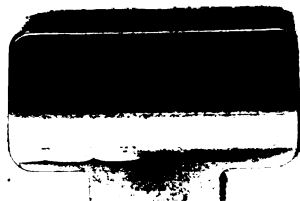
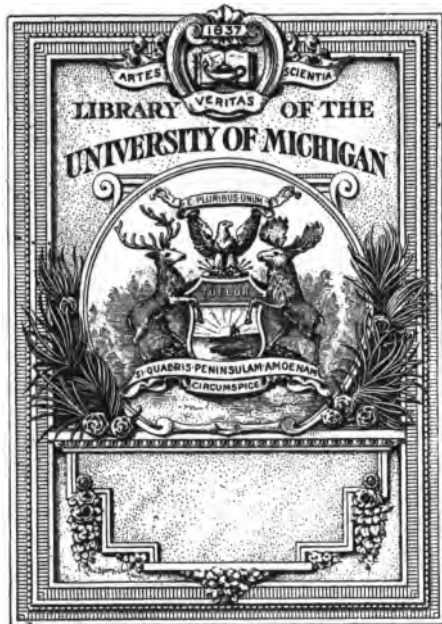


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SECOND BIENNIAL REPORT.
—
STATE BOARD OF HEALTH,
KANSAS.
—
1903-1904.

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SECOND BIENNIAL REPORT,

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OR THE

Nineteenth and Twentieth Annual Reports,

OF THE

STATE BOARD OF HEALTH

OF THE

STATE OF KANSAS,

FROM

January 1, 1903, to December 31, 1904.



**GEO. A. CLARK, STATE PRINTER,
TOPEKA, KAN
1905.**

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LETTER OF TRANSMITTAL.

OFFICE OF SECRETARY OF STATE BOARD OF HEALTH,
TOPEKA, KAN., February 1, 1905.

To the Honorable E. W. Hoch, Governor:

SIR—In compliance with the laws of this state, I have the honor to herewith submit to you the second biennial report, or the nineteenth and twentieth annual reports, of the State Board of Health, for the years 1903 and 1904.

Respectfully submitted.

S. J. CRUMBINE, M. D., *Secretary.*

STATE BOARD OF HEALTH.

E. P. MILLS, M. D., <i>President</i> , Olathe, (H.).....	Term expires Mar. 28, 1905
A. B. SCOTT, M. D., <i>Jetmore</i> , (R.).....	Term expires Mar. 28, 1905
J. B. CARLILE, M. D., <i>Leon</i> , (R.).....	Term expires Mar. 28, 1905
G. E. LOCKE, M. D., <i>Holton</i> , (R.).....	Term expires Mar. 28, 1906
CHARLES LOWRY, M. D., <i>Topeka</i> , (H.).....	Term expires Mar. 28, 1906
H. M. BENTLEY, M. D., <i>Sterling</i> , (H.).....	Term expires Mar. 28, 1906
J. B. CARVER, M. D., <i>Fort Scott</i> , (R.).....	Term expires Mar. 28, 1907
B. J. ALEXANDER, M. D., <i>Hiawatha</i> , (R.).....	Term expires Mar. 28, 1907
L. A. GOLDEN, M. D., <i>Kensington</i> , (R.).....	Term expires Mar. 28, 1907
C. D. WELCH, <i>Coffeyville</i>	Term expires Jan. —, 1908

ADVISORY BOARD.

F. O. MARVIN, A. M., M. Am. Soc. C. E., <i>Sanitary Adviser and Civil Engineer</i>	Lawrence.
E. H. S. BAILEY, Ph. D., <i>Chemist</i>	Lawrence.
SARA E. GREENFIELD, M. D., <i>Bacteriologist</i>	Topeka.

S. J. CRUMBINE, M. D., *Secretary*, Topeka.

STANDING COMMITTEES.

1. On Heating, Lighting, Ventilating, and General Sanitation.—Doctors LOCKE, ALEXANDER, and CARVER.
2. On Epidemic and Endemic Diseases and Quarantine.—Doctors ALEXANDER, SCOTT, and BENTLEY.
3. On Topography, Meteorology, Hygiene, and Inspection of Public, State and Charitable Institutions.—Doctors CARLILE, LOWRY, and GOLDEN.
4. Water Sources, Drainage, and Disposal of Substances Dangerous to Public Health.—Doctors GOLDEN, CARVER, and BENTLEY.
5. Special Sources of Danger to Life and Health.—Doctors LOWRY, LOCKE, and SCOTT.
6. Adulteration of Foods, Drugs, and Drinks.—Doctors SCOTT, LOCKE, and CARLILE.
7. Vital Statistics, Registration, and Nomenclature.—Doctors ALEXANDER, GOLDEN, and LOCKE.
8. Finance and Executive.—Doctors CARVER, CARLILE, and BENTLEY.

SECRETARY'S REPORT.

TOPEKA, KAN., February 1, 1905.

To his Excellency E. W. Hoch, Governor:

SIR—In accordance with that provision of the statute which requires the secretary of the State Board of Health to make biennial reports to you upon the vital statistics and sanitary condition and prospects of the state, the second biennial report, including the nineteenth and twentieth annual reports, is herewith respectfully submitted.

GENERAL HEALTH.

The general health of the state of Kansas for the years 1903 and 1904 has been fairly good. It will be noticed, however, in the table of contagious diseases reported for these two years, which is herewith submitted as a part of this report, that the communicable diseases were more widely spread throughout the state the past year than in the previous year. This discrepancy in the number of cases of contagious diseases may possibly be accounted for, in a small measure at least, from the fact that physicians generally, I believe, are more conscientious in making reports to the county health officers, and they to this Board, than perhaps at any previous time of recent years. However, there is no denying the fact that smallpox, scarlet fever, diphtheria and typhoid fever were widely prevalent during the year 1904. The largest fatalities reported among communicable diseases are those of typhoid fever and diphtheria.

DIPHTHERIA.

Owing to the great difficulty at times to make a positive diagnosis in cases of suspected diphtheria, it has been the policy of this Board to permit county health officers to send swabbings from the throats of such suspected cases to the Board's bacteriologist, in order that a positive diagnosis could be made, and in the event that the bacillus of the dread disease was found, proper steps could be taken for its suppression. It is a fact that has been conceded by almost every scientific observer that very often the bacillus of diphtheria lingers in the throats of those who have been afflicted for a variable length of time after the patient has apparently recovered. This being a fact, the question naturally arises, For how long a time should such case be continued in quarantine? The only solution of that question

must be the bacteriological test of a swabbing of the throat of such cases; hence it has been the policy of this Board for the past six months to encourage such means for determining the length of quarantine, and county health officers have been advised to send cultures to this Board for examination, and that quarantine be continued until such time as our bacteriologist, should determine that the swabbings were free from the Klebs-Loeffer bacillus. This procedure very naturally enlarges the scope and usefulness of the Board, and I take it that its value to the profession and the citizens of this state in general should be with that end in view; therefore, in order to continue the policy here suggested, it is necessary that the Board's sanitary fund be increased largely, or that a law be enacted placing the state bacteriologist on a salary, with sufficient fund for the proper maintenance of a state laboratory, and that the profession throughout the state be permitted to send cultures of suspected contagious or infectious diseases for the decision and findings of the bacteriologist.

I certainly know of no other means and methods by which the lives and health of the people of this state could be better protected at such a small outlay, and strongly urge that the legislature now in session take such steps for the betterment of the public health in this particular. It might be urged that physicians may have these specimens examined by bacteriologist engaged in that work, but it must be remembered that the charges therefor are usually excessive, being from three to five, or even ten dollars, which practically makes it prohibitive, and thus the people are not enabled to avail themselves of the great scientific advance along these lines, and many a young life is sacrificed because of the want of an early diagnosis and the proper quarantining of the case early enough to prevent subsequent exposures.

TYPHOID FEVER.

During the year 1903 there were 758 cases of typhoid fever reported, with 242 deaths; and in 1904, 1081 cases, with 339 deaths. During the decade from and including 1895 and 1904, in which an average of about seventy counties reported to this Board, there were reported 6141 cases of typhoid fever and 2939 deaths. These figures are both alarming and suggestive—alarming that so large a number of lives are sacrificed in a preventable disease, and that as the years go by the number of cases and deaths have steadily increased. It is suggestive of imperfect or lack of preventable measures, and naturally raises the inquiry, From what source comes this infection, and how best can it be prevented in continuing its dire work of destruction?

Typhoid fever has been described as a rural disease; that its propagation is from the country to the town rather than from the town to the country. With the means of rapid transportation now at hand,

and because of the fact that the cities must necessarily be supplied with their food products, including vegetables and milk, from the country districts, the residents of the cities should have a lively interest in the sanitary surroundings of their neighbor on the farm, of his well or spring, of his yards and barns, privies and outhouses. Some one has rightly said that the rural privy is the original plague-spot. These places are usually located with little or no regard for sanitation, the matters of convenience and reasonable amount of privacy alone being considered. Many of them are built upon the open ground, without vaults, open to flies, that swarm by the thousands in this pestilential nursery, and are frequently open to the access of chickens and even pigs. Then, again, if there is a convenient brook, closets are sometimes built over them that the running stream may wash the excrementitious matter away into the larger streams. All of this is unsanitary and unscientific, and the powers of the State Board of Health should be enlarged and extended that they might prohibit such unsanitary surroundings, and in a measure at least prevent the infection of milk and vegetables, either through contaminated water or by flies, and the pollution of streams through the farmyard brook.

Many of our cities in Kansas receive their water-supply from the streams and rivers close by them, and it must be evident to even a tyro in medicine, that such streams used for public water-supply should be kept free from contamination, by preventing the emptying of sewers from cities that may be situated above them into them. Were it not for certain natural processes by which streams have a tendency to purify themselves, first, by action of the sunlight, which is strongly germicidal to all pathogenic bacteria; second, by the usual lack of sufficient organic matter, which prevents rapid multiplication, or even the sustaining of their life for any considerable length of time; third, by sedimentation; fourth, by dilution—I say, were it not for these natural processes, many streams would become very little better than open sewers, carrying death and destruction in their waters to all who partook therefrom. These natural processes, however, take time for their accomplishment, and as the streams in Kansas are usually swift running, and the towns are becoming more thickly studded along the watercourses, it is evident that very little if any dependence can be put on the theory that nature will purify them so as to make them free from danger. Thus is suggested the importance of legislation along the line of placing the municipal water-supplies and sewerage systems under the jurisdiction of some responsible department of the state's government, whereby cities may be deterred from polluting sources of public water-supply for other cities,

and where private corporations installing water plants may be compelled to furnish wholesome water to the citizens of the town which they desire to serve. It is therefore urged that the bill now pending before the present legislature have favorable consideration.

It might be well in this connection also to call attention to the economic side of this problem. As typhoid fever attacks by preference those in young and middle life, between the ages of eighteen and forty, will be readily seen that the flower of young manhood and young womanhood is offered as a sacrifice to this dread disease, and as has been computed that a life in young manhood is worth \$10,000, on that basis the economic loss to the state in loss of life has been \$29,320,000 for the decade just past. This does not include the immense expense and time attendant on those who have recovered from a long and tedious illness, which, were it added to the above amount, would be stupendous. Is it not important that the state should take some action in the matter of this preventable disease?

SMALLPOX.

