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FOREIGN SUBSTANCE IN CHEWING TOBACCO.

COURT DECIDES THAT MANUFACTURER IS NOT LIABLE FOR POISONING CAUSED BY A SUBSTANCE ACCIDENTALLY INTRODUCED.

The courts have held that manufacturers of drugs and foodstuffs are liable to consumers who purchase from dealers for injury resulting from negligence in allowing foreign substances to be introduced into the drugs or foodstuffs during the manufacturing or packing processes. (Public Health Reports Oct. 15, 1915, p. 3095.)

The Supreme Court of Tennessee has decided that this rule is not applicable to chewing tobacco, on the ground that tobacco is not a food. (See p. 269 of this issue of the Public Health Reports.)

MENTAL MANIFESTATIONS OF PELLAGRA.

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The occurrence of mental disturbances among pellagrins has been variously estimated in Italy, according to Marie,¹ at from 4 to 10 per cent, while in the United States the frequency of insanity among pellagrins has been placed by Grimm,² at 7.5 per cent. If the very mild types of aberration are included, it is probable that even a greater number show mental disturbances, a point very recently brought out by Singer,³ who found that 52 of 130 unselected cases showed mental symptoms.

The fact that mental disturbances are so frequently associated with pellagra—an association that has been noted ever since the recognition of the disease—warrants investigation in this particular field. A number of such investigations have been made. Curiously divergent views and observations have been reported. In the present study it was thought advisable to restrict the inquiry to certain lines. These are indicated in the following questions, which were held in

¹ Marie, Pellagra; Trans. by Lavinder and Babcock. The State Co., Publishers, Columbia, S. C., 1910.

² Grimm, Public Health Report, U. S. Public Health Service, Mar. 7, 1913.

³ Singer, H. Douglas, Mental and Nervous Disorders Associated with Pellagra. Archives of Internal Medicine, January 1915, p. 121.

mind throughout the work here reported: First, are the psychic disturbances that accompany pellagra typical? Second, if a mental symptom complex can be ascribed, how does it compare with mental disturbances of known etiology? With this object in view, it was planned to make, whenever possible, a close study of individual cases throughout the course of the disorder.

In the search for material a visit was made to the hospitals at Savannah, Ga., where the United States Public Health Service was treating a number of pellagrins for purposes of investigation. Few of these showed mental disturbances, and after viewing opportunities elsewhere it was decided that the Georgia State Sanitarium at Milledgeville offered the largest amount of material for study. From the latter part of January, 1914, to the middle of August of the same year a large number of cases were observed. The histories of a still larger number were available for careful perusal. Incidentally the well-preserved records and clinical notes that are taken as a routine at the Georgia State Sanitarium greatly facilitated this investigation and made possible a much wider survey than could otherwise have been feasible.

The literature dealing with the psychoses associated with pellagra is very contradictory. Oddly contrasting observations have been recorded. The need of a careful investigation in this particular field was indicated by Finzi¹ in 1902, when he published his views on the mental symptoms of pellagra. He concluded that the psychosis was an amentia. This term "amentia" as used by European writers refers to a mental disturbance characterized by haziness or clouding of consciousness varying in degree, during which an individual is more or less out of touch with his surroundings and which not infrequently is accompanied by sense falsifications. The mental states commonly found during the course of infectious diseases, generally looked upon as delirious states, are not unlike the condition that is termed "amentia" by Europeans. In this country the term has been used to indicate a condition of feeble-mindedness—in fact, not a mental disease, but a failure of mental development; therefore, a congenital and not an acquired condition.

Tanzi and Antoni¹ also viewed the mental disturbance associated with pellagra as of this type, viz, a mental confusion or delirium. Vedrani,¹ on the other hand, maintained that the psychosis of pellagra ran its course without disturbance of orientation, an observation entirely at variance with the others, since a disturbance of orientation invariably accompanies, is in fact an essential symptom of, the mental state that is termed "amentia." This difference among recent writers is difficult to understand and led Gregor² in 1907 to make a

¹ Marie, Pellagra.

² Gregor, A., Beitrag zur Kenntnis der Pellagrösen Geistesstörungen. *Jahrbu. f. Psych. u. Neurol.*, Leipzig u. Wien, 1907, XXVIII, pp. 215-309.

painstaking investigation of the mental symptoms associated with pellagra. His work resulted in an excellent report dealing with this particular phase of the disorder. From 72 cases studied, he came to the following conclusions: That a fairly well-defined symptom complex occurred coincidentally with the somatic symptoms of pellagra and therefore that a causal relationship existed. He classified the mental states into seven groups: (1) Neurasthenia, (2) acute (stuporous) dementia, (3) amentia (acute confusional insanity), (4) acute delirium, (5) catatonia, (6) anxiety psychosis, (7) manic-depressive and a terminal state of pellagrous dementia.

This grouping of the mental conditions associated with pellagra offers no difficulty. All the types mentioned, with the exception of catatonia, were observed in this investigation. The conditions, however, were frequently very transient and these subclassifications were made possible only when the psychosis was viewed in cross section at any one period of its course. When the psychosis was viewed in its entirety, it was frequently found that the characteristics of one group appeared at one time, while previously or subsequently the characteristics of another group were manifested. That many cases passed through several of these groups was mentioned by Gregor.¹ This occurred so frequently in the writer's experience that the need of these rather poorly circumscribed groups was questioned. This applies particularly to groups 1, 2, 3, and 4. Gregor himself states that the milder cases of group 2 differ only in degree from group 1 and that a prodromal stage resembling group 1 precedes group 3. It is my opinion that group 4 is an aggravation of the conditions classified under group 3. In other words, the various clinical types coming under the groups referred to with the exception of the mildest in group 1 are merely degrees of the same mental disorder.

In group 1 Gregor places seven cases. The symptoms are subjective complaints of headache, gastralgia, vertigo, anxiety, vague, ill-defined fears, depressed mood, disturbance of association of ideas, questions answered after long hesitation; later, apathy and inactivity. In the experience of the writer a neurasthenic state was very frequently associated with a depression of mood. This depression, however, was not an abnormal state, but perfectly consistent with the physical condition that existed. As these patients were conscious of their malady, the pains and general distress would naturally result in a depression and can not therefore be regarded as disordered psychic activity. Upon the other hand, when the depression is excessive—that is, not in accord with the physical suffering and consciousness of a serious malady—it can be viewed as of psychotic nature. In such instances, however, one usually finds, in addition to

¹Gregor, A., Beiträge zur Kenntnis der Pellagrösen Geistesstörungen, pp. 215-309.

the depression, transient periods of confusion; also when confusion exists the depression of mood is more apparent than real. While apparently depressed, these patients were in many instances apathetic. Their interests were seemingly lost or largely self-centered.

In order to facilitate the presentation of this report it seems desirable to state at this point the classification of the mental states that will be followed. Like Singer, the writer separated his cases into groups, depending upon the etiologic value that could be ascribed to pellagra. The cases in which pellagra alone seemed responsible for the mental symptoms were subgrouped into two classes, viz, confused and delirious forms. The remaining material was viewed as instances of complication; that is, the development of pellagra in an individual already insane, the psychosis in this instance antedating the pellagra by years and being entirely unrelated. Another group of cases in which Singer believes that pellagra may serve to precipitate a mental disturbance in a susceptible individual was also made. These will be considered later under the atypical mental states encountered during a course of pellagra. The term neurasthenia was applied to the noninsane cases, of which there were not many seen, though the condition of neurasthenia was frequently obtained in the history of the cases committed as insane.

Singer has employed a very good term in designating the mental aberrations that are, according to his investigations, so very frequent. The term, symptomatic depression, as used by him fits the conditions he found in the noncommitted cases and is quite analogous to the neurasthenic state in group 1, described by Gregor, and also found in the writer's limited experience among the noninsane pellagrins.

The cases designated as confused in this report are practically all included in the severe symptomatic depressions of Singer. In the separation of sane from insane pellagrins, the writer placed greater stress upon the relative clearness of the patient, the condition of his sensorium, and less upon his mood. When the patient was found to be out of touch with his surroundings, did not clearly comprehend at all times, the mental condition was viewed as an aberration. The term that seemed to fit this condition best was "confusion." Here, as elsewhere, the condition varied in degree from the standpoint of both duration and severity. Not infrequently the condition was very transient, a matter of a few hours or less, though manifesting itself almost daily during the course of acute pellagra; in other cases the confusion was much more marked and continuous for several weeks.

The other type of mental reaction associated with pellagra and attributable to this disease without demonstrable or suspected complications will be referred to as delirious, the term not differing from

that used by Singer for similar reactions and analogous to the cases described by Gregor in groups 3 and 4. These delirious types differed clinically from the confused types by being markedly confused or not infrequently entirely disoriented with motor restlessness and vivid sense falsifications.

Neurasthenia.

The neurasthenic condition as described by Gregor, or the symptomatic depression of Singer, was elicited in 12 or 17 sane pellagrins examined. Four of these cases which failed to show these nervous symptoms were children. No special effort was made to study sane cases. The problem held in mind concerned abnormal mental states associated with pellagra. As a consequence the writer has no data bearing on the frequency of mild depressions among noncommitted cases, such as those reported by Singer. Judging from anamneses taken in the cases studied at the Georgia institution, he is convinced that a neurasthenic state is an almost constant prodromal of the more serious mental conditions which bring about commitment. The frequency of the neurasthenia, which in some instances may be aptly described as symptomatic depression, in the institutional cases studied, makes it seem very probable that an equal or larger number can be found among the pellagrins at large in cases that never progress to the point suggesting insanity.

In referring to the frequency of neurasthenia, either in the histories of the pellagrins committed to an institution as insane or in the noninsane cases, adults alone are considered, since the writer's study was largely restricted to such cases. A rather typical example of this neurasthenia is illustrated in the following case:

Case S. R., colored, female. Admitted to the Georgia Sanatorium in February, 1914. There was nothing of note in patient's family history or her own personal history up to about one year previous to her hospital admission, when her present illness began. At that time she felt ill, could not do her housework, her muscles ached; she felt tired, slept poorly, her tongue had been very sore, and her bowels loose; later her hands became reddened and inflamed. After a few weeks she felt better, though her bowels were loose occasionally. About a month previous to her admission, the nervous symptoms again became prominent, and she was advised to come to the hospital for treatment. Upon admission she was quiet, perfectly oriented, and clear; she gave a coherent account of her life; no delusions or hallucinations could be elicited. She knew she had pellagra, and voluntarily came to the hospital for treatment; though she knew the institution was for mental cases, yet she was informed that pellagra was treated there also. Her memory showed no defect; her retention was good; general information in accord with her opportunities. She complained of great bodily weakness and wished to remain in bed; she also complained of itching and burning of the throat, pains in the abdomen radiating upward; pains over the spine and in the legs, persistent headache, and sleepless nights. During the early part of the following month, about two weeks after her admission, the physical

symptoms became aggravated, excessive salivation developed with very severe stomatitis; the darkened, thickened skin over the hands, forearms, and feet showed an outer border of redness; sloughs developed over the knees; diarrhea continued unabated throughout the period of her hospital residence. Her emaciation now became very severe; yet the patient remained very clear until about two days before her death, when she was observed at times to be slightly hazy. She continued to recognize the examiner, however, and others about her; but failed to recall details of former conversations; happenings of the last few days were no longer retained. Where she had kept track of time spent at the hospital since her admission, she now became somewhat hazy and was in doubt as to the length of her residence. No hallucinosis developed. When asked concerning the pains and aches she referred to upon admission, she claimed that these were no longer as severe. About 20 hours preceding her death she paid little attention to questions that were asked. She lay quietly in bed, occasionally twitching an arm or leg, and when either was held up, a coarse, jerky tremor was observed; her face was immobile and eyes half closed. When spoken to loudly she comprehended the question asked and in a feeble, hardly audible voice would make coherent replies. Without further change the patient died suddenly. In this instance no mental impairment occurred until shortly before death; the nervous condition is termed a neurasthenia.

Confused Types.

Usually after a period of neurasthenia such as described in the former case, without any abatement of the nervous distress mentioned, the patient develops periods of haziness during which he is but partially oriented. This disorientation usually manifests itself at first in a failure to keep track of time duration. Shortly after, even fairly familiar surroundings are not completely recorded. Many slight occurrences, whether within the field of vision or of hearing, make no impression. Gross stimuli are comprehended, however. This dimming of apperception is not limited to the special senses alone, but slight tactile stimuli are apparently insufficient to pass the threshold of consciousness. The indifference to flies, etc., about the face and hands would indicate this. With the haziness as to whereabouts a feeling of apprehension is almost constantly present. At times this apprehension is very vague and ill defined; at other times and not infrequently it is very marked and becomes a great distressing fear. These patients not only show evidence of this by their behavior, but usually express this apprehension or fear in some manner.

As a rule, after the above condition has developed, hallucinations appear. In the less clouded cases these hallucinations are largely in the auditory field and usually take the form of an indistinct murmuring attributed to some near relative, quite frequently children, or to the voice of God. Visual and somatic hallucinations are also encountered, though not as frequently as the auditory. The transient nature of this confused condition has been previously mentioned. During intervals of confusion these patients have a degree

of insight into their mental condition. Very frequently they make expressions indicating a consciousness of mental inadequacy; this the writer has found to be a fairly constant symptom of these mildly confused types. The following cases will serve to illustrate this type of mental reaction:

Case R. S., colored, female. Upon admission to the sanitarium the patient showed a characteristic pellagra. She was clear mentally, appreciated her surroundings, and gave a detailed and apparently accurate account of her life history. About one year previous to admission she felt "heavy." The household work she was accustomed to perform became a laborious task. She felt very weak, had intermittent attacks of diarrhea and constipation. Her tongue felt swollen and appeared "inflamed." Her muscles ached, she had pains in the region of the heart, skin over hands burned and itched, and she lost progressively in weight. Her account of the weeks preceding her admission was rather meager. She knew that she was at home, but was unable to relate events leading up to her commitment. From the information received with the patient it is probable that she became very confused previous to her admission. When interviewed shortly after she came to the hospital the patient seemed fairly clear. She was oriented as to place, but hazy as to time. She did not know the day of the week, nor could she approximate the time of the month. She recognized the clinician as a physician, appreciated the character of the institution, and correctly identified the attendants. No hallucinations could be elicited, nor was there a retrospective account of any experience that could have been interpreted as hallucinatory. She was not depressed at this time, cooperated willingly, and seemed quite grateful for any little attention paid to her. After two days a change occurred in her mental condition. The confusion now became quite apparent. Previous conversations and interviews were not recalled. Retention tests applied showed failure in this field. While her memory for the immediate past became hazy for details, grosser or more striking events were retained. Coincident with this aggravation of her mental state the physical signs of pellagra became acute. The stomatitis and diarrhea were very severe; the skin between the fingers and over the knuckles sloughed. Mentally she became less and less in touch with her surroundings. Finally a deep stupor developed, and the patient died.

In this instance the mental condition was a confusion with a prodromal neurasthenic state, the confusion manifesting itself in a clouding of the sensorium which placed the patient out of touch with her surroundings. The confusion deepened as the physical signs of pellagra became more acute. In this instance no hallucinosis appeared throughout her stay at the hospital, a period of three weeks.

Case J. S., white, female. After the death of her husband the patient was compelled to do hard, laborious work. Her income was insufficient to support her children, who were then sent to an orphanage. At about this time her health failed. She became weak, lost weight, her hands became inflamed, and she was told that she had pellagra. This occurred about four months previous to her admission. When admitted to the hospital the patient was quiet and answered questions relevantly and coherently. She admitted that she had been worrying about her children; that at times she felt "very confused," as if her head were "whirling around"; that frequently she felt startled, because it seemed as if "she did not know just what had happened." Frequently during the last few weeks she had vague fears as if something was to happen, "something dreadful." Usually at these times her children would come to her mind.

She thought she had been sent to the hospital because her "mind was failing." Upon admission the patient had a well-developed pellagra with skin, mucous membrane, and intestinal symptoms. Although apparently clear, she showed considerable confusion as to recent happenings and made a number of contradictory statements of which she was evidently not aware. She was oriented as to place, knew its character, and recognized the physicians and nurses. She did not know the day of the week, and in estimating the time of the day she failed by over three hours. Her memory for remote events showed no discrepancy. She denied hallucinations, nor were any delusions elicited. She was a trifle anxious in her attitude, looking about in a somewhat apprehensive manner. She understood questions and answered revelantly and correctly so far as her faulty memory for the recent would permit. She tired easily and gave the impression of wishing to be left alone.

Retention tests applied were not recalled after one hour. The patient even failed to recall that a test phrase and number had been given her. After 10 minutes the patient could recall only 2 of 5 simple tests. In performing mental calculations she experienced great difficulty. The serial subtraction of 7 from 100 was not performed. She counted from 1 to 20 in five seconds; the reverse count required 18, and in addition the patient had to be assisted and urged to continue. At this time she complained of mental confusion. Later she developed auditory hallucinations. These invariably concerned her children and herself. They were usually of a condemnatory character. The voices were not very distinct, but were described as a murmuring that she heard when alone. She could understand that her children were to be tortured and she herself was to meet with some indescribable calamity. She now showed fear and expressed anxiety as to her future. Her disorientation became more marked; although she knew she was at the hospital, she mistook attendants for patients; she lost track of the length of time she was at the hospital, and her memory for the recent became very much impaired. Questions asked were frequently unheeded, though by insistence and repetition a monosyllabic reply which indicated some comprehension could be obtained. Throughout this time the patient remained quietly in bed; facial expression heavy, eyes usually fixed toward the ceiling, showing no interest and taking no notice of her surroundings. This condition persisted several weeks. At night patient was usually restless and frequently soiled herself. She had to be urged to take food. The physical manifestations of pellagra subsided and gradually the mental condition changed. Within a week the stuporous state disappeared and the patient seemingly took more interest in what was going on about her. Hallucinations were no longer elicited. The apprehension disappeared and she became clear. Her recollection for events preceding her admission was very faulty, nor could she recall any events with any degree of certainty for the period of confusion that has been described. She recalled hearing voices that she now recognized as imaginary, and described them as of dream-like experience. The patient eventually made a complete recovery.

Case C. F., colored, female. Admitted to the sanatorium March 26, 1914. There was nothing of note in patient's early life until the advent of her present illness, which began about a month previous to admission, and consisted of a typical pellagra, accompanied by a neurasthenic condition such as previously described. When admitted the patient was extremely reduced physically. She appeared frightened and apprehensive; at times would look about and mutter and mumble as if in response to a voice. She seemed entirely lost to her surroundings. But few questions were answered relevantly. When asked how she felt, she replied, "I feel like something is going to happen, I feel that way, I feel that way." When asked if she saw strange sights that she could not

account for, she replied, "Yes; something running around the walls sometimes." She admitted great fear, did not recognize the physician and nurse as such, gave no account of her trip to the hospital, did not recall a former interview with the examiner, did not appreciate the nature of the institution, and was mildly restless, which condition became aggravated at night. She was frequently observed muttering and mumbling to herself, paid no heed to bowel or urinary discharge; she appeared sad and sometimes her eyes would suffuse with tears; she never asked any questions and never made any efforts to orient herself. The simplest calculations were not performed. When directed to count from 1 to 20 she began, but stopped before she reached 6. Retention tests were not recalled after two minutes. The few replies made by the patient were in a hesitating, low tone of voice, which became less and less audible, and at times the patient would reiterate the last word until it became an indistinct whisper. The patient never made any request for food, though at times she indicated a thirst by making an effort to point to her lips. When lying quietly in bed a tremor of fingers was present. This became accentuated when patient made an effort to raise her arm from the bed. At times coarse, jerky movements of both upper and lower extremities were observed. The patient continued in this mental and physical condition over two months, when improvement occurred. Later, when clear and oriented, she showed a well-marked amnesia for her earlier period at the hospital.

Case M. G., white, female. In this patient pellagra had existed three years. From the informant it was learned that the patient had complained of pains generally distributed about the body, vertigo, stiffness of the muscles, and general weakness. Upon admission to the hospital she had a typical pellagrous rash and loose bowels. Mentally she was confused, could give no account of her trip to the hospital or the happenings of the previous two weeks, frequently paid no heed to the questions asked, but said over and over again, "I'm scared, I'm scared. What are you going to do to me? Am I going to be killed? I don't like to be left by myself." She knew in a vague way that she was at a hospital, but did not know its location, nor did she know the day of the week or the month, and made no effort to fix the hour of the day. Her retention was very defective. She counted from 1 to 20 in 10 seconds with difficulty, and she made no effort to reverse, nor would she perform simple mental calculations. She frequently remarked, "I have pellagra; I have been in bed two weeks. Oh, I don't remember; I don't remember." Although the patient denied hallucinations, from her behavior at times it was thought that they probably existed. At times the patient appeared more clear than at others, when she would show a certain degree of insight into her condition, at one time stating that she knew there was something wrong with her mind, that everything seemed "strange" and unfamiliar. The patient ultimately recovered and showed a well-marked amnesia for her previous confused state. Certain of the happenings were more readily recalled, and these coincided with her periods of relative clearness.

Case I. O., white female. The anamnesis failed to disclose any previous history of pellagra. Upon admission the patient showed dark, dry, scaly skin over backs of hands, redness and large cracks over the knuckles, desquamation of the palms of the hands, denuded tongue with fine tremors and exaggerated reflexes. She had been taken from her home to jail because of her mental condition, which, from the description, was apparently an excitement. Upon admission to the hospital the patient complained of backache, general physical depression, vertigo, headache, and pains in the arms and legs. Mentally she was confused and unable to give an account of her trip to the hospital. The day following her admission she could not recall her former interview with the examining physician. Retention tests were forgotten within a few minutes.

She did not know the day of the week, the month, and was doubtful as to the year. Her frequent reply to questions was "I don't know," or "I have forgotten." She made no effort to cooperate, being listless and apathetic. At times she admitted feeling depressed, though at others she said she felt neither sad nor happy. She remarked that she heard singing at night and voices that came from without the room. These frightened her, particularly when the voices sounded like her children. She stated that a few days before coming to the hospital she was very much frightened because she believed that somebody was "after her." At one time she claimed that she could "feel things crawling around in her abdomen"; also that she saw bugs and snakes in her room at night, and that she had complained of this to her people. At times she was observed to cry. When asked concerning this, she said that she was fearful of what was to be done to her children. She did not know by whom or why her children should be harmed, yet she felt this fear. On a number of occasions the patient remarked, "My mind goes off." When asked as to this, she said that she couldn't think and that she seemed lost. The patient always appeared very confused. She failed to appreciate the nature of the institution, failed to recognize the nurses, and never became clearly oriented. Gradually an indifference developed and the patient became very careless and apathetic. In the course of a few months she became seclusive; although she had improved in her general physical condition and was up and about, she became very untidy, irritable, and inaccessible, showing no initiative, requiring to be led from place to place, never associating with others or showing any inclination to converse. The final condition was a severe grade of dementia, with a persistence of darkened, thickened skin over the dorsum of fingers and marked anemia.

These few cases serve to illustrate the basic symptom upon which the grouping of confused states is made. It will be noted that these cases all showed at one time a condition of mental cloudiness, also that varying degrees of this partial disorientation were present, and likewise that it was more or less episodic, viz, periods of confusion were interspersed with periods of relative clearness. Aside from this primary disturbance of orientation, individual variations are encountered in the presence of hallucinations, expression and evidence of fear, and apprehension as well as delusions. The point which is emphasized is that, whatever the added mental symptoms may be, they occur in a certain setting—a partial disorientation. Not infrequently these patients appear depressed, and many will express ideas consistent with a depressed mood. This is particularly true of those with hallucinatory experiences, since these usually take the form of self-condemnation or injury or harm to a near relative or friend. This condition, however, is associated with the state of confusion previously described. The prominence of apprehension in these confused cases probably results from the failure of the patients to properly adjust themselves to the conditions that surround them. The feeling of mental inability which is variously expressed indicates a degree of insight into the confusion. This consciousness of mental difficulty was expressed during periods of relative lucidity and, as a rule, when the patient was tested as to recent memory or asked to perform calculations that required a little concentration for a brief

period. This feeling of insufficiency was never expressed during a period of relatively greater confusion or during a stuporous condition.

Delirious Types.

As previously mentioned, the primary disturbance of orientation observed in the confused cases is here deepened, so that the patient is for periods at least completely disoriented. Apprehension or fear is not as constant, but instead patients show great motor restlessness; this activity is apparently purposeless. The sense falsifications here become very prominent, particularly the visual. Not infrequently the same cases will show periods of confusion preceded by a delirium or the delirium may follow a confusion. The writer made it a practice to designate the case as of the delirious type, if it showed distinct evidence of complete disorientation at some period during its course.

