improvement work done by the bureau about the tuberculosis activity work. Unsupervised inspection urged on by commendable zeal for improvements and unchecked by a sense of proportion is apt to put emphasis on the unessential.

The power to placard premises should be used with reserve. There is really no justification for having two kinds of sanitary inspectors under two systems of management.

The present sanitary inspection in the tuberculosis division has in it the germ of real housing inspection. It should be developed and strengthened, but not outside of the bureau proper.

GENERAL CONCLUSIONS.

(1) The illogical, incomplete, and contradictory provisions of the present charter do not permit the city of St. Paul to obtain a central health agency of comprehensive scope and adequate power.

(2) The existing powers of the charter as regards matters affecting the maintenance of the physical efficiency of the public have been very imperfectly and incompletely exercised, the fact seeming to be that both the officials and the public are still thinking in terms of the old charter. They complain of the fit of the new municipal uniform without ever having fully tried it on.

(3) The existing bureau of health to a large extent fails to avail itself of even the incomplete utilization by the city of its charter powers.

(4) The responsibility for the last mentioned fact rests partly upon the city government and partly upon the bureau of health, but principally upon the citizens generally.

(5) The control of housing should be in the hands of the bureau of health, and also such portions of public recreation as are not already under its control.

(6) The limitations placed upon the choice and term of service of the health officer are illogical and harmful.

(7) There is urgent need of greatly extending the scope of the medical inspection in the public schools. Such inspection is the proper function of the bureau of health.

(8) The present system of collecting and disposing of municipal wastes is insanitary and inefficient.

(9) There is an undue incidence of some of the preventable communicable diseases in the city of St. Paul.

(10) There seems to be some evidence that too much consideration has been given to the personality of persons involved in neglect of sanitary requirements, not from improper motives but from complacency.

(11) The sum of 23 cents per capita is too small to permit the bureau of health being adequate.

(12) Even within the limitations of the present legal and financial resources it would be possible to have a creditable health bureau if a full-time man was given earnest public support.

(13) There is great indefiniteness as to just what effect the charter has had on the validity of the old health ordinances.

(14) The charter provision requiring council action to change an administrative rule tends to prevent efficient administration.

(15) The offices of the bureau of health are inadequate in size and almost completely lacking the modern equipment necessary for the efficient operation of such a bureau.

(16) There are no systems of time records, work standards, efficiency markings, demerits, disciplinary penalties, or promotion for any of the employees.

(17) There is an entire absence of any system of property record and accountability.

(18) The methods of recording results of both office and field activities are inadequate and inefficient.

(19) There is an almost complete lack of systematic planning and supervision of the field activities and office methods.

(20) The enforcement of the law by court action or by revocation of license is very imperfect.

(21) The staff of the laboratory is underpaid and required to work unreasonably long hours.

(22) The potential working time of the laboratory is only partially utilized because of lack of systematic correlation of its work to the activities of the bureau, for which lack the laboratory is not responsible.

(23) The methods of transacting business in the bureau of vital statistics are careless and make possible fraud and crime.

(24) The general systems of food, meat, milk, hotel, and sanitary inspections are operated without systematic methods of supervision, and in consequence are not as efficient as they should be, but with the exception of the milk inspection the imperfections in the work accomplished are not of special sanitary importance. The milk inspection is not devoting its time to the phases of the work that would produce the maximum of sanitary protection for the effort expended.

(25) The system under which sanitary police are permanently assigned to duty in a ward is wasteful and inefficient.

(26) The system which permits the taking of diphtheria cultures by the sanitary police is wholly indefensible.

(27) The system of handling reportable diseases by the medical division is faulty in conception and imperfect in execution, but this is in no sense the fault of the employees of that division.

(28) The tuberculosis work is well planned and efficiently conducted.

(29) The smallpox hospital, although organized and maintained on a plan open to serious objections, is adequate in size and reasonably satisfactory.

(30) The professional care in hospital of contagious diseases is properly a function of the bureau of health.

(31) The same is true of the care of the tuberculosis cases, and a general hospital on a limited site is an undesirable place for the operation of a municipal or county sanatorium for tuberculosis.

(32) The concentration of all the field nurse activities of the bureau upon tuberculosis alone is a mistake.

(33) The defects noted as to supervision are the logical consequences of an outgrown system and not the result of conscious neglect.

(34) In spite of the above grounds for criticism much zeal and intelligence have been and are being shown by many of the employees of the bureau.

RECOMMENDATIONS.

(1) When the work of amending the charter is taken up, an endeavor should be made to clarify the present confused conditions of the sections directly affecting the efficiency of the bureau of health by recognizing the relative importance of that bureau as an agency of municipal government.

(2) Whatever else is done, the administrative control of all matters relating to housing should be placed under the bureau or department of health, and provisions made for putting under the same control all expansions of public recreational character other than the parks, and also any future development of what are usually denominated public welfare activities.

(3) The position of health officer should be made a full-time position, and filled by an experienced sanitarian with a term of office of not less than four years.

(4) Provision should be made for giving the chief of the bureau of health the authority to make necessary changes in administrative procedures without referring every detail of such changes to the council.

(5) The position of part-time deputy health officer should be abolished and replaced by that of full-time chief of division of medical inspection, with authority to act for the chief in his absence.

(6) The meat, food, and milk divisions and office of veterinarian should be consolidated into one division of food inspection under a trained chief inspector.

(7) Hotel and restaurant inspection in so far as relates to structural conditions should be made a part of the housing work, but pending the inauguration of that work the inspection should be made an integral part of the division of sanitary inspection.

(8) To the division of sanitary inspection should be given control of public baths. The number of sanitary policemen should be reduced to eight men working on assignment, and not employed at all in establishing or terminating quarantine.

(9) The chief sanitary inspector should become the active field supervisor of the sanitary inspection.

(10) The number of medical inspectors should be increased to five on full time at adequate salaries, and all medical work, including supervision of baths, checking of death certificates, operation of tuberculosis dispensary, verifying diagnosis, vacinating, etc., should be handled by them, and the entire system of handling reportable diseases should be modernized and humanized.

(11) The tuberculosis division should be moved to the city hall and placed directly under the chief of the medical division.

(12) The number of field nurses should be increased by four and the scope of the work done by them should be widened from the present concentration upon tuberculosis alone, by inaugurating some infant welfare activity and by assigning to them the work of giving the necessary instructions in the purpose and rules of quarantine, and the performance of terminal disinfections.

(13) The plan of substituting revocable permits for fixed term licenses should be inaugurated and expanded as rapidly as possible

for the control of the operation of places of food handling and of other activities under the control of the bureau.

(14) The present system of maintaining the smallpox hospital should be replaced by one of direct appropriation for the maintenance of patients.

(15) A suitable addition, at least two clerks and a stenographer, should be made to the office force and organized under a chief clerk; proper methods of handling correspondence, complaints, records, files, and reports should be established.

(16) Provision should be made for inaugurating the educational work of the bureau.

(17) A system of property accountability, records, work standards, and efficiency markings and disciplinary measures should be inaugurated as rapidly as possible.

(18) Provisions should be made for a definite system of promotion and increased compensation, based upon length of service, current efficiency, and examinations.

(19) The entire system of health ordinances should be revised, effect should be given by legislation to the ample powers vested in the council, and the resulting sanitary code should be printed in book form.

(20) A general revision should be made of the rules for handling reportable diseases and the State law requiring the reporting of such diseases should be rigidly enforced.

(21) To the bureau of health should be given the medical care of patients with communicable diseases hospitalized by its orders.[1]

[1] It is recognized that many matters of importance regarding sanitary conditions in the city, and for the protection of the health and lives of its citizens have not been referred to in the body of this report, the findings, or recommendations. The omissions have been intentional in order to concentrate attention upon matters of immediately major importance.

PREVALENCE OF DISEASE.

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

UNITED STATES.

ANTHRAX.

California Report for December, 1916.

During the month of December, 1916, one case of anthrax was reported in California.

CEREBROSPINAL MENINGITIS.

State Reports for December, 1916.

Place.	New cases reported.	Place.	New cases reported.
California:		Massachusetts—Continued.	
Los Angeles County	2	Middlesex County—	
Los Angeles	2	Marlborough	1
San Francisco	2	Malden	1
San Joaquin County	1	Plymouth County—	
Total	7	Hingham (town)	1
		Suffolk County—	
Maryland:		Boston	2
Baltimore City	2	Total	9
Massachusetts:		Wisconsin:	
Essex County—		Langlade County	1
Salem	1	Milwaukee County	1
Franklin County—		Total	2
Greenfield (town)	1		
Hampden County—			
Springfield	2		

City Reports for Week Ended Dec. 30, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md	1	.....	Philadelphia, Pa	2	.....
Chicago, Ill	1	.....	Portland, Oreg	1	1
Cleveland, Ohio	1	.....	Providence, R. I	.....	1
Dubuque, Iowa	1	1	St. Louis, Mo	.....	2
Los Angeles, Cal	2	.....	St. Paul, Minn	1	1
New York, N. Y	2	.....	Springfield, Mass	1	.....

DIPHTHERIA.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 146.

ERYSIPELAS.

City Reports for Week Ended Dec. 30, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md.	.....	1	Newark, N. J.	5	2
Binghamton, N. Y.	3	.....	New Castle, Pa.	1	.....
Bridgeport, Conn.	3	.....	New London, Conn.	1	.....
Buffalo, N. Y.	3	2	New York, N. Y.	.....	4
Cambridge, Mass.	.....	1	Omaha, Nebr.	1	.....
Chicago, Ill.	27	2	Philadelphia, Pa.	12	3
Cincinnati, Ohio.	4	1	Pittsburgh, Pa.	10	.....
Cleveland, Ohio.	8	2	Portland, Oreg.	1	1
Denver, Colo.	1	.....	Providence, R. I.	.....	1
Detroit, Mich.	8	2	Sacramento, Cal.	2	1
Erie, Pa.	2	.....	St. Joseph, Mo.	1	.....
Flint, Mich.	1	1	St. Louis, Mo.	10	1
Hartford, Conn.	2	.....	St. Paul, Minn.	1	.....
Jersey City, N. J.	.....	1	San Francisco, Cal.	.....	1
Lancaster, Pa.	1	.....	Seattle, Wash.	2	.....
Los Angeles, Cal.	4	1	Toledo, Ohio.	1	.....
Milwaukee, Wis.	1	.....	Trenton, N. J.	2	.....

LEPROSY.

New Jersey—Newark.

During the month of December, 1916, a case of leprosy was notified at Newark, N. J., in the person of A. H., a native of Syria, male, 20 years of age, residing at 278 Plane Street, Newark.

City Report for Week Ended Dec. 30, 1916.

During the week ended December 30, 1916, one case of leprosy was reported in Williamsport, Pa.

MALARIA.

State Reports for December, 1916.

Place.	New cases reported.	Place.	New cases reported.
California:		California—Continued.	
Alameda County—		Shasta County—	
San Leandro	1	Redding	1
Butte County	4	Solano County	2
Chico	2		
Gridley	1	Total	23
Colusa County—			
Colusa	3	Maryland:	
Fresno County	2	Somerset County—	
Glenn County—		Manokin	2
Orland	1		
Kings County—		Massachusetts:	
Corcoran	1	Hampden County—	
Los Angeles County—		Springfield	1
Los Angeles	1	Middlesex County—	
Merced County	1	Newton	2
San Francisco	1		
San Joaquin County	2	Total	3

City Reports for Week Ended Dec. 30, 1916.