During the year 1903, 526 cases of smallpox were reported, with a fatality of twelve; and in the year 1904, 2734 cases were reported, with sixteen deaths. These 2734 cases reported, in my judgment, do not cover nearly all the cases, but from a general survey of the situation, with which the secretary is quite familiar, it would be safe in saying that the figures should be placed more nearly at 3500. Owing to the mildness of the epidemic, many cases having but a few scattered pustules, it has markedly increased the difficulties of health officers in locating the cases and making an effective quarantine. Indeed, I suspect that half of the cases have had no attending physician at all. This mildness and the continued epidemic to a greater or less extent for the past six years has produced a general apathy and disregard for the disease among a great many people, hence making the matter of isolation and the prevention of exposure exceedingly difficult.

That the disease in its present form, which might be in my judgment denominated varioloid, gives but a passing immunity to those so afflicted, has been demonstrated to my entire satisfaction by observation of a large number of cases. A number of authentic cases have occurred in which the patient had the same disease three or four years ago. Then, again, we have experimental evidence at hand that those suffering from these very mild attacks will as a rule readily respond to an effective vaccination, which would seem to further indicate the lack of perfect immunity. This emphasizes the importance of not permitting people who have had the disease to act as nurses or of becoming exposed to other patients, under the supposition that they

are immune; hence health officers should be extremely careful in their opinions along the lines above indicated.

I am thoroughly convinced that an efficient and successful vaccination will give immunity from smallpox for a longer period than an attack of mild varioloid, as we now have it throughout the state. However, it is to be borne in mind the disease is liable at any time to become malignant in type and assume the confluent form of smallpox, as has been illustrated time and again, not only during the past two years, but in the previous six years of the epidemic. The twenty-eight cases of fatalities during the past two years is certainly silent testimony to that fact, and should be a solemn warning that even though the disease is mild it is one that cannot in any sense be trifled with.

The wide-spread prevalence of the disease not only in this state, but throughout the United States, and the mildness of the epidemic in general, have produced the same lax conditions in other states as in Kansas, with a growing tendency to disregard quarantine measures, the rights of society, and the welfare of people in general; hence it is that cases are frequently found in public places, traveling from place to place on railway-trains, and practically holding at naught such precautionary and preventive measures as the State Board of Health of this and other states are endeavoring to set in motion for the prevention of contagious diseases. Evidence has multiplied in this office the past three months in which cases have gone from one place to another, in some instances openly, in others clandestinely, by being heavily veiled or hooded, and still others who had had the disease but had never had the necessary disinfection and fumigation of their person or clothing. Such procedure of course infects the places and coaches in which they go or travel and exposes a large number of people to the contagion. This is not only true in cases of smallpox, but in other contagious diseases as well. It is quite natural that people who are away from home when they are taken sick long to return to their homes, where they may have the comforts of their home surroundings and the presence of their friends and relatives; so it is that the people, if they are at all able, take the first train for their homes, regardless of the disease from which they suffer and unmindful of the exposures they may give to their fellow men. This is certainly a wrong practice from any point of view, and some legislation should be had which will not only deter people from going into public places or railway-trains while suffering from a contagious disease, but should also compel railway companies to fumigate their cars at regular stated intervals.

TUBERCULOSIS.

That the great white plague is still in our midst dealing death and destruction on every hand, is evidenced by the fatalities reported for the year 1903, which was 628 deaths, with eighty-five counties reporting; and 697 deaths for 1904, ninety counties reporting. These cases include in the main those of pulmonary tuberculosis, and do not take into account the number of deaths of children which are probably of tubercular origin. With our floods of sunshine, pure air, abundance of nutritious food and water, accessible to the poorest of our land, and our splendid inland situation, with ideal atmosphere, which is comparatively dry, these figures show an alarming mortality. Indeed, I suspect that if the correct number could have been accounted from all the counties of the state, it would have been nearer 1500 cases for 1904 than the figures given as reported, for it is a well-known fact that in the latter stages of the disease, when all hope is gone and the family and friends are simply waiting for the lapse of time to carry the dear one to the great unknown, the services of the family physician are dispensed with; hence a large number of cases are never reported. That tuberculosis is an infectious disease, has been conceded by scientific observers on every hand, and clinical experience has proven the assertion to the entire satisfaction of every practitioner who has been in practice any considerable length of time; hence the greatest care should be exercised by the family or the nurses having tubercular cases in charge. All the secretions and excretions of the patient should be destroyed, and the patients instructed and cautioned as to their duties in the matter, explaining to them the danger of improper care of their secretions.

The geographical situation of Kansas is such that the great army of tubercular cases from the East, who are daily seeking the higher, drier and more health-giving atmosphere of the Rocky Mountain region, are compelled to go through this state on transcontinental railway-trains to reach their destination. With the imperfect and unsanitary surroundings of the ordinary railway-car, in which few, if any, cuspidors are supplied, and no other places provided in which expectoration and secretions can be properly taken care of, with the velvet and plush tapestries in the ordinary Pullman sleeping-car, which are a ready receptacle for dust and floating pathogenic germs, it needs no scientific demonstration to prove the assertion that these railway-coaches and sleeping-cars become and are thoroughly infected with the tubercle bacilli, and this again emphasizes the necessity and urgent importance of railway-car fumigation. When we have contagious or infectious diseases in the homes of the people of Kansas we require such persons and places to be thoroughly disinfected and

fumigated before permitting people to come and go from such infected places, and there is no reason or logic that can be adduced whereby it might be successfully argued that the railroad companies should be exempt from doing likewise, or being entitled to any special privileges contrary to the efforts of this Board to maintain the public health and protect the lives and health of the citizens of this great state. Kansas spends much time, thought and treasure in the up-building of material and educational interests of the state, which is right and highly commendable, but in my judgment she falls far short when it comes to the consideration of the health of her splendid citizenship. Surely a human life is of more value than an acre of land, a bushel of wheat, or a Kansas steer, in which we take such a diligent interest.

TUBERCULOSIS SANITORIUM.

The following joint resolution has been introduced in the legislature as a preliminary step towards the establishment of a state sanitorium for consumptives:

JOINT RESOLUTION in favor of a committee to consider the question of a state sanitorium for consumptives.

Resolved by the senate and house of representatives in general session convened, That the governor be and is hereby authorized and instructed to appoint a committee consisting of three or five members, one of whom shall be a member of the State Board of Health, to consider the question of a state sanitorium for consumptives; and who shall report to the next legislature the best location for, and probable cost of erection and maintenance of, such an institution, together with such recommendations as they deem proper (the report to be submitted to the legislature some time during the first six days of the session); the committee to serve without pay, except for actual necessary expenses, which shall be paid from money in the treasury not otherwise appropriated, and the governor is hereby authorized to draw his warrant for the same.

It is hoped that the legislature will be unanimous in passing this resolution, and that your excellency will appoint a committee who are not only professionally competent to weigh this matter carefully, but who have a large interest in the campaign that has been started throughout the various states of our country for the cure and prevention of this dread disease. A large number of Eastern states have these institutions already established, and the universal testimony given by them is that they have accomplished even greater results than was expected, and that many poor unfortunates who would certainly have otherwise succumbed to an untimely death have been cured, and are now useful citizens. Not only is this needed for the benefit of those who are so unfortunate as to be stricken, especially those of the poorer classes, but the educational value to the people at large is such as cannot be estimated. Information is disseminated from these institutions as to the best ways and means of caring for

tuberculous patients and for the prevention of the inoculation of others, and it is the universal concensus of opinion of those having the management and charge of such institutions that it is well worth the expenditure in these various states from an educational standpoint alone, not taking into account the relief of those who have been stricken. With the additional advantage we have over other states less favorably situated, by our high altitude in the western portion, the bright and life-giving sunshine, and dry atmosphere, it certainly would prove a boon to hundreds of Kansas people in the years to come, and be the means of saving many precious lives that now are sacrificed to the great white plague.

STATE INSTITUTIONS.

The annual reports received from the state institutions indicate a satisfactory condition of health of the inmates. From all the institutions but two there were reports of deaths from tuberculosis. This but emphasizes the importance of the request from Superintendent Biddle, that a separate cottage for the care of tuberculous patients should be provided for each institution. Assuredly the inmates of the state institutions should have protection from tubercular infection as well as from ordinary contagious diseases, and I strongly urge that such separate cottages be provided for the care and treatment of consumptives at all the institutions.

The buildings at the Boys' Industrial School, at North Topeka, are greatly in need of repair. Having been built twenty-odd years ago, much of the work has rotted, the floors have sunk in several of the buildings, and the sleeping apartments are overcrowded, with windows in some instances so loose that were it not for the splendid system of steam heating they would be positively uninhabitable during the cold season such as we have been experiencing the past month. The bathing facilities are inadequate and out of date, and should be supplemented by modern methods and of a sufficient capacity to accommodate the increased number of inmates.

It is also recommended that a complete sewer system be inaugurated at the State Soldiers' Home, at Fort Dodge. With over 550 inmates, the primitive system of closets and privies is entirely inadequate for the needs of the institution and a positive menace to the health of the camp.

RECOMMENDATIONS.

The State Board of Health would recommend the enactment into law of the bill before the present legislature giving the Board more power, in that it should be permitted to publish its rules and regulations, giving them the force and power of law and providing penalties for the violation of same. Under the present law, the powers

of the State Board of Health are purely advisory, and with little or no power to enforce its rules and regulations concerning the abatement of nuisances and other matters which are prejudicial to the public health. It is a problem of almost daily occurrence that this Board is called upon to exercise authority in correcting some unsanitary condition, and we find the usefulness of the Board largely crippled because of lack of authority. It is true that our advice is usually followed, but it is due largely to the fact that people generally think we have such authority.

A law placing the municipal water-supplies and sewerage systems of the state under the jurisdiction of the State Board of Health is certainly an urgent necessity, and has been alluded to under the heading of "Typhoid Fever." This is another matter which is frequently brought to the notice of the State Board of Health by the filing of complaints and petitions from citizens in various parts of the state concerning defects in sewer systems or polluted and unwholesome water. To all these appeals we are compelled to reply that we can do nothing for them. It must be evident, therefore, to any one giving the matter any investigation or thought, that there should be some responsible authority empowered to correct these existing evils.

A compulsory-vaccination law is urgently needed, and the one presented to the present legislature is humane and equitable. It is practically what might be called a local-option vaccination law; that is to say, such compulsory vaccination is only operative by resolution of the local boards of education. This gives some means by which epidemics of smallpox may be successfully combated. It cannot be successfully argued but what smallpox could be wiped out of existence if every person would be successfully vaccinated. The 106 years of experimental evidence on that matter certainly cannot be gainsaid. Moreover, it has been noted by this Board that it is almost universally the case that those having smallpox during the last few years of the epidemic in this state are those who have not been successfully vaccinated. The people who argue against vaccination usually do so on the grounds that they fear it will produce a bad arm, and recite instances whereby an arm has been sacrificed to the theory of vaccination. In the early days when inoculation was practiced by taking lymph from the arm of one person and inoculating it into another frequently severely sore arms were produced, not by the vaccination itself, but inoculating septic material. There is no reason in these latter days, where the vaccine is prepared with care and the vaccination is done aseptically, why there should be a serious arm, or even loss of time from one's usual occupation. Moreover, every child should have protection from this disease for personal reasons, because it can be

had with so little cost and inconvenience, and I have not heard for a number of years of any serious results following a vaccination when properly and aseptically done. Quarantine measures for the prevention of smallpox are at best but a pure makeshift in the final control of the disease, the only true prevention being that of vaccination.

The appropriation for our sanitary fund should be largely increased, as it has been the policy of this Board to make use of the bacteriological tests in the control and prevention of diphtheria, tuberculosis, and typhoid fever. With the present appropriation of \$400 per year, out of which the expenses of the secretary are paid in making trips over the state in quarantine matters, it leaves but little for bacteriological work which has grown to be such an important part of our Board of Health work. I recommend that the appropriation for the sanitary fund be not less than \$1000 per year.