This carrying over from one group to another is fairly common and emphasizes the fact that this differentiation of confused and delirious type is simply a grouping dependent upon either severity of intoxication or degree of individual reaction to intoxication. Probably both conditions obtain, since this grouping had little prognostic significance. Cases that remained confused throughout the course of their alienation seemingly gave but little better prognoses than those in which mental condition was essentially a delirium. Exception is made, however, in the instance of the very severe grades of delirium that have such a marked resemblance to the delirium of typhoid. In these instances the outcome was almost invariably fatal.

That severity of intoxication may be an additional reason for the delirious reaction is possible, since as a rule these delirious cases presented the other signs of pellagra in severer grade. Yet this is by no means a constant observation. The writer has seen cases such as the one illustrated as typifying the neurasthenia which showed very marked physical evidence of the disease, while on the other hand, a case to be quoted later (case R. M) showed slight external evidence of pellagra. Yet the first quoted showed very slight or no mental abnormality, while the latter gave very marked mental symptoms. It is probable that these cases of delirious reactions represent, in part at least, individuals prone to such disturbances, analogous to the instance of susceptibility to delirium from relatively slight fever.

The following cases will illustrate the delirious type of mental disturbance associated with pellagra:

Case C. H., colored, female. Upon admission to the sanitarium the patient had a characteristic pellagrous rash over knees, elbows, hands, and feet. Feet and legs were quite edematous. The daughter stated that the patient had been well until three years before, at which time her health failed, she complained of headache, vertigo, muscular pains, tongue and mouth became sore,

and diarrhea developed. At this time the daughter was told her mother had pellagra. About two months previous to admission the patient suddenly became very irritable, struck her children, drove them out of the house, did not eat, and was very excited for several days. Following this, the patient seemed well mentally until about a week before coming to the hospital, when she again became excited, ran about the house, shouting and crying, praying and singing.

When admitted the patient was very restless, threw herself on her knees, paid no attention to questions, showed great fear when approached, and had to be forcibly led to the examining room. If not held, the patient would go about the room, peeping through the windows and door. No relevant replies were obtained to questions. When asked her name, patient replied, "Mamma, where are you, mamma?" The attendants observed her behave in a similar way when in her room, frequently going to the door of her room and crying out the same appeal. The patient was evidently entirely disoriented. She referred to the place as "Dodge" and to the examiner as "Mr. Jesup." When asked what she was doing there, she replied that she came to see her folks. At one time she said that God spoke to her and told her to pray. Her memory could not be tested. Three months later the patient was filthy, destructive, did not associate with others, and was inaccessible. A discoloration of the dorsum of the hand with thickening of the skin was still present at this time.

Case N. H., white, female. Patient had had pellagra two years; previous to that time had been healthy. The condition manifested itself shortly after the birth of her last child, after which time the patient progressively lost in weight and suffered from neurasthenia. Shortly before her admission to the hospital she became very restless and excitable. Upon admission the patient was inaccessible to any detailed examination. She was very evidently confused and appeared very apprehensive. She resisted care, had to be forcibly led to the ward, constantly crying and shouting, calling for her husband and her children. When asked, "Do you know where you are?" answered "No." When asked, "Why did they bring you here?" replied, "I don't know;" later said "They said my mind was not right, and they were not going to let me raise my baby, and I have raised all three of them." When asked whether she had any trouble with her thoughts, replied, "Yes; sometimes I was afraid somebody might kill us." Claimed that she was tired and did not want to be bothered with questions. Also remarked, "When my baby was 3 years old my hands peeled off and my bowels ran off. This was this fall two years ago." When asked if she felt downhearted said, "I am lonesome away from my husband and children." She also claimed that her husband and children mistreated her, yet could not name any particular incident. She admitted having had dreams and said that God spoke to her and told her she was "going to suffer," that she was "going to die." She said that at times she felt as if she were hypnotized and that she had been accused of "doing things" which she could not recall. This patient was blank for a long period previous to her admission. Of her trip to the hospital she had no recollection, could not recall what was done for her upon admission, did not know the name of the hospital or its character, was doubtful concerning the people around her, and did not recognize the physicians and nurses as such. Her retention was nil; could not recall the tests after a few minutes. Her memory for the remote was better; the patient was able to give some account of her previous life and also the development of the pellagra. Throughout the interview the patient evinced great fear and several times was observed to look hastily about, out of the window, and mutter some words as if in reply to an auditory hallucination. At night she was very restless, constantly getting up in bed and going to the

door and windows. Very little change occurred in the patient's mental condition for a period of about five weeks, when gradual improvement in both the physical and mental condition developed. After two months the recovery was complete. A failure to recall instances upon her admission and for several weeks during her hospital residence shows the extent to which she was out of touch with her surroundings; in other words, the patient had an amnesia that covered the period of delirium.

The delirious types, as already mentioned, include cases showing a grave disturbance that has been compared to typhoid fever. This form of delirium is fairly frequent and in my experience usually fatal. The similarity to a severe typhoid during its third week is very striking. Without positive Widal or other unmistakable evidence of a typhoid infection the delirium encountered in pellagra, when of this character, can be differentiated only with difficulty. The presence of characteristic skin lesions or the history of their presence is essential for the diagnosis. The characteristics of the delirium offer no differentiating symptoms, since the emaciation, diarrhea, sunken cheeks, sordes, dry fissured tongue, low mutterings, subsultus, carphologia, occasional violence, and complete disorientation are common to both conditions. Case illustrations are unnecessary; the symptoms are such as are found in very severe intoxications. When an occasional muttering is audible and intelligible it never indicates any awareness of time, place, or person. The motor restlessness is of wide range. It not infrequently shows monotonous characteristics. Certain movements without apparent purpose are maintained in spite of efforts to restrain. Coarse twitchings of muscles are very prominent. These patients, as a rule, show no indication of a hallucinosis. The very few that improved following this grave form of delirium were completely amnesic for this period.

This form of delirium may terminate a case that has been simply confused for a period of several weeks, or it may develop quite suddenly in a case that showed the milder form of delirium previously described. In the majority of the fatal cases a typhoidal state manifested itself as a final condition. The duration of this typhoidal state is variable. Several cases continued in this condition for over three weeks, though rarely does the condition last longer than a week or ten days. Its outcome is not necessarily fatal. A few cases passed through this grave form of delirium and were rapidly improving at the close of this investigation.

Other clinical pictures from a psychiatric standpoint are occasionally seen in these deliria. These atypical reactions may account for the terms "acute mania" or "catatonia." A psychosis associated with pellagra has in some instances been described as a "mania." This term is justifiable if the striking, more evident symptoms alone are considered and the basic disturbance of orientation is ignored.

The following case illustrates this manic-like reaction during the course of a pellagra:

Case R. M., female, white, age 33. Large and muscular, weight about 160 pounds, with a pellagrous dermatitis half encircling the neck, both hands a bright pinkish hue with fine scaling, an inflamed tongue and buccal cavity. When first observed the patient was extremely overactive, constantly trying to get up from the mattress. When approached she would grasp at the examiner's clothing, talking almost constantly. At times this talk showed all the characteristics of a manic flight. To the salutation of "Good morning" the patient replied, "Morning, morning, day, and night, good-bye, good luck, Hello John, come here, damn you—hell, hell, it's burning, put it out, get out—water, give me some water," etc. The patient would laugh and shout at the top of her voice, clutch at anything within her reach, and hold fast if successful. When asked questions the patient would, as a rule, repeat part of the question; at no time was any relevant reply obtained. This overactivity, press of speech, rambling talk with occasional flight, and distractibility with inattention and apparently elevated mood continued for over two weeks, when the patient developed a delirium showing the characteristics referred to as "typhoidal." The history obtained with the patient gave no indication of any previous mental disease—the pellagra preceded the "excitement" noted previous to admission by two months.

The manic-like behavior of this patient was very striking, yet this reaction occurred during a period of probably total disorientation. At no time when observed did the patient utter any remark that would tend to show she was at all in touch with her surroundings. In fact, at times it was apparent from her talk that she felt herself at her home, and also upon a few occasions she called her husband's name. It was concluded that the patient was entirely unconscious of her surroundings. The words that she picked up from conversation in her presence or direct questions to her seemingly carried no meaning.

It was also in the course of a delirium that catatonic reactions were observed. These instances were few, however. In three cases the similarity to catatonia consisted in verbigeration and other monotonous activities. A word or phrase would be muttered over and over again. Heedless of questions, though at times interrupted for a brief period by a loud command, the patient would return to the same or some other word or phrase and continue its reiteration. These patients also moved their fingers and hands in endless repetition. None was accessible to questions, none gave any indication of being aware of his surroundings, other than the few instances when a slight response was obtained to an imperative, repeated, and simple command, such as "Show your tongue." They likewise showed considerable resistiveness and would assume rather constrained attitudes in bed. In no instances was a definite, waxy flexibility observed. One case of this type improved during the period of observation and showed an almost complete amnesia for the time during which she showed these catatonic symptoms, in this respect differing from the catatonia observed in dementia præcox.

Resistance to muscular movements was occasionally encountered among the cases that showed simply a mental confusion such as previously described. This resistance, however, was not of a catatonic

type. It was observed in cases that held the arm or leg in a state of considerable flexion. When efforts were made to extend the limb a resistance would be met, and, furthermore, pain frequently complained of and evidenced by facial expression. If instead of extension an effort was made further to flex the leg or arm suddenly no resistance would be encountered. These muscular attitudes that at times gave the appearance of constraint are thought to be due in many instances to actual muscular cramp.

The mental symptoms of both the confusional and delirious types are dependent upon a lack of impressibility. The clouded sensorium fails to assimilate or properly coordinate sensory impressions. Not infrequently, in the less affected cases, by great emphasis and insistence an impression will be properly grasped and in such event a normal response can be obtained. In other words, quite a number of patients who are apparently quite out of touch with their surroundings can be made to attend for brief periods. The disorder of memory is therefore more of a failure to receive an impression than an inability to recall. This lack of impressibility accounts for the haziness as to surroundings shown in their partial disorientation. This haziness, as a rule, first involves time, the approximate hour of the day being lost; later, haziness as to place and person develops. The feeling of apprehension so very common in the well-developed confused and mildly delirious cases seems also dependent upon the clouded sensorium of the patients, the degree of apprehension and fear reaction seeming proportionate to the extent of disorientation, up to the point where the latter is complete. When the patient is entirely out of touch the fear reaction is not prominent and is infrequent. The spontaneous utterances, "Where am I? What are you going to do with me? I'm lost; everything is gone; don't kill me; my mind is blank. Where are my children?" etc., indicate the nature of the anxiety these patients feel and, furthermore, tend to show that this anxiety results from an inability properly to interpret conditions surrounding them. The hallucinations are, as a rule, in the auditory and visual fields. The voices are rarely distinct or constant. In many cases they are described as murmurings, in others the information conveyed is more in the nature of a premonition.

Both the auditory and visual sense falsifications became more evident in the cases that show a delirious reaction. Here the hallucinations assume a more terrifying character. The voices condemn, threaten to torture, kill, burn, murder, etc., while the visual are of somewhat similar character, hideous animals, frightful apparitions, or the patients see their own body hanged or their children tortured. Accompanying these hallucinations a fear reaction was invariably observed. In the milder or confusional types visual hallucinations were never distinctly described. The "voices" did not

have the same terrifying character. In these instances they were described as indistinct murmurings usually ascribed to relatives, particularly children. Also the "voice of God" was frequently mentioned in these cases. The complete content of any message was rarely recalled. As a rule, the patient would simply state that God had spoken to him without giving further details.

Anxiety Psychosis.

An anxiety psychosis has been described in connection with pellagra. A number of cases were observed that showed during their course a mental symptom complex, not unlike that described as involuntional melancholia. At certain periods in the course of the cases observed the picture was quite classical, yet invariably, by closer scrutiny, a haziness or clouding of the sensorium could be detected. This disturbance of consciousness in conjunction with a mental condition that has the general appearance of an anxiety psychosis has in the experience of the writer been found only in pellagra. The following case illustrates this condition:

Case F. H., white, female, age 43. Admitted March 3, 1914. Patient's father is said to have been "nervous" and a paternal uncle insane. Patient's early life was uneventful. As a child and during attendance at school nothing of note occurred. She married at 20. About six months previous to her admission a mental change developed. She became "nervous" and depressed, restless and sleepless at night, constantly worrying about trivial matters in the household, also concerning her children. She was observed sitting alone, wringing her hands and moaning, and very frequently she shed tears without apparent cause. The patient acknowledges that about six months previously she became depressed. Upon admission she showed a well-developed pellagra. The hands and wrists were symmetrically affected, a slight diarrhea was present, the tongue appeared denuded of epithelium. She complained of pains about the body, particularly along the spine; also of being "nervous" and feeling "frightened." She was poorly nourished and anemic. The patient stated that she had had "this crysipelas" (referring to her hands) for over 20 years; that the eruption appeared twice every year.

Upon admission the patient appeared depressed. When interviewed she frequently wept. She spoke in a whining tone of voice, appreciated the questions asked, and replied relevantly and correctly, excepting in the instances in which her memory was at fault. She sat in a rather dejected, uncomfortable attitude as a rule, picking at her dress or rearranging it, almost always looking toward the floor, only occasionally looking at the examiner, and then only when a question was repeated. Excepting the slight restlessness of the hands the patient was quiet. She appeared tidy in her dress and was cleanly in her habits. She frequently complained of being "afraid," and also of hearing "voices." She took sparingly of food and slept on an average four hours during the night, though not regularly nor restfully. Her ideas of self-reproach were frequent. Such expressions as these were typical: "I have sinned"; "I can't be pardoned"; "there's no use in praying"; "my children will suffer because of me." Her depressed mood was not only apparent, but expressed in many replies; for instance: How do you feel? "I feel bad." Are

you downhearted? "Yes; I feel bad; I want to go back home." "Yes; I feel so bad." "My head hurts." "I am as sick as I can be." The auditory hallucinations mentioned by the patient had in the beginning a melancholic coloring, though later they became more terrifying in character. In reply to questions, or at times spontaneously, the patient said, "I hear you all talking about me." Asked. When you are alone? replied, "Yes, sir." What is said? "They just talk about me." Bad things? "They want to take me out of there." Are you frightened then? "They frighten me when I feel so bad." "I don't know their names." Later in the course of her illness the patient stated, "They want me to be out; they are tired of me. I hear them planning to kill me; they want to get me out of the way." Have you enemies? "Seems like I have."

The following replies indicated the patient's confusion: She said, "I told you the other day that I haven't been well" (this during the first interview). Do you know me? "Yes; it is the one that has been in here." What is your name? "Hamilton—Tiney Hamilton; you all know it; I told you all before." What place is this? "I don't know." Is it a hospital? "'Pears like it was." Is it Milledgeville? "Atlanta was where I was going." What day of the week? "I don't know." Monday, Tuesday, or Wednesday? "It must be Sunday." What makes you think so? "I left home on Sunday about a week ago." Do you think you have been here about a week? "Yes, sir" (second day after admission). Patient knew she came to the hospital on a train with her husband and deputy sheriff, also that she received a bath upon admission. Her memory for the remote was fairly good. She gave the names of her school-teachers and dates of events in her life without discrepancies.

At times the patient would appear much brighter, though her depression with a tendency toward anxiety would then become more apparent. During the periods of confusion the hallucinations invariably became prominent, at least at those times the patient would make reference to them. During her clearer periods the patient displayed some insight into her condition; for instance. Is there anything wrong with your mind? "Yes, doctor, there is something wrong; I don't know what it is." Can you think clearly? "Sometimes I can and sometimes I can't." Is your memory all right? "Not much of the time." Are not the voices you hear imaginary? "No, sir; they are just like you talking." Upon several occasions the patient was quite prompt in performing mental calculations, counting 1 to 20 in 7 seconds and reversing in 10. Upon other occasions the required time was more than double; likewise in the serial subtraction of 7 from 100 upon a few occasions, with a little assistance, the patient was successful, while at others she would rarely get beyond the first subtraction.

Gradually the confusion became continuous and marked. She frequently complained to the nurse concerning those who were threatening her, also that she was being hypnotized. On March 18, 15 days after admission, she was noted as being much more restless and becoming very confused. She was frequently observed muttering and mumbling to herself. Within a few hours it was evident that the patient became entirely out of touch with her surroundings, coarse, jerky tremors of the arms and legs developed, questions were no longer understood, restlessness increased, patient began talking aloud, calling out names, jactatory tremors of the upper extremity developed, incontinence of bowel and bladder occurred, pulse became rapid and feeble, temperature remaining subnormal until her death on March 26, 1914, 23 days after admission.

The prominence of the ideas of self-reproach, the gloomy outlook, the depression of mood, restlessness, and anxiety bear great resemblance to the depressions so frequently observed at the involuntal

period of life; yet the frequent episodic disorientation with subsequent memory defects for the periods of confusion is an addition to the clinical picture that characterizes these disturbances as pellagrous.

This type of depression was observed only among females and at the period of life when such a condition ordinarily manifests itself. Whether these patients would have developed a psychosis of this type in any event or whether the psychosis was precipitated by the advent of pellagra is, of course, not answerable. That the existence of pellagra can alter a primary mental condition was observed in a number of cases. It is therefore possible that, in the instance of these agitated depressions at the involutorial period of life, the pellagra simply supplies the elements of confusion to a psychosis that is quite independent of this disease.

Pellagra Manifestations in Already Established Psychoses.

That an intercurrent pellagra manifests itself by certain mental symptoms in an already established psychosis was very strikingly demonstrated in a number of cases that developed among hospital inmates. These cases were of the type that do not in the usual course of the disorder show episodic disturbance such as accompanied the pellagra. This superimposed mental condition can therefore be viewed as pellagrous, and herein serves to typify the mental disturbance that can be directly ascribed to this disease. Two cases of feeble-mindedness, two of dementia præcox of paranoid type, and one epileptic with a general mental deterioration developed pellagra after a lengthy hospital residence.

The original examination and series of clinical notes taken in these cases established the mental condition of the patients. As the somatic signs of pellagra developed, the clinical notes showed these significant entries: "Patient is confused," or "is very restless, disturbed, and confused," "is disoriented." In the instance of the epileptic the notes taken described an excitement in addition to a mental confusion that had never been noted before. The two stationary dementia præcox cases that were personally examined at the time pellagra developed showed, in addition to the fundamental disorder, a disorientation for time and place that had not existed previously. The memory of the patients for recent events was greatly impaired. This retentive defect was easily demonstrable when tests were applied. A mild restlessness and apprehension were observed at this time, while at no time had these patients shown any other behavior than the quiet, placid, automaton-like existence so constantly observed in a stationary dementia præcox. There was no doubt as to the simultaneous existence of pellagra and a psychosis or mental abnormality independent of pellagra in these cases. As the pellagra manifested itself

the primary condition was altered by the development of a confusion. This coincidental development in cases that do not show these episodes of confusion in the ordinary course of events is sufficient reason to ascribe this superimposed confusion to pellagra.

The coexistence of pellagra and an unrelated mental disturbance accounts in all probability for the number of cases that are grouped as "dementia præcox reactions." The histories of 34 cases thus grouped were reviewed; in a few instances additional information was received at a date subsequent to the time when the diagnosis "dementia præcox reaction" was made. In 12 cases a very significant history of early peculiarities and oddities in conduct was obtained. Although the anamneses were not as complete as desired, yet in general a description of a personality having the characteristics of the shut-in type described by Hoch was obtained in 12 of the 34 diagnosed as dementia præcox. This peculiar make-up antedated all pellagra by a number of years and is unquestionably not dependent upon this disease.

In the instance of pellagra and an unrelated psychosis the mental picture becomes atypical. The fundamental alienation manifests itself either in all purity or is distorted by the addition of confusion or mild delirium to the already existing mental symptoms. A number of such cases can be quoted. It must be understood that in these cases of pellagra complicating another mental disturbance the pre-existence of the latter was unquestioned. Its long duration previous to any pellagrous manifestations and its typical course and development over several years left no room for doubt as to the independence of the fundamental psychosis. In three cases a well-developed dementia præcox preceded all physical evidence of pellagra by over 10 years. Upon admission to the hospital, information as to previous condition is usually meagre. The patients present a picture quite typical of dementia præcox, although transient episodes of confusion are occasionally described. These are believed to be the pellagrous manifestations. It is customary to group these cases as "dementia præcox" type, yet the type existed previous to the pellagra. The mental disturbance that is associated with the active physical signs of pellagra in individuals previously normal always had in the experience of the writer the primary disturbance of orientation. Without confusion or periods of confusion, without delirium varying in severity and duration, from observation the writer would hesitate to ascribe an acute mental condition to pellagra. The mental disturbances that accompanied evident pellagra were so consistently of this nature that in the absence of these symptoms the mental state must be regarded as probably due to some other agents or at least as very atypical.

Another possibility must be entertained when the complication of a previously existing psychosis and pellagra is considered and that

is, To what degree may the occurrence of pellagra serve to bring out a latent mental disturbance, particularly of the dementia præcox type? Whether this latter condition is viewed as of psychogenetic origin or as an intoxication, to have pellagra superimposed upon a condition about to manifest itself or requiring just an added stimulus would in all probability hasten the development.

That an increased suggestibility is present early in pellagra has been frequently mentioned; that mental confusion and haziness due to pellagrous intoxication would accelerate psychoses of psychogenetic origin is therefore very probable. In such cases the coexistence of pellagra and an unrelated mental disturbance would be difficult to recognize. For these cases and such others in which, owing to insufficient anamnesis, a clear clinical picture is not obtained, the usage of an unclassified type (mental) by Dr. E. M. Green is to be recommended.

Dementia or Terminal Mental Conditions.

With the exception of the atypical and coincidental psychoses, the mental states thus far described can be referred to as acute in contrast to a terminal condition that has been named a dementia. The occurrence of these final or terminal mental conditions associated with pellagra is in the experience of the writer very infrequent; that is, when pure uncomplicated pellagrins alone are considered. The acute mental disturbances (confusional or delirious reactions) terminate either in recovery or in a typhoidal state shortly before death; in other words, when the patient recovers from pellagra he also recovers his mental health with very few exceptions.

In all cases examined either personally or by means of histories, there were but four in which the mental condition at the time of the examination could be looked upon as a sequel or accompaniment of pellagra. In these four cases the disease was present at various times during a period of years. Their histories further showed a number of acute mental disturbances in the nature of delirious attacks from which recovery seemingly took place. Gradually a general mental enfeeblement developed, and at the time these patients were interviewed the mental state differed very little from the quiet, apathetic general mental deterioration such as one frequently finds in the terminal state of a deteriorating dementia præcox case. Without a history the condition could not be differentiated from dementias due to other causes. The memory was affected, but not out of proportion to other intellectual defects.

In one instance the case had all the indications of a general paralytic. The patient, a colored female, showed a quiet euphoria with mildly expansive ideas mainly concerning her own good health and strength, both mental and physical,

gross memory defects and a slurring, drawling speech, tremulous tongue and lips, and unsteady gait. The pupils, however, were not affected; repeated Wassermann tests of both blood and spinal fluid as well as cytologic and chemical examination of the latter gave negative results. The condition was therefore attributed to pellagra, which in this instance had manifested itself at various times during the preceding four years and was associated with at least one sharp delirious episode of over four weeks' duration. Following this delirium the present condition gradually developed. Incidentally, the patient had also been a morphin habitué.

The term "pseudo general paralysis" has been employed in describing certain of the mental states associated with pellagra. This term unquestionably has been applied to such cases as the one just described, and their general appearance and symptomology warrant this comparison with paresis. However, in view of our present-day knowledge concerning the etiology of paresis and its established entity, it would be advisable to discard this term. The differentiation of such terminal states of pellagra from paresis must be made by means of spinal fluid examination and specific tests, having in mind, however, that, while pellagra gives negative findings, paresis or syphilis may complicate it.

Chronic mental states largely ascribed to pellagra are those occurring late in life. A number of cases were observed that showed a typical senile dementia. These were all advanced in years and the occurrence of mental defects of this nature could have been expected. Likewise a number of cases with well-marked peripheral arteriosclerosis showed a general mental enfeeblement such as is usually associated with sclerosis of the cerebral vessels. That these psychoses may have developed at a somewhat earlier period owing to the pellagra is not questioned, yet the condition was not different from that usually found in association with advanced age and can not therefore be attributed to pellagra alone.

Unbalanced Diet in Cases of Insanity.

The occurrence of pellagra among inmates of insane institutions has been noted by all investigators and has brought forth some views concerning its etiology. In general the types that develop pellagra have been described as demented individuals coming under the class of terminal dementia præcox cases, epileptics, and inferiors. This was found to be a fact, though the significance of the development of pellagra in these individuals became apparent to me only when Surg. Joseph Goldberger pointed out the possibilities of an unbalanced diet. When these cases that develop within an institution are further studied it becomes apparent that the existing psychosis as such has no direct bearing upon the development of pellagra. The majority are cases of terminal dementia resulting from a long-standing dementia præcox; a lesser number are low-grade inferiors, deteriorated paretics or seniles, and in a few instances cases of depression associated with motor sluggishness. While these conditions are quite dissimilar, yet from the standpoint of general behavior about the ward, and more particularly their attitude toward food intake, these widely different conditions come to a common goal. The case of dementia præcox has apparently lost all outside interests.