During the week ended December 30, 1916, one case of malaria was reported in Newark, N. J., one case in New Orleans, La., and one case in San Francisco, Cal.

MEASLES.

Alaska—Ketchikan.

Acting Asst. Surg. Story reported that during the period from December 23, 1916, to January 6, 1917, 26 new cases of measles were notified in Ketchikan, Alaska, making a total of 41 cases reported since the beginning of the present outbreak, about December 15, 1916.

See also Diphtheria, measles, scarlet fever, and tuberculosis, page 146.

PELLAGRA.

State Reports for December, 1916.

Place.	New cases reported.
California:	
San Bernardino County	1
Massachusetts:	
Bristol County—	
Taunton	1

City Reports for Week Ended Dec. 30, 1916.

During the week ended December 30, 1916, one case of pellagra was reported in Coffeyville, Kans., and one case in Richmond, Va.

PNEUMONIA.

City Reports for Week Ended Dec. 30, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alameda, Cal.	1	.....	Los Angeles, Cal.	15	10
Beaver Falls, Pa.	1	.....	Manchester, N. H.	2	2
Binghamton, N. Y.	3	5	Newark, N. J.	89	28
Canton, Ohio	1	5	New Castle, Pa.	2	.....
Chicago, Ill.	222	110	Philadelphia, Pa.	112	88
Cleveland, Ohio	37	18	Pittsburgh, Pa.	50	65
Covington, Ky.	1	1	Reading, Pa.	5	7
Detroit, Mich.	10	34	Salt Lake City, Utah	1	6
Dubuque, Iowa	4	4	Sandusky, Ohio	2	.....
Flint, Mich.	4	2	San Francisco, Cal.	19	16
Grand Rapids, Mich.	3	3	Schenectady, N. Y.	2	.....
Jackson, Mich.	3	3	Steelton, Pa.	2	.....
Kalamazoo, Mich.	4	1	Stockton, Cal.	7	6
Kansas City, Mo.	3	10	Toledo, Ohio	2	5
Lancaster, Pa.	4	.....	Wichita, Kans.	5	3

POLIOMYELITIS (INFANTILE PARALYSIS).

West Virginia—Winter Outbreak.

Passed Asst. Surg. Leake reported in relation to poliomyelitis in West Virginia, as follows: Three new cases were notified at Elkins during the week ended January 15, 1917, making a total of 60 cases, with 9 deaths, reported since the beginning of the outbreak December 15, 1916. Three cases have been reported in Randolph County outside of Elkins, 23 cases at Grafton, and 3 cases at Fairmont.

POLIOMYELITIS (INFANTILE PARALYSIS)—Continued.

State Reports for December, 1916.

Place.	New cases reported.
California:	
Alameda County—	
Oakland	1
Amador County	1
Los Angeles County—	
Los Angeles	3
South Pasadena	1
Marin County	1
San Bernardino County—	
Redlands	1
San Francisco	7
San Luis Obispo County	1
Santa Clara County	1
Tehama County—	
Red Bluff	1
Ventura County—	
Oxnard	1
Yuba County	1
Marysville	1
Total	21
Maryland:	
Baltimore City	2
Carroll County—	
Union Bridge	1
Frederick County—	
Brunswick	1
Total	4
Massachusetts:	
Berkshire County—	
North Adams	1
Pittsfield	1
Bristol County—	
Attleborough	1
Essex County—	
Beverly	1
Gloucester	1
Massachusetts—Continued.	
Essex County—Continued.	
Lynn	2
Salem	1
Swampscott Town	1
Hampden County—	
Holyoke	2
Hampshire County—	
Southampton Town	1
Middlesex County—	
Cambridge	6
Medford	1
Newton	1
Somerville	1
Waltham	1
Westford	1
Woburn	1
Acton Town	1
Everett	1
Norfolk County—	
Brookline Town	2
Quincy	2
Suffolk County—	
Boston	6
Total	36
Wisconsin:	
Bayfield County	1
Brown County	1
Eau Claire County	1
La Crosse County	1
Marquette County	1
Milwaukee County	1
Monroe County	1
Sheboygan County	1
Wood County	1
Total	9

City Reports for Week Ended Dec. 30, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Cleveland, Ohio	1		Newark, N. J.	1	
Everett, Mass.	1		New York, N. Y.	4	1
Hartford, Conn	1	1	Philadelphia, Pa.	1	1
Los Angeles, Cal.	1		Pittsburgh, Pa.	1	
Lynn, Mass.	1	1	San Francisco, Cal.	1	
Milwaukee, Wis.	1		Wilmington, Del.	1	1

RABIES IN ANIMALS.

City Report for Week Ended Dec. 30, 1916.

During the week ended December 30, 1916, three cases of rabies in animals were reported in St. Paul, Minn.

SCARLET FEVER.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 146.

SMALLPOX.

Connecticut.

Collaborating Epidemiologist Black reported that during the week ended January 13, 1917, 30 new cases of smallpox were notified in Connecticut as follows: 27 cases at Waterbury, 1 case each at Naugatuck, Stonington, and Thomaston.

Minnesota.

Collaborating Epidemiologist Bracken reported that during the week ended January 13, 1917, two new foci of smallpox infection were reported in Minnesota, cases of the disease having been notified as follows: Crow Wing County, Long Lake Township, 1; Pipestone County, Eden Township, 1.

State Reports for December, 1916.

Place.	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:						
Alameda County	2	.....	.....	.....	2	.....
Contra Costa County	1	.....	.....	1	.....	.....
Martinez	6	.....	.....	1	5	.....
Yolo County—						
Woodland	1	.....	1	.....	.....	.....
Total	10	.....	1	2	7	.....
Massachusetts:						
Suffolk County—						
Boston	1	.....	.....	.....	1	.....

Miscellaneous State Report.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Wisconsin (Dec. 1-31):			Wisconsin—Continued.		
Barron County	10	3	Sauk County	1	.....
Dodge County	6	.....	Trempealeau County	5	.....
Milwaukee County	2	.....	Washington County	3	.....
Outagamie County	4	.....	Waupaca County	33	.....
Polk County	2	.....	Waushara County	1	.....
Rock County	1	.....			
Rusk County	1	.....	Total	69	3

SMALLPOX—Continued.

City Reports for Week Ended Dec. 30, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Ann Arbor, Mich.	2		New Orleans, La.	7	
Butte, Mont.	5		Omaha, Nebr.	4	
Canton, Ohio.	1		Pittsburgh, Pa.	1	
Chicago, Ill.	2		Portland, Oreg.	5	
Cleveland, Ohio.	12		Quincy, Ill.	1	
Covington, Ky.	2		Rockford, Ill.	3	
Danville, Ill.	3		St. Joseph, Mo.	7	
El Paso, Tex.	1		St. Louis, Mo.	1	
Evansville, Ind.	1		St. Paul, Minn.	2	
Flint, Mich.	2		Salt Lake City, Utah.	1	
Grand Rapids, Mich.	1		Springfield, Ill.	1	
Indianapolis, Ind.	6		Springfield, Ohio.	2	
Kansas City, Mo.	1		Toledo, Ohio.	3	
Little Rock, Ark.	5		Topeka, Kans.	1	
Minneapolis, Minn.	11				

TETANUS.

City Reports for Week Ended Dec. 30, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Charleston, S. C.		1	Pittsburgh, Pa.	1	1
Lexington, Ky.		1	Richmond, Va.		1
Los Angeles, Cal.	1	1	Trenton, N. J.		1
New York, N. Y.	1		Wilmington, N. C.	1	
Philadelphia, Pa.		2			

TUBERCULOSIS.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 146.

TYPHOID FEVER.

State Reports for December, 1916.

Place.	New cases reported.	Place.	New cases reported.
California:		California—Continued.	
Alameda County—		Santa Cruz County	1
Berkeley	5	Sonoma County	1
Oakland	42	Sutter County	1
Amador County—		Tehama County—	
Jackson	3	Corning	1
Contra Costa County	1	Total	97
Pittsburg	1		
Imperial County—		Maryland:	
El Centro	2	Baltimore City	31
Los Angeles County	1	Allegany County—	
Covina	1	Cumberland	3
Long Beach	2	Anne Arundel County—	
Los Angeles	2	Fairfield	1
Pasadena	1	Annapolis	1
Monterey County	1	Eastport	2
Placer County—		Galloways	1
Auburn	2	Baltimore County—	
Riverside County—		Roland Park	1
Hemet	1	Fullerton	1
San Bernardino County—		Catonsville	3
Redlands	1	Beckleysville, R. F. D.	1
San Diego County—		Hamilton	1
National City	2	Turners Station	1
San Diego	4	Texas	1
San Francisco	18	Mount Winans	1
San Joaquin County	1	Calvert County—	
Lodi	1	Island Creek	1
Stockton	1	Wallville	1

TYPHOID FEVER—Continued.

State Reports for December, 1916—Continued.

Place.	New cases reported.
Maryland—Continued.	
Caroline County—	
Goldsboro, R. F. D.	1
Grove	1
Goldsboro	1
Carroll County—	
Asbestos	1
Patapsco, R. F. D.	1
Lisbon, R. F. D.	1
Cecil County—	
Elkton	1
Charles County—	
Rock Point	2
Nanjemoy	1
Dorchester County—	
Cambridge	2
Cambridge, R. F. D.	1
Williamsburg, R. F. D.	1
Frederick County—	
Bartonsville	2
Thurmont	1
Graceham	1
Garrett County—	
Hubbard, R. F. D.	1
Crellin	2
Howard County—	
Snelltown	3
Montgomery County—	
Quince Orchard	1
Chevy Chase	2
Kensington	1
Poolesville, R. F. D.	1
Prince Georges County—	
Beltsville, R. F. D.	2
Queen Annes County—	
Queenstown, R. F. D.	1
Price	1
Fords Store	1
St. Marys County—	
St. Inigoes	1
Somerset County—	
Dames Quarter	1
Crisfield	5
Marion, R. F. D.	1
Talbot County—	
Trappe, R. F. D.	1
Trappe	1
Oxford, R. F. D.	1
Sherwood	1
Washington County—	
Hagerstown	5
Williamsport	1
Smithsburg	1
Wicomico County—	
Salisbury	2
Pittsville	3
Jesterville	1
Worcester County—	
Pocomoke City	2
Whaleysville	2
Berlin	1
Total	118
Massachusetts:	
Barnstable County—	
Harwich Town	1
Provincetown Town	1
Berkshire County—	
North Adams	1
Pittsfield	1
Bristol County—	
Dighton Town	1
Fall River	10
New Bedford	4
Essex County—	
Danvers Town	1
Haverhill	1
Lynn	9
Saugus Town	1
North Andover Town	1
Hampden County—	
Ludlow Town	1
Springfield	3
Westfield Town	1
Middlesex County—	
Cambridge	2
Everett	1
Lowell	2
Melrose	2
Natick Town	1
Newton	1
Reading Town	1
Somerville	1
Waltham	1
Norfolk County—	
Quincy	2
Wellesley Town	2
Plymouth County—	
Bridgewater Town	2
Brockton	1
Suffolk County—	
Boston	18
Chelsea	2
Worcester County—	
Gardner Town	1
Worcester	2
Total	79
Wisconsin:	
Bayfield County	3
Brown County	9
Clark County	1
Columbia County	2
Crawford County	2
Door County	5
Douglas County	4
Fond du Lac County	3
Juneau County	1
Kenosha County	1
Kewaunee County	1
Manitowoc County	2
Milwaukee County	11
Oconto County	4
Polk County	1
Price County	2
Rusk County	1
Sheboygan County	1
Winnebago County	3
Total	57

TYPHOID FEVER—Continued.