The salary of the stenographer should be placed on an equal with the salaries of other stenographers of the state-house, that of \$900 per year. With the rapidly increasing work of the Board, and the large amount of statistical tabulation, it requires an accurate, painstaking and competent stenographer to fill the position, and such services should be properly compensated.

Respectfully submitted.

S. J. CRUMBINE, M. D., *Secretary.*

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PROCEEDINGS OF THE BOARD—1903-'04.

FIRST QUARTERLY MEETING.

TOPEKA, KAN., February 28, 1903.

To the Members of the Kansas State Board of Health :

DEAR DOCTOR—You are hereby notified that the first quarterly meeting of the State Board of Health will be held in the office of the secretary at Topeka, Thursday, March 5, 1903, at 1:30 P. M. Respectfully yours,

J. M. MINICK, *President.*

CHAS. LOWRY, *Secretary.*

In response to the above call, the Kansas State Board of Health convened in the office of the secretary, at the state-house, at 1:30 P. M., March 5, and was called to order by the president.

The following members replied to the roll-call: Doctors Minick, Alexander, Locke, Gish, Dykes, Crumbine, and Gardner.

Doctor Hollembeak was absent. Professor Bailey and Doctor Greenfield, of the advisory board, were present.

The minutes of the last meeting were read and approved. The secretary then read his report. It was moved by Doctor Locke, and seconded by Doctor Gish, that the report be adopted.

Doctor Greenfield then read a paper on the care of consumptives. Doctor Alexander moved that the paper be printed and copies distributed to physicians sending in specimens of sputum; also to county health officers, for them to distribute. Doctor Dykes seconded the motion.

Some discussion followed in regard to those who had the privilege of sending in specimens, and it was agreed that all members of the Board could send specimens to the bacteriologist and could give authority to health officers of their respective counties. Doctor Crumbine commended the bacteriologist for work done.

Doctor Alexander moved that the fee for making examination by bacteriologist be fixed at two dollars, and thus enable the physicians to send in more specimens. Remarks were made by Doctors Locke and Gish. Doctor Dykes seconded the motion and it was carried.

Professor Bailey read report on examination of Parsons water, and made several remarks in regard to water-supply of towns in vicinity of Parsons.

Doctor Crumbine moved that the bacteriologist be instructed to purchase material for her work. Doctor Gardner seconded the motion. Carried.

The following bills were audited and allowed:

B. J. Alexander, traveling expenses and per diem.....	\$11 10
A. S. Gish, " " " "	12 22
G. E. Locke, " " " "	9 80
J. M. Minick, " " " "	25 55
M. N. Gardner, " " " "	21 90
S. J. Crumbine, " " " "	32 99
J. B. Dykes, " " " "	23 74
Total.....	<u>\$137 30</u>
Sara E. Greenfield, traveling expenses.....	\$5 75
E. H. S. Bailey, " " " "	2 50
Total.....	<u>\$8 25</u>

Upon motion, the board adjourned.

SECRETARY'S REPORT.

Mr. President and Members of the Board:

GENTLEMEN—Since the meeting of the Board on December 19, the work of the office has been in finishing and getting out the first biennial report, for the years 1901 and 1902, carrying on quite an extensive correspondence with county health officers in regard to infectious diseases that in some cases approached an epidemic form, and also in looking after matters of legislation entrusted to your secretary by resolution of the Board at the last meeting. We thought it advisable to get out the biennial report this year as early as possible, and so wrote the county health officers urging them to have their annual reports for 1902 in by the 5th of January, the object being to get our material to the state printer in time to get the book out before the meeting of the legislature. While this deprived us of some of the reports of county health officers that have been in the habit of making annual reports later, it was a choice between that or not having the book out until late in the spring. We should receive reports from 103 out of the 105 counties in the state. Two counties have no health officers. Our records show reports from eighty-six counties in 1900, eighty-nine in 1901, and seventy-two in 1902. The smaller number this year is accounted for by the fact that only one request was made by the secretary to send in the annual reports, whereas the delay in publication in 1900, and no publication in 1901, gave the secretary opportunity to urge county health officers, by repeated letters, to send in their reports.

I am glad to be able to state that there is an increased interest taken by county health officers in getting reports from physicians and in keeping in touch with the State Board of Health. There is great difficulty in getting physicians to report infectious diseases to county health officers, and also in reporting vital statistics. Doctor Bartlett, of Sumner county, Doctor Hatch, of Marshall county, and Doctor Iles, of Nemaha county, county health officers, have gotten out circular letters to send to physicians in their respective counties, urging them to make the necessary reports. Many others, from the character of the reports sent in, show that they do the best they can with the law as it is. I wish to call particular attention to the report of Doctor McLaughlin, of Wyandotte county. This is the largest county in the state and the report is absolutely complete in every particular. It came in too late for publication; so I wish to give a brief summary of the report made. The population of Wyandotte county is 76,000.

The total number of deaths for the year 1902 was 1202; the total number of births, 1166; the total number of marriages, 1205. The most prevailing diseases were pneumonia, tuberculosis, and typhoid fever. Ten nuisances were abated during the year. ~~The causes for death~~ were given in about 900 cases. The number of deaths reported for which there were no causes given was 321. It is easy to see that, in this the largest county in the state, getting out a report as complete as this requires a great deal of time and careful attention, for which the county health officer of Wyandotte county is entitled to great commendation.

A brief explanation of the reason for not having the list of physicians, as compiled by the new board of registration, published in the biennial report seems necessary. Request was made of the secretary of the State Board of Medical Registration and Examination for the list of names. It was refused on the ground that he was going to make a biennial report, and did not care to have the list published until after it was published by his own board. As no provision was made in the law creating the Board of Registration and Examination for the publication of any report, it was impossible for the secretary to get a requisition on the printer for such publication, and notwithstanding the effort made then by the secretary of the State Board of Health to obtain the list various excuses for withholding the same were given.

INFECTIOUS DISEASES.

Of the infectious diseases that usually prevail at this time of the year, the most prevalent in the state this winter has been scarlet fever. While it has not become a serious epidemic in any locality it has been general throughout the state. The community where most complaint has come from scarlet fever has been in and around Baldwin, Douglas county. There was complaint about lack of rigid quarantine made by one or two physicians against the county health officer, but on his attention being called to same by letter from your secretary he at once looked up the cases and established quarantine. The same thing was true in Marshall county. Complaint came from the mayor of Axtell that the health officer of Nemaha county, adjoining Marshall, was giving no attention to quarantine regulations in cases of scarlet fever that existed there. I sent the health officer of whom complaint was made the following letter:

"TOPEKA, KAN., February 13, 1903.

"*Urban G. Iles, M. D., Seneca, Kan.:*

"DEAR DOCTOR—Word comes from Axtell, Marshall county, of the existence of scarlet fever in your county, and it is said a large number of families have had the disease among their children and no attention whatever has been given to quarantine regulations by you as health officer of Nemaha county. The people have been allowed to run at large and the disease has spread to quite an alarming extent on account of lack of quarantine. This you understand is entirely against the law in regard to infectious diseases. The law requires all physicians to see to it that quarantine regulations are enforced, and especially is the enforcement of this law expected of a county health officer. Will you kindly look into the matter and not only enforce quarantine law, but also, as your duty requires in all epidemics, report to this office the number of people afflicted with the disease as often as once a week until the epidemic has passed. It is a very unusual thing for any county health officer in this state to neglect these matters, and I trust you will promptly do your duty, and by so doing help to stamp out the epidemic of scarlet fever that is existing in your county. The quarantine law will be found on page 100 of the biennial report mailed to you about two weeks ago. Very truly yours, CHAS, LOWRY, *Secretary.*"

In reply to my letter, the county health officer justified himself by saying that the physicians would not report their cases of infectious diseases, but he had gone over the ground and looked up the cases wherever he could find them and established a quarantine. Later, he issued a very carefully worded circular to all the physicians of the county, calling their attention to the quarantine law and to the penalty for not reporting cases, and I am glad to state that I have received word from the county health officer of the adjoining county (Doctor Hatch) that the cases of scarlet fever are all being thoroughly quarantined.

Smallpox has not prevailed as an epidemic this winter. Since the serious outbreak of the disease at Argentine in the fall, when there were between thirty and forty cases, with twelve or fifteen deaths, there have been but a few scattering cases in different parts of the state. In Greeley county there was quite a scare early in February, but only two cases occurred. Doctor Allen, the efficient county health officer, vaccinated extensively and exercised good judgment in the management of the cases, and also in managing the people, who seemed very much worked up over the situation. For a time I was in daily mail and telegraphic correspondence with Doctor Allen. The following is the last letter received from him:

"TRIBUNE, KAN., February 12, 1903.

"DEAR DOCTOR LOWRY—I think we shall have no more pox; seem to have it under control. Thank you for your advices. I will only be in this field until April 1. Dr. Mark Beach, one of the graduates of the Kansas Medical College, takes my place, and during the month of April I will be in Topeka and call on you. Very respectfully yours, A. A. ALLEN."

The number of cases of smallpox reported for December of 1902 was 27, against 380 in 1901; for January, 29 cases, against 403 last year; for February, 29 cases, against 423 last year.

There has been a less number of cases of diphtheria than early in the fall.

There has been quite an extensive correspondence carried on from this office with the county health officer of Labette county, in regard to the water-supply of the city of Parsons. On February 5 I received the following letter from Doctor Henson, county health officer of Labette county:

"MOUND VALLEY, KAN., February 4, 1903.

"Chas. Lowry, M. D., Topeka, Kan.:

"DEAR DOCTOR—I am notified through to-day's mail, by the coroner of this county, that there are three dead cattle lying in the stream from which the city of Parsons gets its water supply, at the immediate place that the city's supply of water is obtained. Kindly advise me at once what duties devolve upon me in this matter. Please be explicit in your instructions to me.

Fraternally, J. H. HENSON."

To this I wired the following reply: "Have animals removed at once. Will write further instructions," and sent the following letter:

"TOPEKA, KAN., February 6, 1903.

"J. H. Henson, M. D., Mound Valley, Kan.:

"DEAR DOCTOR—Your letter of February 4, informing me of dead animals lying in stream from which the city of Parsons gets its water-supply, duly received. You undoubtedly received my telegram requesting removal of animals at once. Think you had better make some effort to find out who the parties were who are responsible for putting the animals in the stream. It is a serious matter, and the parties who are guilty are liable to a fine. As you know, noth-

ing would be more certain to produce typhoid fever than that condition of things, contaminating the water by decaying animal matter. I trust you will do all you can to look the matter up in all its bearings. Am glad you reported this case so promptly, and hope by this time you have the animals removed from the stream. The question of bringing suit against the parties who are guilty can be considered later.

Very sincerely yours, CHAS. LOWRY, *Secretary.*"

On February 9 I received another letter from Doctor Henson:

"MOUND VALLEY, KAN., February 8, 1903.

"Chas. Lowry, M. D., Topeka, Kan.:

"DEAR DOCTOR—I received your telegram and letter of the 6th inst., and I immediately went to Parsons and made a careful investigation of matters there pertaining to the water-works at that place, though am still in search of further information, and I think at this time I will not be in a position to make a final report to you of the conditions which I have found. The conditions are bad, and should I find that I am going to need some assistance, can you send a member of the Board down here? Or do you prefer to give me explicit instructions, and I take the matter up with our county attorney? I shall proceed carefully, and shall institute no suits until I have more fully advised with you. However, will state at this time that eight or more dead animals, such as cows, hogs, etc., have been taken from this stream during the past ninety days, and not to exceed one mile and a half above the point where the city takes its water from the stream, and there are more than 2500 school children drinking this water five days out of the week—that is, from Monday until Friday evening. This will, no doubt, give you an idea of the conditions up there.