The patient is inactive, seats himself or stands about the ward alone, hides in nooks and corners. His life is vegetative. When directed he may without further assistance proceed to a dining room and there seat himself with the others. He is heedless of what is placed before him; may eat all or none. If all but the gravy has been purloined by a neighboring patient he offers no protest. In a slow, monotonous manner he eats any food that happens to be before him.

Without proper supervision it is obvious that such a patient may receive either an inadequate or unbalanced diet over a lengthy period. Sometimes the gluttonous paretic may find himself in similar straits. While to all appearance taking a great quantity of food, this food may consist of any one article of diet that is conveniently near and easily handled. The behavior of the depressed, inactive cases at the table will likewise result in either insufficient or monotonous diet if unattended. This possibility of a deranged diet in the instance of a patient devoid of all apparent outside interests, apathetic, indifferent, listless, or affected in his attitude toward food owing to delusions can be readily seen. This possibility becomes a certainty when the fare supplied tends to one-sidedness, is deficient in amount, or its service is not made with the care and attention this type of patient requires.

Summary.

After excluding cases in which it was evident that the pellagra was simply incidental to a previously existing psychosis, 167 cases were grouped under the types previously described. Eighty-four, or 51 per cent, were of the confused and 63, or 38 per cent, of the delirious type. Sixteen cases, 10 per cent, gave a clinical picture that resembled either dementia præcox (11 cases), and senility or arteriosclerotic dementia (5 cases). In none of these 16 cases was it possible to establish the existence of a psychosis previous to the pellagra. These are probable instances in which pellagra served as a precipitating factor in the development of a psychosis of the dementia præcox or senile type.

The relative frequency of the types mentioned above applies of course to cases of pellagra that are committed to an institution as insane. That a large number of cases with mild mental confusions are never committed would seem very probable from Singer's experience. It is therefore likely that the confusional types are far more frequent than the delirious, since it is probable that nearly every case of excitement and delirium is committed, while mild confusions may not warrant this procedure.

Physical evidence of pellagra was unmistakably present or obtainable in the history of every case summarized. The average duration of the pellagra previous to evident mental disturbances was 2 years. The briefest interval between the onset of the pellagra, as

shown by the dermatitis and mental symptoms was 10 days, while the longest period was 20 years. In every instance where a psychosis existed previous to the onset of pellagra the former clearly belonged to one of the well-recognized groups and never had the characteristics of either the confused or delirious types mentioned.

The writer's first query, "Is pellagra associated with a typical psychosis," can be answered in the following way: If uncomplicated pellagrins admitted to an institution for the insane are considered, the vast majority, 90 per cent, show a mental abnormality characterized by a disturbance of orientation. The variations in the clinical manifestations from a mental standpoint depend primarily upon degrees of this disorientation. Accompanying this primary disturbance there are clouding of the mind, confusion of thought, visual and auditory hallucinations, apprehension, defective retention, and a subsequent amnesia restricted to the periods of greater disorientation; furthermore, the periods of confusion or delirium tend to appear as episodes of varying duration.

Rossi¹ mentions the frequency with which the condition he terms a depression passes into a confusion. He likewise mentions the partial inaccessibility of the insane pellagrins; also their failure to form a clear idea of their new surroundings after transfer from their home to an institution, though they have knowledge of the fact that they are no longer at home. He also refers to the insight that these patients occasionally have, whereas the effect of the impressions of the outside world may be considerably impeded.

These characteristics are found in the mental disturbance associated with intoxications and infective or exhaustive states. It has been a practice in some institutions to group the pellagrous mental states with the infective-exhaustive psychoses, while others classify the condition among the toxic psychoses. This latter grouping is recommended. From clinical manifestations alone the psychoses associated with pellagra bear greater resemblance to the toxic than to the infective-exhaustive mental states. The deliria encountered in the infections are associated with fever. The confused states that occur in the course of an exhaustion, while not necessarily accompanied by fever, do not show the episodic variations one finds in pellagra. In the exhaustive states the hallucinations are not as vivid, and fear reactions are not as prominent, as in pellagra. Furthermore, the feeling of mental inadequacy is not nearly so prominent in either the infective or exhaustive states or combination of these conditions as it is in pellagra.

When the mental states found in pellagra are compared with the toxic psychoses, of which alcoholism is a good example, a greater re-

¹ Rossi, Pellagra and its Relation to Psychiatry. *Am. Journ. of Insanity*, special No. V, 1913.

semblance is noted. During the course of chronic alcoholism acute mental upsets occur and contribute approximately 15 per cent of the total admissions to a State hospital for the insane. These acute upsets have the characteristics ascribed to the mental conditions associated with pellagra; that is, one finds states of confusion varying in degree, hallucinosis, and delirium. Fear reactions are very prominent in the confused and mildly delirious cases. The character of the hallucinosis is very similar to that found in pellagra.

The resemblance is not clinical alone, but the character of degeneration found in the nerve cells of the brain is similar in both conditions. Dunlap¹ has reported three cases of pellagra that showed axonal degeneration of cortical nerve cells. Singer and Pollock² found a similar condition in pellagrins that died during the acute stages of the disease. Axonal degeneration³ has also been noted in chronic alcoholism. Dunlap found this change in a case of Korsakow's psychosis, and he quotes Cole, who reported this type of degeneration in either the brain or cord or both in alcoholism. He includes beriberi with pellagra and chronic alcoholism as conditions in which this form of degeneration is found in the central nervous system. Quoting Dunlap further upon this analogy:

In the absence of a clinical history, we have no means of saying on pathological evidence alone whether a given case is one of pellagra or of central neuritis (Meyer) or of alcoholic psychosis.

He concludes that possibly a cell is limited in its reaction to an injurious agent and that axonal degeneration of a nerve cell is its particular manner of responding to any one of a number of injurious agents; yet to the writer the interesting point lies in the fact that this type of nerve cell degeneration has been found almost exclusively in these conditions, alcoholism, pellagra, beriberi, and central neuritis (Meyer).

To continue this analogy from a clinical standpoint, the occasional very evident peripheral neuritis found in pellagra is of interest. When this occurs to the extent found by the writer in four cases, the similarity of the condition to the Korsakow psychosis is very striking. These four cases showed weakness of extensor muscles to the degree of drop wrists in one case, while three showed pronounced involvement of the legs. Deep reflexes were entirely lost in the areas involved; also sensory disturbances were present. These physical symptoms, associated with mental confusion, hallucinations, retentive defects, and, in one instance, a true confabulatory state, completed a picture that had all the cardinal features of a Korsakow's

¹ Dunlap, Charles B., *Pathological Changes in the Nervous System in Pellagra*. State Hospital Bulletin, vol. 7, No. 4, p. 488, New York State Hospital Commission.

² Singer and Pollock, *Archives of Internal Medicine*, June, 1913.

³ William G. Spiller—*American Journal of Medical Sciences*, January, 1911—found an axonal degeneration of nerve cells in the brain as well as in the cord.

psychosis. This resemblance accounts for the grouping of the pellagrous psychoses with the Korsakow conditions by Mongeri.

Furthermore, the development of a chronic condition of general mental enfeeblement after a series of acute upsets during the course of alcoholism is common experience. A similar chronic mental enfeeblement is claimed for pellagra, though in the experience of the writer this was infrequent.

In the atypical mental states found in pellagra a counterpart is found in alcoholism. While the majority of the alcoholic disturbances come under well-recognized groups from a clinical standpoint, not infrequently cases are encountered that bear a great resemblance to the paranoid form of dementia præcox. The differentiation can not be made in a number of instances. As previously mentioned, similar atypical reactions are found in pellagra, and result probably from a combination of conditions.

The second query, "Does the pellagrous psychosis compare with psychosis of known origin," is then answered in the affirmative. The similarity is all in the direction of the acute alcoholic psychoses.

Suggestions as to etiology naturally arise from this comparison. While a resemblance to the infective-exhaustive state exists in the presence of clouding of the mind, yet in these conditions one has fever present or a state of physical exhaustion. In pellagra, fever is characteristically absent and physical exhaustion is certainly not essential to mental symptoms. Certain of the differences in mental symptoms encountered in these conditions have already been alluded to. The question of a toxin resulting from an infective process is therefore to a large degree if not entirely ruled out, though the possibility of a condition similar to syphilis, in which infection with elaboration of toxins over a long period occurs without fever, must still be considered. Yet, taking into account our experience in larger psychiatric hospitals, it is difficult to ignore the frequency with which alcoholism is associated with similar mental states. When clouding of the mind occurs from other causes a febrile state is very constant.

It is therefore suggested that in the instance of pellagra the symptoms do not result from an infection, but from a toxic substance of a chemical nature similar to alcohol in that it has specific deleterious properties.

Conclusions.

The psychosis that accompanies pellagra has the characteristics of the toxic psychoses in 90 per cent of the uncomplicated cases admitted to an institution for the insane.

It has great resemblance to the acute alcoholic psychoses.

When pellagra develops in an individual already insane synchronously with the physical manifestation, a mental confusion or delirium may be added to the existing psychosis.

Were an etiology to be suggested from the mental disturbances alone, the causes would fall among a group of agents similar to alcohol in that they are not products of bacterial or parasitic invasion of the body, but chemical intoxicants in the narrower sense.

Grateful acknowledgment of my indebtedness for assistance and valuable suggestions is herewith made to Surg. Joseph Goldberger, Surg. Edward Francis, Surg. C. H. Lavinder, and Asst. Surg. R. M. Grimm, of the United States Public Health Service, and to the trustees, superintendent, clinical director, and members of the staff of the Georgia State Sanitarium, Milledgeville, Ga.

PLAGUE-PREVENTION WORK.

LOUISIANA—NEW ORLEANS—PLAGUE ERADICATION.

The following report of plague-eradication work at New Orleans for the week ended January 22, 1916, was received from Surg. Creel, of the United States Public Health Service, in charge of the work:

OUTGOING QUARANTINE.		LABORATORY OPERATIONS—continued.	
Vessels fumigated with sulphur.....	6	Rodents received by species—Continued.	
Vessels fumigated with carbon monoxide...	10	Muskrats.....	8
Vessels fumigated with cyanide gas.....	8	Putrid (included in enumeration of species).....	38
Sulphur used, pounds.....	440	Total rodents received at laboratory.....	7,581
Coke consumed in carbon-monoxide fumigation, pounds.....	14,500	Rodents examined.....	1,843
Cyanide used in cyanide-gas fumigation, pounds.....	303	Rats suspected of plague.....	31
Sulphuric acid used in cyanide-gas fumigation, pints.....	456	Plague rats confirmed.....	2
Clean bills of health issued.....	29	PLAGUE RATS.	
Foul bills of health issued.....	7	Case No. 274:	
FIELD OPERATIONS.		Address, 517 Toulouse Street.	
Rodents trapped.....	7,491	Captured December 4, 1915.	
Premises inspected.....	6,996	Diagnosis confirmed January 19, 1916.	
Notices served.....	906	Treatment of premises: Intensive trapping; destruction of rat harbors; rat proofing adjoining premises complete.	
Poisons placed.....	5,598	Case No. 275:	
Garbage cans installed.....	38	Address, Wharf No. 4, Westwego, La.	
BUILDINGS RAT PROOFED.		Captured, January 7, 1916.	
By elevation.....	127	Diagnosis confirmed January 20, 1916.	
By marginal concrete wall.....	172	Treatment of premises: Intensive trapping.	
By concrete floor and wall.....	185	PLAGUE STATUS TO JAN. 22, 1916.	
By minor repairs.....	291	Last case of human plague Sept. 8, 1915.	
Total buildings rat proofed.....	755	Last case of rodent plague Jan. 20, 1916.	
Concrete laid, square yards.....	4,173	Total number of rodents captured to Jan. 22.....	583,511
Premises, planking and shed flooring removed.....	141	Total number of rodents examined to Jan. 22.....	320,623
Buildings demolished.....	96	Total cases of rodent plague to Jan. 22, by species:	
Total buildings rat proofed to date (abated). 99,923		Mus musculus.....	6
LABORATORY OPERATIONS.		Mus rattus.....	18
Rodents received by species:		Mus alexandrinus.....	11
Mus rattus.....	140	Mus norvegicus.....	240
Mus norvegicus.....	746	Total rodent cases to January 22, 1916.	275
Mus alexandrinus.....	116		
Mus musculus.....	6,369		
Wood rats.....	202		

HAWAII—PLAGUE PREVENTION.

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

Honolulu.

WEEK ENDED JAN. 8, 1915.

Total rats and mongoose taken.....	308	Classification of rats shot from trees:	
Rats trapped.....	305	Mus rattus.....	2
Mongoose trapped.....	1	Average number of traps set daily.....	884
Rats shot from trees.....	2	Cost per rat destroyed.....cents..	24½
Examined microscopically.....	260	Last case rat plague, Aiea, 9 miles from Honolulu,	
Showing plague infection.....	None.	Apr. 12, 1910.	
Classification of rats trapped:		Last case human plague, Honolulu, July 12, 1910.	
Mus alexandrinus.....	126	Last case rat plague, Kukaiau Mill Camp Hawaii,	
Mus musculus.....	105	Dec. 30, 1915.	
Mus norvegicus.....	51	Last case human plague, Paauhau Plantation,	
Mus rattus.....	23	Hawaii, Dec. 16, 1915.	

Hilo.

WEEK ENDED JAN. 1, 1915.

Rats and mongoose taken.....	2,157	Classification of rats trapped and found dead:	
Rats trapped.....	2,152	Mus norvegicus.....	344
Rats found dead.....	1	Mus alexandrinus.....	337
Mongoose taken.....	22	Mus rattus.....	587
Rats and mongoose examined macroscopically	2,175	Mus musculus.....	885
Rats and mongoose examined microscopically	2	Last case of rat plague, Kukaiau Plant, Kukaiau,	
Rats and mongoose examined bacteriologi-		Dec. 30, 1915.	
cally.....	2	Last case of human plague, Kalopa, Paauhau	
Rats and mongoose plague infected.....	2	Dec. 16, 1915.	

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.

CEREBROSPINAL MENINGITIS.

State Reports for December, 1915.

Place.	New cases reported.	Place.	New cases reported.
Indiana:		Kansas—Continued.	
Benton County.....	1	Wyandotte County—	
Clinton County.....	1	Kansas City.....	2
DeKalb County.....	1	Total.....	7
Hamilton County.....	1	Mississippi:	
Marion County.....	1	Hinds County.....	2
Posey County.....	1	Texas:	
Washington County.....	1	Williamson County.....	1
Total.....	7	Virginia:	
Iowa:		Campbell County.....	1
Shelby County.....	1	Culpeper County.....	1
Kansas:		Fauquier County.....	1
Brown County.....	1	Henry County.....	1
Geary County.....	1	Loudoun County.....	1
Johnson County.....	1	Norfolk County.....	1
Marshall County.....	1	Total.....	6
Pratt County.....	1		

City Reports for Week Ended Jan. 15, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md.....	1		Milwaukee, Wis.....	3	2
Biddeford, Me.....		1	Nashua, N. H.....	1	
Boston, Mass.....	1		Newark, N. J.....	1	1
Buffalo, N. Y.....	1		New York, N. Y.....	2	
Chicago, Ill.....	4		Philadelphia, Pa.....	1	
Cleveland, Ohio.....	2	2	Pittsburgh, Pa.....	2	
Indianapolis, Ind.....	1		St. Paul, Minn.....		2
Jersey City, N. J.....	1	1	Washington, D. C.....	1	1

DIPHTHERIA.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 259.

ENTERITIS.

Wisconsin—Milwaukee—Epidemic.

Senior Surg. Chas. E. Banks reported January 29, that "intestinal trouble" was prevalent in Milwaukee; that this statement was based upon press reports, conversations with physicians, and direct personal knowledge; that the cause of the epidemic was not known, the city water supply being, so far as could be ascertained, in its usual satisfactory condition; and that while entire families were suffering from attacks, the malady did not seem to be of a serious character.

ERYSIPELAS.

City Reports for Week Ended Jan. 15, 1916.

Place.	Cases.	Deaths	Place.	Cases.	Deaths.
Atlanta, Ga.		1	Lawrence, Mass.	2	
Baltimore, Md.	1		Los Angeles, Cal.	4	
Birmingham, N. Y.		2	Milwaukee, Wis.	2	
Boston, Mass.			Newark, N. J.	4	
Bradock, Pa.	1		New York, N. Y.		3
Brockton, Mass.	2		Omaha, Nebr.	2	
Buffalo, N. Y.	6	2	Philadelphia, Pa.	12	1
Chicago, Ill.	33	3	Pittsburgh, Pa.	12	2
Cincinnati, Ohio.	4		Providence, R. I.		1
Cleveland, Ohio.	11		Reading, Pa.	3	
Detroit, Mich.	4	1	Rochester, N. Y.	7	
Erie, Pa.	2		St. Louis, Mo.	8	1
Harrisburg, Pa.	1		St. Paul, Minn.	2	
Hartford, Conn.	1		San Francisco, Cal.	2	
Kansas City, Mo.		1	Schenectady, N. Y.	1	
Lancaster, Pa.	2		Toledo, Ohio.		1

LEPROSY.

City Reports for Week Ended Jan. 15, 1916.

During the week ended January 15, 1916, leprosy was reported by cities as follows: Chicago, Ill., 1 case; New Orleans, La., 2 cases; New York, N. Y., 1 death.

MALARIA.

State Reports for December, 1915.

Place.	New cases reported.	Place.	New cases reported.
Kansas	150	Mississippi—Continued.	
Mississippi:		Covington County	33
Adams County	31	De Soto County	13
Alexander County	22	Forrest County	148
Amite County	79	Franklin County	58
Attala County	46	George County	24
Benjamin County	12	Grenada County	24
Bolivar County	499	Hancock County	146
Calloway County	68	Harrison County	123
Carrall County	10	Hinds County	261
Chickasaw County	20	Holmes County	348
Choctaw County	32	Issaquena County	35
Claiborne County	55	Itawamba County	68
Clarke County	10	Jackson County	30
Clay County	38	Jasper County	87
Coahoma County	310	Jefferson County	67
Copiah County	63	Jefferson Davis County	24
		Jones County	171

MALARIA—Continued.

State Reports for December, 1915—Continued.

Place.	New cases reported.	Place.	New cases reported.
Mississippi—Continued.		Mississippi—Continued.	
Kemper County.....	35	Quitman County.....	56
Lafayette County.....	35	Lincoln County.....	12
Lamar County.....	44	Scott County.....	14
Lauderdale County.....	123	Sharkey County.....	111
Lawrence County.....	50	Simpson County.....	64
Leake County.....	69	Smith County.....	64
Lee County.....	69	Sunflower County.....	549
Leiflore County.....	235	Tallahatchie County.....	88
Lincoln County.....	40	Tate County.....	138
Lowndes County.....	35	Tippah County.....	33
Madison County.....	41	Tishomingo County.....	16
Marion County.....	130	Tunica County.....	117
Marshall County.....	44	Walthall County.....	6
Monroe County.....	45	Warren County.....	182
Montgomery County.....	26	Washington County.....	235
Neshoba County.....	78	Wayne County.....	16
Newton County.....	27	Wilkinson County.....	5
Noxubee County.....	57	Winston County.....	93
Oktibbeha County.....	50	Yalobusha County.....	66
Panola County.....	90	Yazoo County.....	285
Pearl River County.....	46		
Perry County.....	43	Total.....	6,730
Pike County.....	57		
Pontotoc County.....	26	Virginia.....	385
Prentiss County.....	39		

City Reports for Week Ended Jan. 15, 1916.

During the week ended January 15, 1916, malaria was reported by cities as follows: Little Rock, Ark., 1 case; Memphis, Tenn., 3 deaths.

Measles.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 259.

PELLAGRA.

Indiana—DeKalb County.

During the month of December, 1915, one death from pellagra was reported in DeKalb County, Ind.

State Reports for December, 1915.

Place.	New cases reported.	Place.	New cases reported.
Kansas.....	9	Mississippi—Continued.	
Mississippi:		Coahoma County.....	4
Adams County.....	6	De Soto County.....	2
Alcorn County.....	5	Forrest County.....	17
Amite County.....	5	George County.....	1
Attala County.....	1	Greene County.....	1
Bolivar County.....	27	Grenada County.....	3
Calhoun County.....	2	Hancock County.....	6
Carroll County.....	2	Harrison County.....	11
Chickasaw County.....	4	Hinds County.....	26
Choctaw County.....	1	Holmes County.....	11
Claborne County.....	2	Itawamba County.....	7
Clay County.....	7	Jackson County.....	4
Coahoma County.....	36	Jasper County.....	2
Copiah County.....	15	Jefferson County.....	1
		Jefferson Davis County.....	1

PELLAGRA—Continued.

State Reports for December, 1915—Continued.

Place.	New cases reported.	Place.	New cases reported.
Mississippi—Continued.		Mississippi—Continued.	
Jones County.....	17	Iron Ootoc County.....	5
Kemper County.....	3	Prentiss County.....	4
Lafayette County.....	2	Scott County.....	7
Lamar County.....	10	Sharkey County.....	2
Lauderdale County.....	4	Simmons County.....	2
Lawrence County.....	12	Smith County.....	1
Leake County.....	5	Sunflower County.....	43
Lee County.....	5	Tallahatchie County.....	11
Leflore County.....	5	Tate County.....	3
Lincoln County.....	5	Tippah County.....	3
Lowndes County.....	4	Tishomingo County.....	6
Madi on County.....	4	Tunica County.....	13
Marion County.....	6	Walhall County.....	1
Marshall County.....	13	Warren County.....	14
Monroe County.....	22	Washington County.....	13
Neshoba County.....	8	Yalobusha County.....	2
Newton County.....	1	Yazoo County.....	20
Noxule County.....	11		
Oktibbeha County.....	2	Total.....	507
Panola County.....	4		
Perry County.....	1	Virginia.....	21
Pike County.....	3		

City Reports for Week Ended Jan. 15, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Atlanta, Ga.....		1	La Crosse, Wis.....	1	1
Charleston, S. C.....		1	New Orleans, La.....	2	1
Chattanooga, Tenn.....	1		San Francisco, Cal.....		1
Galveston, Tex.....		1	Washington, D. C.....	2	

PLAGUE.

Louisiana—New Orleans—Plague-Infected Rats Found.

Surgeon Creel reported that a rat captured January 7, 1916, on wharf No. 4, New Orleans, La., was proven positive of plague infection January 20, 1916.

Doctor Creel further reported that a rat trapped January 6, 1916, at a city dump located at Clio and Derbigny Streets, New Orleans, was proven positive of plague infection January 24, 1916.

PNEUMONIA.

City Reports for Week Ended Jan. 15, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alameda, Cal.....	1		Galesburg, Ill.....	6	6
Auburn, N. Y.....	3	3	Grand Rapids, Mich.....	43	2
Binghamton, N. Y.....	6		Harrisburg, Pa.....	9	6
Birmingham, Ala.....	1	5	Kalamazoo, Mich.....	4	3
Braddock, Pa.....	3		Kansas City, Mo.....	6	12
Canton, Ohio.....	3	1	Lexington, Ky.....	3	5
Chicago, Ill.....	535	227	Lorain, Ohio.....	1	
Cleveland, Ohio.....	101	56	Los Angeles, Cal.....	11	11
Columbus, Ohio.....	2	13	Manchester, N. H.....	7	7
Dayton, Ohio.....	3	14	Nashua, N. H.....	1	
Detroit, Mich.....	15	20	Newark, N. J.....	54	35

PNEUMONIA—Continued.

City Reports for Week Ended Jan. 15, 1916—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
New Castle, Pa.....	2	.....	Schenectady, N. Y.....	4	2
Newport, Ky.....	6	6	Seattle, Wash.....	3	.....
Norristown, Pa.....	4	3	Steelton, Pa.....	3	1
Pasadena, Cal.....	1	3	Steubenville, Ohio.....	3	.....
Philadelphia, Pa.....	133	93	Stockton, Cal.....	1	1
Pittsburgh, Pa.....	143	109	Toledo, Ohio.....	2	5
Reading, Pa.....	2	7	Wichita, Kans.....	3	.....
Rochester, N. Y.....	16	10	Willinsburg, Pa.....	5	7
Saginaw, Mich.....	1	4	Williamsport, Pa.....	2	.....
San Francisco, Cal.....	16	15	York, Pa.....	5	.....

POLIOMYELITIS (INFANTILE PARALYSIS).

State Reports for December, 1915.