City Reports for Week Ended Dec. 30, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Albany, N. Y.	4		New Bedford, Mass.	1	
Atlantic City, N. J.	1		New Britain, Conn.	1	
Baltimore, Md.	4		New London, Conn.	1	
Berkeley, Cal.	1		New Orleans, La.	8	1
Birmingham, Ala.	1		New York, N. Y.	20	6
Bridgeport, Conn.	3	1	North Adams, Mass.	1	
Buffalo, N. Y.	3		Omaha, Nebr.	2	
Butler, Pa.		1	Philadelphia, Pa.	3	
Cambridge, Mass.	2		Pittsburgh, Pa.	5	2
Camden, N. J.	1		Portland, Oreg.	1	
Chelsea, Mass.	1		Providence, R. I.	1	
Chicago, Ill.	17	3	Quincy, Mass.	1	
Cincinnati, Ohio.	2	1	Reading, Pa.	1	
Cleveland, Ohio.	1	1	Richmond, Va.	2	
Columbus, Ohio.	1		Rutland, Vt.	1	
Cumberland, Md.	1		St. Joseph, Mo.		1
Detroit, Mich.	3	3	St. Louis, Mo.	7	1
East Orange, N. J.	1		St. Paul, Minn.	1	
El Paso, Tex.	1		Salt Lake City, Utah.	1	
Evansville, Ind.	2		San Diego, Cal.	3	
Fall River, Mass.	2		Sandusky, Ohio.	1	
Flint, Mich.	3	1	San Francisco, Cal.	4	
Harrisburg, Pa.	2		Seattle, Wash.	1	
Indianapolis, Ind.	3		South Bend, Ind.	3	
Jersey City, N. J.		1	Syracuse, N. Y.	1	1
Kansas City, Mo.	1		Toledo, Ohio.	6	
Kokomo, Ind.	1		Topeka, Kans.		1
Lowell, Mass.	1		Trenton, N. J.	1	
Milwaukee, Wis.	2	1	Washington, D. C.	4	
Minneapolis, Minn.	1		Wheeling, W. Va.	1	
Nashville, Tenn.	3				

PREVENTABLE DISEASES.

Massachusetts Report for Week Ended Jan. 6, 1917.

	Cases reported.		Cases reported.
Anthrax	1	Ophthalmia neonatorum	46
Cerebrospinal meningitis	2	Poliomyelitis (infantile paralysis)	5
Chicken pox	199	Scarlet fever	143
Diphtheria	181	Septic sore throat	6
Dog bite	1	Trachoma	1
Dysentery	1	Tuberculosis (pulmonary)	133
German measles	4	Tuberculosis (other forms)	8
Measles	332	Typhoid fever	18
Mumps	152	Whooping cough	45

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

State Reports for December, 1916.

State.	Cases reported.		
	Diphtheria.	Measles.	Scarlet fever.
California	283	492	395
Maryland	201	788	147
Massachusetts	775	1,054	578
Wisconsin	219	190	610

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

City Reports for Week Ended Dec. 30, 1916.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md	589,621	179	11	.....	3	.....	15	.....	29	23
Chicago, Ill	2,497,722	783	209	30	140	3	268	13	164	55
Cleveland, Ohio	674,073	184	23	5	32	.....	9	.....	24	15
Detroit, Mich	571,784	262	90	7	5	.....	59	4	23	22
Los Angeles, Cal	503,812	.....	2	1	10	.....	17	.....	67	16
New York, N. Y	5,602,841	1,630	195	23	148	2	98	.....	372	187
Philadelphia, Pa	1,709,518	651	45	12	12	.....	27	.....	87	57
Pittsburgh, Pa	579,090	285	22	2	72	2	17	.....	17	22
St. Louis, Mo	757,309	236	87	5	33	.....	53	.....	39	16
From 300,000 to 500,000 inhabitants:										
Buffalo, N. Y	468,558	111	19	1	8	.....	8	1	29	7
Cincinnati, Ohio	410,476	143	19	1	3	.....	16	.....	25	11
Jersey City, N. J	306,345	128	14	1	1	.....	5	.....	12	14
Milwaukee, Wis	436,535	109	15	2	4	.....	69	.....	6	7
Minneapolis, Minn	363,454	.....	22	.....	6	.....	10	.....	.....	.....
Newark, N. J	408,894	.....	13	2	4	.....	2	.....	22	15
New Orleans, La	371,747	.....	11	.....	547	1	.....	.....	22	18
San Francisco, Cal	463,516	197	38	4	27	.....	21	.....	28	21
Seattle, Wash	348,639	81	.....	.....	77	.....	4	.....	11	3
Washington, D. C	363,980	145	8	.....	2	.....	7	.....	11	12
From 200,000 to 300,000 inhabitants:										
Columbus, Ohio	214,878	67	8	1	46	1	10	.....	9	5
Denver, Colo	260,900	87	.....	.....	53	.....	6	.....	.....	15
Indianapolis, Ind	271,708	.....	28	.....	5	.....	10	.....	15	.....
Kansas City, Mo	297,847	99	10	2	1	.....	18	.....	6	6
Portland, Oreg	295,463	64	1	.....	58	1	10	.....	1	5
Providence, R. I	254,960	81	11	.....	.....	.....	13	.....	.....	11
St. Paul, Minn	247,232	63	8	.....	1	.....	8	.....	8	4
From 100,000 to 200,000 inhabitants:										
Albany, N. Y	104,199	.....	5	.....	31	.....	.....	.....	.....	.....
Birmingham, Ala	181,762	70	3	.....	.....	.....	1	.....	10	5
Bridgeport, Conn	121,579	49	7	.....	11	.....	1	1	7	2
Cambridge, Mass	112,981	36	21	2	5	.....	6	.....	3	2
Camden, N. J	106,233	.....	.....	.....	.....	.....	2	.....	1	.....
Fall River, Mass	128,366	41	3	.....	55	.....	.....	.....	8	4
Fort Worth, Tex	104,562	16	.....	.....	.....	.....	.....	.....	.....	2
Grand Rapids, Mich	128,291	39	2	.....	8	.....	8	.....	4	1
Hartford, Conn	110,900	51	8	.....	1	.....	5	.....	3	1
Lawrence, Mass	100,560	31	2	.....	1	.....	.....	.....	6	1
Lowell, Mass	113,215	39	7	2	28	.....	2	.....	6	3
Lynn, Mass	102,425	27	4	1	2	.....	4	.....	1	4
Nashville, Tenn	117,057	40	5	.....	99	.....	4	.....	7	5
New Bedford, Mass	118,158	41	3	.....	6	.....	2	.....	5	6
New Haven, Conn	149,685	.....	.....	.....	5	.....	.....	.....	9	3
Omaha, Nebr	165,470	38	1	.....	2	.....	13	.....	.....	5
Reading, Pa	109,381	36	3	.....	.....	.....	3	.....	.....	1
Richmond, Va	156,687	64	5	.....	2	.....	6	.....	4	4
Salt Lake City, Utah	117,399	44	3	.....	194	2	6	.....	.....	.....
Springfield, Mass	105,912	41	6	.....	.....	.....	6	.....	3	2
Syracuse, N. Y	155,624	45	6	.....	3	.....	9	.....	1	1
Tacoma, Wash	112,770	.....	8	.....	19	.....	2	.....	.....	.....
Toledo, Ohio	191,554	62	5	.....	3	.....	53	.....	10	5
Trenton, N. J	111,593	54	2	.....	1	1	2	.....	7	4
Worcester, Mass	163,314	.....	6	1	3	.....	11	.....	3	4
From 50,000 to 100,000 inhabitants:										
Atlantic City, N. J	57,660	9	.....	.....	5	.....	.....	.....	1	.....
Bayonne, N. J	69,893	.....	.....	.....	.....	.....	3	.....	3	.....
Berkeley, Cal	57,653	11	1	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y	53,973	17	6	.....	3	.....	4	.....	2	.....
Brockton, Mass	67,449	23	2	.....	.....	.....	1	.....	1	.....
Canton, Ohio	60,852	28	3	3	.....	.....	3	.....	1	2
Charleston, S. C	60,731	21	.....	.....	.....	.....	.....	.....	.....	3
Covington, Ky	57,141	15	4	.....	.....	.....	1	.....	1	2
Duluth, Minn	94,495	.....	.....	.....	2	.....	.....	.....	3	.....
El Paso, Tex	63,705	52	1	.....	3	.....	1	.....	.....	14
Erie, Pa	75,195	.....	1	.....	2	.....	2	.....	3	25
Evansville, Ind	76,078	18	6	2	2	.....	4	1	3	.....