Very truly yours, J. H. HENSON."

To this I replied as follows:

"TOPEKA, KAN., February 11, 1903.

"J. H. Henson, M. D., Mound Valley, Kan.:

"DEAR DOCTOR—Yours of February 8 received, and in reply will advise, first, that you confer with the mayor and city marshal of Parsons and let them know the situation in regard to the animals being thrown in the stream above the city. Ascertain if possible who are the guilty parties; also publish a notice conspicuously for at least two weeks in the paper with the largest circulation in Parsons of the condition of things, with the statement that any parties in the future guilty of throwing dead animals in the stream will be punished to the full extent of the law. I would also have a conference with the county attorney. The parties who have done this may be ignorant, or possibly malicious. It is well to know which before bringing prosecution. If you can find out who the parties are, and have positive evidence, and in the opinion of your county attorney it is best to bring suit, go ahead and do it. I would be governed in the matter by circumstances. The important thing is to secure cooperation of local officials and publish the newspaper notice over your own signature as county health officer.

"I think it would be well to have the water which is used tested. When you are at Parsons, if you will take water from the hydrants in three different parts of the city and place in perfectly clean glass bottles and express the same to Prof. E. H. S. Bailey, of Lawrence, he will make the analyses. Please write to Professor Bailey when you send the water, and I will also notify him.

Very truly yours, CHAS. LOWRY, *Secretary.*"

On the 17th I received the following letter:

"MOUND VALLEY, KAN., February 15, 1903.

"Chas. Lowry, [M. D.], Topeka, Kan. :

"DEAR DOCTOR—I regret my inability to make a more complete report concerning the water-supply at Parsons than I shall at this time be able to do. However, will say that I met the county attorney in Parsons on the 12th inst., and with him and a member of the city board of health we investigated conditions as to the water-supply in as thorough a manner as was possible, and found two dead carcasses in ravines a few rods from the main creek from which the city of Parsons gets its water-supply; also found where several carcasses had been dragged from the stream from which the water-supply is taken and buried a few rods from the water's edge; and furthermore, there is a filthy feed-yard which this stream passes through and receives the wash of the same.

"I have had these carcasses burned, and have caused as good sanitary arrangements to be made as possible under the existing circumstances. However, I desire to state in this connection that it is utterly impossible to make and keep this creek in sufficient sanitary condition for water-supply source for domestic use, and therefore I cannot see how the people of Parsons are going to get proper protection in this matter unless this stream is condemned; and I will further state in this connection that this same water-works company have a pipe-line to the Neosho river, and, in my judgment, they should be compelled to furnish the city of Parsons with water from this stream, as it has running water the year around. In conclusion, will say that I have not published the notices, as you suggested, as I do not believe you yourself would have done so had you been on the ground as I was.

"I will send the water to Professor Bailey and will instruct him to send you report of same, and will await your further instructions.

Yours fraternally, J. H. HENSON."

"P. S.—Find enclosed newspaper clippings."

To this I replied as follows:

"TOPEKA, KAN., February 17, 1903.

"J. H. Henson, M. D., Mound Valley, Kan. :

"DEAR DOCTOR—Yours of February 15 duly received. Am glad you have made so thorough an examination of the situation at Parsons. I note all you say in your letter, also what is contained in the newspaper clippings. If you care to have Professor Marvin, sanitary adviser and civil engineer of the State Board of Health, go over the ground with you, I will write him to do so. There is sufficient money in the sanitary fund of the board to pay the expenses of such a trip. It seems to me from all I gather in your letter that the conditions at Parsons are serious, and that there is an urgent need of changing the source of water-supply for the city, which if not done there is more than a probability the city of Parsons will be visited by a severe epidemic of typhoid fever. You can write me if you care to have Professor Marvin's assistance in the matter.

"Am glad you did not publish the notices if in your judgment it was best not to do so. Of course, you did not state your reasons, but one on the ground can judge better the conditions than one away, and I assure you that what you have done is very satisfactory to me. Let me hear from you at your convenience.

Very truly yours, CHAS. LOWRY, *Secretary.*"

On the 20th I received the following letter.

"MOUND VALLEY, KAN., February 19, 1903.

"Chas. Lowry, M. D., Topeka, Kan.:

"DEAR DOCTOR—In reply to your favor of the 17th inst., I think now it is advisable to await Professor Bailey's analysis of the samples of water which I expressed to him on the 16th, hermetically sealed in five pint, glass-stoppered bottles. As soon as the professor has completed his analysis we will be in better position to give this matter final consideration.

"Doctor, of course, this analysis may not bring out contamination to any great extent, owing to the extreme cold weather, all surfaces being frozen, and the water in creek running over the dam, though I do not fear but what an analysis of the water at any time during the warm season of the year would bring forth an abundance of contamination. And, therefore, inasmuch as I feel warranted in the opinion that this creek should be condemned as a source of water-supply for domestic use, I should like very much to meet Professor Marvin on such date as you may suggest. I will duly appreciate any suggestions you may see fit to make. Wishing you success, I am,
Fraternally, J. H. HENSON."

Following is my reply:

"TOPEKA, Kan., February 21, 1903.

"J. H. Henson, M. D., Mound Valley, Kan.:

"DEAR DOCTOR—Your letter of the 19th duly received. Think it would be well, as long as the water from the creek is being used for domestic purposes, to have several tests made. It may be, as you say, that the water at the present time would not show any contamination, but by testing later in the spring it might be different. I think it is the custom, where it is expected to obtain the exact condition of water in streams, to make tests at different seasons and stages of the water.

In regard to having Professor Marvin meet you, you can arrange a date to suit yourselves. I will write him that he will hear from you, and that the state will pay his bill for investigating with you. I will do that at once, so whenever you write to Professor Marvin he will understand the meaning. I think so far you have done all that any one could do, but it is advisable to follow up the matter and see to it that the water-supply of the city of Parsons is what it should be, so far as we are able to do so. Very truly yours,

CHAS. LOWRY, *Secretary.*"

LEGISLATION.

Agreeable to resolution passed at the last meeting of the State Board of Health, requesting the secretary to have a bill introduced at the present session of the legislature, giving the Board a per diem, and also changing the personnel by adding an attorney to the membership of the Board, I wish to report. I had the following bill amending the act creating the State Board of Health drawn up by the assistant attorney-general:

AN ACT to amend sections 1 and 2 of chapter 129 of the Session Laws of 1885, entitled "An act to create a state and local boards of health, and to regulate the practice of medicine in the state of Kansas."

"Be it enacted by the Legislature of the State of Kansas:

"SECTION 1. That section 1, chapter 129, of the Session Laws of 1885, entitled "An act to create a state and local boards of health, and to regulate the practice of medicine in the state of Kansas," be amended so as to read as follows: Section 1. Within thirty days after this act shall take effect, the governor, by and with the advice and consent of the senate, if it then be in session, shall appoint from

the different parts of the state nine physicians, who shall be men of good moral character and temperate habits, distinguished for the devotion to the study of medicine and allied sciences, and not less than seven years' continuous practice in their profession, and each of whom shall be a graduate of a respectable medical college; the governor shall also appoint one other person not a member of the medical profession (preferably an attorney interested in sanitary sciences), and said persons when so appointed and confirmed shall be known as the Kansas State Board of Health. Three of the members of said Board shall be appointed for one year, three for two years, and four for three years; and annually thereafter the governor shall in like manner appoint successors of like character and qualifications to fill the vacancies occurring in said Board by reason of the expiration of the terms of service as herein provided; and the persons so appointed shall hold their respective offices for the like term of three years and until their successors are appointed and qualified; but in no case shall the governor appoint a majority of the physicians that shall constitute said Board of Health from any one school of medical practice, nor shall said Board at any time be composed of persons, a majority of whom shall be of the same school of medical practice. Upon the appointment of the persons provided for in this act, the secretary of state shall issue to each of them a certificate of his appointment, and within twenty days after such appointment, the said ten persons shall meet in the city of Topeka, and they shall each take and subscribe to the oath prescribed by law for state officers, which shall be filed with the secretary of state. And thereupon said Board shall immediately organize by electing one member of the Board president; the member of said Board who is not a physician shall have no vote in the election of officers, but shall have a vote on all other questions arising in the regular quarterly meetings of the Board. The president of said board shall have no vote on any matter other than the election of officers, unless there is a tie vote, when he shall have the deciding vote. The Board shall also elect a secretary, and said secretary shall be the executive officer of said Board, but not a member thereof. The secretary shall execute to the state of Kansas a bond in the sum of \$5000 with sureties, to be approved by the governor, and when approved it shall be filed in the office of secretary of state. Said bond shall be conditioned for the faithful performance of the duties of his office as such secretary, and he shall take and file a like oath to that prescribed for the members of said Board. The Board may elect one of its own number secretary, but in such case such election shall create a vacancy in the Board; and all appointments, whether original or to fill vacancies, made during the recess of the legislature, shall be submitted by the governor to the senate at its first session after such appointment is made, for its action. But all lawful actions of the members of the Board, made before confirmation or rejection, shall be valid. The Executive Council shall provide the State Board of Health a suitable office at the city of Topeka, for the transaction of its business.

"Sec. 2. That section 2, chapter 129, of the Session Laws of 1885, aforesaid, be amended to read as follows: Sec. 2. The State Board of Health shall make, adopt and publish such rules and order of business as may be necessary to make this act effective and facilitate the transaction of its business. It shall provide a seal, and all correspondence and papers emanating from it shall be under the seal of said Board. It shall meet quarterly, and oftener, if deemed necessary, at such place as it may designate, the first meeting to be held in the city of Topeka. The annual meeting after the first shall be held in the month of June in each and every year at Topeka, and a majority of its members shall constitute a quorum for the transaction of business. The compensation for the members of said board shall be five dollars for each and every day actually spent in the discharge of

their duties, and the actual and necessary traveling expenses of said members shall, while employed on the business of the Board, be allowed and paid. The secretary shall receive such compensation as may be allowed by said Board of Health and approved by the governor, and to be paid him in the same manner as other state officers are paid, and such necessary expenses shall be allowed him as the secretary of state shall admit on the presentation of an itemized account, having vouchers annexed, together with the certificate of the Board.

"SEC. 3. Original sections 1 and 2 of chapter 129 of the Session Laws of 1885 and all other acts or parts of acts in conflict herewith are hereby repealed.

"SEC. 4. This act shall take effect and be in force from and after its publication in the official state paper."

Also the following new bill to place the bacteriologist of the Board on a salary:

"AN ACT creating the position of state bacteriologist, and fixing the salary thereof.

"Be it enacted by the Legislature of the State of Kansas:

"SECTION 1. That the Kansas State Board of Health shall at its regular election of officers elect a qualified person (not a member of the Board), who shall become and be known as state bacteriologist, and who shall receive a salary of \$500 per year, to be paid in the same manner as salaries of other state officers are paid. The state bacteriologist shall spend a portion of each day in a laboratory at the state-house, and shall give gratuitous services when called upon to make bacteriological examinations for any physician in the state. He shall keep a record of all cases of tuberculosis where sputum has been sent for examination, and he shall send out literature giving information for the proper management and care, from a sanitary standpoint, of all such cases.