Place.	New cases reported.	Place.	New cases reported.
Indiana:		Mississippi—Continued.	
Jay County.....	1	Hancock County.....	1
Kansas:		Tallahatchie County.....	1
Bourbon County—		Total.....	3
Fort Scott.....	1	Virginia:	
Clark County.....	1	Floyd County.....	1
Coffey County.....	1	Gloucester County.....	1
Ellis County.....	1	Henry County.....	1
Geary County.....	1	Lancaster County.....	2
Johnson County.....	1	Lee County.....	2
Reno County—		Prince Edward County.....	1
Hutchinson.....	1	Stafford County.....	1
Saline County.....	1	Tazewell County.....	1
Total.....	8	Warwick County—	
Mississippi:		Newport News.....	1
Itawamba County.....	1	Total.....	11

City Reports for Week Ended Jan. 15, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Detroit, Mich.....	.....	1	New York, N. Y.....	1	.....
Lowell, Mass.....	1	.....	Omaha, Nebr.....	1	.....
New Bedford, Mass.....	1	.....		

SCARLET FEVER.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 259.

SMALLPOX.

Maryland—Wicomico County.

Collaborating Epidemiologist Fulton reported by telegraph January 28, 1916, that a new focus of smallpox infection had been reported in Maryland, one case of the disease having been notified in Wicomico County, Salisbury R. F. D., Md.

SMALLPOX—Continued.

Minnesota.

Collaborating Epidemiologist Bracken reported by telegraph that during the week ended January 29, 1916, five new foci of smallpox infection were reported in Minnesota, cases of the disease having been notified as follows: Dakota County, South St. Paul, 3; Lyon County, Monroe Township, 1; Morrison County, Cushing Township, 1; Renville County, Milville Township, 1; Rice County, Lonsdale, 1.

Texas—Galveston.

Surg. Bahrenburg reported by telegraph January 26, 1916, that another case of smallpox had been notified at Galveston, Tex., making a total of four cases recently reported at that place.

Kansas Report for December, 1915.

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.
Kansas:						
Atchison County—						
Atchison	1					1
Bourbon County	2			1		1
Butler County	10					10
Cherokee County	3				1	2
Clay County	1					1
Cloud County	1				1	
Crawford County	6					6
Pittsburg	1					1
Douglas County	2				2	
Ellis County	4		1		2	1
Franklin County	2				2	
Gearv County	1				1	
Gove County	50			4	52	3
Harvey County	3					3
Kingman County	2				2	
Labette County	33				23	10
Linn County	2					2
Marion County	1					1
Marshall County	1				1	
Montgomery County	2				2	
Nemaha County	1		1			
Neosho County	21					21
Norton County	1				1	
Osage County	2				1	1
Osborne County	3				2	1
Pratt County	1					1
Reno County						
Hutchinson	2				1	1
Republic County	10					10
Rooks County	106			4	20	82
Sedgwick County	2					2
Wichita	41				25	16
Sherman County	1			1		
Stafford County	6				6	
Sumner County	6					6
Washington County	13				6	7
Wyandotte County—						
Kansas City	17					17
Total	370		2	10	158	200

SMALLPOX—Continued.

Miscellaneous State Reports.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Indiana (Dec. 1-31):			Mississippi (Dec. 1-31)—Con.		
Counties—			Counties—Continued.		
Carroll.....	4		Ifinds.....	9	
Clinton.....	3		Holmes.....	2	
Fountain.....	20		Leflore.....	5	
Gibson.....	1		Lincoln.....	3	
Jackson.....	3		Madison.....	6	
Jasper.....	4		Marion.....	4	
Jennings.....	9		Noxubee.....	3	
Johnson.....	8		Simpson.....	2	
Knox.....	31		Sunflower.....	1	
Lake.....	9		Tate.....	1	
Madison.....	2		Tunica.....	1	
Miami.....	4		Washington.....	9	
Montgomery.....	2		Yazoo.....	31	
Pike.....	3				
Posey.....	1	1	Total.....	202	
Sullivan.....	1				
Tippecanoe.....	1		Texas (Dec. 1-31):		
Vanderburgh.....	82		Bastrop County.....	2	
Vigo.....	58		Bell County.....	8	
Total.....	246	1	Bosque County.....	1	
Iowa (Dec. 1-31):			Cameron County.....	31	
Counties—			Cooke County.....	2	
Benton.....	1		Coleman County.....	1	
Blackhawk.....	21		Dallas County.....	3	
Buchanan.....	1		Denton County.....	11	
Cass.....	4		El Paso County.....	13	
Cherokee.....	36		Frio County.....	1	
Clarke.....	14		Grimes County.....	1	
Clay.....	2		Hidalgo County.....	9	
Franklin.....	5		Jefferson County—		
Hardin.....	2		Port Arthur.....	1	
Iowa.....	1		Kaufman County—		
Jasper.....	1		Terrell.....	5	
Lee.....	11		La Salle County.....	4	
Linn.....	13		Palo Pinto County.....	3	
Monona.....	1		San Augustine County.....	34	
Muscatine.....	2		Smith County—		
Page.....	1		Tyler.....	3	
Polk.....	1		Tarrant County.....	23	
Pottawattamie.....	1		Travis County.....	1	
Scott.....	68		Williamson County.....	42	
Story.....	1				
Wapello.....	3		Total.....	199	
Wayne.....	1				
Wright.....	16		Virginia (Dec. 1-31):		
Total.....	207		Counties—		
Louisiana (Dec. 1-31):¹			Augusta.....	7	
St. Mary Parish—			Fluvanna.....	1	
Garden City.....	6		Giles.....	1	
Mississippi (Dec. 1-31):			Greensville.....	15	
Counties—			Lunenburg.....	3	
Bolivar.....	2		Nottoway.....	5	
Carroll.....	10		Prince Edward.....	5	
Choctaw.....	20		Wise.....	1	
Coahoma.....	14				
Copiah.....	2		Total.....	38	
Covington.....	3				
De Soto.....	50		Wyoming (Dec. 1-31):		
Greene.....	21		Counties—		
			Campbell.....	2	
			Natrona.....	3	
			Total.....	5	

¹ Supplemental report.

SMALLPOX—Continued.

City Reports for Week Ended Jan. 15, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Butte, Mont.	2		New Orleans, La.	3	
Coffeyville, Kans.	1		New York, N. Y.	1	
Danville, Ill.	1		Oklahoma City, Okla.	2	
Davenport, Iowa.	10		Omaha, Nebr.	3	
Detroit, Mich.	2		Reck Island, Ill.	5	
Duluth, Minn.	1		St. Paul, Minn.	1	
Evansville, Ind.	8		Salt Lake City, Utah.	1	
Galveston, Tex.	1		San Francisco, Cal.	1	
Grand Rapids, Mich.	5		Sioux City, Iowa.	6	
Kansas City, Mo.	1		Springfield, Ill.	17	
Lincoln, Nebr.	1		Toledo, Ohio.	1	
Milwaukee, Wis.	2		Wichita, Kans.	3	

TETANUS.

City Reports for Week Ended Jan. 15, 1916.

During the week ended January 15, 1916, tetanus was notified in cities as follows: Chicago, Ill., 2 deaths; Lincoln, Nebr., 1 death; New York, N. Y., 1 death; Wheeling, W. Va., 1 death.

TUBERCULOSIS.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 259.

TYPHOID FEVER.

State Reports for December, 1915.

Place.	New cases reported.	Place.	New cases reported.
Indiana:		Indiana—Continued.	
Adams County	2	Tippecanoe County	12
Carroll County	5	Tipton County	1
Cass County	2	Union County	1
Clark County	5	Vanderburg County	5
Clinton County	1	Warren County	5
DeKalb County	1	White County	3
Delaware County	3		
Elkhart County	3	Total	160
Floyd County	7		
Fountain County	2	Kansas:	
Gibson County	1	Allen County	4
Greene County	1	Anderson County	2
Hamilton County	6	Atchison County	1
Howard County	4	Atchison	4
Huntington County	3	Barton County	2
Jackson County	2	Bourbon County	3
Jay County	6	Fort Scott	1
Jefferson County	1	Brown County	3
Jennings County	1	Butler County	2
Johnson County	2	Cherokee County	7
Knox County	2	Clay County	1
Lake County	10	Coffey County	3
Laporte County	1	Cowley County	4
Lawrence County	1	Crawford County	6
Marion County	40	Doniphan County	1
Martin County	2	Douglas County	2
Monroe County	2	Elk County	1
Morgan County	2	Ellsworth County	1
Ohio County	2	Ford County	1
Owen County	2	Franklin County	4
Randolph County	1	Graham County	1
Ripley County	1	Greenwood County	2
Scott County	1	Hamilton County	1
St. Joseph County	1	Harper County	1
Sullivan County	7	Hodgeman County	1

TYPHOID FEVER—Continued.

State Reports for December, 1915—Continued.

Place.	New cases reported.	Place.	New cases reported.
Kansas—Continued.		Mississippi—Continued.	
Jefferson County	1	Lenoir County	5
Jewell County	9	Lowndes County	2
Johnson County	4	Madison County	4
Kinman County	1	Marion County	9
Kiowa County	1	Marshall County	6
Labette County	3	Monroe County	12
Leavenworth County—		Montgomery County	4
Leavenworth	1	Neshola County	14
Logan County	1	Newton County	1
Lyon County	1	Noxubee County	3
Marshall County	2	Oklahoma County	4
McPherson County	1	Panola County	5
Miami County	3	Perry County	2
Mitchell County	1	Pike County	3
Montgomery County	12	Pontotoc County	5
Coffeyville	2	Prestiss County	5
Morris County	3	Quitman County	2
Nemaha County	2	Randolph County	8
Neosho County	1	Scott County	3
Norton County	4	Simmons County	6
Osage County	1	Smith County	3
Pawnee County	1	Stafford County	15
Pratt County	1	Tallahatchie County	6
Reno County	3	Tate County	18
Hutchinson	6	Tioga County	5
Republic County	1	Tishomingo County	5
Riley County	1	Tunica County	2
Rooks County	1	Waltham County	2
Russell County	1	Washington County	6
Sedgewick County	2	Wilkinson County	3
Wichita	4	Winston County	12
Shawnee County	1	Yalobusha County	2
Tapeba	1	Yazoo County	2
Sheridan County	1		
Smith County	2		
Stafford County	1		
Summer County	2		
Wilson County	1		
Wyandotte County—			
Kansas City	7		
Total	152	Total	333
Mississippi:		Texas:	
Adams County	2	Coke County	1
Alcorn County	8	Dallas County	9
Amite County	2	Denton County	4
Atta County	5	Eastland County	1
Boivar County	18	El Paso County	1
Calhoun County	6	Galveston County	15
Carroll County	3	Guadalupe County	2
Chickasaw County	1	Hunt County	2
Choctaw County	1	Hansford County	2
Claiborne County	1	Hutchinson County	4
Clarke County	2	Johnson County	3
Clay County	2	Kaufman County	1
Coahoma County	7	Nueces County	1
Copiah County	3	Parker County	4
Covington County	4	Rumney County	1
De Soto County	3	San Augustine County	3
Forrest County	7	Smith County	1
Franklin County	5	Somervell County	1
Grenada County	2	Tarrant County	8
Hancock County	10	Travis County	0
Harrison County	6	Williamson County	4
Hinds County	5		
Holmes County	6	Total	68
Itawamba County	4	Virginia:	
Jackson County	7	Accomac County	2
Jasper County	2	Albemarle County	6
Jefferson Davis County	9	Alleghany County	2
Jones County	7	Amelia County	3
Lafayette County	8	Appomattox County	1
Lamar County	4	Augusta County	2
Lauderdale County	12	Bedford County	4
Lawrence County	2	Botetourt County	1
Leake County	5	Buchanan County	3
Lee County	11	Buckingham County	1
		Campbell County	5
		Lynchburg	2
		Caroline County	2
		Charlotte County	2
		Chesterfield County	1

TYPHOID FEVER—Continued.

State Reports for December, 1915—Continued.

Place.	New cases reported.	Place.	New cases reported.
Virginia—Continued.		Virginia—Continued.	
Cumberland County.....	1	Northampton County.....	4
Dickenson County.....	1	Nottoway County.....	3
Dinwiddie County.....	2	Orange County.....	3
Elizabeth City County.....	2	Page County.....	1
Fairfax County.....	1	Pittsylvania County.....	1
Fauquier County.....	3	Danville.....	1
Floyd County.....	1	Powhatan County.....	1
Fluvanna County.....	1	Prince Edward County.....	1
Franklin County.....	2	Prince George County.....	3
Frederick County.....	1	Rappahannock County.....	1
Giles County.....	2	Roanoke County—	
Gloucester County.....	5	Roanoke.....	3
Grayson County.....	2	Rockbridge County.....	4
Greensville County.....	5	Rockingham County.....	4
Halifax County.....	4	Russell County.....	4
Henrico County.....	1	Scott County.....	2
Henry County.....	4	Shenandoah County.....	2
James City County.....	1	Smyth County.....	4
Lancaster County.....	1	Spotsylvania County.....	1
Lee County.....	2	Fredericksburg.....	2
Loudoun County.....	7	Tazewell County.....	5
Louisa County.....	1	Warwick County—	
Lunenburg County.....	3	Newport News.....	1
Madison County.....	3	Washington County.....	5
Mathews County.....	1	Westmoreland County.....	1
Mecklenburg County.....	1	Wise County.....	1
Middlesex County.....	2	Wythe County.....	3
Montgomery County.....	4		
Nelson County.....	2	Total.....	168
Norfolk County.....	4		

City Reports for Week Ended Jan. 15, 1916.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Auburn, N. Y.....	1		Memphis, Tenn.....	6	
Baltimore, Md.....	5	4	Milwaukee, Wis.....	2	1
Beaver Falls, Pa.....	1		Montclair, N. J.....	1	
Binghamton, N. Y.....	1		Morristown, N. J.....	2	
Boston, Mass.....	3		Nashville, Tenn.....	1	
Brockton, Mass.....	1		Newark, N. J.....	2	1
Buffalo, N. Y.....	1		New Bedford, Mass.....	1	2
Butler, Pa.....	1		New Castle, Pa.....	4	
Chattanooga, Tenn.....		1	New London, Conn.....	1	
Chicago, Ill.....	16	3	New Orleans, La.....	1	1
Cincinnati, Ohio.....	1		New York, N. Y.....	15	3
Cleveland, Ohio.....	4	2	Oklahoma City, Okla.....	2	
Covington, Ky.....	1		Omaha, Nebr.....	1	
Cumberland, Md.....		1	Philadelphia, Pa.....	3	4
Detroit, Mich.....	1	1	Pittsburgh, Pa.....	2	3
Duluth, Minn.....	1		Portland, Oreg.....	2	1
Erie, Pa.....	1		Providence, R. I.....	1	
Evansville, Ind.....	2		Richmond, Va.....	1	
Fall River, Mass.....	4		Saginaw, Mich.....	1	
Galesburg, Ill.....	2		St. Louis, Mo.....	4	1
Galveston, Tex.....	2		San Francisco, Cal.....	5	
Grand Rapids, Mich.....	3		Steubenville, Ohio.....	2	
Harrisburg, Pa.....		1	Syracuse, N. Y.....	2	
Hartford, Conn.....	1		Tacoma, Wash.....	3	
Haverhill, Mass.....	1		Toledo, Ohio.....	2	
Indianapolis, Ind.....	6	2	Waltham, Mass.....	1	
Jersey City, N. J.....	9		Washington, D. C.....	6	
Johnstown, Pa.....		1	Wheeling, W. Va.....	2	1
Kokomo, Ind.....	1		Wilkes-Barre, Pa.....	1	
Lancaster, Pa.....	1		York, Pa.....	2	
Lawrence, Mass.....	5		Zanesville, Ohio.....	1	
Melrose, Mass.....	1				

TYPHUS FEVER.

Texas—Eagle Pass.

Senior Surg. Pierce reported by telegraph February 1, 1916, that one case of typhus fever had been notified at Eagle Pass, Tex.

DIPHThERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

State Reports for December, 1915.

State.	Cases reported.		
	Diphtheria.	Measles.	Scarlet fever.
Indiana.....	217	891	399
Iowa.....	68	.....	86
Kansas.....	436	258	504
Mississippi.....	172	8	55
Texas.....	349	.....	324
Virginia.....	522	329	212

City Reports for Week Ended Jan. 15, 1916.

City.	Population as of July 1, 1915 (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.....	584,605	213	29	2	158	.....	31	2	28	21
Boston, Mass.....	745,139	327	41	7	50	1	67	2	63	22
Chicago, Ill.....	2,447,045	990	103	10	106	2	266	4	180	87
Cleveland, Ohio.....	656,975	277	37	3	51	.....	26	4	29	20
Detroit, Mich.....	554,717	213	63	5	51	2	32	1	34	12
New York, N. Y.....	5,468,190	1,883	399	25	24	5	145	6	379	180
Philadelphia, Pa.....	1,683,664	.....	82	10	154	1	62	.....	196	61
Pittsburgh, Pa.....	571,984	336	41	3	217	1	29	.....	21	13
St. Louis, Mo.....	745,958	322	65	5	19	.....	28	3	51	26
From 300,000 to 500,000 inhabitants:										
Buffalo, N. Y.....	461,335	171	31	2	286	6	10	1	28	18
Cincinnati, Ohio.....	406,706	177	20	2	45	.....	14	.....	24	19
Jersey City, N. J.....	300,133	122	20	1	3	.....	13	.....	38	11
Los Angeles, Cal.....	465,667	159	4	1	2	.....	8	.....	80	25
Milwaukee, Wis.....	428,062	110	21	1	263	.....	27	.....	.....	12
Newark, N. J.....	399,000	.....	28	.....	121	1	27	.....	73	.....
New Orleans, La.....	366,484	131	37	1	.....	.....	3	.....	17	21
San Francisco, Cal.....	1,416,912	177	21	.....	4	.....	22	.....	89	20
Seattle, Wash.....	320,834	49	1	.....	6	.....	9	.....	11	7
Washington, D. C.....	358,679	132	27	1	23	.....	5	.....	9	9
From 200,000 to 300,000 inhabitants:										
Columbus, Ohio.....	209,722	80	9	2	1	.....	13	1	8	4
Indianapolis, Ind.....	265,578	98	5	.....	3	.....	4	.....	36	8
Kansas City, Mo.....	289,879	.....	14	2	3	.....	11	.....	7	2
Portland, Oreg.....	272,833	61	1	4	.....	.....	2	.....	9	2
Providence, R. I.....	250,025	96	19	4	15	.....	14	1	7	4
Rochester, N. Y.....	250,747	83	3	1	19	.....	6	.....	7	4
St. Paul, Minn.....	241,999	64	7	.....	12	.....	6	.....	12	7
From 100,000 to 200,000 inhabitants:										
Atlanta, Ga.....	184,873	47	3	.....	.....	.....	8	.....	.....	10
Birmingham, Ala.....	174,108	44	2	.....	.....	.....	4	.....	13	7
Bridgewater, Conn.....	118,434	.....	.....	1	.....	.....	5	.....	3	1
Cambridge, Mass.....	111,669	36	3	.....	3	.....	7	.....	4	6
Camden, N. J.....	104,349	.....	2	.....	.....	.....	1	.....	4	.....

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

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

City Reports for Week Ended Jan. 15, 1916—Continued.

City.	Population as of July 1, 1915 (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 107,000 to 200,000 inhabitants—Continued.										
Dayton, Ohio.....	125,590	54	8	.....	2	.....	28	1	6	5
Fall River, Mass.....	126,984	49	2	.....	4	.....	2	.....	.....	2
Grand Rapids, Mich.....	125,759	39	1	1	.....	2	3	.....	5	.....
Hartford, Conn.....	108,969	6	6	.....	43	.....	5	.....	5	.....
Lowell, Mass.....	112,121	36	12	1	.....	2	7	.....	4	.....
Lynn, Mass.....	190,316	21	9	.....	67	.....	5	.....	1	.....
Memphis, Tenn.....	146,113	58	1	.....	.....	.....	8	.....	13	5
Nashville, Tenn.....	115,978	56	1	.....	2	.....	5	.....	8	3
New Bedford, Mass.....	114,694	34	1	.....	.....	.....	1	.....	4	4
New Haven, Conn.....	147,995	1	1	.....	.....	.....	5	.....	3	1
Oakland, Cal.....	190,803	3	3	1	.....	1	4	.....	1	3
Omaha, Neb.....	135,455	10	10	1	.....	2	60	3	.....	4
Reading, Pa.....	105,094	45	2	.....	204	.....	10	.....	1	.....
Richmond, Va.....	154,674	60	6	.....	2	.....	1	.....	4	7
Salt Lake City, Utah.....	113,567	25	11	.....	.....	.....	2	.....	3	1
Saranton, Pa.....	144,981	5	5	.....	2	.....	7	.....	.....	.....
Spokane, Wash.....	112,990	.....	.....	.....	.....	.....	1	.....	2	2
Springfield, Mass.....	103,216	45	2	.....	1	.....	4	.....	3	.....
Syracuse, N. Y.....	152,534	49	7	1	.....	2	6	.....	6	4
Tacoma, Wash.....	108,091	1	1	.....	1	.....	.....	.....	.....	.....
Toledo, Ohio.....	187,840	75	2	1	135	2	6	.....	17	4
Trenton, N. J.....	100,212	53	3	1	53	.....	2	.....	5	2
Worcester, Mass.....	160,523	81	6	.....	4	.....	7	.....	5	6
From 50,000 to 100,000 inhabitants:										
Akron, Ohio.....	82,958	20	6	1	3	.....	21	.....	.....	5
Altoona, Pa.....	57,606	21	6	.....	1	.....	2	.....	.....	.....
Bayonne, N. J.....	67,582	2	2	.....	.....	.....	.....	.....	2	.....
Berkeley, Cal.....	54,879	14	1	.....	.....	.....	8	.....	.....	1
Binghamton, N. Y.....	53,082	27	3	2	.....	.....	2	.....	2	1
Brockton, Mass.....	65,746	11	3	.....	3	.....	2	.....	4	.....
Canton, Ohio.....	59,139	13	3	1	7	.....	18	.....	.....	.....
Charleston, S. C.....	60,427	27	1	.....	.....	.....	.....	.....	1	6
Chattanooga, Tenn.....	58,576	.....	.....	.....	.....	.....	.....	.....	3	1
Covington, Ky.....	56,520	19	3	.....	4	.....	.....	.....	1	2
Duluth, Minn.....	91,613	23	1	.....	42	.....	10	.....	2	.....
Erie, Pa.....	73,798	20	3	.....	.....	.....	.....	.....	8	.....
Evansville, Ind.....	72,125	28	1	.....	1	.....	2	.....	1	.....
Fort Wayne, Ind.....	74,552	26	1	.....	5	.....	1	.....	1	3
Harrisburg, Pa.....	76,754	31	1	.....	4	.....	.....	.....	12	3
Harrisburg, Pa.....	76,194	30	15	2	4	1	4	.....	2	3
Hoboken, N. J.....	66,585	27	5	.....	73	.....	2	.....	.....	1
Johnstown, Pa.....	59,269	1	1	.....	1	.....	.....	.....	1	.....
Lancaster, Pa.....	98,197	32	10	1	21	.....	2	.....	4	4
Lawrence, Mass.....	55,158	35	.....	.....	.....	.....	1	.....	1	.....
Little Rock, Ark.....	56,097	19	4	.....	.....	.....	2	.....	1	.....
Malden, Mass.....	76,430	31	3	.....	7	.....	2	.....	.....	.....
Manchester, N. H.....	66,336	15	3	.....	.....	.....	.....	.....	.....	1
Mobile, Ala.....	52,222	1	1	.....	3	.....	1	.....	1	.....
New Britain, Conn.....	88,158	21	4	.....	4	.....	7	.....	.....	.....
Oklahoma, Okla.....	69,010	23	2	1	40	.....	6	.....	3	1
Pasadena, N. J.....	58,156	21	.....	.....	3	.....	3	1	.....	1
Portland, R. I.....	63,014	22	3	.....	4	.....	.....	.....	.....	.....
Portland, Me.....	53,761	7	1	.....	21	.....	9	.....	.....	.....
Rockford, Ill.....	64,806	26	2	.....	.....	.....	2	.....	3	4
Sacramento, Cal.....	54,515	29	1	.....	1	.....	1	.....	2	1
Saginaw, Mich.....	51,115	21	3	.....	.....	.....	4	.....	1	1
San Diego, Cal.....	95,265	20	1	.....	.....	.....	5	.....	5	1
Schenectady, N. Y.....	85,460	39	3	.....	4	.....	5	.....	1	2
Somerville, Mass.....	67,030	21	7	3	.....	.....	3	.....	1	.....
South Bend, Ind.....	59,468	6	6	.....	3	.....	3	.....	.....	3
Springfield, Ill.....	50,804	23	1	.....	.....	.....	2	.....	2	.....
Springfield, Ohio.....	77,738	41	.....	.....	.....	.....	3	.....	2	3
Troy, N. Y.....	67,847	1	1	.....	.....	.....	1	.....	.....	.....
Wichita, Kan.....	75,218	28	5	1	2	.....	2	1	7	1
Wilkes-Barre, Pa.....	50,543	.....	.....	.....	.....	.....	.....	.....	.....	.....
York, Pa.....	.....	4	.....	.....	31	.....	.....	.....	3	.....
From 25,000 to 50,000 inhabitants:										
Alameda, Cal.....	27,031	6	.....	.....	.....	.....	.....	.....	1	.....
Auburn, N. Y.....	36,947	15	2	.....	.....	.....	.....	.....	.....	1
Brookline, Mass.....	31,934	1	1	.....	7	.....	4	.....	1	1

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

City Reports for Week Ended Jan. 15, 1916—Continued.