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

City Reports for Week Ended Dec. 30, 1916—Continued.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 50,000 to 100,000 inhabitants—Continued.										
Flint, Mich	54,772	16	4				1			
Harrisburg, Pa	72,015	24	3				3		5	
Hoboken, N. J	77,214	16	1				3		6	2
Lancaster, Pa	50,853				1					
Little Rock, Ark	57,343	15	2		2				1	
Malden, Mass	51,155	11	4		4				1	2
Manchester, N. H	78,283	23	2		8		1		2	2
Mobile, Ala	58,221	15					2			3
New Britain, Conn	53,794	2			1				7	
Norfolk, Va	89,612	8	2		3		1			6
Oklahoma City, Okla	92,943	18			36		1			
Passaic, N. J	71,144	25	2	1	1			1	2	
Pawtucket, R. I	59,411	21	6	1						
Portland, Me	63,867	28	2							3
Rockford, Ill	55,185	14	2				2			
Sacramento, Cal	66,895	43	1				1			6
Saginaw, Mich	55,642	20	5		1		4			
St. Joseph, Mo	85,236	30	4	1					2	3
San Diego, Cal	53,330	20	1		1		2			4
Schenectady, N. Y	99,519	18	1		2	1			10	2
Somerville, Mass	87,039	18	3		3		3		1	2
South Bend, Ind	68,946	15			1		7			
Springfield, Ill	61,120	35	7		1		1			5
Springfield, Ohio	51,550	11			1		2		2	2
Troy, N. Y	77,916				16	1			2	3
Wichita, Kans	70,722		2	1					4	1
Wilkes-Barre, Pa	76,776	14	3		1		7		1	1
Wilmington, Del	94,265	45					2			
From 25,000 to 50,000 inhabitants:										
Alameda, Cal	27,732	4					2			
Brookline, Mass	32,730	12			2		1		2	
Butler, Pa	27,632	4								
Butte, Mont	42,918	33			7				6	6
Chelsea, Mass	46,192	19	4		1		2		2	
Chicopee, Mass	29,319	5			1				3	
Cumberland, Md	26,074		1		1					
Danville, Ill	32,261	9	1							
Dubuque, Iowa	39,873				12					
East Orange, N. J	42,458	11	1				1			3
Elgin, Ill	28,203	7			30					1
Everett, Mass	39,233		2				2			2
Fitchburg, Mass	41,781	8								1
Galveston, Tex	41,863	13								1
Haverhill, Mass	48,477				1		1			2
Jackson, Mich	35,263	21	1		4		2	1	1	1
Kalamazoo, Mich	48,886	14					7			1
Kenosha, Wis	31,576	2	1				2			
Knoxville, Tenn	38,300				35		1		1	
La Crosse, Wis	31,677	11	1							
Lexington, Ky	41,097	15	2		3		2			2
Lincoln, Nebr	46,515	14	4		2		4			
Long Beach, Cal	27,587	14					1			
Lorain, Ohio	36,964				1					
Lynchburg, Va	32,940	6	4		18				1	1
Madison, Wis	30,699						3			
Medford, Mass	26,234	8			15		4			
Montclair, N. J	26,318	8								
Newburgh, N. Y	29,603	9			1				2	1
New Castle, Pa	41,133								1	
Newton, Mass	43,715	7			1		1			
Niagara Falls, N. Y	37,353	16	2		10				2	
Norristown, Pa	31,401	18	3							1
Ogden, Utah	31,404	9	2		149	2	11			
Orange, N. J	33,080	23	1				3		1	3
Pasadena, Cal	46,450	13								
Perth Amboy, N. J	41,185		5		1				1	
Pittsfield, Mass	38,629	16	2	1			1		4	3
Portsmouth, Va	39,651	15	3							1
Quincy, Ill	36,798	14								
Quincy, Mass	38,136	10	7							1
Racine, Wis	46,486	17	2				1			1

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

City Reports for Week Ended Dec. 30, 1916—Continued.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 50,000 inhabitants—Continued.										
Roanoke, Va.	43,284	12			11					2
San Jose, Cal.	38,902	11					1		2	2
Steubenville, Ohio	27,445	14	1							
Stockton, Cal.	35,358	15	7		4		3			
Superior, Wis.	46,226	6			2					
Taunton, Mass.	36,283	15			1		3		4	1
Topeka, Kans.	48,726	20	1	1	26		3			2
Waltham, Mass.	30,570	9							1	
Watertown, N. Y.	29,894	16	2							
West Hoboken, N. J.	41,139	2	1							
Wheeling, W. Va.	43,377	17	2				2		2	
Williamsport, Pa.	33,809		3						1	
Wilmington, N. C.	29,892	7			14					2
Zanesville, Ohio	30,863	17								
From 10,000 to 25,000 inhabitants:										
Ann Arbor, Mich.	15,010	7					3			1
Clinton, Mass.	[1] 13,075	3	1				1			
Concord, N. H.	22,669	5	2	1	1					2
Galesburg, Ill.	24,276	10	1				1			
Kearny, N. J.	23,539	6							1	1
Kokomo, Ind.	20,930	4	1		34		1			
Long Branch, N. J.	15,395	4		1			2			
Marinette, Wis.	[1] 14,610	3								2
Morristown, N. J.	13,284	3	5							
Nanticoke, Pa.	23,126	3	3				1			
Newburyport, Mass.	15,243	4			1		1		1	
New London, Conn.	20,985	14					1			
North Adams, Mass.	[1] 22,019	3	1							
Northampton, Mass.	19,926	12							2	1
Plainfield, N. J.	23,805	11							1	1
Rutland, Vt.	14,831	3			23	1	2			
Sandusky, Ohio	20,193				11				1	1
Saratoga Springs, N. Y.	13,821	5	1				1		2	
Steelton, Pa.	15,548	3							1	
Wilkinsburg, Pa.	23,228	14					2		1	

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

FOREIGN.

CUBA.

Communicable Diseases—Habana.

Communicable diseases have been notified at Habana as follows:

Diseases.	Dec. 10-20, 1916.		Remaining under treatment Dec. 20, 1916.	Diseases.	Dec. 10-20, 1916.		Remaining under treatment Dec. 20, 1916.
	New cases.	Deaths.			New cases.	Deaths.	
Diphtheria	9	.....	9	Paratyphoid fever	2	.....	3
Leprosy	.....	.....	250	Scarlet fever	2	.....	4
Malaria	54	2	68	Typhoid fever	7	3	26
Measles	12	.....	12	Varicella	3	.....	2

GREAT BRITAIN.

Examination of Rats—Bristol.

During the period from September 1 to December 11, 1916, 3,101 rats were examined at Bristol, England. No plague infection was found.

Examination of Rats—Liverpool.

During the two weeks ended December 16, 1916, 453 rats were examined at Liverpool. No plague infection was found. The last plague-infected rat at Liverpool was reported found in October, 1916.

CHOLERA, PLAGUE, SMALLPOX, AND TYPHUS FEVER.

Reports Received During the Week Ended Jan. 19, 1917.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Bombay	Nov. 19-25	1	1	
Calcutta	Nov. 5-18	.....	17	
Indo-China	.....	.....	.....	July 1-31, 1916: Cases, 1,674; deaths, 1,328.
Provinces—				
Anam	July 1-31	458	324	
Cambodia	.....do.....	3	3	
Cochin-China	.....do.....	94	68	
Kouang-Tcheou-Wan	.....do.....	83	62	
Laos	.....do.....	393	388	
Tonkin	.....do.....	643	483	
Japan:				
Nagasaki	Nov. 27-Dec. 3	9	4	
Osaka	Dec. 1-5	4	8	Aug. 13-Dec. 5, 1916: Cases, 966; deaths, 625.
Taiwan Island—				
Keelung	Nov. 27-Dec. 9	5	4	
Taihoku	.....do.....	12	3	
Yokohama	Nov. 27-Dec. 3	1	1	
Districts	.....do.....	1	1	

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

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

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

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Philippine Islands:				
Manila	Nov. 19–25		1	Not previously reported: Cases, 2.
Provinces				Nov. 19–25, 1916: Cases, 439; deaths, 257.
Albay	Nov. 19–25	53	30	
Antique	do	8	7	
Bataan	do	18	16	
Bohol	do	1	1	
Bulacan	do	5	5	
Capiz	do	8	6	
Cavite	do	28	20	
Iloilo	do	51	23	
Laguna	do	4	6	
Leyte	do	19	11	
Misamis	do	27	19	
Negros Occidental	do	185	103	
Rizal	do	2		
Sorsogon	do	30	10	

PLAGUE.

Ceylon:				
Colombo	Nov. 12–18	3	1	July 23–29, 1916: Cases, 9; deaths, 8.
India				Nov. 5–18, 1916: Cases, 12,485; deaths, 9,342.
Bombay	Nov. 19–25	9	6	
Karachi	do	1		
Madras	do	1		
Madras Presidency	do	685	440	Sept. 17–23, 1916: Cases, 429; deaths, 280.
Mandalay	Oct. 28–Nov. 18		2	
Prome	Nov. 5–18		25	
Rangoon	Nov. 12–18	5	6	Oct. 1–7, 1916: Cases, 9; deaths, 9. Original report lost on s. s. Arabia.
Toungoo	Nov. 5–18		3	
Indo-China				July 1–31, 1916: Cases, 93; deaths, 51.
Provinces—				
Anam	July 1–31	17	10	
Cambodia	do	18	17	
Cochin-China	do	31	18	
Kouang-Tcheou-Wan	do	27	6	
Siam:				
Bangkok	Oct. 22–Nov. 18	4	3	
Straits Settlements:				
Singapore	Nov. 5–11	1	2	

SMALLPOX.

Brazil:				
Rio de Janeiro	Nov. 26–Dec. 9	16	2	
China:				
Dairen	Nov. 19–25	23	4	
Harbin	Nov. 6–12	1		
Hongkong	Nov. 26–Dec. 9	36	23	
Egypt:				
Cairo	July 2–15	15	8	
India:				
Calcutta	Nov. 5–11		1	
Madras	Nov. 19–25	2	1	Sept. 17–23, 1916: Cases, 10; deaths, 4.
Moulmein	Oct. 28–Nov. 4		4	
Rangoon	Nov. 12–18	1		Oct. 1–7, 1916: Cases, 1; original report lost on s. s. Arabia.
Indo-China				July 1–31, 1916: Cases, 58; deaths, 24.
Provinces—				
Anam	July 1–31	10	5	
Cambodia	do	10	3	
Cochin-China	do	29	11	
Tonkin	do	9	5	
Japan:				
Kobe	Dec. 4–10	1	1	
Mexico:				
Mexico City	Dec. 10–16	2		
Russia:				
Archangel	Nov. 25–Dec. 8	5		
Petrograd	Oct. 22–Nov. 4	21	6	

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

Reports Received During Week Ended Jan. 19, 1917—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Spain:				
Seville	Nov. 1-30	.....	22	
Valencia	Dec. 3-9	1	.....	
Straits Settlements:				
Penang	Oct. 28-Nov. 11	2	.....	
Tunisia:				
Tunis	Dec. 2-8	20	6	

TYPHUS FEVER.

China:				
Antung	Dec. 4-10	4	.....	
Egypt:				
Cairo	July 2-15	116	59	
Port Said	July 2-8	3	3	
Germany:				
Berlin	Nov. 12-18	.....	1	
Königsberg	Nov. 19-Dec. 2	1	4	
Mexico:				
Mexico City	Dec. 10-16	224	.....	
Netherlands:				
Rotterdam	Nov. 26-Dec. 2	6	.....	
Russia:				
Archangel	Nov. 25-Dec. 8	10	4	
Petrograd	Oct. 22-Nov. 4	13	1	
Switzerland:				
Zurich	Dec. 3-9	1	.....	

Reports Received from Dec. 30, 1916, to Jan. 12, 1917.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Bombay	Nov. 5-18	5	6	
Calcutta	Oct. 15-Nov. 4	.....	16	
Madras	Nov. 5-11	2	.....	
Indo-China	.....	.....	.....	June 1-30, 1916: Cases, 1,904; deaths, 1,250.
Provinces—				
Anam	June 1-30	446	367	
Cambodia	.....do	5	3	
Cochin-China	.....do	137	76	
Laos	.....do	40	29	
Tonkin	.....do	1,276	775	
Japan:				
Osaka	Nov. 16-20	4	3	Aug. 13-Nov. 20, 1916: Cases, 952 deaths, 577.
Taiwan Island—				
Keelung	Nov. 13-19	.....	.....	Present.
Taihoku	.....do	1	.....	
Yokohama	Nov. 6-12	4	2	
Java:				
Mid-Java	Sept. 23-29	1	1	
West Java	Sept. 29-Oct. 5	3	2	
Batavia	.....do	2	1	
Philippine Islands:				
Manila	Oct. 29-Nov. 18	14	3	Not previously reported: Cases, 8.
Provinces	.....	.....	.....	Oct. 29-Nov. 4, 1916: cases, 1,303; deaths, 828.
Albay	Oct. 29-Nov. 18	136	82	
Bataan	.....do	50	42	
Batangas	.....do	1	1	
Bohol	.....do	39	13	
Bulacan	.....do	23	16	
Camarines	.....do	47	28	
Capiz	.....do	20	16	
Cavite	.....do	92	71	
Iloilo	.....do	135	90	
Laguna	Nov. 5-18	8	4	
Leyte	Oct. 29-Nov. 18	12	11	
Misamis	.....do	83	53	
Negros Occidental	.....do	524	319	
Rizal	.....do	22	14	

[1] For reports received from July 1 to Dec. 29, 1916, see Public Health Reports for Dec. 29, 1916. The tables of epidemic diseases are terminated semiannually and new tables begun.