"SEC. 2. This act shall take effect and be in force from and after its publication in the official state paper."

Very soon after the legislature convened these bills were introduced in the senate by Senator J. C. Carpenter, and in the house by Dr. Henry O'Donnell. The amendment giving the members a per diem was favorably reported and passed in the senate in a very few days, and sent over to the house. The same bill in the house was referred to the committee on hygiene and public health, and there it was amended in the following manner: "The governor shall appoint as nearly as possible in proportion to the number of legally registered physicians of the respective schools, as shall be determined by the list of legally registered physicians of the state." This, if it became a law, would materially change the personnel of the State Board of Health. This bill as amended in the house was passed to a third reading, where it could have been taken up and passed any day. After about ten days Doctor O'Donnell substituted the senate bill, striking out a slight amendment made in the senate to the bill as presented, and it passed the house, went back to the senate, was signed by the governor, published, and became a law.

In regard to the fate of the bill to place the bacteriologist on a salary: This bill in the senate was referred to a committee and favorably reported. In the house it was referred to the committee on hygiene and public health, who reported adversely to the bill, and as it was the opinion of the chairman of the house committee that it could not be passed, no attempt was made to pass the bill through either the house or the senate, although the chairman of the senate committee to whom the bill was referred assured me that if the bill could be passed through the house he could get it through the senate. The large number of physicians in the house who have ideas of their own in regard to medical legislation made it impracticable for me to attempt to pass the bill through that branch of the legislature.

SECOND QUARTERLY MEETING.

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TOPEKA, KAN., June 15, 1903.

To Drs. J. M. Minick, J. B. Carver, E. J. Alexander, G. E. Locke, A. S. Gish, L. A. Golden, S. J. Crumbine, M. N. Gardner, and E. P. Mills:

DEAR DOCTORS—You are hereby notified that the annual meeting of the Kansas State Board of Health will be held in the office of the secretary, at the state-house, in the city of Topeka, on the 25th day of June, 1903.

Please acknowledge receipt of this notice. CHAS. LOWRY, *Secretary*.

J. M. MINICK, *President*.

In response to the above call, the State Board of Health met in the office of the secretary, and was called to order by the president at two P. M.

Members present: Doctors Minick, Carver, Alexander, Locke, Gish, Golden, Crumbine, Gardner, and Mills. Doctor Greenfield, of the advisory board, was present.

The minutes of the last quarterly meeting were read by the secretary, and accepted as read.

The secretary then read his report for the quarter. Doctor Locke moved that the report be accepted and placed on file. Doctor Gish seconded the motion and it was carried. A general discussion followed concerning vaccination to prevent smallpox. Doctor Crumbine stated that he had made inquiry and found that out of 153 cases of smallpox 146 had not been vaccinated. In other instances it was known that the majority of the cases which occurred had not been vaccinated.

A discussion followed regarding the advisability of quarantining for measles.

Doctor Crumbine moved that the secretary have printed separate blanks for reporting smallpox, in which the question will be asked whether or not the patient has been vaccinated; if so, when; and is there a good scar. This motion was seconded by Doctor Mills and carried.

The annual election of officers was the next in order of business. As the terms of three members of the embalmers' examining committee expired in June, nominations were in order to fill the vacancies. Doctor Alexander nominated Mr. Hinthorn, Doctor Locke nominated Mr. Barkley, and Doctor Crumbine nominated Mr. Penwell. The rules of the Board were suspended and the secretary instructed to cast the vote. Mr. Hinthorn, Mr. Barkley and Mr. Penwell were elected.

Nominations for president were called for. Doctor Crumbine nominated Doctor Locke. There being no other nominations, Doctor Alexander moved that the secretary be instructed to cast the vote of

the Board for Doctor Locke as president for the coming year. This motion was seconded and carried. Doctor Locke thanked the Board for the honor and expressed a desire to fill the chair with honor and justice.

Doctor Locke nominated Doctor Lowry secretary for the coming year. Doctor Gardner moved that the rules be suspended and the secretary elected by acclamation. This was seconded and carried.

Doctor Alexander moved that the entire advisory board be re-elected. Doctor Crumbine seconded the motion and it was carried.

Doctor Greenfield then made a short report of her work as bacteriologist.

A discussion followed concerning the relationship of the State Board of Health to the condition of the water in the Kaw valley. It was decided that as the city board of health of Topeka was doing efficient work in looking after the health of the people the State Board need not interfere. Doctor Greenfield made a report of the examination of the city water. Doctor Gardner moved that the entire Board visit North Topeka and investigate the surroundings, and that the expense be paid out of the sanitary fund. Doctor Crumbine seconded the motion. Carried.

The Board then adjourned.

SECRETARY'S REPORT.

Mr. President and Members of the State Board of Health.

GENTLEMEN—At the close of the last meeting of the State Board of Health, which was held on March 5, the subject of the Parsons water-supply was under consideration. For the benefit of the new members of the board I wish to recapitulate the subject herein referred to. During the past winter there was found in the stream which supplies the city of Parsons with water a number of dead animals—hogs and cattle. The attention of Doctor Henson, of Mound Valley, the efficient health officer of Labette county, was called to the same and he at once wrote me the conditions. I requested him to go to Parsons and personally see that the animals were removed, the stream cleaned up as much as possible, and that the effort be made to ascertain the parties who deposited the animals in the stream, and to take measures to prevent the repetition of the same. Doctor Henson had a conference with the mayor of Parsons and sheriff of Labette county in regard to it, and notices were given out that any one guilty of throwing animals in the stream in the future would be punished to the full extent of the law. The question of the contamination of the water-supply was then brought up. There was quite an extensive correspondence growing out of the above facts between Doctor Henson and your secretary, much of which was read at the last meeting. The State Board has had the water examined twice, once by Professor Bailey and at one time by Professor Bartow. Professor Marvin, the sanitary and civil engineer, was requested to go over the ground with Doctor Henson, which he has done. The first analysis made by Professor Bailey was read at the

last meeting. The report of Professor Marvin has been received since the last meeting and I herewith submit the same to you:

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PROFESSOR MARVIN'S REPORT.

Dr. Charles Lowry, Secretary State Board of Health, Topeka Kan.:

DEAR SIR—In accordance with your instructions, I visited the city of Parsons on March 23 last, and, with Dr. J. H. Henson, the county health officer, made some examination into complaints that had been made concerning the quality of the water furnished as public supply.

The plant is owned and operated by the Parsons Water-works and Power Company, which has a franchise from the city. Water is taken from a pond made by damming Labette creek, a relatively small stream, with a drainage area of about forty-five square miles. The water is pumped from this pond through a subsidence tank of about 160,000 gallons capacity, where, under the action of a coagulating solution of aluminum sulphate, which is added to the water between the pumps and this tank, some portion of the impurities of the water settle to the bottom and remain until the tank has silted up to such degree as to require the removal of the deposit.

I was informed that this tank is cleaned, at times, several months apart, and that two or three feet of deposit is removed. The claim is made that seventy-five per cent. of the suspended impurities of the water is removed in this manner. This is probably too large an estimate, as the analyses included in this report show a much less amount as a result of the complete process of subsidence and filtration.

The capacity of this tank is about one-fourth of the present average daily supply of 600,000 gallons pumped to the city, so that, while it is used continuously during pumping hours, the average movement of the water through it is slow, perhaps four inches a minute, a condition favorable to settling. The real office of this tank is to relieve the filters of some of their work, to prevent their quick clogging, and increase the periods between necessary washings.

The water from this basin, with its charge of coagulant, passes directly to the four mechanical filters of the Jewell gravity type, where the flocculent precipitate formed by the decomposition of the aluminum sulphate is caught by the sand layer. This forms a coating of gelatinous material which entangles and retains the matters in suspension, rendering the effluent fairly clear.

The effluent from the filters passes into a cement-lined clear-water basin of about 2,000,000 gallons capacity, from which it is pumped into the mains. Under present rate of consumption, this basin holds about three or four days' supply and the water probably is slightly improved by this storage.

The plant as a whole seems to be a good one, that ought to and probably does materially improve the quality of the water.

At the time of my visit to Parsons I collected three samples of water: No. 1 from the pond near the intake, No. 2 from the clear water basin, and No. 3 from a service tap at J. T. Elliot's drug-store. As the water was just high enough to run over the dam and as there had been no heavy rains for some weeks, I think that sample No. 1 represented fairly the average spring condition of the water in the pond. These waters were analyzed at the University of Kansas by Professor Bartow, and the results are given below, in parts per million:

Residue on evaporation: No. 1, 292; No. 2, 258; No. 3, 260.
Loss on ignition: No. 1, 84; No. 2, 74; No. 3, 78.
Residue after ignition: No. 1, 208; No. 2, 184; No. 3, 182.
Chlorine: No. 1, 6.2; No. 2, 6.3; No. 3, 6.4.
Free ammonia: No. 1, 0.127; No. 2, 0.03; No. 3, 0.027.

Albuminoid ammonia: No. 1, 0.49; No. 2, 0.271; No. 3, 0.258.

Nitrogen as nitrites: No. 1, 0.004; No. 2, none; No. 3, none.

Nitrogen as nitrates: No. 1, none; No. 2, 0.058; No. 3, 0.093.

Oxygen consumed: No. 1, 6.345; No. 2, 3.56; No. 3, 3.06.

Hardness: No. 1, 108; No. 2, 104; No. 3, 98.

All the waters were slightly colored and retained a turbidity after standing some time. There was a slight sediment in No. 1. The residue after ignition was in all three cases blackened.

EDWARD BARTOW, *Analyst*.

These analyses indicate that the plant was removing only a portion of the organic matter, that this was probably of vegetable origin, and that the quality remaining was sufficient to prevent the classification of the filtered water as first class, though not enough to condemn it as unfit for use.

In February last, during a cold spell when the pond was ice covered, Doctor Henson collected three samples of water from the city supply, from taps in the town. These were analyzed by Professor Bailey, of the University, with the following results, in parts per million:

Mineral matter: No. 1, 271; No. 2, 276; No. 3, 265.

Loss on ignition: No. 1, 60; No. 2, 59; No. 3, 68.

Chlorine: No. 1, 8.85; No. 2, 8.85; No. 3, 8.85.

Free ammonia: No. 1, 0.106; No. 2, 0.108; No. 3, 0.116.

Albuminoid ammonia: No. 1, 0.111; No. 2, 0.142; No. 3, 0.108.

Nitrogen as nitrates: No. 1, none; No. 2, some; No. 3, trace.

Nitrogen as nitrites: No. 1, none; No. 2, none; No. 3, none.

The mineral matter, which was really very small, only 15.83 grains per gallon, contained the following constituents, the most abundant being noted first: Calcium carbonate, calcium sulphate, magnesium sulphate, sodium chloride, alumina and iron oxide.

E. H. S. BAILEY.

These analyses as a whole indicate a little poorer quality than the more recent one given above, because of the greater amounts of free ammonia and chlorine, which point to animal sources of organic pollution, due probably to the local conditions to be spoken of later.

So far as I can form a judgment from my necessarily hasty examination of the plant, it seems to me to be of such a character as to successfully deal with water, at least in its present spring condition. But I hardly think it is managed in such a way as to secure uniform results. The efficiency and regularity of action of any mechanical-filtration plant depend almost entirely on the nicety with which the amount of the coagulant used is adjusted to the varying character of the water to be treated, and in this case of a small stream much variation is to be expected.

After times of heavy rainfall, the consumers complain of dirty water, due either to a lack of sufficient amount of the applied coagulant, or to a lack of enough alkaline bases in the raw water to decompose the alum and form the gelatinous precipitate.