City.	Population as of July 1, 1915 (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.										
Butler, Pa.	26,587	4	1							
Butte, Mont.	42,918	14			6			2		
Chelsea, Mass.	132,452	24			32		1	3		3
Chicopee, Mass.	28,688	11	1					1		
Cumberland, Md.	25,544	10			5		1			1
Danville, Ill.	31,554	14		1	4		2			1
Davenport, Iowa.	47,127	2	1							
Dubuque, Iowa.	39,650									1
East Orange, N. J.	41,155	16	1	1	11		4		1	
Elgin, Ill.	27,844	4	1							1
Everett, Mass.	38,307	15	5		1			1		1
Everett, Wash.	33,767	4								
Fitchburgh, Mass.	41,144	6	4		3		6		1	
Galveston, Tex.	41,076	17	2				2			2
Haverhill, Mass.	47,774	20	9	1	1		3		2	1
Kalamazoo, Mich.	47,364	18						1		1
Kenosha, Wis.	30,319	8			1		3			1
Kingston, N. Y.	26,632	10	5	1			4		1	
La Crosse, Wis.	31,522	15	1				1			
Lexington, Ky.	39,763	15			1					2
Lima, Ohio.	34,644	10	21		1					
Lincoln, Nebr.	49,028	18	1		2		4			1
Lorain, Ohio.	35,662	12	5		1		4			
Lynchburg, Va.	32,385	9	2							2
Madison, Wis.	30,984	5	2		16					4
Medford, Mass.	25,737	13							2	
Montclair, N. J.	25,530	10								
Nashua, N. H.	40,351		2				2			
New Castle, Pa.	40,351		1		2				6	
Newport, Ky.	31,722	14	1					1		1
Newport, R. I.	29,631	3	4	1	3					
Newton, Mass.	43,085	14	4		5		1			1
Niagara Falls, N. Y.	36,240	12			3				2	
Norristown, Pa.	30,833	14	1							
Ogden, Utah.	30,466		1				1			
Orange, N. J.	32,524	13	1		1		1		3	
Pasadena, Cal.	43,859	9	1						1	2
Perth Amboy, N. J.	39,725		7				1		2	
Pittsfield, Mass.	37,580	13								1
Portsmouth, Va.	38,610	12	1							1
Racine, Wis.	45,807	13	1				2		3	2
Roanoke, Va.	41,929	18	3	1	2				3	3
Rock Island, Ill.	27,961		1				1			
Steubenville, Ohio.	26,631	14			1		4			
Stockton, Cal.	34,508	9			1		1			1
Superior, Wis.	45,285	15								
Taunton, Mass.	35,957	14			10				1	2
Waltham, Mass.	30,123	11		1	1					1
Wheeling, W. Va.	43,097	22			13					3
Williamsport, Pa.	33,495	11					3			
Wilmington, N. C.	28,264	11	2							1
Zanesville, Ohio.	30,406						2		1	
From 10,000 to 25,000 inhabitants:										
Ann Arbor, Mich.	14,979	11	2							
Beaver Falls, Pa.	13,316				18				1	
Biddeford, Me.	17,570	4					1		1	
Braddock, Pa.	21,310				4					
Cairo, Ill.	15,593	6								1
Clinton, Mass.	13,075	4								
Coffeyville, Kans.	16,765		2							
Concord, N. H.	22,480	6	1				1			1
Galesburg, Ill.	23,923	14			1				1	
Harrison, N. J.	16,555				1					
Kearny, N. J.	22,753	7	2		2					1
Kokomo, Ind.	20,312	10	2	1			2			
Long Branch, N. J.	15,057	2			1					
Marinette, Wis.	114,610						1			1
Melrose, Mass.	17,166	9			2		2		2	
Morristown, N. J.	13,158	7					1			
Muscatine, Iowa.	17,287	4								

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

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

City Reports for Week Ended Jan. 15, 1916—Continued.

City.	Population as of July 1, 1915 (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 10,000 to 25,000 inhabitants—Continued.										
Nanticoke, Pa.....	22,441	6	1						1	
Newburyport, Mass.....	15,195	8								
New London, Conn.....	20,771	9	13						2	
North Adams, Mass.....	12,019	4			2		2			1
Northampton, Mass.....	19,846	14							3	1
Plainfield, N. J.....	23,240	9			8		3		1	1
Rutland, Vt.....	14,624	4								
Saratoga Springs, N. Y.....	12,842	5		1	14					
Steelton, Pa.....	15,337	7	1						1	
Wilksburg, Pa.....	22,361	14			14		2		1	1
Woburn, Mass.....	15,862	1								

¹ Population Apr. 15, 1916; no estimate made.

FOREIGN.

AUSTRIA-HUNGARY.

Cholera.

During the period from November 7 to 29, 1915, 196 cases of cholera with 73 deaths were notified in Austria-Hungary. The cases were distributed as follows: Austria, November 7 to 20, 1915, 115 cases with 43 deaths; Croatia-Slavonia, November 8 to 29, 1915, 72 cases with 22 deaths; Hungary, November 15 to 22, 1915, 9 cases with 8 deaths.

CHINA.

Examination of Rats—Shanghai.

During the week ended December 18, 1915, 262 rats were examined at Shanghai. No plague infection was found.

EGYPT.

Plague.

During the period from December 23 to 29, 1915, 7 cases of plague with 4 deaths were notified in Egypt. Of these, 1 fatal case was of the septicemic form.

ITALY.

Typhus Fever—Florence—A Correction.

The Italian Government has advised that the report of the existence of typhus fever in Florence in September last, noted in the Public Health Reports of December 17, 1915, page 3704, was in error.

UNION OF SOUTH AFRICA.

Plague—Orange Free State.

Eleven cases of plague were notified in the Orange Free State January 28, 1916.

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

Reports Received During Week Ended Feb. 4, 1916.¹

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary.....				Nov. 7-23, 1915: Cases, 196; deaths, 73.
Austria.....	Nov. 7-29.....	115	53	
Croatia-Slavonia.....	Nov. 8-21.....	72	22	
Hungary.....	Nov. 15-22.....	9	8	
Indo-China:				
Saigon.....	Nov. 7-28.....	3	2	

PLAGUE.

Brazil:				
Bahia.....	Dec. 19-25.....	3	3	
Egypt:				
Alexandria.....	Dec. 23.....	1	1	
Assiout, province.....	Dec. 26.....	1	1	
Garlieh.....	Dec. 25-28.....	3	2	
Gizeh.....	Dec. 27.....	1	1	
Minieh, province.....	Dec. 29.....	1	1	
Siam:				
Bangkok.....	Nov. 14-20.....		1	
Union of South Africa:				
Orange Free State.....	Jan. 28.....	11		

SMALLPOX.

Canada:				
Quebec—				
Montreal.....	Jan. 16-22.....	2		
Egypt:				
Cairo.....	Oct. 22-28.....	1		
Germany:				Dec. 5-18, 1915: Cases, 13.
Düsseldorf.....	Dec. 5-11.....	1		
Oppeln, Govt. district.....	Dec. 5-18.....	11		Of these, 6 in one institution.
Guatemala:				Present.
Guatemala City.....	Jan. 9-15.....			
Mexico:				
Guadalajara.....	Jan. 2-8.....	4	1	
Hermosillo.....	Jan. 6-16.....	18	3	
Monterey.....	Jan. 3-9.....	3		
Salina Cruz.....	Jan. 1-15.....	1	1	

TYPHUS FEVER.

Germany.....				Dec. 5-18, 1915: Cases, 4; deaths, 1.
Dortmund.....	Dec. 12-18.....	1	1	
Saxe-Coburg-Gotha.....	Dec. 5-18.....	3		
Italy:				
Palermo.....	Dec. 13-19.....	3		
Mexico:				
Mexico City.....	Jan. 12.....		1	
Tampico.....	Dec. 1-31.....		1	

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

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

Reports Received from Jan. 1 to 28, 1916.

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary.....				Total, Oct. 25-Nov. 1, 1915:
Croatia-Slavonia.....	Oct. 18-Nov. 1.....	102	32	Cases, 107; deaths, 30.
Hungary.....	do.....	16	11	
Borneo:				
Putatan.....	Oct. 17-23.....	2		
India:				
Calcutta.....	Oct. 31-Nov. 27.....		72	
Hen ada.....	Oct. 7-Nov. 27.....		3	
Madras.....	Nov. 7-Dec. 4.....	5		
Madras Presidency.....	Nov. 6-19.....		9	
Mandalay.....	Oct. 24-Nov. 27.....		36	
Merqui.....	Oct. 23-Nov. 20.....		8	
Myingyan.....	Oct. 19-Nov. 6.....		10	
Pakko'u.....	Oct. 10-Nov. 6.....		45	
Promé.....	Nov. 14-27.....		47	
Rangoon.....	Oct. 31-Dec. 4.....	46	41	
Toun'oo.....	Oct. 7-Nov. 27.....		42	
Indo-China:				
Saigon.....	Oct. 25-31.....	1	1	
Java.....				Oct. 15-Nov. 15: Cases, 60;
Batavia.....	Oct. 2-Nov. 15.....	45	31	deaths, 48.
Brebés.....	Oct. 15-28.....	6	6	
Persia:				
Enzeli.....	Nov. 6-12.....		10	Nov. 22, 1915: Still present.
Essaleme.....	Nov. 28.....		7	
Gazian.....	Nov. 6-12.....		4	
Karshah-Roud.....	Nov. 28.....		38	And in vicinity.
Kazvin.....	Nov. 27.....		10	
Rescht.....	Nov. 24.....			And vicinity: Present.
Russia:				
Moscow.....	Nov. 14-27.....	4	1	

PLAGUE.

Brazil:				
Bahia.....	Nov. 21-Dec. 11...	8	4	
Ceylon:				
Colombo.....	Oct. 24-Nov. 27...	11	11	
China:				
Hongkong.....	Nov. 7-27.....	3	3	
Ecuador:				
Guayaquil.....	Nov. 1-30.....	1	1	
Egypt:				
Assiout, province.....	Dec. 17.....	1	1	
Gariéh, pro ince.....	Dec. 6-17.....	3	2	
Mimieh, province.....	Nov. 27-Dec. 9.....	9	9	
Port Said.....	Aug. 13-25.....	2	2	
Greece:				
Athens.....	Dec. 8-20.....		1	
Syrá Island.....	Jan. 16.....	16	10	
India.....				Oct. 31-Dec. 4, 1915: Cases, 23, 511;
Bombay.....	Nov. 9-Dec. 11.....	31	29	deaths, 16, 773.
Calcutta.....	Nov. 21-27.....		1	
Karachi.....	Nov. 7-20.....	2	2	
Madras Presidency.....	Oct. 16-Nov. 5.....		118	Madras Presidency, Aug. 1, 1898,
Do.....	Nov. 12-Dec. 11.....	769	564	to June 30, 1915: Cases, 141, 356;
Mandalay.....	Oct. 24-Nov. 27.....		58	deaths, 109, 095.
Rangoon.....	Oct. 1-Dec. 4.....	35	35	
Indo-China:				
Saigon.....	Oct. 25-Nov. 13...	7	4	
Java.....				Oct. 22-Nov. 4, 1915: Cases, 293;
Kediri residency.....	Oct. 22-Nov. 4.....	137	129	deaths, 277.
Madoen residency.....	do.....	1	1	
Pasoeroen residency.....	do.....	6	8	
Surabaya residency.....	do.....	2	2	
Surabaya.....	Nov. 5-11.....	2	2	
Surakarta residency.....	Oct. 22-Nov. 4.....	147	137	
Mauritius.....	Oct. 1-Nov. 4.....	8		
Russia:				
Siberia—				
Transbaikal Province..	October, 1914.....	16	13	
Straits Settlements:				
Singapore.....	Oct. 31-Nov. 27...	4	2	

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

Reports Received from Jan. 1 to 28, 1916—Continued.

SMALLPOX.

Place.	Date.	Cases.	Deaths.	Remarks.
Australia:				
New South Wales.....				Total, Dec. 10-16, 1915: Cases, 25.
Beza district.....	Dec. 10-16.....	1		
Gloucester district.....	do.....	1		
Newcastle district.....	Nov. 19-Dec. 16.....	53		
Sydney.....	Dec. 3-16.....	6		
Foots Hill district.....	Dec. 10-16.....	1		
Austria-Hungary:				
Hungary—				
Budapest.....	Nov. 21-Dec. 11...	205		
Brazil:				
Rio de Janeiro.....	Nov. 14-Dec. 18...	104	25	
Canada:				
Ontario—				
Fort William and Port Arthur.....	Dec. 19-25.....	1		
Quebec—				
Montreal.....	do.....	1		
Canary Islands:				
Grand Canary.....	Nov. 23.....			Epidemic.
Ceylon:				
Colombo.....	Oct. 21-Nov. 13...	6	2	
China:				
Chechow.....	Nov. 21-27.....			Present.
Tient sin.....	do.....		2	
Nan lin.....	Nov. 7-Dec. 18.....			Do.
Egypt:				
Alexandria.....	Dec. 21-27.....	3		
Cairo.....	Sept. 3-Oct. 14.....	4		
France:				
Paris.....	Dec. 5-11.....	1		
Germany:				
Breslau.....	Dec. 12-18.....	1	1	
Oppeln, Govt. district.....	Nov. 21-27.....	1		
Saxony.....	do.....	1		
India:				
Bombay.....	Nov. 7-Dec. 11.....	33	16	
Calcutta.....	Nov. 20.....		2	
Madras.....	Nov. 7-Dec. 11.....	24	12	
Bangoon.....	Oct. 31-Dec. 4.....	12	6	
Italy:				
Turin.....	Nov. 22-Dec. 5.....	6		
Java.....				Oct. 15-Nov. 15: Cases, 267; deaths, 54.
Batavia.....	Nov. 1-15.....	14	8	
Manchuria:				
Harbin.....	Nov. 15-28.....	5		
Mexico:				
Agascalientes.....	Dec. 13-Jan. 2.....	11	7	
Frontera.....	Nov. 21-Dec. 25.....	86	24	
Guadalajara.....	Dec. 5-25.....	21	7	
Hermosillo.....	Dec. 12-Jan. 1.....	44	9	
Monterey.....	Dec. 13-Jan. 2.....		9	
Piedras Negras.....	Jan. 10-16.....	2	2	
Progreso.....	Dec. 5-18.....	2		
Tampico.....	Dec. 7-Jan. 10.....		33	
Vera Cruz.....	Dec. 13-Jan. 9.....	54	41	
Portugal:				
Lisbon.....	Dec. 5-26.....	4		
Russia:				
Petrograd.....	Oct. 24-Nov. 13...	57	13	
Riga.....	Nov. 14-20.....	1		Aug. 1-31, 1915: Cases, 10; deaths, 1.
Spain:				
Madrid.....	Nov. 1-30.....		22	
Valencia.....	Nov. 21-Dec. 18.....	108	2	
Switzerland:				
Basel.....	Nov. 29-Dec. 4.....	7		
Turkey in Asia:				
Beirut.....	Oct. 10-30.....	23	12	
Union of South Africa:				
Johannesburg.....	Oct. 17-23.....	2		
Uruguay:				
Montevideo.....	Oct. 1-31.....	1		

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

Reports Received from Jan. 1 to 28, 1916—Continued.

TYPHUS FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Antung.....	Nov. 22-Dec. 5.....	2	.....
Egypt:				
Alexandria.....	Nov. 12-18.....	1	1	
Cairo.....	Aug. 13-Oct. 21.....	34	23	
Germany:				
Berlin.....	Nov. 21-Dec. 11.....	.....	5	
Hano ver.....	do.....	2	1	
Lübeck.....	Nov. 7-20.....	3	1	
Königsberg.....	Nov. 28-Dec. 18.....	9	3	
Stettin.....	Dec. 5-25.....	.....	6	
Great Britain:				
Dundee.....	Dec. 12-18.....	3	.....
Liverpool.....	Dec. 5-18.....	3	2	
Greece:				
Saloniki.....	Oct. 21-Nov. 27.....	.....	170	Dec. 10: Present among troops.
Yehije-Vardar.....	Dec. 10.....	.....	.....	Present among troops.
Italy:				
Florence.....	Oct. 1-30.....	20	2	
Java:				
Batavia.....	Oct. 23-Nov. 15.....	8	2	Oct. 15-Nov. 15, 1915; Cases, 38; deaths, 12.
Samarang.....	Oct. 22-28.....	2	.....
Mexico:				
Aguascalientes.....	Dec. 13-Jan. 2.....	.....	12	Estimated number cases, 1,500.
Guadalajara.....	Dec. 2-31.....	6	2	
Mexico City.....	Dec. 23.....	.....	.....	Prevalent.
Queretaro.....	Dec. 16.....	.....	.....	Prevalent. Estimated number cases, 500.
Salina Cruz.....	Dec. 16-21.....	1	.....
Russia:				
Moscow.....	Dec. 7-27.....	28	5	
Petrograd.....	Oct. 21-Nov. 27.....	15	3	
Riga.....	Nov. 14-20.....	12	.....
Vladivostok.....	Oct. 8-28.....	11	4	
Spain:				
Madrid.....	Nov. 1-30.....	.....	1	
Turkey in Asia:				
Aleppo.....	Oct. 25-Nov. 1.....	.....	.....	Estimated deaths, 200 daily.
Mersina.....	Nov. 21-27.....	3	.....

YELLOW FEVER.

Ecuador:				
Guayaquil.....	Nov. 1-30.....	1	1	

SANITARY LEGISLATION.

COURT DECISIONS.

TENNESSEE SUPREME COURT.

A Manufacturer of Chewing Tobacco is not Liable to a Consumer who Purchases Through a Dealer for Illness Caused by an Injurious Substance in the Tobacco.

LIGGETT & MYERS TOBACCO CO. v. CANNON, 178 S. W. Rep., 1009. (Aug. 25, 1915.)

The rule that a manufacturer of foodstuffs is liable to a consumer for injury caused by impurities negligently introduced into the foodstuffs during the process of manufacture does not apply to chewing tobacco.

The plaintiff was injured, with symptoms of poisoning, by biting a bug or the body of a bug in a plug of tobacco which he purchased from a dealer. The evidence did not show that the manufacturer had been negligent or that he had knowledge of any fact which would indicate that the tobacco contained any injurious substance. The court held that the manufacturer was not liable.

WILLIAMS, J.: This cause is before us on a petition filed by J. J. Cannon for a writ of certiorari to review a judgment of the court of civil appeals adverse to him, in that a judgment of the circuit court in his favor as plaintiff in this action was reversed, and his suit dismissed, by the court of civil appeals upon the motion for peremptory instructions interposed in the court below by the tobacco company.

Cannon purchased of a retail dealer in the city of Memphis a 5-cent plug of Star navy chewing tobacco, the product of one of the factories of the defendant company, which tobacco had come into the possession of the retailer through intermediate wholesale dealer or dealers. Cannon bit a "chew" from the plug, and within a few minutes his mouth and lips began to smart. Examining the remnant of the plug, he found impressed and embedded under its top wrapper or leaf cover a large black bug, which he had just bitten in two. He took the partly masticated quid from his mouth and found "a black something mashed up in it"—a part of the bug he had chewed. Cannon's face was soon in a swollen condition; he became dizzy, and sent for a physician to alleviate his pain.

The theory of the plaintiff in his pleading and proof was that the bug had been negligently manufactured in the plug of tobacco by the defendant company.

The motion of the company for a directed verdict was based upon the grounds, first, that it owed the plaintiff no duty with reference to the tobacco, because of the absence of any contractual relation between it and plaintiff; and, second, that no negligence on its part had been shown by the proof.

The general and true rule undoubtedly is that laid down in the recent case of *Burkett v. Manufacturing Co.*, 126 Tenn., 467; 150 S. W., 421, that ordinarily the manufacturer of an article or commodity placed by him on the market for sale and sold by another to an ultimate consumer is not liable to the last named for injuries due to defects or impurities in the article or commodity. But to this rule there are well-recognized exceptions, as is there set forth, one of these being foodstuffs. *Boyd v. Coca Cola Bottling Works*, 132 Tenn., —; 177 S. W., 80.¹

¹ Public Health Reports, Oct. 15, 1915, p. 3035.

The contention of plaintiff, Cannon, is that tobacco is to be classed as a food, and is thus to fall within an exception to the general rule. The court of civil appeals, in substance, sustained this contention, saying:

"While tobacco may not be strictly a food, it occurs to us that the same reasons which underlie the rule of liability in the case of sale for immediate use of drugs, foods, and beverages would apply in the case of tobacco, especially chewing tobacco. The reasons for the rule holding manufacturers of foods liable to purchasers from intermediate dealers, where such food is bought for immediate use, is that the putting of such articles on the market is dangerous to the public; and we think the same rule should be applied to the manufacturer of chewing tobacco. Such manufacturer sells it, knowing that it is to be taken into the human mouth, and that, if it is poisonous, it will as readily poison the user as if it were a food to be taken into the stomach. So we are of the opinion that the first reason given why the trial court should have directed a verdict is not well based."

We are unable to follow the Court of Civil Appeals either in its argument or to its conclusion as to the status properly assignable to tobacco in this regard.

The term "food" includes everything that is eaten or drunk for the nourishment of the body—any substance that is taken into the body, which serves, through organic action, to build up normal tissues or to supply the waste of tissue. *Com. v. Pflaum*, 236 Pa. 294, 84 Atl. 842, Ann. Cas. 1913E, 1287; *Wiley, Foods and Their Adulteration*, 7.

We think it manifest that tobacco is not a foodstuff. It does not tend to build bodily tissue, and as to the average adult its tendency is widely thought to retard the building up of fatty tissue. In respect of its use by the young, it can not be doubted that it tends to stunt normal development and even growth in stature. The desire or appetite for food is natural and common to all of the human race, while the desire for tobacco must be created.

"There is no nutriment in tobacco. It is merely a narcotic. It is not generally regarded as an article of food. It could hardly be said that an indictment for selling unwholesome food could be sustained by proof that defendant sold a bad or unwholesome cigar." So the sale of tobacco and cigars on Sunday is not authorized under a statute prohibiting the sale of any goods and wares on that day, except drugs or medicines, provisions, and other articles of immediate necessity. *State v. Ohmer*, 34 Mo. App. 115.

This court has held that tobacco in one form, the cigarette, is not a legitimate article of commerce, because possessed of no virtue, being bad inherently. *Austin v. State*, 101 Tenn. 563, 48 S. W. 305, 50 L. R. A. 478, 70 Am. St. Rep. 703, affirmed 179 U. S. 343, 21 Sup. Ct. 132, 45 L. Ed. 224.

The admission of foodstuffs among those classes of commodities excepted from the general rule of nonliability to the ultimate consumer on the part of the manufacturer is comparatively recent, and this was done because of the close analogy of such commodity to drugs. Thus, in *Bishop v. Weber*, 139 Mass. 411, 1 N. E. 154, 52 Am. Rep. 715, it was said that the furnishing of provisions which endanger human life or health stands "clearly upon the same ground as the administering of improper medicines, from which a liability springs irrespective of any question of privity of contract between the parties."

Such inclusion of foods among the excepted articles of commerce was based upon public policy and compelling necessity.

The best statement is that embodied in *Ketterer v. Armour & Co.* (D. C.) 200 Fed., 322, by Noyes, J.:

"Public policy regards the public good, and I am yet to be convinced that the public welfare will be promoted by holding that producers and manufacturers owe no duty to consumers to guard against diseased and poisonous meats and provisions, except in those isolated cases where they happen to sell directly to them. * * * It [the remedy] should rest, as was once said, upon 'the demands of social justice.'"

Foods are used as a matter of necessity in the support of life by all mankind, from the infant to the aged. The legislatures have accordingly undertaken to give safeguards to the consuming public by way of pure-food statutes.

Tobacco has not been so treated. On the contrary, it has been deemed a fit article on which to levy heavy internal revenue taxes; and, as we have seen, the sale of tobacco in certain forms has been restricted and undertaken to be prevented by statute.

It is, we think, apparent that the same consideration of public welfare can not support the enlargement of the class of food-stuffs proper, so as to include tobacco, even in the form of chewing tobacco, and that public policy as thus far declared is, as it should continue to be, not favorable to a classification that would protect its ultimate consumer under the rule above outlined.