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

Reports Received from Dec. 30, 1916, to Jan. 12, 1917—Continued.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Philippine Islands—Continued.				
Provinces—Continued.				
Samar	Nov. 5-18	13	10	
Sorsogon	Oct. 29-Nov. 18	93	53	
Tayabas	Nov. 5-18	1	1	
Zambales	Oct. 29-Nov. 18	6	8	
Straits Settlements:				
Singapore	Oct. 22-28	2	2	
Turkey in Asia	Sept. 22-Nov. 3	189	81	
Turkey in Europe:				
Constantinople	Oct. 1-29	6	1	

PLAGUE.

Brazil:				
Bahia	Nov. 5-25	11	7	Jan. 1-Nov. 11, 1916: Cases, 14; deaths, 7. Nov. 5-11: Cases, 4; deaths, 2.
Joazeiro				June 1-Nov. 6, 1916: Cases, 67; deaths, 51.
Ceylon:				
Colombo	Oct. 28-Nov. 4	1	1	
China:				
Kansu Province—				
Taochow	Oct. 1-24		20	Pneumonic. Reported present in other localities in Province.
Egypt				Jan. 1-Nov. 23, 1916: Cases, 1,698; deaths, 825.
Alexandria	Nov. 12-22	2	1	1 case on s. s. Proton, arrived Nov. 16, 1916, from Sidi Barand and Sollum.
India				Oct. 15-28, 1916: Cases, 16,991; deaths, 13,340.
Bassein	Oct. 22-28		1	
Bombay	Nov. 5-18	20	15	Oct. 8-14, 1916: Cases, 13; deaths, 7. Received out of date. Original report lost on s. s. Arabia.
Karachi	Oct. 29-Nov. 4	1	1	
Madras				Oct. 8-14, 1916: Cases, 1; deaths, 1.
Madras Presidency	Nov. 5-18	1,129	762	Oct. 8-14, 1916: Cases, 534; deaths, 353.
Prome	Oct. 22-Nov. 4		18	
Rangoon	Oct. 23-Nov. 11	7	4	
Toungoo	Oct. 22-Nov. 4		5	
Indo-China				June 1-30, 1916: Cases, 75; deaths, 53.
Provinces—				
Anam	June 1-30	27	19	
Cambodia	do	17	16	
Cochin-China	do	31	18	
Saigon	Nov. 6-19	3	1	
Java:				
East Java—				
Kediri Residency	Aug. 26-Sept. 22	12	10	
Pasoeroean Residency	do	2	2	
Surabaya Residency	do	3	3	
Straits Settlements:				
Singapore	Oct. 22-Nov. 4	3	3	

SMALLPOX.

Austria-Hungary:				
Austria—				
Vienna	Nov. 12-18	1		
Hungary—				
Budapest	Nov. 5-18	28		
Brazil:				
Bahia	Nov. 12-18	3		
Rio de Janeiro	Nov. 12-25	16	4	
China:				
Amoy	Oct. 31-Nov. 20			Present.
Chungking	Oct. 28-Nov. 11			Present.
Dairen	Nov. 5-18	26	3	
Foochow	Oct. 29-Nov. 4			Present.
Hongkong	Oct. 28-Nov. 25	42	33	
Nanking	Nov. 12-25			Present.

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

Reports Received from Dec. 30, 1916, to Jan. 12, 1917—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Egypt:				
Cairo	June 11-July 1	50	20	
Port Said	June 11-17	1	1	
France:				
Marseille	Oct. 1-31		5	
India:				
Bombay	Oct. 8-14	3	3	Received out of date. Original report lost on s. s. Arabia.
Madras	Nov. 5-18	7	2	
Rangoon	Oct. 28-Nov. 11	2		
Indo-China				June 1-30, 1916: Cases, 53; deaths, 11.
Provinces—				
Anam	June 1-30	4	1	
Cambodia	do	11	4	
Cochin-China	do	19	5	
Tonkin	do	19	1	
Saigon	Nov. 6-19	11	4	
Java:				
East Java	Sept. 16-29	17	1	
Mid-Java	do	26	3	
West Java	Sept. 29-Oct. 12	135	28	
Batavia	do	10	1	
Mexico:				
Nuevo Laredo	Dec. 10-16	1		
Portugal:				
Lisbon	Nov. 19-Dec. 2	6		
Russia:				
Petrograd	Oct. 8-22	27	5	
Spain:				
Valencia	Nov. 19-Dec. 2	4	1	
Tunisia:				
Tunis	Nov. 25-Dec. 1	17	9	

TYPHUS FEVER.

Austria-Hungary:				
Austria—				
Vienna	Nov. 5-18	8		
Hungary—				
Budapest	do	1		
Belgium:				
Ghent	Oct. 29-Nov. 4		1	
Liege	do		1	
China:				
Antung	Nov. 27-Dec. 3	2		
Hankow	Nov. 12-18	1		
Tientsin	Oct. 29-Nov. 4	1		
Cuba:				
Santiago	Dec. 7-13	1	1	
Egypt:				
Alexandria	Nov. 12-18	1		
Cairo	June 11-July 1	275	112	
Port Said	June 11-17	20	9	
Germany:				
Berlin	Oct. 15-21		1	
Bremen	Oct. 22-Nov. 18	1	2	
Frankfort-on-Main	Nov. 12-18		1	
Königsberg	do	2		
Nuremberg	Oct. 29-Nov. 11	3		
Great Britain:				
Glasgow	Dec. 3-9	3		
Greece:				
Saloniki	Nov. 7-13		7	
Java:				
East Java	Sept. 16-22	2		
Mid-Java	Sept. 16-29	11	2	
West Java	Sept. 29-Oct. 12	24	1	
Batavia	do	21	1	
Mexico:				
Mexico City	Dec. 3-9	232		
Nuevo Laredo	Dec. 10-16	4		July 1-Dec. 16, 1916: Cases, 28.
Russia:				
Petrograd	Oct. 8-14	11		
Sweden:				
Stockholm	Nov. 28-Dec. 4	1		

SANITARY LEGISLATION.

COURT DECISIONS.

ILLINOIS SUPREME COURT.

Milk—Temperature During Transportation—Railroad Company Can Not be Held Responsible for Conditions Which It Can Not Control.

CITY OF CHICAGO *v.* CHICAGO & N. W. RY. CO. (Oct. 24, 1916.)

Municipal corporations, under legislative sanction, may prescribe such regulations as may be reasonably necessary to secure the general health and prosperity of the people.

A municipality has the power to determine what kind of milk shall be sold within its limits, and rules and regulations adopted for this purpose may indirectly affect the production of milk on farms outside the limits of the municipality. Such rules and regulations may require milk to be cooled immediately after it is taken from the cows and kept cool until transported to the municipality for delivery. Such rules and regulations, however, must be certain, reasonable, and adapted to the objects sought to be attained.

An ordinance of the city of Chicago made it unlawful to bring into the city milk of a temperature higher than 55° F. It was also required that the cans of milk should be sealed and that the seals should not be broken during transportation. A railroad company was prosecuted, charged with bringing into the city milk of a temperature higher than 55° F. The court decided that, unless it could be shown that it was possible for the railroad company to ascertain the temperature of the milk without breaking the seals, this provision of the ordinance was unreasonable and void.

[113 Northeastern Reporter, 849.]

CARTER, J.: The city of Chicago brought suit in the municipal court of that city against plaintiff in error for the violation of a city ordinance regulating the production, transportation, and sale of milk. Jury was waived and a trial had before the court, the material issues of the case being submitted by a stipulation of facts, and a judgment was entered imposing a fine of $100 upon the plaintiff in error. The trial judge certified that the validity of a municipal ordinance was involved and that in his opinion the public interest required that the case should be taken directly to this court, and it has been brought here by writ of error.

The ordinance[1] here in question is a long one, of about 12 printed pages, covering in detail practically all matters regarding the supervision of the production, handling, and delivery of milk to be sold within the city of Chicago—not only its treatment in the city, but on the farm from whence it is shipped, including the straining and cooling of the milk immediately after the cows are milked and the temperature at which it shall be kept from that time until delivered to the consumers in Chicago. The particular section of the ordinance here in question reads:

It shall be unlawful for any person, firm, or corporation to transport into the city of Chicago, or to transport or deliver from point to point within the city, milk, cream, skim milk, or buttermilk for human consumption which is of a higher temperature than 60° F.: *Provided*, That after June 1, 1914, it shall be unlawful for any person, firm, or corporation to transport into the city of Chicago, or to transport from point to point within the city, or to deliver, any milk, cream, skim milk, or buttermilk for human consumption which is of a temperature higher than 55° F.

[1] Pub. Health Repts., Jan. 3, 1913, p. 37; Reprint 199, p. 214.

The record shows that plaintiff in error is a common carrier, and in the course of its business transports milk from various parts of the State into the city of Chicago; that on August 21, 1914, it received at Cary and Hartland, stations on its road, various cans of milk for transportation into Chicago, which it carried over its line and delivered at certain platforms in that city, and that upon delivery thereof the temperature of the milk was from 67 to 76° F.; that the milk was brought to the city in baggage cars having no refrigerating facilities, the trip taking in the neighborhood of two hours; that milk trains started as early as 6.40 in the morning, making various stops, and the milk being taken on from platforms at various stations along the road, at some of which places there were no agents or employees of plaintiff in error when the trains arrived; that the milk thus transported went into the homes of various families in Chicago for baking, drinking, and cooking.