The company attempts to remedy this by the addition of lime, but not with entire success, if the statements regarding muddy water from the service taps are to be relied upon.

The means used for adding these chemicals are primitive and not under control, the amounts being regulated by an ordinary hand valve, and the operator judging of needed changes by the appearance of the filter effluent. The company people do not seem to know how much chemical is used from day to day.

Experience elsewhere with mechanical filters has shown that they must be operated by attendants who have special fitness for the work, and that all steps in the process—the application of the chemical, the rate of filtration, the washing of filters, etc.—must be constantly watched, and the water frequently tested, either chemically or biologically, or both. If the filtrate to be used is of the best

quality, as the Labette water seems to be relatively soft, the continuous use of the lime with the alum might prove an advantage; possibly soda ash would prove of greater benefit in breaking up the alumina. In the summer period, the mineral constituents of the water then being concentrated, these would probably form sufficient basis, decompose the alum, rendering the use of other unnecessary. However, as to the ability of this plant to deal with the water in its low summer stages, I would not wish to venture an opinion. This should be settled by actual test. The condition of the pond formed by the dam is not satisfactory; it is no more than a deeper stream, of narrow width, but the water forced back some two miles, and in several shallow lateral draws. The banks and the adjacent lands are as they have always been, and the thorough cleaning of the pond and its environment I believe would benefit the ponded water.

The immediate cause of the recent complaint against the water seems to have arisen from the discovery, in February last, that at a point about half a mile above the intake there were several dead animals, either in the pond, on the ice, or adjacent streams. Most, if not all, of these came from a herd of 200 cattle that were wintered in a pasture bordering a stream, and fed within 200 or 300 feet of its edge. Doctor Henson informs me that he had pulled two carcasses from the water and found four others within short distances from the bank, and that he knew some others had been removed before his first inspection. Owing to the prompt and efficient work of Doctor Henson, at the time of my visit the cattle had been removed, and the pasture cleaned up as clean as a lawn. It goes without saying, that bad conditions like these should not be permitted, and it would seem to be the right and duty of the local health authorities or the water company, or both, to exercise a constant supervision and sanitary inspection of the drainage of the stream for some considerable distance above the intake. The water company owns a pumping plant on the river about eight miles from Labette plant, and a pipe-line from this discharging into Labette pond. This is used only when Labette supply is inadequate. The addition of Neosho water to Labette water alone, if plans were changed to allow separate use, would not remove the use of the filter plant and its right management. Further, the hardness of the Neosho and the relative likeness of Labette water is a point in favor of the latter.

Finally, on the one hand, the company had money invested in a fair plant, and is entitled to fair treatment and the absence of carping criticism; on the other hand, it is in duty bound to furnish good water and to improve its plant or change its method of operating to that end.

Respectfully submitted. F. O. MARVIN,
Sanitary Engineer State Board of Health, Lawrence, Kan.

INFECTIOUS DISEASES.

During the past quarter there have been a few scattered cases of typhoid fever in the state; diphtheria has prevailed to a far less extent than in the fall and early winter. There has been no local epidemic of scarlet fever reported. Measles has prevailed as an epidemic in a large number of towns in the state. Wichita, Lawrence and Topeka and many of the smaller towns have had epidemics, and it has prevailed quite generally throughout the state. The question has been asked a number of times, by county and municipal health officers, What shall I do in regard to quarantining for measles? The directions have been to quarantine all cases; and while this is the rule of the State Board of Health, I sometimes question whether quarantining in the long run in those cases is advantageous. Measles is a child's disease, and where children escape it and have it after they become adults it is almost always of a rather serious nature. It is

true that with children cases of deafness, defective eyesight, often pneumonia and occasionally tuberculosis are the result of mismanaged measles; so there is something to be said on both sides of the question, and when county and municipal health officers ask the question, as they have done many times the past winter, "Shall we quarantine for measles?" the answer is uniformly in the affirmative.

There has been since our last meeting a marked increase in smallpox. More cases have occurred in the state in the past three months than had occurred in a similar time for perhaps fifteen months. The small town of Oxford, Sumner county, had from sixty to seventy cases, all mild, and no deaths were reported. In Woodson, Labette, Reno, Thomas, Sheridan, Jefferson and Gove counties, smallpox has prevailed to quite an extent. A most fatal epidemic of smallpox occurred during March and April in Morris and Rice counties. The correspondence with county health officers in connection with these cases I think it proper that I should report.

The correspondence began on March 13, when the following letter was received:

"DELANVAN, KAN., March 13, 1903.

"DEAR DOCTOR—I was called yesterday to see William Robinson, a railroad laborer, quartered in a box car at Delavan, Morris county; diagnosis, smallpox. I quarantined patient, and as we have no county health officer I report to you.

Yours fraternally, ROBERT B. RAY."

To this I replied as followed:

"TOPEKA, March 16, 1903.

"Dr. R. B. Ray, Delavan, Kan.:

"DEAR DOCTOR—Replying to yours of March 13 in regard to case of smallpox, will say, you will please keep patient in quarantine until he is convalescent; then quarters should be fumigated before the patient is released.

Very truly yours, CHAS. LOWRY, *Secretary.*"

I heard nothing from this case until April 3, when I received the following letter from Doctor Painter:

"COUNCIL GROVE, KAN., April 2, 1903.

"*Secretary State Board of Health, Topeka, Kan.:*

"DEAR DOCTOR—About the 1st of March there was a section-man taken sick at Delavan, Kan., twenty miles west of here. He was sleeping in a box car arranged with crude bunks, in which ten or twelve other men slept. March 8 I was called to see him by the Missouri Pacific Railway Company, and found him broken out with a confluent eruption resembling smallpox, yet the preliminary symptoms had been so light and the eruption neither vesicular nor pustular, I hesitated in calling it smallpox, yet I ordered the patient isolated and the car quarantined. Doctor Ray, of Wilsey, attended the patient, and said he would report the case to you. March 15 the man died, and the 23d of March two other men who had been exposed in the car became sick, and on the 24th still another. These three men were all in the same house, at least a quarter of a mile from the town, where, also, all the other men who had been exposed in the car and had remained at Delavan were boarding. Doctor Sutherland, of Herington, attended these three, and yesterday morning all three of them died, making four in all at Delavan; and after we quarantined the car—March 8—five or six of these men left Delavan and went west, three of them going to Geneseo, and I am informed all three of them have died, the last one March 31.

"The citizens of Delavan are very much alarmed about the condition of affairs, and this morning Mr. Kingman, chairman of the board of county commis-

sioners, who lives at Delavan, reported to me that Mrs. Varner, the lady who had been boarding these men, was taken sick, and he wished me to write you, and, if you think best, to have you visit the town and advise what more can be done to control the disease. Every man who has taken the disease has died—seven in all. Doctor Sutherland, of Herington, can give you a better idea of the disease than I, as I did not attend any of them. As I say, all the parties that are known to have been exposed are at the one house and it is strictly quarantined. Do you think it necessary to quarantine the town? I have only been acting as health officer since the middle of March and have no instructions how to proceed in such cases. We would all feel better satisfied if you or some one of the State Board would visit the locality, and especially to see a case after it is fully developed. Any advice you can give will be thankfully received; also, I would like a copy of the law and rules governing the county health officer.

Yours fraternally, D. H. PAINTER."

- To this I replied as follows:

"TOPEKA, KAN., April 3, 1903.

"D. H. Painter, M. D., Council Grove, Kan.:

"DEAR DOCTOR—Your letter of April 2 received this morning. The cases of smallpox in your county, as I understand it, have all occurred in the box car and at the residence of Mrs. Varner, who it seems is now coming down with the disease. It would seem that very few people have been exposed. There certainly is no occasion for quarantining the town. Keep the house of Mrs. Varner rigidly quarantined, and give her the best attention and nursing that you possibly can. It is a very unusual thing to have the large fatality that you report. There must be a reason in, perhaps, want of good care and exposure during sickness, or it may have been complicated with grippe that is prevailing to such an extent over the state, or possibly pneumonia. I do not think there is any occasion for me to visit Delavan to see this patient. Will send you the biennial report of this Board, which was issued in January; also, such blanks as you may need to distribute among physicians. I wish you would report once in two or three days how this patient is getting along. If Doctor Sutherland is in attendance upon Mrs. Varner, you had better meet him in consultation and see yourself in regard to the quarantine, and see that the case is having all the attention necessary, and that no one leaves the house except the physician in attendance until the patient is convalescent and the house and people thoroughly fumigated.

Fraternally yours, CHAS. LOWRY, *Secretary.*"

On the same day I wrote the following letter to Doctor Sutherland:

"TOPEKA, KAN., April 3, 1903.

"Doctor Sutherland, Herington, Kan.:

"DEAR DOCTOR—Received a letter to-day from Dr. D. H. Painter, recently appointed health officer of Morris county, telling me of the cases of smallpox that have occurred at Delavan, and he reports that you have had charge of the cases. I have written Doctor Painter at some length, and think it would be well for you and Doctor Painter to meet in consultation. The cases have been unusually fatal, it seems, and the people of the town are very much exercised over the condition. Will you write and let me know the cause of the unusual fatality, so far as you can judge of it, and will you try to arrange for a consultation with Doctor Painter. Please attend to the quarantining. When Mrs. Varner is convalescent see that the house and everything in it is thoroughly disinfected. I did not mention one thing to Doctor Painter which you may call his attention to, and that is the matter of vaccinating the people in the town. While it seems that none outside

of this railroad gang have been exposed, yet I would urge the people to be vaccinated. Please write me on receipt of this, and after your consultation with Doctor Painter.

Fraternally yours, CHAS. LOWRY, *Secretary.*"

On April 5 I received this reply to the above letter:

"HERINGTON, KAN., April 4, 1903.

"*Dr. Chas. Lowry, Topeka, Kan.:*

"DEAR DOCTOR—It is with great pleasure that I inform you that I am not attending Mrs. Varner, of Delavan. I attended three cases there and they all died. Of the original railroad cases there were seven, four at Delavan, two at Geneseo, and one at Bushton (these left Delavan and went to Geneseo and Bushton), and all of them died. I have done my share in this unpleasant epidemic and decline to go and see any others at Delavan. Doctor, it would be an impossibility for tongue to describe those cases. It made one's blood run the wrong way to see them. I sent your letter to Doctor Painter, advising him to note what you say about vaccination. Doctor Painter attended Mr. Robinson, the first case, and also saw the other three before I did. I sent again for him, but he very wisely stayed outdoors, since which time I go him one better and stay out of the county.

Yours, H. H. SUTHERLAND."

Wishing to know the particulars about the cases of smallpox in Rice county, spoken of by Doctor Sutherland, I sent the following letter to Doctor McBride, county health officer of Rice county:

"TOPEKA, KAN., April 6, 1903.

"*J. S. McBride, M. D., Lyons, Kan.:*

"DEAR DOCTOR—Reports come to me from different sources of cases of smallpox in your county at the towns of Bushton and Geneseo, and that several have died. Have you any knowledge of these cases? Please let me know about them, how many cases there are, and how many, if any, have died. I wish you would make a careful investigation at once and report to me the conditions.

Very truly yours, CHAS. LOWRY, *Secretary.*"

To this letter Doctor McBride replied as follows:

"LYONS, KAN., April 7, 1903.