The liability of a manufacturer of tobacco should not be carried to the extent asked by plaintiff, when there is thus a failure to justify its imposition. The door to fraud would be opened wide for false claims on the part of consumers against distant manufacturers who would be under serious handicaps in making defense. The rule would invite a flood of litigation, in which the parties would lack much of having an equal opportunity to adduce proof that a claimed defect did or did not exist, or that there was or was not negligence imputable to the manufacturer as to the particular article purchased in open market.

In our view, the liability of the defendant company must be made out under the general rule, if at all. The case is closely akin to the well-reasoned case of *Hasbrouck v. Armour & Co.*, 139 Wis., 357; 121 N. W., 157; 23 L. R. A. (N. S.), 876, which was an action by an ultimate consumer against the manufacturer of a toilet soap, a cake of which contained a needle or a sharp piece of steel, not visible. The presence of this foreign substance rendered the article dangerous, and the result of its use by the plaintiff was a bodily injury and an impairment of his health. After adverting to cases of liability falling under exceptions to the general rule, the court ruled against the plaintiff, saying:

"But where the manufacturer or vendor had not at the time of the injury brought himself into any privity with the person injured, within the rule of the foregoing cases or similar and analogous circumstances, the duty which the law imposes in favor of the user or consumer upon a manufacturer or dealer selling at wholesale to dealers generally, but not selling to consumers directly, is identical with the duty imposed by law on all persons with respect to the public generally. There is no privity, no particular relation, carrying with it special duties or a special degree of care in such case. *Standard Oil Co. v. Murray*, 119 Fed. 572, 57 C. C. A. 1; *Salmon v. Libby et al.*, 114 Ill. App. 258; *McCaifrey v. Mossberg & Co.*, 23 R. I. 381, 50 Atl. 651, 55 L. R. A. 122, 91 Am. St. Rep. 637; *Bragdon v. Perkins & Co.*, 87 Fed. 109, 30 C. C. A. 567, 66 L. R. A. 124; *Zieman v. Kieckhefer E. M. Co.*, 90 Wis. 497, 63 N. W. 1021; *Loop v. Litchfield*, 42 N. Y. 351, 1 Am. Rep. 513. The cases are collected in *Huset v. Threshing M. Co.*, 120 Fed. 865, 57 C. C. A. 237, 61 L. R. A. 303, and the rule well stated from the viewpoint that no duty rests upon the manufacturer and seller to dealers in favor of the purchaser from the latter, with certain specified exceptions. * * *

"The manufacturer or vendor should have no immunity from duties common to all merely because he is a manufacturer or vendor. At the same time there is in the common law no authority for imposing special duties upon him by reason of any privity between him and the vendee of his vendee, except in the instances mentioned, which may be regarded as occasions of a general duty toward the public to whom the wares are offered, or as exceptions to the rule of nonliability."

In the absence of a duty owed by the defendant company as manufacturer of the plug of tobacco, the failure to observe which would be actionable, a case of liability can only be made by a showing of knowledge, or a reasonable means of knowledge from anything brought to the notice of the manufacturer, that the use by the consumer would be dangerous. In that event knowledge or notice disregarded gives to the transaction the color of fraud, with consequent liability to the distant consumer injured. *Burkett v. Manufacturing Co.*, supra; *Hasbrouck v. Armour & Co.*, supra; *Cadillac Motor Car Co. v. Johnson*, 221 Fed., 801, — C. C. A. —; *Lebourdias v. Vitriol Wheel Co.*, 194 Mass., 341, 80 N. E., 482.

In the instant case there is no proof or contention that the tobacco was put on the market with knowledge on the part of defendant that the bug was so embedded. On the contrary, the proof shows that the plant of defendant was sanitary in its appointments, that the process of manufacture was under continuous inspection until the

tobacco was put into plug form, and that there were maintained appliances for keeping the tobacco until completed as to manufacture clear of dirt or any foreign substances.

The court of civil appeals reversed the judgment of the circuit court, and sustained defendant's motion for a directed verdict, on the ground that negligence was not shown but negatived.

A correct result having been reached by that court, we affirm its judgment.

OREGON SUPREME COURT.

Dogs Running at Large—Ordinance Providing for their Impounding and Destruction Held Invalid.

ROSE v. CITY OF SALEM et al., 150 Pac. Rep., 276. (July 20, 1915.)

In the State of Oregon dogs are regarded as personal property, and an ordinance which provides for destroying impounded dogs without a judicial hearing and in some cases without notice to the owners is void as authorizing the taking of property without due process of law.

This is a suit to restrain the enforcement of a municipal ordinance of the city of Salem, which reads as follows:

"SECTION 1. It shall be unlawful, from and after the 10th day of June, 1914, for any person, firm, or corporation, who may own or be the custodian of any dog, to permit any such dog to run loose or be at large upon any of the public streets, highways, or other public places within the corporate limits of the city of Salem, Oreg. All dogs found upon any of the public streets, highways, or other public places in the city of Salem, Oreg., shall be deemed to be running loose or be at large within the meaning of this ordinance, except such dogs as may be under control by means of a chain or leash or may be in or upon any vehicle and while so therein or under the personal control of the owner or custodian thereof.

"SEC. 2. It shall be unlawful for any dog to run loose or at large upon any of the public streets, highways, or other public places in the city of Salem, and the street commissioner or his agents are authorized to impound any dog found running loose or at large as defined in this ordinance, and are also authorized to enforce all of the other provisions of this ordinance, subject to the general direction and control of the street committee of and the council to carry this ordinance into effect the street commissioner, and his agents, are authorized to use any of the equipment and property of the city under the control of the street department.

"SEC. 3. Whenever any dog shall be impounded under authority of this ordinance, the street commissioner, his agents or deputies, in charge of the work hereunder, shall forthwith give notice to the owner or custodian of any impounded dog if such person is known to the street commissioner, or his agents in charge of the work hereunder, and if the owner or custodian so notified does not claim said dog within the period of three days from the date of said notice and also pay the redemption fee provided for herein, such dog shall be humanely killed at the expiration of said period.

"SEC. 4. Whenever any dog shall be impounded under the authority of this ordinance and the owner or custodian thereof is unknown to the street commissioner or his agents acting under this ordinance, such dog shall be kept for the period of three days and if at the end of the said time the owner or custodian shall not appear and claim such dog and pay the redemption fee provided herein, such dog shall be killed.

"SEC. 5. Any dog impounded under authority of this ordinance may be released to the owner or custodian thereof by the street commissioner upon payment to the city treasurer of the sum of \$2 upon the first impounding and the sum of \$4 upon any second or subsequent impounding.

"SEC. 6. The street commissioner is hereby authorized to deliver to any person any dog impounded under this ordinance, after the expiration of three days from the time of impounding upon payment to the city treasurer of the redemption fee of \$2 in the case of the first impounding or upon the payment of the sum of \$4 in the case of a second or subsequent impounding of any such dog. Such delivery shall be subject to the claim of the rightful owner of said dog and the payment by him of the redemption fees paid to the city and the reasonable expense of keeping the said dog up to the time of claim by the owner. The street commissioner at the time of making any such delivery shall take a written receipt from such person acknowledging that such person holds the said dog subject to the claim of the rightful owner upon the payment of the redemption fees paid by such person and the reasonable expense of keeping such dog up to the time of claim by such owner, and it shall be unlawful for the street commissioner to deliver a dog to any person under the provisions of this section without receiving the receipt herein provided for.

"SEC. 7. All periods of time named in this ordinance shall be computed by excluding from the computation the day upon which the impounding shall be made.

"SEC. 8. The street commissioner shall keep a duplicate record of dogs impounded, which shall show the date and time when impounded, a description by approximate weight, age, color, sex, and breed where feasible, with the owner or custodian's name if the name is known, and in said record an entry shall be made of the disposition made of said dog. The duplicate and all delivery receipts shall be filed monthly with the city recorder and be deemed public records of the city of Salem, Oreg.

"SEC. 9. It shall be unlawful for any person to in any way interfere with any person engaged in seizing or impounding any dog under authority of this ordinance, and any person convicted of a violation of the provisions of this section shall be punished as provided for in section 12 hereof. Any person who may encourage or urge any dog to attack or worry any person engaged in enforcing the provisions of this ordinance or who shall threaten any such person while engaged in the performance of duties under this ordinance, shall be deemed guilty of interfering with the enforcement of this ordinance within the meaning of this section.

"SEC. 10. The expense of caring for dogs impounded under this ordinance shall be paid out of the general fund of the city of Salem, and all moneys paid in redemption fees shall be credited to the general fund of the city.

"SEC. 11. Any person owning or having in charge any female dog who shall permit the same to run at large while in heat, shall, upon conviction thereof, be punished as for a violation of this ordinance.

"SEC. 12. Any person violating any of the provisions of this ordinance shall, upon conviction, be punished by a fine of not less than \$10 nor more than \$100 or by imprisonment in the city jail one day for each \$2 of any such fine."

The cause was heard upon a motion for judgment upon the pleadings, and a decree entered in favor of the plaintiff, from which defendant appeals.

BENSON, J. (after stating the facts as above): Plaintiff contends that the ordinance is void for the reason that its provisions exceed the authority of the city council. It may be conceded at the outset that municipal corporations can exercise no powers but such as are expressly conferred upon them by the act of incorporation, or are necessary to carry into effect the powers thus conferred, or are essential to the manifest objects and purposes of the corporation. Section 18 of the charter authorizes the council "to prevent domestic animals from running at large within the city, or any portion thereof; to provide for impounding and selling such animals." Section 42 authorizes the council "to license, tax, impound, sell, or kill dogs." There can be no serious question but that the charter gives the council ample authority to prohibit dogs from running at large. We do not need to cite any further authority than the above sections to satisfy this conclusion.

There remains, then, a consideration of the ordinance itself. It will be noted that sections 3 and 4 thereof provide for the impounding of dogs found running at large and for notice to the owners or custodians, if they are known to the street commissioner or his assistants, and, further, that if the dogs are not redeemed within three days they are to be summarily killed. Plaintiff contends that this procedure violates the fundamental principle that no person should be deprived of his property without due process of law. We think that this contention is correct. It is true that the courts of last resort in many of the States have held that similar ordinances are not obnoxious to this doctrine, and are to be upheld as a valid exercise of police power; but in all cases of this sort, which have been called to our attention, emphasis is laid upon the assumption that dogs are property in a limited or qualified sense only, and they invariably comment upon the fact that at common law such animals were not the subject of larceny. It is true that at common law they were held not to be the subject of larceny and the historical reason for such holding is found in the fact that at that time larceny was a capital offense, and the courts rebelled at the thought of putting a man to death for stealing a dog. However, in this State it is larceny to steal a dog, and that animal is expressly declared by statute to be personal property. (Sec. 5731, L. O. L.)

Whatever may be the law in other jurisdictions, in this State dogs are regarded as being just as important a class of personal property as any other domestic animal and equally entitled to the protection of the law. In Illinois it has been held that a statute providing for the impounding and sale of domestic animals without a judicial hearing and without actual or constructive notice to the owner is void. *Poppon v. Holmes* (44 Ill., 362; 92 Am. Dec. 186). The same doctrine is held in the following cases: *Slessman v. Crozier* (80 Ind., 487); *Campbell v. Evans* (45 N. Y., 360). An ordinance could doubtless be readily framed which would accomplish the purposes desired, and yet protect private property from forfeiture or destruction without due process of law.

The ordinance in question is objectionable in this particular, and the decree of the lower court is affirmed.

STATE LAWS AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

DISTRICT OF COLUMBIA.

Common Drinking Cups—Prohibited in Public Places. (Reg. of Commissioners, Dec. 3, 1915.)

SECTION 1. No person shall provide or expose any cup, mug, drinking glass, or similar article for use by the public generally in any place under his control, or allow any cup, mug, drinking glass, or similar article to be so provided, exposed, or used there, unless such cup, mug, drinking glass, or other article has been thoroughly cleansed and has been sterilized since last used.

SEC. 2. Any person who violates any of the provisions of this regulation shall, on conviction thereof, be punished by a fine not exceeding \$25.

SEC. 3. This regulation shall take effect on and after February 1, 1916.

Common Towels—Prohibited in Public Places. (Reg. of Commissioners, Dec. 3, 1915.)

SECTION 1. No person shall provide or expose any towel or similar article for use by the public generally in any place under his control or allow any towel or similar article to be so provided, exposed, or used there, unless such towel has been thoroughly cleansed since last used.

SEC. 2. Any person who violates any of the provisions of this regulation shall, on conviction thereof, be punished by a fine not exceeding \$25.

SEC. 3. This regulation shall take effect on and after February 1, 1916.

Common Eating and Drinking Utensils and Toilet Articles—Prohibited in Public Places. (Reg. of Commissioners, Dec. 3, 1915.)

SECTION 1. No person shall provide or expose for common use, or permit to be provided or exposed for common use, in any hotel, restaurant, lunch room, store, shop, school, office building, place of amusement, or any similar establishment, any article named below, unless it has been thoroughly cleansed since last used; that it to say, any cup, mug, glass, fork, spoon, finger bowl, jar, spirometer mouthpiece, napkin, towel, or similar article.

SEC. 2. No person shall put any beverage, food, ice cream, or similar article, preserves, condiment or flavoring extract or sirup, into any cup, mug, glass, jar, can, bottle, or other receptacle not provided by the purchaser, for sale, unless the same has been thoroughly cleansed before such filling and that is clean at the time thereof; nor, after July 1, 1916, unless to the knowledge of the person filling the same said cup mug, glass, jar, can, bottle, or other receptacle has been sterilized by hot water or by steam since last used. No person shall knowingly have in his custody or possession for sale any cup, mug, glass, jar, can, bottle, or other receptacle filled in violation of these regulations.

SEC. 3. No person shall maintain any hotel, restaurant, lunch room, eating place, barroom, saloon, soda water fountain, or other place where food or drink is sold for consumption on the premises; or any hospital or asylum for human beings; or any

beverage, [sic] food, ice cream or similar article, preserves, condiment, or flavoring sirup or extract is bottled, canned, or packed, unless the same be provided with adequate facilities for the cleansing and sterilization of all cups, mugs, drinking glasses, forks, spoons, and finger bowls used by any patron, customer, patient, inmate, visitor, or employee, and of all bottles, jars, cans, and other receptacles filled for sale.

SEC. 4. Any person violating any of the provisions of these regulations shall be punished, on conviction thereof, by a fine not exceeding \$25.

SEC. 5. These regulations, except as otherwise hereinbefore specified, shall take effect on and after February 1, 1916.

IOWA.

Communicable Diseases—Method of Disinfection. (Gen. Order No. 1, Bd. of H., Nov. 3, 1915.)

Because of the high price of permanganate of potash, used for disinfecting purposes, and because there seems to be no prospect of its becoming less for some time to come, the Iowa State Board of Health issues the following order as to disinfection:

First, all clothing should be boiled and washed thoroughly which can be washed, and all other clothing should be properly aired and exposed to the sunlight.

Second, all woodwork and surfaces should be washed thoroughly with good soap and water, together with all furniture and utensils used about the sick.

Third, disinfection by the formaldehyde method may be performed as follows:

Formaldehyde disinfection by the sheet method.—1. Prepare room for disinfection as given in the rules.

2. Suspend an ordinary bed sheet (2 by 1½ yards) by one edge from a line stretched across the middle of the room. The ordinary rather coarse cotton sheet should be used in order to secure rapid evaporation.

3. Sprinkle 8 ounces of formaline—the 40 per cent solution of formaldehyde gas—on the sheet. This sprinkling may be done with a rose-head sprinkler such as is used by florists.

The above quantity is sufficient for disinfecting 1,000 cubic feet of room space. If more space is to be disinfected, increase proportionately the number of sheets and amount of formalin.

4. Keep room closed for at least eight hours.

Fourth, it is quite necessary to follow all of the means of prevention which have been mentioned in the bulletins heretofore, as proper care during a sickness is a real prevention.

With the exercise of due care, the waste products which act as vehicles for the infectious agents of our common and occasional scourges may be so effectively dealt with from hour to hour and from day to day as to make the aftertreatment of the room and its contents somewhat of a mere form, carried out as a matter of routine practice or in order to make assurance doubly sure.

KANSAS.

Ice—Analyses of, when Sold for Domestic Purposes. (Reg. Bd. of H., Oct. 4, 1915.)

1. Corporations or individuals selling artificial ice for domestic consumption shall submit to the water and sewage laboratory of the State board of health complete information concerning the source of water supply used for the manufacture of the ice and detailed description of the process involved

2. A 50-pound cake of ice manufactured shall be sent to the water and sewage laboratory of the State board of health, Lawrence, Kans., each year for complete analysis. Results of these analyses shall be reported to the person whose name is signed to the information sheet and to the secretary of the State board of health.

3. Artificial ice shall contain less than 100 bacteria per cubic centimeter and no organisms of the bacillus coli group in 1 cubic centimeter. If the ice does not meet these requirements it shall be sold for refrigeration purposes only and not for domestic consumption.

4. Corporations or individuals harvesting natural ice shall file full information with the water and sewage laboratory of the State board of health with regard to the source of the ice and the method of storage.

5. A 50-pound cake of the ice shall be shipped to the water and sewage laboratory of the State board of health during March or April each year for complete analysis.

6. Natural ice properly stored shall contain less than 100 bacteria per cubic centimeter and no organisms of the bacillus coli group in 1 cubic centimeter. If the ice does not meet these requirements it shall be sold for refrigeration purposes only and not for domestic consumption.

7. County health officers shall furnish the water and sewage laboratory of the State board of health with lists of ice dealers in their districts.

8. Fees for the services rendered under these rules and regulations pertaining to ice supplies shall be payable by the manufacturer or owner of the ice plant January 1 of each year to the director of the water and sewage laboratory of the State board of health at the University of Kansas, Lawrence, Kans.

9. Fee shall be \$15 annually for each source of supply of ice which is sold for domestic consumption.

MAINE.

Tuberculosis—State Sanatoriums—Establishment and Maintenance. (Chap. 351, Act Apr. 3, 1915.)

SECTION 1. The State shall establish and maintain by building, lease, or by purchase one or more sanatoriums in such districts of the State as shall seem best to serve the needs of the people for the care and treatment of persons affected with tuberculosis. Where lease or purchase is made the State shall have the right to enlarge or otherwise adapt the property to meet the needs of the situation; and such additions or improvements shall be considered permanent. At the expiration of the original lease of any property for use as a tuberculosis sanatorium the State shall have the right of release or of purchase.

SEC. 2. Persons having legal residence in Maine shall be admitted to these sanatoriums from any part of the State; provided after due examination by any reputable physician or the superintendent of the sanatorium said person shall be found to be suffering from tuberculosis. According to the capacity of the sanatorium, such patients shall be eligible for treatment in all stages of the disease. Whenever a patient is received for treatment in any of these State sanatoriums the charge for treatment shall not exceed \$5 per week. If upon due inquiry into the circumstances of a patient, the superintendent of the sanatorium finds such patient or his relatives unable to pay for his care and treatment in whole or in part, the charge for such care and treatment not so paid shall be laid upon the State. No discrimination shall be made in the accommodation, care, or treatment of any patient because of the fact that the patient or his relatives do or do not contribute in whole or in part to the charge for treatment: and no officer or employee of such State sanatorium shall accept from any patient thereof any fee or gratuity whatever for any service rendered.

SEC. 3. The government of the several sanatoriums shall be vested in a "board of trustees for tuberculosis sanatoriums." Said board of trustees shall consist of five members who shall be residents of the State, appointed by the governor and approved by his council as soon as may be after the passage of this act. The original appointments shall be for the respective terms of five, four, three, two, and one years. Thereafter one member shall be appointed annually for the full term, which shall be five years, except the appointment of persons to fill vacancies shall be made for the unexpired term. No more than three of any one political party shall serve on the

board of trustees at one time. It shall be the duty of the said board as soon as practicable to erect necessary buildings or to alter any buildings, on property acquired, for sanatorium use in the proper care and treatment of persons sick with tuberculosis. The said board shall have the general management and supervision of the State tuberculosis sanatoriums and one or more of said trustees shall visit each institution under supervision at least once each month. The said board of trustees shall, on or before the 1st day of October of each year, furnish a report to the governor and council containing a history of the several sanatoriums for the year and a complete statement of all accounts, with all the funds, general and special, appropriated or belonging to said sanatoriums, including a detailed statement of disbursements.

SEC. 4. The board of trustees may appoint the superintendents, physicians, assistants, and other employees, and fix the salaries of the same, for the proper administration of the several sanatoriums; and said board shall have like duties and like powers as those required of and vested in the trustees of other State hospitals.

SEC. 5. The governor and council shall, before payment, approve all bills of the board of trustees contracted in establishing and maintaining or operating the State tuberculosis sanatoriums.

SEC. 6. The board of trustees shall have authority to accept and hold in trust for the State, any grant or devise of land, or any gift or bequest of money or other personal property, or any donation to be applied, principal or income, or both, for the benefit of either or all said sanatoriums; and to apply the same in accordance with the terms of the gift.

SEC. 7. The members of the board of trustees shall receive \$5 per diem when on official business connected with these several tuberculosis sanatoriums, plus their necessary expenses.

SEC. 8. For carrying out the provisions of this act the sum of \$75,000 shall be, and hereby is, appropriated for use within the years 1915 and 1916.

SEC. 9. The acts of the board of trustees shall be subject to the approval of the governor and council, and the governor, with the advice and consent of the council, shall have authority to remove any trustee for cause.

Schools—Examination of Pupils after Absence Because of Sickness. (Chap. 174, Act Mar. 24, 1915.)

Section 4 of chapter 73 of the public laws of 1909 is hereby amended by striking out the words "from unknown cause" in the fifth line thereof and by inserting in place thereof "whenever in the judgment of the teacher the circumstances of the absence were such as to require such a certificate," so that said section as amended shall read as follows:

SEC. 4. The school committee shall cause to be referred to a school physician for examination and diagnosis every child returning to a school without a certificate from the board of health or family physician after absence on account of illness or whenever in the judgment of the teacher the circumstances of the absence were such as to require such a certificate; and every child in the schools under its jurisdiction who shows signs of being in ill health or of suffering from infections or contagious diseases, unless he is at once excluded from school by the teacher; except that in case of schools in remote and isolated situations, the school committee may make such other arrangements as may best carry out the purposes of this act.

Habit-Forming Drugs—Dispensing of, by Physicians, Surgeons, Dentists, and Veterinarians. (Chap. 142, Act Mar. 18, 1915.)

Section 7¹ of chapter 211 of the public laws of 1913 is hereby amended by striking out after the word "indicated" in the ninth line thereof, the following words,

"and the aforesaid practitioners shall keep a record in a book kept solely for that purpose of the name and address of the patient treated, the name of the disease indicated and the quantity of the drug dispensed, furnished, or given away on each separate occasion, which record shall be made within 48 hours of the dispensing, furnishing or giving away, and shall be preserved for at least 2 years, and shall at all times be open to inspection by members of the State board of health, members of the State board of pharmacy or their authorized agents, by State officials or their authorized agents or by the police authorities or officers of cities and towns. But no practitioner of medicine, surgery, or dentistry shall dispense or prescribe, except for his own professional use, more than 4 grains of morphine, cocaine, heroin, opium, or any other hypnotic or narcotic drug, their salts, compounds, or any preparation of the same, unless it be for a chronic, incurable, or malignant disease," so that said section as amended shall read as follows:

SEC. 7. No practitioner of medicine, surgery, dentistry, or veterinary medicine shall dispense, furnish, or give away opium, morphine, heroin, codeine, cannabis indica, cannabis sativa, or any salt compound of said substances or any preparation containing any of the said substances or their salts or compounds, or cocaine or its salts or alpha or beta eucaine or their salts or any synthetic substitute for them, or any preparation containing the same or any salt or compound thereof except in good faith as medicines for diseases indicated.

Births, Deaths, and Marriages—Town Records of, Previous to 1892—Preservation of. (Chap. 117, Act Mar. 17, 1915.)

Section 1 of chapter 203 of the public laws of 1903 is hereby amended by striking out the words "five hundred" in the 16th line of said section, and inserting in place thereof the words "one thousand," so that said section, as amended, shall read as follows:

SECTION 1. Whenever the record of the births, marriages, and deaths, previous to the year 1892, beginning at the very earliest date, of any town in this State, shall be collected from church records, church registers, records of clergymen, family bibles, public records, and other available sources, and shall be printed and verified in the manner required by the standing committee of the Maine Historical Society, under the editorship of some person selected by said committee, whose services shall be rendered free and without any compensation, and the work shall appear to them to have been prepared with accuracy, the secretary of state shall purchase 500 copies of such record at a price not exceeding 1 cent per page: *Provided*, That the written copies of the town records shall become the property of the State, and shall be deposited in the office of the State registrar of vital statistics: *And provided further*, That not more than \$1,000 shall be expended by authority of this act in any one year.