Counsel for plaintiff in error admit that a municipality has the power to regulate what kind of milk shall be sold within its limits, and that such rules and regulations may indirectly affect the production of the milk on the farms outside the city limits, and that it may thus apply regulations that will, in effect, require milk to be cooled immediately after it is taken from the cow and to be kept cool until transported to the city for delivery. This is undoubtedly the law. Municipal corporations are usually invested with express power to preserve the safety and health of the inhabitants. In determining the validity of such ordinances it has long been the established rule that municipal corporations, under legislative sanction, may prescribe such regulations as may be reasonably necessary to secure the general health and prosperity of the people. (2 Dillon on Mun. Corp. (5th ed.), sec. 677; 3 McQuillin on Mun. Corp., sec. 969.) This court, in construing certain provisions of this same ordinance with reference to the regulations for pasteurizing milk, in Koy *v.* City of Chicago (263 Ill., 122; 104 N. E., 1104; Ann. Cas., 1915C., 67; Pub. Health Repts. Reprint 342, p. 96) upheld the validity of the ordinance in that respect, reviewing at some length the authorities on the question of the power of municipalities to enact ordinances of this character, and, in effect, holding regulations such as are before us in this case valid, provided they are reasonable and are adapted to the objects sought to be attained. (See also City of Chicago *v.* Bowman Dairy Co., 234 Ill., 294; 84 N. E., 913; 123 Am. St. Rep., 100; 14 Ann. Cas., 700. People *v.* Department of Health, 189 N. Y., 187; 82 N. E., 187; 13 L. R. A. (N. S.), 894. State *v.* Broadbelt, 89 Md., 565; 43 Atl., 771; 45 L. R. A., 433; 73 Am. St. Rep., 201. State *v.* Schlenker, 112 Iowa, 642; 84 N. W., 698; 51 L. R. A., 347; 84 Am. St. Rep., 360. Adams *v.* Milwaukee, 144 Wis., 371; 129 N. W., 518; 43 L. R. A. (N. S.), 1066; Pub. Health Repts. Reprint 342, p. 104.)

Plaintiff in error, however, contends that the ordinance here in question, if intended to apply to common carriers, is invalid, being unreasonable in its method of regulation, that other provisions of the ordinance require that cans of milk be sealed before they are shipped and that the seals shall remain unbroken during transportation by the carrier, and that the carrier, therefore, can not ascertain the temperature of the milk at the time it is shipped. Under any fair construction we think the ordinance was intended to apply to common carriers in the transportation of milk from the country to the city, otherwise it would be ineffective. The object sought to be obtained would be absolutely defeated if common carriers, in the transportation of milk from the country to the city, were not required to keep it cool in transit. Very little, if any, proof is found in the record with reference to the reasons for keeping milk cool while it is being shipped; it being evidently assumed that the court would take judicial notice of the fact that the requirement of keeping milk cool from the time it is taken from the cows on the farm until sold to the consumer is a reasonable health regulation. The authorities submitted in the briefs do not show with certainty whether the greatest advantage from keeping the milk cool is to assist in the salable quality of the milk or whether it tends most strongly for the promotion of health. The authori-

ties cited, however, indicate that milk which is allowed to become heated above a certain temperature develops, by multiplication, harmful bacteria and that no subsequent refrigeration or cooling of the milk will destroy those bacteria; that if the milk is cooled at the stable on the farm, as required by the ordinance, and kept cool until it is delivered, while such treatment will not destroy the bacteria already present it will restrain the multiplication thereof and "is a deterrent, especially to harmful bacteria." Counsel for plaintiff in error practically concede that this is true, so that it is unnecessary for us to restate the reasons why the care of milk, it being an article of food in such general use, should be fully regulated by statute or ordinance for the promotion of the health of the public, as was stated at length in Koy *v.* City of Chicago, supra.

Whether the ordinance, in its requirements as to the temperature of milk transported or delivered by a common carrier, is reasonable in view of its other provisions is of a much more serious character. We do not agree with the argument of counsel for plaintiff in error that as common carriers ordinarily must accept all freight tendered, therefore they would not be justified in refusing to receive cans of milk even though they were not within the limitations of temperature required by this ordinance. Common carriers would surely be justified in refusing to accept such milk at a higher temperature if impracticable to reduce it to the proper temperature while it was being transported by them to the city. It is not intended that they shall be required to accept all freight delivered to them if by so doing they would violate the provisions of other valid statutes or ordinances. Milwaukee Malt Extract Co. *v.* Chicago, Rock Island & Pacific Railway Co. (73 Iowa, 98; 34 N. W., 761). Under the circumstances here indicated, if the milk could not be cooled to a proper temperature after it was received, and if there were any practicable way for the common carrier to test the temperature of the milk before accepting it for transportation, the carrier would be justified in refusing to accept it if it were not at the proper temperature. (State *v.* Goss, 59 Vt., 266; 9 Atl., 829; 59 Am. Rep., 706; 4 R. C. L., 666; 6 Cyc., 372, note. U. S. *v.* Oregon W. R. & N. Co. (D. C.), 210 Fed., 378. James Clark Distilling Co. *v.* Western Maryland Ry. (D. C.), 219 Fed., 333; Id., 339.)

The record shows that no attempt was made to take the temperature of the milk in question at the time it was taken into plaintiff in error's cars at the stations outside of Chicago, and it is contended by counsel for the railway company that it is not only impracticable, but impossible, under the provisions of this ordinance, to make any test that would relieve the common carrier from responsibility if the milk were not at a proper temperature when taken into its cars. Counsel for the city concede that the milk is required to be carried in sealed cans, which may not be opened from the time they are received by the carrier until delivered in the city, but they argue that the approximate temperature of the milk can be obtained by thermometers applied to the outside of such cans. While there is no proof on this question in the record itself, the city offered, as a part of its brief, the record of tests that have recently been made by the city authorities by the application of thermometers to the outside of milk cans. These tests show the differences between the temperature of the milk at the center of the can, inside, and the temperature on the outside of the wall of the can, ran as high as 5.1° F.; the average difference in 17 tests being 2.58°. The officials of the city health department made these tests, and they gave it as their opinion that for practical purposes a temperature of 57° F. on the outside of the milk can would be evidence that the contents had a temperature of 55° F. or less, and counsel for the city argue that plaintiff in error could make such tests and thus comply with the ordinance. Of course, these tests are not properly in the record. They have been made since the trial of the case in the municipal court, and plaintiff in error has had no opportunity of investigating as to their correctness, either by cross-examining the city officials who made them, or in any other way. But even if they were properly in the record, would that make the ordinance reasonable? It is apparent from what there is in the briefs

with reference to the tests, that they can not be made with any accuracy quickly. These tests were doubtless made under very favorable conditions, and doubtless, also, there was ample time and every opportunity for cautious and deliberate action in making them. Is it practicable to make such tests under such circumstances as they must be made at the various shipping stations on plaintiff in error's road? It appears from the record and briefs that many cans are taken on at some of these stations—sometimes as many as 100—and that the stopping time of the milk train must necessarily be very limited. From what is before us we do not think it would be practicable to make such a test by a thermometer placed on the outside of each milk can. A reasonable ordinance can not require what by its very terms it makes impossible. It can not fix a penalty for failing to do that which it prohibits. This ordinance prohibits the seal being broken on the can while it is being transported by the common carrier. We do not see, on this record, how it is possible for a positive test to be made as to the temperature of the milk within the can—such a test as will assure the carrier that it is safe in accepting the milk.

A regulation requiring cars carrying milk not to be allowed to become heated above a stated temperature could be enforced without great hardship to the railroad company, and such temperature could be readily ascertained. It appears from the record that at the platforms from which the milk is taken onto the cars there is often no other railroad business being transacted, and the cans are often brought and left there in advance of the arrival of the milk trains. The conditions under which milk is shipped are very different from those under which fruit and vegetables are shipped in refrigerator cars for long distances. Canned milk might be carried on trains for a sufficient length of time—even if received in a warm condition, several degrees above 55° F.—to cool it to a proper temperature if the cars were properly refrigerated. But there is no proof in the record on this question, and on what is before us we are not prepared to hold that plaintiff in error could reasonably be required to furnish such cars. It is obvious that for the short hauls from some of the near-by stations, the length of time the milk is carried in the cars would not be sufficient to cool it to the proper temperature, no matter what system of cooling the cars was adopted by plaintiff in error. It seems to be very important that the milk should be as short a time as possible in transit from the country to the city.

The city council has authority to pass ordinances regulating this question, and the question of regulation, in the first instance, rests with the municipal authorities, but whether its exercise in a particular case is reasonable is a judicial question.

There must be some logical connection between the object sought to be accomplished by such an ordinance and the means prescribed to accomplish the end. An unreasonable ordinance will be held void by the courts. (City of Lake View *v.* Tate, 130 Ill., 247; 22 N. E., 791; 6 L. R. A., 268. People *v.* Ericsson, 263 Ill., 368; 105 N. E., 315; L. R. A., 1915D, 607; Ann. Cas., 1915C, 183. Koy *v.* City of Chicago, supra; 3 McQuillin on Mun. Corp., sec. 893; 2 Dillon on Mun. Corp. (5th ed.), secs. 589, 591.) It is true that the common carrier should not be permitted to be the one agency of those handling milk between the time it is milked and the time it reaches the consumer to defeat the purposes of a reasonable health ordinance on that subject; neither should the common carrier be burdened with an impracticable regulation which makes it responsible for the possible neglect of another person or agency in not bringing the milk to the station at a temperature required by the ordinance. As the ordinance reads, plaintiff in error could be made liable for the neglect of the dairyman bringing the milk and delivering it at the train. Even if it were practicable to take the test on the outside of the can, it is no answer to say that plaintiff in error could not be held liable if it approximated the temperature within 2 or 3 degrees. The ordinance does not so provide. It states in definite terms that it is unlawful to transport milk into the city of Chicago at a temperature higher than 55° F.

An ordinance, to be reasonable, should be certain. Cooley's Const. Lim. (7th ed.), 284. Manifestly this ordinance is not certain if it be construed that the approximate temperature of the milk in the can is all that is required. On the record and proof before us we do not see how the courts could say that plaintiff in error had complied with the ordinance if it made the test on the outside of the cans and it were afterwards found that the test was not correct even though it were shown that it was within 2° of being correct. Neither, on this record and proof, do we think the courts could hold that the ordinance was being complied with if the proof showed that the cars in which the milk was transported to the city were at a temperature of 55° or less if when the milk reached Chicago it were found to be at a higher temperature than that provided by the ordinance. In South Covington Railway Co. *v.* Covington (235 U. S., 537; 35 Sup. Ct., 158; 59 L. Ed., 350; L. R. A., 1915F, 792) it was held that a regulation providing that the temperature of cars should never be permitted to be below 50° F. was unreasonable when the evidence showed that it was impossible in the operation of the cars to keep them uniformly up to this temperature. By the same line of reasoning, on the record before us, it must be held that the provision here in question of this ordinance, so far as it applies to common carriers, is unreasonable and void.

We realize how important this question is to the health of the people of Chicago and the State at large, and we have no hesitation in reaffirming the rules laid down in Koy *v.* City of Chicago, supra, and City of Chicago *v.* Bowman Dairy Co., supra, with reference to the right of the authorities of the city of Chicago to make all proper and reasonable regulations with reference to the care, transportation, sale, and delivery of milk in order to protect and promote the health of the people—especially the children—of that great city. On this record it is impossible to tell what practicable regulations should be included in an ordinance with reference to the transportation of milk by common carriers from the various shipping points to the city of Chicago. Counsel in their briefs now seem to concede that they did not realize the far-reaching effect of the questions here under discussion until after the case was brought to this court. We regret that the evidence presented on the trial did not fully cover the question of what would be reasonable regulations with reference to any test that could be practicably applied to find the temperature of the milk at the time of taking the cans onto the trains, and also what would be reasonable regulations with reference to the temperature of cars used for transporting milk, and what methods would be practicable for keeping cars at the proper temperature. If, when the case is sent back to the trial court, the city authorities are of the opinion that proof can be presented that would show that this ordinance is reasonable on these and all other questions involved herein under the rules heretofore laid down, they will no doubt present such proof. Plaintiff in error will then have an opportunity of cross-examining any witnesses that may be offered and of presenting any evidence that it desires upon any of the questions that have here been touched upon. On such a record, doubtless, the court could pass much more satisfactorily upon the reasonableness of this ordinance than it can upon the record before us. Notwithstanding divers scientific theories upon subjects of this nature the courts usually defer to the determination and decisions of the proper municipal authorities as to the basis of police regulations unless such basis is manifestly erroneous (3 McQuillin on Mun. Corp., sec. 969). As we have stated before, however, on the record before us this ordinance, so far as it applies to plaintiff in error and common carriers in like situation, must be held an unreasonable exercise of the police power.