"*Chas. Lowry, M. D., Topeka, Kan.:*

"DEAR DOCTOR—Yours at hand. We are having a very severe form of smallpox in the north part of county. Have had four deaths, with four other cases coming down, and several others quarantined. We are doing everything in our power to stamp out the disease as soon as possible. There has been some complaint made as to these towns, wishing them quarantined. Would like to know what to do in the matter. The board was in session when I received your letter; so concluded to wait until I could hear from you. All have died who have had the disease so far.

Fraternally, DOCTOR MCBRIDE."

On April 8, I sent the following letter to Doctor McBride:

"TOPEKA, KAN., April 8, 1903.

"*J. S. McBride, M. D., Lyons, Kan.:*

"DEAR DOCTOR—Yours of the 7th just received. I would hardly think it necessary to quarantine the towns on account of the four cases that are coming down. The important thing is a strict quarantine of the cases and also have the people vaccinated as far as you can. When the cases have recovered see that the houses and clothing are thoroughly fumigated. These cases that died are parties who took the disease near Delavan, as I understand it. There was a great mistake made by some one in allowing people who had been infected to go at large. My understanding is that these people were with the man who first came

down with smallpox in the box car. They were all sleeping in the car, and as soon as it was learned that one of the party had smallpox the others were turned loose to go where they chose, all being infected. Though that cannot be helped now, the thing to do is to quarantine all the cases and see that all have medical attention and good care. Let me hear from you often in regard to the conditions.

Fraternally yours, CHAS. LOWRY, *Secretary.*"

On April 10 I received a reply from Doctor McBride:

"Chas. Lowry, M. D., Topeka, Kan. :

"DEAR DOCTOR—I was around among the smallpox patients yesterday. There are three at Geneseo, six at Bushton. These are all in one family and in the pest-house; one more to come down. The cases at Geneseo are in different families and are quarantined. One was out on the street while he was breaking out. Now, I look for a regular epidemic at that place, and I am getting letters every day wanting the town quarantined. I would like for you or one of the Board to come or let me know what to do. Fraternaly, DOCTOR McBRIDE."

On April 7 I received the following telegram from Doctor Painter: "Four cases at Varner's. Mother and daughter doing well. Father and son not so well. No physician in attendance. No other cases."

Replying to this, I wired the chairman of the board of county commissioners of Morris county, asking him to see that the Varner family had medical attendance.

April 9 the following letter was received from Doctor Painter, evidently replying to my telegram to county commissioner:

"COUNCIL GROVE, KAN., April 8, 1903.

"Dr. Chas. Lowry, Topeka, Kan. :

"DEAR DOCTOR—The four cases of smallpox at Delavan are all reported better this morning, and doing well. The disease is much milder with them, it seems, than in the other cases, and is not of the confluent type. It appears they were advised by some friends, when they were first exposed, to use a medicine put up by some doctor at Wichita, who claimed to be a specialist in smallpox, and his medicine is claimed to prevent and modify the disease. Varner's family have been taking this medicine since their first exposure, and when the disease appeared in their own family they wired to Wichita for this doctor. The old doctor died last September, but his son went to Delavan and prescribed for the family. This is all the medical attendance they have had or wish, and as they are reported to be doing well and having the disease in a very light form, I do not think it necessary to urge other attendance. I am in daily communication with Mr. Kingman, chairman of the board of county commissioners, and will keep you informed of the condition at Delavan. I consider our quarantine has been very successful, as no new cases have appeared outside of the house in which all dangerous ones were confined (I mean dangerous to the public safety), and it is now more than two weeks since they were isolated there.

Fraternaly yours, D. H. PAINTER."

On April 11 I was making arrangements to visit Rice county, as requested by Doctor McBride, when, by a singular coincidence, I received a request from Doctor O'Donnell, health officer of Ellsworth county, to come to Ellsworth, and a telegram from Surgeon General Wyman, of Washington, D. C., to make a personal investigation of the cases in Rice county, the report having gone out that the disease was bubonic plague. On arriving in Ellsworth, I found that there were no cases of smallpox in that county, but the people were very much excited over the condition in the adjoining county of Rice, and the city of Ellsworth had

passed an ordinance quarantining against Geneseo, Bushton, and Frederick, in Rice county. The following morning I took the train to Frederick, where, by appointment, I met Doctor McBride. I found the town quarantined against Geneseo and Bushton and all the people very much excited over the situation, having guards out around the town on every road to prevent any one from the above-named towns entering their town. While this quarantine was illegal, I did not think it best under the circumstances to try to raise it. I visited the towns where smallpox existed and found the conditions as good as they possibly could be under the circumstances. There had been a number of deaths, as reported, but at that time those who were sick with smallpox at Bushton were all in a pest-house, being carefully nursed by three trained nurses, and Doctor McBride was visiting the cases daily and giving them all necessary attention. At Geneseo there were three cases in three separate families, all quarantined and having medical attention. I found that the physicians who were attending these cases were extra careful in regard to spreading the disease themselves, having a tent near where the cases were, and going directly to the tent after visiting the patients, where they bathed and changed their clothing.

On arriving home I at once reported to Surgeon General Wyman in substance what I have reported to you. I also found a telegram from Doctor Painter, stating that Mr. Varner had died, but that the rest were doing well.

The conditions, then, as developed by my visit to Rice county, and by an extensive correspondence, much of which is not given here, are as follows: A Mr. Robinson, one of a gang of eleven railroad workmen, came down with smallpox about the 1st of March in a box car where he was quartered with the ten other men. Between that time and the 10th of March he was visited by two physicians, Doctor Ray, of Wilsey, and Doctor Painter, of Council Grove, but not until late in the day of the 10th, and then by order of the railroad officials, was this patient quarantined. The other ten men were taken to the home of Mr. Varner and told that they were to be quarantined. On the night of the 10th seven of the ten men left and went to their homes in Geneseo and Bushton, in Rice county, three remaining in the house of Mr. Varner. These three came down with the disease in a few days. The first case died about the time the others came down. On the 31st of March the three men in Mr. Varner's house died, and of the seven who went to their homes in Rice county, three more died. Others in the families came down with the disease; so that up to the time of my visit there were twenty-one cases in all, eleven of which were fatal, Mr. Varner being the last. Later two others died, making thirteen in the two counties of Morris and Rice. This condition was to a large extent the result of a lack of prompt and efficient managing of the original case on the part of the physicians in attendance. The county commissioners of Rice county may reasonably come in for a share of censure in not having a county health officer at the time of the outbreak of this epidemic.

After my visit to Rice county some correspondence of a personal character occurred between Doctor Painter, health officer of Morris county, and myself, growing out of newspaper criticisms, for which Doctor Painter, without justification, held me responsible. This correspondence I would consider without interest to the Board; so I will not report same unless you request it. There was some correspondence between myself and the Mexican consul at Kansas City, who was directed to make inquiry about the epidemic. His letters were answered and the conditions explained.

On May 12 I received from Doctor Painter the last letter in our correspondence on the subject of this unfortunate local epidemic.

"COUNCIL GROVE, KAN., May 12, 1903.

"*Dr Chas. Lowry, Topeka, Kan.:*

"DEAR DOCTOR—We have now come to the question of a final "clean up," and disinfecting the property occupied by the smallpox patients at Delavan. I am convinced from expressions of prominent citizens of that place that nothing short of 'purification by fire' will satisfy the people. I therefore write you for your opinion and advice on the subject. The building occupied is a small affair. There were seven cases and four deaths in the house. It is estimated that \$500 will cover all expense of replacing the house and its contents in case they are burned.

"Now, what do you think of burning the entire 'mess' and make a sure thing of it? In case we do burn the house and its contents, will the State Board stand any part of the expense? We thought if we would secure a tent for the Varner family to occupy while we were rebuilding the house it would be a good scheme. Can you secure one for us and ship it to H. Kingman, Delavan, at the expense of the county? The county health board will have a meeting here Saturday, at one P. M. We would like to hear from you upon this matter by that time, or, better, we would like to have you meet with us, if you can and think best. At any rate, write me fully regarding the proper method to adopt and also regarding the tent. I thought, perhaps, the State Board might be able to furnish one, or, if not, we could get one from the adjutant general or some one in Topeka.

Yours fraternally, D. H. PAINTER."

On receipt of this letter, I took the matter up with the attorney-general in regard to the destruction of the house, and acted upon his suggestion, and refused to give any advice on the matter, as I did not care to commit the state in any way for any part of the loss of property. Following is my reply:

"TOPEKA, KAN., May 13, 1903

"*D. H. Painter, M. D., Council Grove, Kan.:*

"DEAR DOCTOR—Your letter of May 12 received, and replying to same will say: In regard to the destruction of the house where the Varner family had smallpox, and where the other three cases occurred and died, you are master of the situation. I think the matter is up to you. You know the situation just as well as I do, and your judgment in that matter is just as good mine. In regard to the other question, the loss: Of course the State Board of Health has no fund to bear a part of any such loss; neither is there anything in the law which would authorize them to do it in any event. If your county health board decides it is best to burn the property, I think at the next meeting of the legislature an appropriation could be obtained from the state for compensating your county for at least part of the loss. It is my opinion that the Varner family should not have to bear the loss. In this, I presume, you and your county board agreed. If I could be of any assistance to you I would come out, but I do not see that it would help you at all for me to do so.

"Regarding a tent for the use of the family in case the house is burned, I have been to the adjutant general and also to the G. A. R. headquarters to try and secure one for you, but in neither case was successful. I understand the Topeka Tent and Awning Company rent tents, and one 16 x 16 could be rented for two or three dollars a week. Fraternally yours,

CHAS. LOWRY, *Secretary.*"

This closed the correspondence regarding the unfortunate epidemic in Rice and Morris counties.

Following is a report of a case of smallpox from the county health officer of

Nemaha county, where circumstances at the onset were similar to the one just reported, but with results entirely different, and where the management was prompt and the best possible judgment used:

"SENECA, KAN., April 19, 1903.

"*Dr. Charles Lowry, Topeka, Kan.:*

"DEAR DOCTOR—We have a case of smallpox two and a half miles north of Goffs, Kan., in a camp of railroad graders. There are about fifteen in the camp. I ordered the patient separated from the rest and the whole camp quarantined in a field a quarter of a mile from a house or country road. They are in covered wagons. Doctor Maxson, of Goffs, has charge of the case. If you think best, you might write him in reference to disinfection, etc. It might have more weight than coming from me. Yours very truly, URBAN G. ILES."

To this letter I replied as follows:

"TOPEKA, KAN., April 21, 1903.

"*Urban G. Iles, M. D., Seneca, Kan.:*

"DEAR DOCTOR—Your letter of April 19 duly received. Am glad that you quarantined the camp of railroad laborers that have been exposed to smallpox. Please look after the matter of having the attending physician disinfect, etc., yourself. It is better for you to do it. He will respect your orders just as much as mine in regard to that matter. See that everything is attended to and exercise all possible care to prevent the spread of the disease.

Very truly yours, CHAS. LOWRY, *Secretary.*"

Later I received the following letter concerning the case:

"SENECA, KAN., May 7, 1903.

"*Dr. Chas. Lowry, Topeka, Kan.:*

"DEAR DOCTOR—The case reported was the only one. Those that were exposed had been vaccinated and no new cases developed among them. The case is well, their bedding and clothing burned, and they were supplied with a new outfit by the county and have resumed work. The wagons and harness were scrubbed with lye and corrosive sublimate.

Yours very truly, URBAN B. ILES."

During the quarter I have visited Woodson, Gove and Thomas counties, at the request of the health officers of the respective counties, to assist them in work in connection with smallpox and quarantine cases. Neither of the above was of special interest, and no fatality occurred in either case.

EMBALMERS' EXAMINING COMMITTEE.