Burial—Vaults and Mausoleums—Construction and Maintenance. (Chap. 94, Act Mar. 15, 1915.)

SECTION 1. Before any person, firm, or corporation shall build, construct, or erect any mausoleum, vault, or other burial structure, entirely above ground or partly above and partly by excavation, with the intention and purpose that when so built, constructed, and erected, the same may contain 20 or more deceased human bodies for permanent interment, the person, firm, or corporation shall present all plans for such construction to the State board of health of the State of Maine, and shall obtain the written approval of said board of such plans before proceeding with the construction and erection of said mausoleum, vault, or other burial structure.

SEC. 2. All crypts or catacombs placed in a mausoleum, vault, or other burial structure, as described in section 1 of this act, shall be so constructed that all parts thereof may be readily examined by the State board of health or any other health

officer, and such crypts or catacombs, when used for the permanent interment of a deceased body, or bodies, shall be so hermetically sealed that no offensive odor or effluvia may escape therefrom.

SEC. 3. Should any person, firm, or corporation, build, construct, or erect a mausoleum, vault, or other burial structure, as specified in section 1 of this act, before obtaining the approval of the State board of health, as required in section 1 of this act, or should any person, firm, or corporation, after building or constructing said mausoleum, vault, or other burial structure, in accordance with the requirements of this act, fail to hermetically seal all crypts or catacombs therein after a dead body or bodies have been placed in said crypts or catacombs, according to the requirements of this act, the said person, firm, or corporation shall be fined not less than \$100 nor more than \$500 for each offense, and the court may order the person, firm, or corporation by whose authority said interment or interments were made, in addition to said fine, within a reasonable time to hermetically seal said crypts or catacombs containing said deceased body or bodies, or in the discretion of the court to remove the deceased body or bodies and bury it or them in some suitable cemetery, or the court may order the hermetical sealing of said crypt, or catacomb, to be done under the direction of the board of health in the municipality where said mausoleum, vault, or other burial structure is erected, and that the said person, firm, or corporation shall pay all expenses attending the said work, or the removal of said body or bodies, and the burial of the same in some cemetery, provided the said body or bodies can not be suitably and properly hermetically sealed in said crypts or catacombs.

SEC. 4. All fines or penalties provided by the terms of this act may be recovered or enforced by indictment, and the necessary processes for causing the crypts and catacombs to be sealed or the bodies to be removed and buried, may be issued under the direction of any justice of the supreme judicial court or the superior courts in term or vacation time.

SEC. 5. The supreme judicial courts and the superior courts shall have original and concurrent jurisdiction in all cases under the provisions hereof: *Provided*, That the judges of municipal and police courts and trial justices may cause the persons brought before them on complaint under the provisions of this act to recognize with sufficient sureties to appear before the supreme judicial courts or superior courts and, in default thereof, shall commit them.

OHIO.

Ophthalmia Neonatorum—Violations of Law or Regulations to be Prosecuted. (Res. Bd. of H., Nov. 10, 1915.)

Whereas the act for the prevention of blindness from inflammation of the eyes of the newborn (G. C. 1248-1 et seq., 106 O. L., 321) makes it the duty of the State board of health "to report any and all violations of this act as may come to its attention, to the State board of medical registration and examination and also to the local police or county prosecutor in the county wherein said misdemeanor may have been committed, and to assist said official in every way possible, such as by securing necessary evidence." Be it

Resolved, That the secretary and executive officer be, and is hereby, authorized to act for the State board of health in making such reports as are above required and to give such assistance and secure and present such evidence as may be necessary to aid in securing the conviction of any person who violates any provision of the act above referred to, or any provision of the rules and regulations adopted by the State board of health under authority granted in said act.

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

BAY CITY, MICH.

Milk and Milk Products—Production, Care, and Sale. (Ord. Dec. 6, 1915.)

SECTION 1. No person shall bring into the city of Bay City for sale, or shall sell or offer for sale, any milk or cream without a permit or license issued by the city recorder on the recommendation of the board of health.

SEC. 2. No person shall bring into the city of Bay City for sale, or shall sell or offer for sale, any milk which shall have been obtained from any milk dealer, dairyman, or other person not having a license issued by the city recorder.

SEC. 3. A fee of \$1 shall be charged for each license.

SEC. 4. Licenses or permits shall be renewed annually on or before the 1st of May. The applicant must state his name, residence, post-office address, and location of his business place or places.

SEC. 5. The applicant must state the number of cows from which milk is obtained for sale and the number of quarts (estimated) sold daily.

SEC. 6. If the applicant buys a part or all of his milk supply, the names and addresses of all persons from whom he obtains milk or cream and the quantity (estimated) shall be stated.

SEC. 7. Any dairyman, milk dealer, or other person, upon application to the board of health for a permit or license to sell or deliver milk shall file a sworn statement, giving his name and address, the number of cows he owns or has charge of, the average amount of milk (estimated) which he sells each day, the names of all persons from whom he buys milk, the average amount of milk (estimated) which he buys from them each day.

SEC. 8. The recorder will not issue any such license until the board of health is satisfied that the sanitary conditions of the stables, cows, wagons, store, or places of business of the applicant therefor and with [sic] all the utensils used by him, and that the food given the cows is pure and wholesome and that all the persons engaged in the care and handling of the milk are free from any contagious disease and that said persons use due cleanliness in their work.

SEC. 9. All applications must be signed by the applicant and when received by the board of health must be placed on file, and the name of such applicant shall be entered in a book of registration kept for that purpose. As soon as possible within 14 days after an application is received at the health office for a permit to sell milk the dairy and food inspector shall visit the dairy or place of business of such applicant and make such observation and gather such information as to enable the board to satisfy themselves of the sanitary condition of his dairy. Should the applicant live at such distance from the city of Bay City as to make it impracticable for the dairy and food inspector to visit such dairy premises, such applicant shall furnish evidence satisfactory to the board of the sanitary condition of his dairy.

SEC. 10. If after the issuance of a license to sell milk or cream, the board of health shall become satisfied that the provisions of the sanitary code are being violated, it will at once revoke the license issued to such person or persons, and no new license will be issued until all insanitary conditions have been rectified and all other provi-

sions of the sanitary code are complied with. Anyone selling or handling milk or cream under a license issued by the recorder who shall change location (this means changing producers or routes) without notifying the board of health or dairy and food inspector of such change shall have such license revoked at the option of the board of health.

SEC. 11. *Milk ticket*.—If dairymen or other persons offering milk for sale use tickets as representations of value, these tickets must be in coupon form and must be destroyed after once using.

SEC. 12. *The stable and surroundings*.—The surroundings to the stable must be kept in sanitary condition. Cows must not be allowed to stand in manure or filth. The cow stable should be painted or whitewashed at least once a year. It must be kept free from dirt, dust, cobwebs, and odor. Manure and urine must be removed from the stable at least once daily, and if not taken to field daily must be removed at least 30 feet from stable and placed where the cows can not get into it. If horses are kept in same stable a tight partition should separate them from the cattle. No other animals or fowls will be allowed in the cow stable. Floors must be laid not less than 1 foot higher than outside surface level, so that good drainage can be procured. Floors must be constructed of asphalt, concrete, brick with surface flushed with cement or of wood, water tight. They must be kept in good repair at all times and also constructed with a gutter not less than 12 inches wide and 6 inches deep; a 4-foot walk back of cows and not less than a 20-inch manger in front. Ceilings must be dust tight and kept free from cobwebs.

Light.—The window area shall be at least 4 square feet per 500 cubic feet of air space, and shall be uniformly distributed, if possible. If uniform distribution is impossible, sufficient additional window area must be provided, so that all portions of the barn shall be adequately lighted. Windows must be kept partly open if no other method of ventilation is provided for. Stable yards must be well drained and kept clean at all times.

SEC. 13. Cows must be kept clean; manure, litter, etc., must not be allowed to become caked on them; they must not be allowed to stand in or wade through filth and manure. The bedding must be sufficient in quantity at all times to protect the animals from lying in filth.

SEC. 14. Any dairyman knowingly possessing or permitting a tuberculous animal to remain in his herd, or in the same building with a healthy herd, shall have his license revoked by the board of health after proper proof of same.

SEC. 15. *Feed and water*.—Cows must be fed on clean, dry feed, neither decayed, moldy, dusty, distillery waste, nor starch waste. If malt is fed it must not be fed when sour. Pure running spring water or ordinary well water, free from contamination, pumped into clean tanks or troughs, must be provided for drinking.

SEC. 16. Milkers must thoroughly wash and wipe their hands and the cows' udders before they begin milking. They must not use pails, cans, strainers, etc., unless they have been thoroughly washed in hot water and soap, or hot water and soda, and afterwards sterilized with boiling water or steam. Care must be taken that the seams of the vessels are thoroughly cleansed with a brush. It will be unlawful to use wooden pails. They must refrain from milking or handling milk in any way when in themselves or in their families there is even a suspicion of any contagious or infectious disease, smallpox, scarlet fever, diphtheria, typhoid fever, tuberculosis, or the like.

SEC. 17. *Handling the milk*.—Immediately after milking the milk shall be removed from the stable into a milk house, aerated and cooled to at least 55 degrees temperature, and put into perfectly clean bottles or cans. Dairymen who use both bottles and cans in delivering milk shall not fill bottles while on their delivery route. No person, firm, or corporation, except such as sell for consumption on the premises where sold, shall sell, offer for sale, expose for sale, or keep with intention of selling, any milk or cream unless such milk or cream is kept, offered for sale, exposed for sale, or

sold in sanitary bottles tightly closed and capped and bottled at the dairy in a manner approved by the inspector of dairies. All milk sold in bottles shall have a properly fitting stopper which shall have stamped thereon the name of the dealer supplying the same.

The above paragraph relating to bottling shall not apply to bona fide dealers in milk or cream at wholesale, who shall sell at any one time a quantity of not less than 1 gallon of milk or 2 quarts of cream; nor to owners of one cow who sell milk on their premises only, in which case the milk shall be placed in receptacles furnished by the buyer.

SEC. 18. The milk house or milk room must not be attached by doorway to any other building and must be at least 50 feet from any cesspool or vault; must be provided with a tight floor, either concrete or wood, laid so as to provide drainage, and it must be kept clean at all times and free from odor and must be screened from flies.

SEC. 19. *Care of cans and bottles.*—All cans, bottles, cappers, or utensils used in the handling or disposition of milk must be thoroughly cleansed and afterwards sterilized by boiling water or steam before they are again used as receptacles for milk. Milk cans must be washed and cleansed immediately after the milk or cream is emptied from them. No person shall use a milk bottle for any other purposes. Bottles shall be collected daily in a thoroughly cleansed condition.

SEC. 20. No person shall bring into the city of Bay City for sale, or offer for sale, any milk (a) containing less than 12 per cent milk solids; (b) containing more than 88 per cent of water or fluid; (c) containing less than 3 per cent of milk fats; (d) from which any part of the cream has been removed; (e) having a specific gravity of less than 1.029; (f) containing any dirt, foreign matter, or sediment; (g) containing any boracic or salicylic, formalin or other foreign chemicals; (h) containing any pathogenic bacteria; (i) containing bacteria of any kind more than 150,000 per cubic centimeter; (j) drawn from any cow having a communicable disease or showing clinical symptoms of tuberculosis or from a herd which contains any diseased cattle or are afflicted with or have been exposed to any communicable disease; (k) drawn from any cow within 15 days before and 12 days after parturition; (l) drawn from any cow which has been fed on garbage, refuse, swill, moist distillery waste, or other improper food; (m) having a temperature, or which has been kept at a temperature higher than 55° F.; (n) which has existed or has been kept under conditions contrary to the provisions of this code; (o) No milk shall be kept, sold, or offered for sale drawn from cows suffering with sore or inflamed udders and teats, or from cows diseased: *Provided*, That the subdivisions (a), (b), (c), and (d) of this section shall not apply to milk sold under the name of skimmed milk.

SEC. 21. *Retailers.*—All grocers, bakers, or other persons having or offering for sale milk or cream shall at times [sic] keep the same in bottles only, and also keep the names and addresses of the dairymen from whom the milk on sale was obtained. If skimmed milk is kept or offered for sale, each and every container of such milk shall be plainly marked with the words "skimmed milk" in letters not less than 1 inch in height, and placed where it can be plainly seen by purchasers and inspectors.

SEC. 22. (a) No person shall bring into the city of Bay City for sale or shall sell or offer for sale milk from which the cream has been removed, either in part or in whole, unless sold as skimmed milk and unless, on two sides of the containers from which such milk is sold, there appears in red letters, not less than 1 inch in height, the words "skimmed milk."

(b) No person shall bring into the city of Bay City for sale or shall sell or offer for sale any so-called skimmed milk containing less than 9.3 per cent of milk solids.

SEC. 23. (a) No person shall ship or store any milk in any basement, cellar, refrigerator, milk house, dairy, or other place, unless such place have 1 square foot of window space to each 4 square feet of floor space, with a cement floor properly drained, and shall contain a vat made of nonabsorbent material large enough to store all milk.

Windows and doors shall be provided from May 1 to October 1, inclusive, with sound screens of mesh sufficiently fine to keep out flies and other insects.

(b) No person shall store any milk in any basement, cellar, refrigerator, milk house, dairy, or other place which is within 15 feet of any water-closet or private vault or cesspool, or any horse or cow stable, or any chicken or poultry yard or coop, or any other objectionable condition.

SEC. 24. *Milk delivery wagons.*—No person shall use any vehicle for the delivery of milk in the city of Bay City which has not painted thereon in legible Roman letters not less than 3 inches in height and on both sides of the vehicle in a conspicuous place the name and location of his dairy and the number of his permit; and if such vendor sells skimmed milk, each and every container of skimmed milk shall have the words "skimmed milk" inscribed thereon in plain letters not less than 1 inch in height plainly visible to the prospective purchaser.

SEC. 25. Every person using, in the sale or distribution of milk, a delivery wagon or other vehicle, shall keep the same at all times in a cleanly condition and free from any substances liable to contaminate or injure the purity of the milk, and from May 1 to October 1 shall have and keep over such delivery wagon or vehicle a covering of canvas or other material so arranged as to thoroughly protect the contents thereof from the rays and heat of the sun.

Utensils.—All shipping cans, bottles, dippers, measures, stirrers, and other utensils must be so constructed that all parts are absolutely free from spaces where milk can soak in, so that it can be removed by simple washing.

The surface coming in contact with milk, cream, or buttermilk must be smooth and free from excessive rust. All utensils must be kept scrupulously clean, inside and outside, at all times, and must be kept in good repair and free from rough surface of any kind. Utensils not kept up in the above condition will be removed from any dairy, milk house, or depot, being dangerous and injurious to public health, and destroyed by the milk inspector.

SEC. 26. *Sealed containers; wholesale delivery.*—No person or dealer shall sell, offer for sale, or deliver any milk, skimmed milk, cream, Dutch cheese, or other milk product in quantities exceeding 1 gallon unless the can or receptacle containing the same is securely sealed by lock and chain, wire, or other contrivance equally efficient: *Provided, however,* That the persons or dealers engaged exclusively in the wholesale delivery or sale of milk, buttermilk, whey, sour milk, cream, skimmed milk, Dutch cheese, or other milk products from wagons not carrying milk for retail customers may deliver the same from unsealed cans or receptacles: *And provided further,* That said wagon or wagons shall have inscribed conspicuously thereon in plain letters not less than 3 inches in height the words "wholesale delivery."

SEC. 27. No person or milk dealer shall sell, deliver, or offer for sale any milk kept in a refrigerator or ice box unless such refrigerator or ice box has milk compartment separated by an impervious water and odor proof partition from all other compartments of said refrigerator or ice box; neither milk nor cream shall be kept in the same compartment with any other foodstuffs except butter and cheese.

SEC. 28. *Milk plants.*—(a) *Construction.*—Floors must be made of asphalt, cement, or other smooth vitrified substance laid so as to allow ready drainage; walls and ceilings shall be smooth, tight, and kept painted in some light color; window space shall be equivalent to 10 per cent floor space.

(b) Equipment must be arranged and constructed so it can be easily and efficiently cleaned; all piping used to convey milk must be of the sanitary take-down form. Windows and doors from May 1 to October 1 must be provided with sound screens of mesh sufficiently fine to keep out flies and other insects. Buildings and equipment must be kept clean at all times and free from odors.

(c) *Handling milk.*—If milk is sold as pasteurized milk, it shall be pasteurized as soon as received by the dealer while fresh, and same shall be labeled "Pasteurized

milk." Same shall be pasteurized at the following temperatures: 140° F., uniform heating, 20 minutes; 150° F., uniform heating, 15 minutes; 155° F., uniform heating, 10 minutes; 160° F., uniform heating, 5 minutes; 165° F., uniform heating, 1 minute.

The time shall be calculated from the time the entire quantity reaches the required temperature. The milk shall be promptly cooled after pasteurization to a temperature of 59° F., or less, and stored at a similar temperature.

SEC. 29. *Contagious diseases.*—Should scarlet fever, smallpox, diphtheria, typhoid fever, tuberculosis, or other dangerous or infectious disease occur in the family of any dairyman or among any of his employees, or in any house in which milk is kept for sale or in the family or among any of the employees of any person who ships milk into the city of Bay City for sale, such dairyman, such vendors, or shippers of milk, shall immediately notify the health officer of the facts of the case, and said health officer shall at once investigate and order the sale of such milk stopped, or sold under such regulations as he thinks proper; should dairymen, vendors, or shippers of milk fail to notify the health officer when contagious diseases exist in their families, or in the families of their employees, or who, after such information is given the health officer, fail to obey their directions, the food and dairy inspector shall seize and destroy all milk sent into the city by such persons, and he shall, when acting in good faith, be held harmless in damages therefor in any suit or demands made.

In delivering milk to families in which there exist any of the above-named contagious or infectious diseases the dairyman shall not enter, neither shall he permit any of his milk bottles or vessels to be taken into or out of such houses, but shall pour such milk as each family wishes into vessels furnished by such family. No dealer, person, firm, or corporation shall deliver, sell, offer for sale, have in their possession, or deliver any milk, skimmed milk, or cream in any bottle, can, or other receptacle which bears the name, cap, or stamp of any other dealer, person, firm, corporation, or company.

SEC. 30. (a) *Milk inspectors.*—The meat inspector of Bay City, the health officer, or any person authorized by the board of health, may examine all dairy herds, utensils for handling milk, of all dairymen or persons engaged in selling or shipping for sale milk or cream to the city of Bay City. These inspectors shall have the power to open any can, vessel, or package, containing milk or cream, whether sealed (locked) or otherwise, or whether in transit or otherwise, and take samples of the milk or cream. If found to be filthy or the cans or other containers are in an unclean condition, the said inspector may then and there condemn the milk or cream as deemed by him to be filthy and confiscate the same, and he shall, if done in good faith, be held harmless in damages therefor in any suit or demand made.

(b) For the determination of the dirt content, milk samples (approximately one-half pint) shall be passed through a filter consisting of an absorbent cotton disk, free from sizing, about one-eighth of an inch in thickness and with a filtering of three-fourths inch to 1 inch in diameter.

The filters shall be graded as follows:

(1) Clean milk shall be that which does not leave on the cotton more than six particles of foreign matter large enough to be barely visible without magnification, nor tint or color the cotton except with fat.

(2) Fairly clean milk shall be that containing more dirt than is permitted in clean milk but which does not contain hairs, flies, more than six particles of other than fecal matter, with a dimension greater than 1 millimeter and less than 5 millimeters, or areas greater than 5 millimeters square, which are covered or tinted with fine dirt sufficient to be distinct without magnification.

(3) Dirty milk shall be one which contains more dirt than is permitted in that graded as fairly clean. It may contain dust, dirt, hairs, and particles of fecal matter not over 5 millimeters in dimension. It shall not contain flies or sufficient dust, dirt, hairs, or small particles of fecal matter to obscure the cotton.

(4) Filthy milk shall include all dirty milk in which the cotton is obscured by dirt, or which contains insects, bits of fecal matter with a dimension greater than 5 millimeters, straws, and other foreign objects.

(c) No person, firm, corporation, company, dairyman, creamery, cheese factory, or dealer shall ship or bring into the city, have in their possession, sell, or offer for sale any milk which after above determination shall be graded as dirty or filthy.

SEC. 31. *Cream*.—No person shall bring into the city of Bay City for sale any cream unless such cream is produced from milk which must conform to all the rules and regulations of this code relating to milk, or unless such cream be kept at or below 55° F., free from foreign substances, and shall not contain more than 1,000,000 bacteria per cubic centimeter, and shall not contain less than 18 per cent of milk fat.

SEC. 32. The meat inspector of Bay City is hereby designated and shall be the milk inspector, and it shall be his duty to cause such inspections as are required and provided for in this ordinance, and in connection with the board of health, do any and all things that are required to be done by such inspector and make all inspections contemplated by the provisions hereof.

SEC. 33. It is hereby ordered and required that the milk inspector shall keep a complete record of all dairies inspected and all places where milk is sold or handled. Also a record of all complaints and tests made of each and every place and this shall be open to public inspection; and a report may be obtained by any physician or persons making application to the board of health and milk inspector.

SEC. 34. Registration under this ordinance shall only be granted with an agreement on the part of the person applying for said registration that he will, when requested, file a list of the names of all persons from whom he buys or to whom he sells milk, that he consents to such inspection as the department of health may authorize and to furnish without compensation such small quantities of milk as may be required for an analysis.

SEC. 35. The possession by any dairyman or dealer in milk in his ordinary place of business or conveyance used for distribution thereof, or in any restaurant, boarding house, hotel, drug store, or other place supplying food to the public, of any milk, milk products, ice cream, buttermilk, or other articles of food mentioned or described or in any other manner prohibited by this ordinance, shall be prima facie evidence of an intent to sell or supply the same for human food.

SEC. 36. Any person violating any of the provisions of this ordinance shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not exceeding \$100 and costs of prosecution, or imprisonment in the county jail not to exceed three months, or both, in the discretion of the court, and shall also have his license revoked.

SEC. 37. This ordinance is intended to supersede an ordinance of same title adopted by the common council of Bay City July 10, 1911, the provisions of which said ordinance are hereby repealed.

BOSTON, MASS.

Tuberculosis—Indigent Patients—Hiring of Beds in Private Hospitals for Use of. (Chap. 190, Special Act of Mass. Legislature Mar. 22, 1915.)

SECTION 1. Section 1 of chapter 225 of the acts of the year 1903, as amended by chapter 167 of the acts of the year 1911, is hereby further amended by striking out the word "sixteen," in the sixth line, and inserting in place thereof the word "eighteen," so as to read as follows:

SECTION 1. The trustees of the new hospital for consumptives in the city of Boston are hereby authorized to hire beds in private hospitals for the use of needy tuberculous patients who are residents of said city, until the 1st day of July, 1918, but the said beds shall not exceed 100 in number, and the price paid therefor shall not exceed \$3 a week for each bed.

Tenement Houses—Use of Rooms in Basements or Cellars for Living Purposes.
(Chap. 346, Special Act of Mass. Legislature May 19, 1915.)

Section 68 of chapter 550 of the acts of the year 1907, as amended by section 1 of chapter 928 of the acts of the year 1914, is hereby further amended by adding at the end thereof the following: "(h) Whenever basement rooms which do not comply with all the technical requirements of this act are, in the opinion of the board of health, supplied with sufficient light and ventilation and are suitable rooms for living and sleeping purposes, the board, after an inspection of the premises and a report in writing as to the area, capacity, and other conditions, may issue a certificate to the owner of the building stating that, in the opinion of the board, such rooms are fit to be occupied for living and sleeping purposes. The issue of the said certificate shall operate as an exemption from the technical requirements of this section in all the particulars set forth in said certificate: *Provided*, That said certificate is kept at all times posted in a conspicuous place in such room. A file and record of all such reports and certificates shall be kept in the office of the board of health. Said board may revoke the certificate if such room, in its opinion, ceases to be suitable for the purposes named in the certificate," so as to read as follows:

Sec. 68. In tenement houses hereafter erected no room in the basement or cellar shall be occupied for living purposes, unless all of the following conditions are complied with:

- (1) Such room shall be at least 8½ feet high in every part from the floor to the ceiling.
- (2) There shall be appurtenant to such room the use of a separate water-closet, constructed and arranged as required by section 69.
- (3) Such room shall have a window or windows opening upon the street, and alley, or open passageway not less than 15 feet in width, a railroad right of way, cemetery or public park, or upon a yard or court. The total area of windows in such room shall be at least one-eighth of the floor area of the room, and one-half of the sash shall be made to open full width, and the top of each window shall be within 6 inches of the ceiling.
- (4) The floor of such room shall be damp proof and waterproof, and all walls surrounding such room shall be damp proof.