The judgment of the municipal court must be reversed and the cause remanded for further proceedings in harmony with the views herein expressed.

STATE LAWS AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

MARYLAND.

Communicable Diseases—Notification of Cases by Physicians—Preventive Measures—Recording of Reports, etc. (Ch. 243, Act Apr. 18, 1916.)

SECTION 1. That sections 64, 65, and 66 of article 43 of the Code of Public General Laws of Maryland title "Health" be, and the same are hereby, repealed and reenacted so as to read as follows:

SEC. 64. Whenever any physician knows or has reason to believe or suspect that any person under his professional care is infected with smallpox, diphtheria, scarlet fever, typhoid fever, typhus fever, yellow fever, malarial fever, or any other contagious or infectious disease dangerous to public health, he shall immediately give notice thereof in writing over his own signature to the health officer of the city, town, county, or district in which such disease exists, giving the name of the disease or suspected disease and the name, age, race, sex, place of abode of each person believed or suspected to be sick of the disease; and if he neglects, fails, or refuses to give such notice he shall be fined not less than $10 nor more than $100.

SEC. 65. The health officers of cities, towns, counties, and districts shall keep record of all reports and notifications received in pursuance of sections 63 and 64, and such record shall contain the names of all persons who are sick with infectious or contagious diseases, the localities in which they live, the disease with which they are affected, together with the date of such reports, the names of persons reporting any such cases, and the record of quarantine, isolation, disinfection, and other preventive measures. The board of health shall give the school boards of health of their respective counties, cities, or towns immediate information of cases of infectious or contagious diseases reported to them according to this subtitle. The State board of health shall prepare and furnish to all local health officers printed forms for the recording and preservation of information required by this act.

SEC. 66. Whenever any health officer of city, town, county, or district shall be notified of the occurrence of a case of smallpox, diphtheria, scarlet fever, typhoid fever, yellow fever, malarial fever, or any other contagious or infectious disease within his sanitary jurisdiction he shall take immediate steps to prevent the spread of the disease. He shall give notice in writing to the school authorities of any contagious or infectious disease affecting school children or likely to endanger the health of school children. He shall within 24 hours transmit to the State board of health such information as he has obtained concerning every case of infectious or contagious disease which has come to his knowledge. It shall be his duty to cooperate with the State board of health in the enforcement of this act within his jurisdiction. The State board of health shall prepare and distribute to all local health officers the printed forms necessary to carry out the provisions of this act.

Communicable Diseases—Notification of Cases in Hotels, Hospitals, Institutions, etc. State Board of Health Authorized to Make and Enforce Local Health Regulations. (Ch. 242, Act Apr. 18, 1916.)

SECTION 1. That section 94 of article 43 of the Code of Public General Laws of Maryland, title "Health," be, and the same is hereby repealed.

SEC. 2. That sections 95, 96, 97, 98, 99, 100, and 101 of the Code of Public General Laws of Maryland be, and the same are hereby, repealed and certain new sections

enacted in lieu thereof, to be known as sections 94, 95, 96, 97, and 98, and to read as follows:

SEC. 94. Whenever any hotel keeper, keeper of a boarding house, lodging house, superintendent, manager, or director of a hospital or private or public institution of any kind shall know or shall have reason to believe that any guest, inmate, or other person in the hotel, boarding house, lodging house, or institution of which he or she may have control or supervision, or on the premises thereof, is sick with or convalescing from smallpox, cholera, yellow fever, typhus or typhoid fever, scarlet fever, leprosy, or any other contagious or infectious disease, the said owner, proprietor, manager, or other person having charge shall immediately give notice thereof in writing to the health officer of the city, town, or county in which the infected house or premises is located; said notice shall state the name and place of residence of the sick person, the name of the disease, the name of the owner, proprietor, or manager of the house and the locality of said house, and it shall be the duty of the local or State health officer, as the case may be, to take such steps and to do such things as may be necessary to render effective the provisions of sections 41 to 50, inclusive.

SEC. 95. Any person or persons who shall neglect or refuse to comply with the provisions of the two foregoing sections shall be deemed guilty of a misdemeanor and shall, upon conviction thereof in a court of competent jurisdiction, be fined not less than $10 nor more than $50 for every such offense.

SEC. 96. In any town, village, or other place in this State where no special health department has been established or constituted by the charter or other act of incorporation of any such town or village, or in case the sanitary law or regulations in places where boards of health or health officers exist should be inoperative, or in case the local board of health or health officer is found to be negligent, incompetent, or inefficient, the State board of health shall make and enforce such regulations respecting nuisances, sources of filth, and causes of sickness as they shall judge necessary for the public health and safety. The said board of health shall also make such regulations as they deem necessary for the public safety respecting any articles which are capable of containing or conveying any infection or contagion or creating any sickness or for the disinfecting of any house, room, or premises where contagious or infectious diseases have existed, and any person who shall sustain damages by reason thereof shall receive compensation in accordance with the provisions of section 42; if any person shall violate or refuse or neglect to comply with any such regulation, he shall forfeit a sum not exceeding $50.

SEC. 97. In any town or village where no special health department has been established, or in case the local board of health or health officer is found negligent, incompetent, or inefficient, the State board of health is hereby empowered to make such rules and regulations in relation to cleansing and care of privies, pigpens, or other noxious places as they may deem desirable and for the preservation of the health of any of the inhabitants thereof, or the said board of health may declare such privy, pigpen, or other noxious place a nuisance, and the abatement thereof be by the said board or its executive officer ordered and enforced; and any violation or neglect, or refusal to comply with any rule or regulation of the said board under sections 94 to 97, both inclusive, shall be deemed a misdemeanor and shall be punished by a fine not exceeding $50 or imprisonment in the county jail not exceeding 30 days, or both fine and imprisonment in the discretion of the court.

SEC. 98. Upon complaint made in writing by the State board of health, or its executive officer, before any justice of the peace charging the commission of an offense against the provisions of said sections 94 to 97, both inclusive, it shall be the duty of the State's attorney of the county or town in which such offense is committed to prosecute the offender.

County Boards of Health—Meetings—Powers and Duties—Montgomery County. (Ch. 202, Act Apr. 4, 1916.)

SECTION 1. That section 36 of article 43 of the Code of Public General Laws of Maryland, title "State board of health," subtitle "State registrar of vital statistics," as amended by chapter 742 of the acts of the general assembly of 1914, be, and the same is hereby, repealed and reenacted so as to read as follows, to wit:

SEC. 36. The local board of health of each county shall meet semiannually in the months of May and October, and as much oftener as they may deem necessary; they shall act in conjunction with the State board of health and shall report to said board such facts in reference to the sanitary conditions of their respective counties as they may deem important or necessary; they may adopt or enforce all needful rules and regulations concerning nuisances and causes of sickness within their respective jurisdictions subject to the provisions of this article; they may regulate all fees and charges in connection with their own regulations and shall establish the salaries of their respective county health officers on the following maximum bases; not exceeding in counties having a population of 15,000 or less $150 per annum, with an additional allowance of not more than $100 per annum for each 8,000 of population in excess of 15,000: *Provided*, That in Montgomery County it shall be the duty of the county commissioners to meet exclusively as a board of health on the first Wednesday of each month: *And provided further*, That it shall be the duty of the health officer of said Montgomery County, in addition to those duties otherwise prescribed by law, in instances of contagion to fumigate all school and other public buildings, the materials therefor to be provided by said board of health: *And provided further*, That said health officer for said Montgomery County, shall perform all the duties heretofore required of the physicians to the jail and the almshouse of said Montgomery County: *And provided further*, That the salary as health officer for said Montgomery County shall be $1,200 per annum: *And provided further*, That the health officer shall attend all indigent persons in the said county suffering from contagious diseases.

SEC. 2. That this act shall take effect on the 1st day of June, 1916.

Health Officers—Appointment. (Ch. 245, Act Apr. 18, 1916.)

SECTION 1. That section 34 of article 43 of the Code of Public General Laws of Maryland be, and the same is hereby, repaied and reenacted so as to read as follows:

SEC. 34. Such local boards of health shall each appoint in the month of May, 1916, and biennially thereafter a health officer who shall be a well-educated physician and who by virtue of his appointment shall be secretary and executive officer of the local board of health, and in the event of vacancy a successor for the unexpired term shall be appointed by the local board of health as soon as practicable. The health officer shall hold office for two years from the date of appointment, but may be removed by the State board of health for cause upon charges made and considered at a regular meeting of said board. And it shall be the duty of every county health officer, district health officer, or local health officer, immediately after his appointment, to appear before the State board of health, or its accredited representative, and to make oath that he will well and truly discharge the duties of his office: *Provided*, That this act be not so construed as to prevent local boards of health from appointing such additional health officers or sanitary officers as they may deem necessary or as may now or hereafter be allowed by law.

State Vaccine Agency—Transfer of Powers and Duties to State Board of Health. (Ch. 204, Act Apr. 4, 1916.)

SECTION 1. All of the powers and duties now exercised or performed by the State vaccine agency, as now provided for by section 53 of article 43 of the Annotated Code of Maryland, title "Health," subtitle "State vaccine agency," and all of the powers and duties now exercised or performed by the State vaccine agent, who is now pro-

vided for by section 54 of said article 43 of said code, together with all the books, records, documents, unexpended balances, and all other matters and things of or appertaining to said agency or agent, shall be transferred to and devolved upon the State board of health, and the said powers and duties shall thereupon and thereafter be exercised and performed by the State board of health; and the said State vaccine agency and the office of the said State vaccine agent shall thereupon be abolished. Nothing in this act shall be construed so as to shorten the term of the office of the incumbent.

SEC. 2. That this act shall take effect on the first day of June, 1916.

Meat—Live Animals—Inspection—Condemnation when Diseased or Unwholesome. (Reg. Bd. of H., Revised to Sept. 15, 1916.)

REG. NO. 16. *Inspection of live animals.*—Whenever an inspector or agent of the State board of health, after examination, shall have reason to believe that any live animal intended for the food of man is diseased, or unsound or unwholesome, he shall condemn said animal and issue an order preventing the sale of said animal for human food: *Provided, however,* That if the owner of said live animal or the person having control of the same, shall give 24 hours' notice to the said inspector of the day and hour upon which the owner or the person having control thereof will slaughter such animal, in the presence of the inspector, that then such inspector after a further examination of such dead animal may modify or change the existing order.