No room on any floor of any house or building now existing or hereafter erected, which floor is in whole or in part below the highest point of the curb of a public street or way in front and within 25 feet of the outside wall, and no room on any floor thereof, which floor is in whole or in part below the highest point of the ground adjacent to such building and within 15 feet thereof, shall be occupied for sleeping purposes unless all of the following conditions are complied with:

(a) Such room shall, on at least one side, abut on an outside wall of said building for a space of at least 7 feet.

(b) Such room shall have a window or windows opening directly upon an open space not less than 15 feet square, and open from the ground to the sky without obstruction; such window or windows shall have a total area of not less than 10 square feet and not less than one-eighth of the floor area of said room, and both halves of the sash of each window shall be made to open to their full width, and the top of each window shall be within 6 inches of the ceiling.

(c) At least 60 per cent of the area of any such room shall be above the level of the highest point of the ground within 15 feet of the outside wall or walls of said room and in which the windows above required are situated.

(d) The floor of such room and all walls surrounding the room shall be damp proof and waterproof.

(e) Such room shall be at least 8 feet 6 inches in height in every part, from floor to ceiling: *Provided*, That in tenement houses erected prior to the first day of August, 1907, and in other houses and buildings erected prior to the 1st day of June, 1914, it shall be sufficient if said room is 7 feet in height over at least four-fifths of its area.

(f) There shall be appurtenant to such room a water-closet, constructed and arranged as required by section 69, and used solely by the occupants of said room or by the household of which said occupants are members.

(g) No such room shall be occupied for sleeping purposes without a permit from the board of health, such permit to be posted in a conspicuous place in the main room of the apartment. A record of all such permits shall be kept in the office of the board of health.

(h) Whenever basement rooms which do not comply with all the technical requirements of this act are, in the opinion of the board of health, supplied with sufficient light and ventilation and are suitable rooms for living and sleeping purposes, the board, after an inspection of the premises and a report in writing as to the area, capacity, and other conditions, may issue a certificate to the owner of the building stating that, in the opinion of the board, such rooms are fit to be occupied for living and sleeping purposes. The issue of the said certificate shall operate as an exemption from the technical requirements of this section in all the particulars set forth in said certificate: *Provided*, That said certificate is kept at all times posted in a conspicuous place in such room. A file and record of all such reports and certificates shall be kept in the office of the board of health. Said board may revoke the certificate if such room, in its opinion, ceases to be suitable for the purposes named in the certificate.

DAYTON, OHIO.

Influenza—Precautions Against the Spread of. (Gen. Order No. 1, Bd. of H., Dec. 31, 1915.)

Because of the presence of an epidemic throughout the country of influenza (commonly called la grippe) and for reasons that this has now affected the city of Dayton, with other contagious diseases, the following regulations and orders of the welfare department, division of health, covering schools (public and private), theaters, churches, picture shows, stores, street cars, and all places where public gatherings are had or where people congregate will be enforced from this day on.

No sweeping shall be done in places affected by this order unless all doors and windows are thrown wide open and which shall remain open until the operation of sweeping is completed. Before the room is occupied and after sweeping, all pieces of furniture, railings, window ledges, doors, and other parts of the room which may come in contact with hands of the public shall be thoroughly wiped with a cloth wet with a disinfectant approved by the division of health. All floors which can be mopped shall be mopped with such disinfectant. The use of this disinfectant on floors and furniture as above directed must be done once each 24 hours of occupancy.

Public and private schools.—After each session and before the schoolroom is again occupied for school purposes, all windows and doors shall be thrown wide open and the rooms thoroughly ventilated for at least 10 minutes.

Churches.—After each service and before the room is again occupied for public services all doors and windows of all rooms occupied for public services shall be thrown wide open and the rooms thoroughly ventilated for at least 10 minutes before being again occupied.

Stores.—A temperature not to exceed 68° shall be maintained in all stores. All doors shall be thrown wide open for three minutes at every two hour interval. All counters, cases, railings, and other pieces of furniture which may come in contact with the public, shall be wiped with a cloth saturated with a disinfectant approved by the division of health.

Theaters other than picture shows.—After each performance and before the room is again occupied for public gatherings the windows and doors shall be thrown wide open for at least one hour. During the performance where a mechanical ventilating system is installed it shall be in operation so as to change the entire air of the room

once each 10 minutes, and a temperature not to exceed 68° shall be maintained in all parts of the theater.

Picture shows—Picture shows which operate continuously shall open all doors and windows for at least one hour before opening for the day's business. Those having adequate ventilating systems approved by the division of health shall so operate them as to change the atmosphere in the rooms once each 10 minutes during the performance. Those not having a ventilating system approved by the division of health shall during each one and one-half hour interval during the performance throw all doors and windows wide open for at least five minutes for thorough ventilation. Before doing this a slide will be thrown upon the screen that the doors will be open for five minutes, and people shall clothe themselves accordingly.

Street cars.—The windows and doors of all street cars, city and interurban, and all public conveyances in the city shall be opened for three minutes at intervals of one hour for thorough ventilation. All street cars provided with mechanical ventilators shall have their ventilators in perfect order and operation continuously so as to completely change the air in the car at intervals of once each five minutes. All street cars not provided with mechanical ventilators shall have at least two ventilator windows open continuously.

All seats, arms and backs of seats, window ledges, straps, and other parts of the car which may come in contact with the hands of the public shall be wiped with a cloth wet with a disinfectant approved by the division of health, once each four hours of use. All floors of street cars must be mopped once each 12 hours with a disinfectant approved by the division of health. Cars shall not be swept while conveying passengers. At no time shall the number of passengers on the street car be greater than one-third more than the seating capacity of each car. The temperature shall at no time exceed 68° Fahrenheit.

Hotels, restaurants, and public eating places.—All hotels, restaurants, and public eating places shall keep all articles of furniture thoroughly disinfected by wiping with a cloth saturated with a disinfectant approved by the division of health.

Ventilation shall be such as to change the temperature in all public gatherings once each five minutes.

The foregoing is declared an order by the director of welfare and will be enforced by all police and sanitary officers of the city of Dayton. In carrying out this order the police and sanitary officers are directed to close all theaters and places of public gatherings which fail to comply with this order until such time as the orders are complied with.

In cases of street cars, they are instructed that where this order is not complied with to board such cars and to require that they be taken to the barn before another passenger is admitted and thoroughly disinfected as required. This order shall be in force and effect until revoked.

KALAMAZOO, MICH.

Meat—Sale of. Slaughterhouses—Sanitary Regulation. (Ord. No. 370, Nov. 24, 1915.)

SECTION 1. No person or persons shall vend or offer for sale in the city of Kalamazoo any meat intended for human consumption, whether slaughtered in said city or elsewhere, unless licensed so to do by the board of health of the said city.

Any person or persons desiring so to do may apply to the board of health, on blanks furnished by the secretary, for such license. Said application shall conform in all respects to the requirements of section 2, of act 120, 1915, of the laws of the State of Michigan relative thereto and the board of health shall not issue such license until the meat inspector shall have examined into the sanitary conditions and cleanliness of the slaughterhouse to be used by the applicant and the market where the meat

is to be sold or the vehicle in which it is to be transported or from which it is to be sold or offered for sale and shall certify that same complies with the requirements of the State law and of this ordinance.

SEC. 2. The board of health is hereby authorized and instructed to grant a license to any person or persons presenting the aforesaid application properly indorsed by the meat inspector, together with the receipt from the city treasurer for the payment of the license fee provided for by this ordinance.

SEC. 3. The license fee shall be for retail dealers \$2, for wholesale dealers \$5, and shall be payable to the city treasurer within 15 days after the adoption of this ordinance and thereafter on the 1st day of May of each year, and the license shall continue in force for one year unless sooner revoked for cause.

The mayor may revoke the said license as provided in section 2 act 120, 1913, law of the State of Michigan.

SEC. 4. No person or persons shall vend or offer for sale or use for human food any diseased or unwholesome meat, meat which has been prepared, dressed or stored in any insanitary or filthy place, or handled or transported in an insanitary or filthy manner.

SEC. 5. (a) No slaughtering shall be done in barns, sheds, or other buildings not designed and not suitable for slaughtering animals and for the handling, dressing, and cooling of meats; nor shall any slaughtering be done outside of a building: *Provided*, That nothing in this act shall be construed to prevent any farmer from killing, dressing, and selling, in the open market, unless diseased, any animal or fowl intended for food that he has raised, fed, or slaughtered, nor any dealer or merchant from buying or selling the same.

(b) All slaughterhouses shall have an abundant supply of water from a well or other source which is not contaminated from the slaughterhouse or surrounding pens or inclosures, or any part of the premises; and which may be applied with adequate pressure through a hose to any part of the room or rooms used for the purpose of slaughtering or preparing meats for consumption as human food.

(c) All slaughterhouses shall have suitable floors of cement and subdrainage with proper sewer connections, which floors shall be thoroughly washed off each day after the slaughtering is completed.

(d) The walls and all exposed surfaces on the inside of slaughterhouse shall be cleansed by washing or scraping as often as once in each month, and if the surfaces are not painted they shall be calcimined or white-washed at least once a month.

(e) Cooling and storing rooms for meat shall be properly ventilated.

(f) All offal and refuse shall be removed from the slaughterhouse on the day of the slaughtering, and disposed of in a decent and sanitary manner.

(g) All animals kept in yards attached to slaughterhouses shall be treated in a humane manner, and if kept there over 12 hours shall be fed and watered.

(h) All pens and inclosures connected with any slaughterhouse shall be kept in a proper sanitary condition.

SEC. 6. No person or persons shall bring within the limits of the city of Kalamazoo to be sold or offered for sale, any meat from any slaughterhouse situated outside its limits, whose owner, lessee or occupant has not conformed to the requirements specified in section 5 of this ordinance.

SEC. 7. Any person or persons violating the provisions of this ordinance, or failing to secure a license as hereinbefore provided, shall be punished by a fine of not less than \$5 or more than \$100 and costs of prosecution, and the court may, in addition to such fine and in lieu thereof, sentence the offender or offenders to not less than 10 days, or more than 30 days in the county jail of the county of Kalamazoo, and as a further penalty the court may hereafter revoke the license herein provided for.

SEC. 8. Every day that a violation of this ordinance shall continue shall constitute a separate and distinct offense.

KEARNY, N. J.**Toilet Facilities—Required to be Furnished for Certain Outdoor Workers. (Reg. Bd. of H., Dec. 21, 1915.)**

SECTION 1. The owner or lessor of land upon which buildings are to be erected, the owner causing the construction, erection, or alteration of any building, and the contractor on public works of any kind whatsoever in the town of Kearny, shall provide suitable and sufficient toilet facilities for the persons employed in said construction, erection, or alteration of said buildings, or said public works.

SEC. 2. Any person, persons, firm, or corporation which shall engage men in laying street railway tracks, or any other work connected therewith, shall provide suitable toilet facilities for the persons so employed.

SEC. 3. The toilet facilities mentioned in sections 1 and 2 shall be provided and ready for use at the time said above-mentioned work shall be commenced.

SEC. 4. Such toilet facilities shall be kept and maintained in a clean and sanitary condition at all times.

SEC. 5. The words "toilet facilities" shall be construed to mean a water-closet connected to the sewer, a privy, or a suitable substitute for the same, which shall be approved by the board of health of the town of Kearny, or its executive officer.

SEC. 6. Any person, persons, firm, or corporation violating any of the provisions of this ordinance shall, upon conviction thereof, forfeit and pay to the town of Kearny a penalty of not less than \$10 or more than \$25 for the first offense and \$25 for each subsequent offense.

MONTCLAIR, N. J.**Milk and Milk Products—Production and Sale. (Reg. Bd. of H., Nov. 23, 1915.)**

An ordinance entitled "An ordinance establishing a sanitary code for the town of Montclair," passed April 9, 1907, is hereby amended as follows:

Article 8, section 7 (e) by adding thereto a new clause as follows:

No person shall ship into Montclair or bring into Montclair or deliver in Montclair in cans any milk, cream, buttermilk or skimmed milk unless such cans are sealed in such a manner that they can not be opened without breaking the seals and unless such seals (or nonremovable labels) have plainly marked thereon the original place of shipment, and no such cans shall be labeled or sealed except in the place designated on the label or seal.

Article 8, section 7, by adding thereto a new subsection (h) as follows:

(h) No person shall ship into Montclair, or have in his possession in Montclair (except for his own personal use), any milk or cream for the sale of which a license (still in effect) has not been granted by the board, unless such person shall previously have obtained a permit in writing from the board authorizing such shipment or possession which permit shall not be granted unless satisfactory assurances are given to the board in writing that such milk or cream will not be sold as such and that it will be handled and disposed of under conditions that are approved or prescribed by the board. Such permit may be revoked at any time by resolution of the board.

Article 8, by adding thereto new sections 8a and 8b as follows:

SEC. 8a. *Buttermilk and skimmed milk.*—No person shall sell or have in his possession in Montclair (except for his own personal use) any buttermilk or skimmed milk unless such milk product has been obtained from milk that could legally be sold in the town of Montclair and unless a license for the sale of such product has been granted by the board in the manner heretofore provided for the sale of milk and cream. In no case shall a license be granted unless the buttermilk or skimmed milk is produced, handled, and distributed in a manner approved by the board, and a license for the sale of either of these products may be revoked by the board at any time for cause.

SEC. 8b. Miscellaneous milk products.—No person shall sell, deliver, or have in his possession in Montclair (except for his own personal use) any milk products of any kind unless such products have been manufactured, handled, stored, and delivered in a manner approved by the board, and unless such products have been heated during the process of manufacture to a temperature equivalent to 145 degrees Fahrenheit for 30 minutes, or have been obtained from milk or cream that has been so heated: *Provided*, That milk products may be made from any unpasteurized milk or cream for the sale of which a license granted by the board is in effect: *And further provided*, That the board may by resolution designate certain milk products which will be exempt from the provisions of this section for such periods of time as in the opinion of the board the public interest requires such exemption.

All persons engaged in the sale of milk products, or of products in which raw milk or cream is used, in the town of Montclair on and after the adoption of this ordinance shall immediately file with the board a written statement as to the place and method of manufacture of such products, which statement shall be in sufficient detail to enable the board to judge as to whether the provisions of this section are being complied with. All places in which milk products are manufactured or handled for sale in Montclair shall be open to the board for inspection at any time.

Penalty.—Any person who violates any of the regulations above set forth shall, upon conviction thereof, forfeit and pay a penalty of \$25 for each offense.

PATERSON, N. J.

Foodstuffs—Stores, Stands, and Wagons—Approval Cards Relative to Sanitary Conditions to be Displayed. (Reg. Bd. of H., Nov. 9, 1915.)

That section 1 of said ordinance [an ordinance to regulate the sanitary conditions of stores or other places in which liquid or solid foodstuffs are kept.—Reprint No. 273 from P. H. R., p. 202] be changed and amended to read as follows:

1. That in all bakeries, confectionery and ice-cream stores, lunch rooms, restaurants, cafés, fruit stores, fruit stands, meat stores, fish stores, or stores, stands, or wagons of a like nature in which liquid or solid foodstuffs are kept, there shall be placed in a prominent position in or on such places, an approval card showing the sanitary condition of the store, stand, or wagon in or on which said card is placed and showing the sanitary condition of the commodities which are kept for sale in or on such places.

That section 2 of said ordinance be changed and amended to read as follows:

2. The board of health shall provide an approval card, annually, with space arranged on same for an inspection and score every six months.

SALEM, MASS.

Milk and Cream—Sale of. (Reg. Bd. of H., Dec. 1, 1915.)

SEC. 5. No person or corporation shall sell or offer, expose, or keep for sale in any shop, store, or other place, milk or cream, unless the same is sold or offered, exposed, or kept for sale in tightly closed or capped bottles. Nothing contained herein shall prevent the sale of milk or cream from cans, crocks, coolers, or other receptacles in restaurants, hotels, or at soda fountains, when the milk or cream is to be consumed in the restaurant, or hotel, or at soda fountains by guests or patrons ordering the same.

[This regulation was effective Jan. 1, 1916.]

SAN ANTONIO, TEX.

Common Drinking Cups—Prohibited in Public Places. (Ord. Dec. 6, 1915.)

That it shall be unlawful for any hotel, café, store, office building, theater, playhouse, or other public place to have or maintain a common drinking cup or other ves-

sel of any sort in the city of San Antonio, and that any person, firm, corporation, or association of persons violating this ordinance shall be deemed guilty of an offense and upon conviction thereof shall be fined not less than \$5 nor more than \$200.

WICHITA, KANS.

Milk and Cream—Production, Care, and Sale—Milk Inspector. (Ord. No. 5261, Nov. 18, 1915.)

SECTION 1. It shall be unlawful for any person or persons to sell or offer for sale any milk or cream to be consumed within the city of Wichita without first having registered his name, residence, place of business; also the name, residence, and place of business of all persons from whom he secures milk; also when he makes any change in the source from which he secures milk he shall report the same to the city clerk.

The registration shall be made within 30 days after the taking effect of this ordinance, and shall be made once each year thereafter during the month of January of each year, for as long as such person or persons remain in business; and said registration shall be made in a permanent record book, to be kept in the office of the city clerk.

SEC. 2. Whenever the board of health or milk inspector shall deem it necessary, and not less than twice a year, the milk inspector shall visit the place or places where the cow or cows are kept, or the place or places where milk is kept for sale, and examine the surroundings, including stable in which the cow or cows are kept, and the food upon which they are fed. Also, all milk wagons and milk containers shall be examined not less than twice a year, or oftener if deemed necessary by the board of health. The report of all inspections made shall be made in writing, and shall specify the place or places inspected, time of inspection, and general conditions as found, and such other information as the board of health may from time to time require, and shall be made a matter of public record in the office of the board of health. In securing specimens of milk for analysis the inspector shall take two bottles of equal size, secure the specimens from the dairyman in open market, seal the bottles, offer one to the dairyman for analysis, and the inspector shall make his analysis from the other. If the conditions are found satisfactory and the milk is found to be pure and of the quality required by this ordinance, the city clerk shall issue to the applicant a license and a number for each wagon operated by said dairyman upon payment of the license fee. The license fee shall be a sum based on the average daily sales of the applicant for the year, as shown by his verified statement, which shall be filed in the office of the city clerk of the city of Wichita. The said annual license fee shall be a sum equal to said average daily sales multiplied by 5 cents per gallon: *Provided*, That no license shall be issued for a less sum than 25 cents.

All license fees provided for in this ordinance shall expire and be collected in the same manner as provided by the terms of ordinance No. 4414, of the city of Wichita.

SEC. 3. It shall be unlawful for any person to sell, exchange, deliver, or have in his possession with the intent to sell, exchange, or deliver in the city of Wichita, any impure, unwholesome, watered, or adulterated milk, or any milk in which a preservative of any kind has been used, or any skimmed milk, unless in a conspicuous place above the center of the outside of the vessel from or in which skimmed milk is sold, the words "skimmed milk" are distinctly marked; and the person selling skimmed milk shall notify the purchaser at the time, that the same is skimmed milk; or any milk which has been exposed to any form of infection or which contains any unhealthy ingredients or substances, or which has been transported or stored in an unclean manner, or which has been produced from a cow or cows which are kept or stabled under unhealthful conditions, or which may be diseased; or any milk obtained from cows that are fed upon any fermented slops, waste, or refuse matter from any starch factory, stable manure, bedding, or upon any grain or other article of food or drink, that has

been fermented or in process of fermentation from any cause, except good ensilage; or from cows 15 days before or 5 days after parturition.

SEC. 4. Whenever in the opinion of the board of health or milk inspector, there are reasons to believe that milk offered for sale is the product of a diseased cow or cows, or contains preservative of any kind, and should be submitted to a microscopic or chemical examination, such examination of the cows or milk as may be deemed necessary, shall be made or caused to be made by the board of health or milk inspector. Whenever it is deemed necessary by the board of health or milk inspector to make a microscopic or bacteriological test, the same shall be made within six hours after milking and the milk shall not contain more than 150,000 bacteria to the cubic centimeter.

SEC. 5. Any person in the city of Wichita who receives milk or cream for sale, shall immediately after emptying the receptacle in which said milk or cream has been received, thoroughly rinse such receptacle so as to free the same from all remnants of milk and of cream, or shall cause such receptacle to be rinsed; and under no condition shall a milk receptacle be used for any other purpose.

SEC. 6. The cow or cows shall be milked into the regulation covered milk pails and the milk immediately after being drawn from the cow or cows shall be taken to the milk house, strained and cooled to a temperature of not to exceed 65 degrees Fahrenheit. Milk shall not be transferred from one vessel to another in the milking stable. No milk bottle shall be received from a customer by any milk dealer that have [sic] not been well washed or are not in a cleanly condition when returned, and said bottles must not be used by the customer for any purpose other than a milk container.

SEC. 7. The milk inspector of the city of Wichita shall have the right to enter without previous notice, for the purpose of inspecting any dairy or dairy farm shipping milk to said city.

SEC. 8. No dairy shall be located or maintained in any locality where the milk or milk products will be contaminated either by dirt, noxious gases, infective organisms, or substances or anything liable to alter the quality of such milk or milk products.

SEC. 9. Every person maintaining a dairy or selling milk or cream shall use a sufficient number of receptacles for the reception, storage, and delivery of milk, and shall cause them to be kept clean and wholesome at all times. No receptacle containing milk shall be left uncovered. The milk inspector shall have the right to condemn milk receptacles at any time, and forbid the further use of said containers for the purpose of containing milk.

SEC. 10. All cans, bottles, or other vessels of any sort used in the sale, delivery, or distribution of milk shall be properly cleansed or sterilized before they are used again for the same purpose, and all wagons used in the conveyance of milk for sale or distribution shall be kept in a cleanly condition and free from offensive odors. Milk shall not be transferred from one vessel to another, except at the creamery, dairy, or customer's house.

SEC. 11. The inspector of milk shall be provided with proper instruments for testing the purity of milk, and it shall be his duty to stop any wagon or person or persons carrying milk for sale, or selling or offering for sale milk in the city of Wichita at any time or place, and test the same, provided the inspector of milk shall not detain any wagon or person or persons engaged in carrying milk for a longer period than is necessary to test the same, and may confiscate such milk if found impure as specified in this ordinance, and shall arrest and prosecute any person found selling, exposing, or offering for sale any milk in violation of this ordinance.

SEC. 12. In all prosecutions under this ordinance if the milk is shown upon analysis to contain more than 88 per cent of watery fluids, or contains less than 12 per cent of milk solids (which solids shall contain at least $3\frac{1}{4}$ per cent of milk fats), or if such milk shall contain preservatives of any kind, or the cream shall contain less than 18 per

cent of milk fats, it shall be deemed for the purpose of this ordinance to be watered, unwholesome, impure, and adulterated.

SEC. 13. It shall be unlawful for any person who is afflicted with any contagious or infectious diseases to sell or handle in anyway milk delivered in the city of Wichita.

SEC. 14. It shall be the duty of the board of health to cause to be inspected and examined any dairy farms or places where cows are kept for dairy purposes the milk of which is sold in the city of Wichita for consumption, also all places where milk is kept for sale in said city, said inspections and examinations to be made at least twice a year. Any person refusing to allow said inspection or examination to be made shall not receive a license to sell milk in the city of Wichita, and if license has already been issued same shall be suspended until such inspection or examination is permitted, and said person shall not be allowed to sell any milk in the city of Wichita until such examination is made.

SEC. 15. There is hereby created the office of milk inspector, who shall also be food inspector and the inspector of weights and measures, who shall be appointed by the board of commissioners, who shall hold his office for a term of two years or until his successor is appointed and qualified, and whose salary shall be \$100 per month.

SEC. 16. *Duties of the milk inspector.*—The milk inspector shall make daily written reports of all work performed by him in the exercise of his duties as milk inspector, said reports to be filed and kept in a book for that purpose, and said book shall be kept in the office of the board of health and open to public inspection.

SEC. 17. No milk shall be produced, brought into, held, delivered, sold, or offered for sale in the city of Wichita from cows not properly cared for or kept in any stable which is not at all times kept in a clean and wholesome condition, nor from any dairy refusing inspection by the board of health.

The cows shall at all times be kept in a clean condition, the udders shall be washed or wiped with a clean, damp cloth just previous to milking, and the milker's hands shall be clean and dry; the milker shall provide himself with a garment sufficient to cover his other clothing and used for milking purposes only; and said garment shall be at all times clean.

SEC. 18. All bottles filled with milk for sale shall have a properly fitting stopper with the name of the dairyman or dairy thereon.

SEC. 19. Any person violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined in any sum not less than \$1 nor more than \$50 for each offense, and such conviction shall operate as a revocation of his license: *Providing*, That before such license is revoked the holder of the same shall have the right to appeal to the board of commissioners within three days after such conviction, and the decision of the board of commissioners shall be final.