Cold Storage—Regulation. (Ch. 163, Act Apr. 4, 1916.)

SECTION 1. That the following 12 sections be added to article 43, to follow section 177*h* as codified in Bagby's Code of 1911, and to be known as sections 177*i*, 177*j*, 177*k*, 177*l*, 177*m*, 177*n*, 177*o*, 177*p*, 177*q*, 177*r*, 177*s*, 177*t*.

COLD STORAGE.

SEC. 177*i*. For the purpose of this act, "cold storage" shall mean the storage or keeping of articles of food at or below a temperature above zero of 45 degrees Fahrenheit in a cold storage warehouse; "cold storage warehouse" shall mean any place artificially cooled to or below a temperature above zero of 45 degrees Fahrenheit, in which articles of food are placed and held for 30 days or more; "articles of food" shall mean fresh meat and fresh meat products and all fish, game, poultry, eggs, and butter.

SEC. 177*j*. No person, firm, or corporation shall maintain or operate a cold storage warehouse without a license so to do issued by the secretary of the State board of health. Any person, firm, or corporation desiring such a license shall make written application to the secretary of the State board of health for that purpose, stating the location of the warehouse. The secretary of the State board of health thereupon shall cause an examination to be made of said warehouse and, if it be found by it to be in a proper sanitary condition and otherwise properly equipped for its intended use, it shall issue a license authorizing the applicant to operate the same as a cold storage warehouse during one year. The license shall be issued upon payment by the applicant of a license fee of $25 to the treasurer of the State.

SEC. 177*k*. In case any cold storage warehouse or any part thereof, shall at any time be deemed by the secretary of the State board of health to be in an unsanitary condition, or nor properly equipped for its intended use, it shall notify the licensee of such condition and upon the failure of the licensee to put such cold storage warehouse in a sanitary condition or to properly equip the same for its intended use, within a time to be designated by the secretary of the State board of health, it shall revoke such license.

SEC. 177*l*. Every such licensee shall keep accurate records of the articles of food received in and of the articles of food withdrawn from his cold storage warehouse, and

the secretary of the State board of health shall have free access to such records at any time. Every such licensee shall submit a monthly report to the secretary of the State board of health, setting forth in itemized particulars the quantities and kinds of articles of food in his cold storage warehouse. Such monthly reports shall be filed on or before the fifth day of each month, and the reports so rendered shall show the conditions existing on the last day of the preceding month reported and a summary of such reports shall be prepared by the secretary of the State board of health and shall be open to public inspection on or before the tenth day of each month.

SEC. 177*m*. The secretary of the State board of health shall inspect and supervise all cold storage warehouses and make such inspection of articles of food therein as it may deem necessary to secure the proper enforcement of this act, and it shall have access to all cold storage warehouses at all resaonable times. The secretary of the State board of health may appoint such persons as it deems qualified to make any inspection under this act.

SEC. *177n*. No article of food intended for human consumption shall be placed, received knowingly or kept in any cold storage warehouse, if diseased, tainted, otherwise unfit for human consumption, or in such condition that it will not keep wholesome for human consumption. No article of food, for use other than for human consumption, shall be placed, received, or kept in any cold storage warehouse unless previously marked, in accordance with forms to be prescribed by the secretary of the State board of health, in such a way as to indicate plainly the fact that such article of food is not to be sold or used for human food.

SEC. 177*o*. No person, firm, or corporation shall place, receive or keep in any cold-storage warehouse in this State articles of food unless the same shall be plainly marked, stamped, or tagged, either upon the container in which they are packed, or upon the article of food itself, with the date when placed therein; and no person, firm, or corporation shall remove, or allow to be removed, such article of food from any cold-storage warehouse unless the same shall be plainly marked, stamped, or tagged, either on the container in which it is inclosed or upon the article of food itself, with the date of such removal, and such marks, stamps, and tags shall be prima facie evidence of such receipt and removal and of the dates thereof. All articles of food in any cold storage warehouse at the time this act goes into effect shall, before being removed therefrom, be plainly marked, stamped, or tagged with the date when this act goes into effect and the date of removal therefrom.

SEC. 177*p*. No person, firm, or corporation shall hereafter keep or permit to remain in any cold-storage warehouse any article of food which has been held in cold storage either within or without the State, for a longer aggregate period than 12 months, except with the consent of the Secretary of the State board of health as hereinafter provided. The secretary of the State board of health, shall, upon application during the twelfth month, extend the period of storage beyond 12 months for any particular article of food, provided the same is found upon examination to be in proper condition for further cold storage. The length of time for which such further storage is allowed shall be specified in the order granting the permission. A report on each case in which such extension of storage may be permitted, including information relating to the reason for the action of the secretary of the State board of health, the kinds and amounts of the articles of food for which the storage period was extended, and the length of time for which this continuance was granted, shall be filed, open to public inspection, in the office of the secretary of the State board of health, and shall be included in its annual report. Such extension shall be included in its annual report. Such extension shall be not more than 60 days; a second extension of not more than 60 days may be granted upon a reexamination, but the entire extended period shall be not more than 120 days in all.

SEC. 177*q*. It shall be unlawful to sell, or to offer for sale, any article of food, which has been held for a period of 30 days or over in cold storage either within or without the State, without notifying persons purchasing, or intending to purchase, the same, that

it has been so held by the display of a placard plainly and conspicuously marked "cold-storage goods," on the bulk mass or articles of food; and it shall be unlawful to represent or advertise as fresh any article of food which has been held in cold storage for a period of 30 days or over.

SEC. 177*r*. It shall be unlawful to return to any cold-storage warehouse any article of food which has been once released from storage for the purpose of placing it on the market for sale. It shall be unlawful to transfer any article of food from one cold-storage warehouse to another if such transfer is made for the purpose of avoiding any provision of this act, and such transfer shall be unlawful unless all prior stampings, markings, and taggings upon such article shall remain thereon.

SEC. 177*s*. The secretary of the State board of health may make all necessary rules and regulations to carry this act into effect. Such rules and regulations shall be filed in the secretary of the State board of health's office, and shall not take effect until 30 days after such filing.

SEC. 177*t*. Any person, firm, or corporation violating any provision of this act shall be guilty of a misdemeanor and shall upon conviction be punished for the first offense by a fine not exceeding $100 and for the second or any subsequent offense by a fine not exceeding $500 or by imprisonment of not more than six months, or by both such fine and imprisonment in the discretion of the court.

SEC. 2. That this act shall be so interpreted and construed as to effect its general purpose to make uniform the law of those States which enact it.

SEC. 3. That this act may be cited as the uniform cold-storage act.

Cold Storage—Regulations Governing. (Reg. Bd. of H., Revised to Sept. 15, 1916.)

REG. NO. 18. *Uniform cold-storage law.*—1. Inspections of cold-storage plants shall be made between the hours of 7 a. m. and 7. p. m.

2. Whenever an inspector believes that any cold-storage plant, after examination, is in an insanitary condition or not properly equipped for its intended use, he shall make an immediate report in writing to the State health officer, describing in detail the conditions as found.

3. Summaries of the reports of cold-storage operators shall be kept in the office of the State health officer and open to inspection by the public.

4. Articles of food not intended for human consumption, in a box or other container, shall be labeled, such label to be not less than 2½ inches wide by 5 inches long, and on which shall be printed in letters not less than one-half inch high the words "Not for human consumption." Such label or tags shall be placed on such box or container in such a way that the same can not be opened without breaking such label, and enough labels must be used to effect such purpose. Such label must contain the name and address of the cold-storage licensee in print. Articles not packed in any container must be branded with indelible ink in a conspicuous place with the words "Not intended for human consumption."

5. Articles of food intended for human consumption in containers must be labeled, such label to be not less than 2½ inches wide by 5 inches long, and on the same shall be printed the name and address of the licensee, and the words--

Received for storage,
Removed from storage,

with sufficient room for the insertion of the proper month, day, and year in indelible ink. Articles not in a container shall be stamped in indelible ink, using the form as above. Articles received for storage prior to June 1, 1916, should be marked, "Received for storage prior to June 1, 1916." Such articles must be labeled before removal and the removal date must also be filled in.

6. Whenever upon examination the time for removal shall be extended, the inspector shall place or cause to be placed upon such articles a label with the words "Time for removal extended to," and fill in the proper date in indelible ink. Such label

shall be not less than 2½ by 5 inches, and on it shall be printed the words "State Board of Health of Maryland." Articles not in containers shall be branded with indelible ink, showing plainly the date to which the time for removal has been extended. Such labels and indelible stamps are to be prepared and kept by the State board of health or in the possession of its inspectors and agents.

7. Placards designed for articles of food offered for sale shall contain the words "Cold storage goods," in letters not less than one-half inch in height.

8. Warrants for violations of the statute shall be sworn out by the inspectors, with the approval of the State health officer.

9. Whenever articles are to be removed from one cold-storage plant to another within this State, the licensee shall give notice in writing to the State board of health that such articles, describing them, have been or are to be removed from his plant to the plant of another licensee within this State, and giving his name and address.

Chicory Mixed with Coffee—Sale. (Ch. 208, Act Apr. 11, 1916.)

SECTION 1. That it is lawful to sell chicory mixed with coffee if it conforms to the following conditions:

1. The amount of chicory shall not exceed 15 per cent of the mixture of coffee and chicory.

2. The package containing the mixture shall bear the words in letters of the same style and size, but not less than one-half inch high, "coffee and chicory," and may contain also the name and address of the manufacturer and distributor, a nondescriptive brand name, and a statement of the net weight of the package contents, but no other printed matter.

3. The mixture shall contain no cereal in any form.

4. If sold in the form of a beverage in hotels or restaurants, there shall be displayed in a prominent place, in characters easily legible to the patrons, a placard bearing the words, "The coffee sold here is mixed with chicory."

SEC. 2. Any person, firm, or corporate body who shall violate any of the provisions of this act shall be guilty of a misdemeanor, and, upon conviction thereof, shall be sentenced to pay a fine of not more than $100.

SEC. 3. The State board of health shall be charged with the enforcement of the provisions of this act.

SEC. 4. All fines and penalties imposed and recovered for the violation of any of the provisions of this act shall be paid to the State board of health, or its agent, and when so collected and paid shall thereafter be, by the State board of health, paid into the State treasury, for the use of the State.

SEC. 5. That this act shall take effect from and after the 1st day of June, 1916.

Bread Boxes—Must be Raised from Floor or Ground. (Reg. Bd. of H., Revised to Sept. 15, 1916.)

REG. NO. 19. *Bread boxes.*—All bread boxes standing outside of any bakery, confectionery, or other place where bread is manufactured, packed, stored, deposited, collected, prepared, or produced for sale, prior to October, 1916, shall, on or before August 1, 1917, be raised not less than 10 inches from the floor, ground, or pavement.

On and after October 1, 1916, no new bread boxes shall be placed outside of any bakery, confectionery, or other place where bread is manufactured, stored, deposited, collected, prepared, or produced for sale, which are not raised at least 10 inches from the floor, ground, or pavement.

Said rule and regulation shall be in full force and effect on and after the 1st day of October, 1916.

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