Following is a brief report from the secretary of the embalmers' examining committee:

"HIAWATHA, KAN., June 18, 1903.

"*Chas. Lowry, Secretary, Topeka, Kan.:*

"DEAR SIR—As you are aware, there has been no examination held since my last report to you; hence all I have to report is the renewal of licenses to date for 1903-'04, which is \$115. This amount has been turned over to our treasurer, E. O. DeMoss, and will appear in his report also, I presume.

"So far as I know, the best of harmony and good will prevails throughout the state, and our present plan of examination will make our certificates good in any state. Very truly yours, J. B. HINTHORN, *Secretary.*"

“TOPEKA, KAN., June 23, 1903.

“*Dr. Chas. Lowry, Topeka, Kan.:*

“DEAR SIR— You will please find enclosed the treasurer's report of the examining committee:

Balance cash on hand at last report	\$373 94
Received from Mr. Hinthorn, renewals	115 00
Total	\$488 94
Paid warrant for printing	20 50
Balance on hand	\$468 44

E. O. DeMoss, *Treasurer.*”

THIRD QUARTERLY MEETING.

TOPEKA, KAN., September 10, 1903.

To Doctors Locke, Minick, Gish, Crumbine, Gardner, Alexander, Mills, Carver, and Golden:

DEAR DOCTORS— You are hereby notified that the third quarterly meeting of the State Board of Health will be held in the office of the secretary, at the state-house, in the city of Topeka, Friday, September 18, 1903.

Please acknowledge receipt of this notice.

Very truly yours,

CHAS. LOWRY, *Secretary.*

G. E. LOCKE, *President.*

In response to the above call, the State Board of Health met in the office of the secretary at 1:30 P. M., September 18. The meeting was called to order by the president.

Members present: Dr. G. E. Locke, Dr. S. J. Crumbine, Dr. A. S. Gish, Dr. J. M. Minick, Dr. M. N. Gardner, Dr. B. J. Alexander, and Dr. J. B. Carver. Doctor Greenfield and Professor Bailey, of the advisory board, were also present. Dr. L. A. Golden and Dr. E. P. Mills were absent.

The minutes of the last meeting were read by the secretary, and approved as read. The secretary's report was then read and received for discussion.

A discussion followed concerning the length of time for quarantining diphtheria, and the following resolution introduced by Doctor Crumbine:

Resolved, That the time of quarantine of all contagious diseases, or diseases dangerous to public health, be such time as in the judgment of the city or county health officer, it may appear safe to raise the quarantine, after the house and premises have been fumigated according to the requirements of the quarantine law.

Doctor Alexander moved that the resolution be adopted. Doctor Minick seconded the motion, and it was carried.

The subject of quarantining cases of whooping-cough or excluding

them from school was then taken up. Doctor Alexander moved that the following resolution be adopted:

Resolved, That in the opinion of this Board cases of whooping cough during the contagious stage should be excluded from the public schools and other places of public assembly.

Doctor Minick seconded the motion, and it was carried.

A discussion followed concerning the causes of typhoid fever in Topeka, and a motion was made and carried that the secretary and president, with the help of such aid as they can get, immediately investigate the water conditions or typhoid conditions in the city of Topeka and make such report as in their judgment is desirable.

Doctor Crumbine moved that the action of the president and secretary in regard to the examination of barbers be approved by the Board. Doctor Minick seconded the motion, and it was carried.

Doctor Minick moved that at the next annual meeting of the Board all county health officers be invited to attend. Doctor Crumbine seconded the motion, and it was carried.

A motion for adjournment was made and carried.

The following bills were audited and allowed:

S. J. Crumbine.....	\$27 14
G. E. Locke.....	9 40
M. N. Gardner.....	17 83
A. S. Gish.....	9 36
J. M. Minick.....	20 90
B. J. Alexander.....	18 40
J. B. Carver.....	20 85
Total.....	\$123 88

SECRETARY'S REPORT.

Mr. President and Members of the State Board of Health:

GENTLEMEN—As implied in the letter calling you together for this quarterly meeting, my report will be exceptionally brief. The last legislature passed a law creating a State Barbers' Examining Board. On July 8 I received the following communication from the governor:

"EXECUTIVE DEPARTMENT, GOVERNOR'S OFFICE,
TOPEKA, KAN., July 8, 1903.

"To the State Board of Health, Topeka, Kan.:

"GENTLEMEN—I this day appointed, subject to your examination and approval, the following persons as members of the Board of Examination and Inspection Commissioners, or barbers' board: J. D. Stevens, Leavenworth, one year; D. M. Mitchell, Argentine, two years; Wm. L. Aker, Wichita, three years. Kindly notify the above-named parties when you will be able to pass upon their qualifications, and notify this office the result of such examination.

Yours truly, W. J. BAILEY."

In the interests of economy, and to save the members the trouble of attending an extra meeting, under the advice of the attorney-general, the president of your board and myself made the examination, on July 23, and as each member named

by the governor passed a satisfactory examination, we reported favorably upon the persons appointed by Governor Bailey. In order to make the examination by the president and secretary legal, it will be necessary to have a resolution passed by the Board, indorsing their action.

During the quarter there has been an unusual amount of correspondence in regard to nuisances from various parts of the state, probably growing out of excessive rainfall. Without going into detail in regard to these various complaints, they are replied to almost invariably either by recommendation to make complaint to the county attorney and bring suit, or, if possible, to try and fix the matter up with the least trouble and friction, and avoid any litigation.

A case of suspected poisoning by an overdose of medicine was brought to the attention of this office during the absence of the secretary, in August. The following is the correspondence in regard to the case:

"OBERLIN, KAN., August 23, 1903.

"*Secretary State Board of Health, Topeka, Kan.:*

"DEAR SIR—I send you by express the stomach of a child that died at Kanona, of this (Decatur) county, yesterday at 3:30 A. M. A traveling doctor, one George Pettitt, who is living in a tent at that place, was called Friday, about two P. M., to prescribe for the child, which was two years old. He and the parents both told me that he gave the child three doses of medicine. At all events, it went to sleep shortly after giving the medicine and never woke up, but died at 3:30 A. M., Saturday. I, as coroner of this county, was telephoned to go to that place and investigate, which I did, with our county attorney. I found this in evidence. The doctor claimed the child had spasms, and gave it one-half tablet of .01 grain of aconitine and .015 grain of atropine twice. He was not sure that the child got the medicine down, so that was the reason he repeated the dose until three were given.

"I asked to see some of the medicine he had given. He told me he only had the three tablets and that he himself took the other half that remained. In all events, the parents and others in attendance told me that the child was very cyanotic and had stertorous breathing. They became uneasy and told the doctor they did not like the conditions existing. He assured them he could wake it up at any time he wanted to, but when he did try he failed, as you might know.

"Now, doctor, at the request of the parents, I send you the stomach to analyze, and if it is not all absorbed in the system, you may give us a little light on the subject. This doctor is from Smith county, Kansas, and has a certificate from our State Board. What shall I do, or what can any one do in the case? I told them that I thought all that could be done was to enter suit for malpractice, and possibly, if the State Board saw fit, to revoke his license.

Yours kindly, DR. S. L. HUBBARD."

As the state chemist was away on his vacation, the specimen was given to Dr. F. B. Dains, of Washburn College, this city, for examination, and his report was as follows:

"TOPEKA, KAN., August 23, 1903.

"*Dr. S. L. Hubbard, Oberlin, Kan.:*

"DEAR DOCTOR—In the absence of Doctor Lowry and also the state chemist, the stomach was turned over to me. The stomach and its contents had partially decomposed. It contained, however, a good deal of fat, possibly due to milk. In analyzing the stomach contents, only slight alkaloidal traces could be found. The tests were very poor, and it is impossible to identify accurately either aconitine or atropine. The two alkaloids are among the most difficult ones to identify with any certainty, and under the conditions and with the amounts

present from the dose it is impossible to make any estimate of the amount of alkaloids given. I also tested for strychnine and morphine, but with negative results. I would like to ask if you have any further information in regard to the nature of the trouble of the child. How long had the child been sick, and did the symptoms point to a possibly natural death? It hardly seems as if the dose given could have produced death. What in the way of food was given the child during the last few hours? I will save carefully the residues of stomach contents and the stomach itself, and will report the matter to Doctor Lowry on his return. If you have any further details concerning the case I shall be glad to hear from you. It does not strike me, however, that it will be possible to prove anything one way or the other. Did the child vomit much, or did he hold this medicine on his stomach? and how long did he live after taking the last tablet? It would not be surprising if a considerable part of the alkaloids had been ejected.

Yours sincerely, F. B. DAINS."

Later Doctor Dains received the following letter:

"OBERLIN, KAN., September 2, 1903.

"*F. B. Dains, Topeka, Kan.:*

"DEAR SIR—Yours of yesterday just received. No, the child did not vomit. It was taken sick in the forenoon of August 21 and this doctor was called in. The parents tell me it was not very sick, yet they called him. He gave it, so he told me, one-half tablet of aconitine .01 grain and atropine .015 grain, and, not being sure that the child swallowed the medicine, repeated the dose twice; so if it did get what was given it, it got one and one-half adult dose. The child went to sleep and never woke up, but died at 3:30 A. M. on the 22d of August. From the symptoms I strongly suspicion belladonna poisoning, as it was very cyanotic from the time it went to sleep, possibly four P. M., until just before death, pupils heavily dilated. Nothing taken in stomach for fourteen hours before death.

Sincerely yours, DR. S. L. HUBBARD."

Regarding the above case, it is the opinion of the secretary that the child died from a overdose of aconitine and atropine. It might be a case for the State Board of Registration and Examination to look into, but so far as this Board is concerned we have no authority to act in the matter.

INFECTIOUS DISEASES.

There has been an unusual amount of typhoid fever in Wyandotte county and Topeka, but in other parts of the state typhoid fever has been possibly less than usual.

We are getting reports from different parts of the state of diphtheria. On September 11 I received a communication by telephone from Doctor Boyd, of Baldwin, that diphtheria was prevailing in that city to such an extent that he had closed the schools, and asked me to go down and look over the ground with him. I found the disease in only three families. There had been no deaths, but in two families it was of rather a malignant type. I did not believe the condition justified the closing of schools, and I recommended a rigid enforcement of quarantine in families where the disease existed and opening of schools on Monday. On the 12th of this month I received word from Doctor Conlan, health officer of St. Marys, to visit that town, as physicians and some of the families where scarlet fever had prevailed were inclined to resist his authority in the matter of the time of quarantine. I went to St. Marys, and found that in cases of scarlet fever the quarantine had been raised against the instructions of the health officer. I wrote a letter for local publication, in which I gave the quarantine law bearing on that subject.

About the same time this office received a letter from Doctor Clark, of Lawrence, county health officer, in which the same matter was complained of. The following is Doctor Clark's letter:

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"LAWRENCE, KAN, September 11, 1903.

"DEAR DOCTOR—A couple of our local physicians have gotten wrathful with me for my length of quarantine, and I would like to have a little backing up. In Doctor Swan's time I had the same fight in regard to scarlet fever quarantine, which I have insisted upon for forty days as a minimum in every case, and after a hard fight silenced opposition and won out, with the help of the authorities I could find to quote and a letter from Doctor Swan. With these I brought the mayor and county commissioners to terms, and have had no trouble since in regard to scarlet fever. These same doctors fought the smallpox diagnosis most bitterly, and insisted it was chicken-pox until we had about fifty cases; then they collapsed.

"Now it is diphtheria. I have one case in quarantine and have announced that it would continue for forty days at least, and longer if necessary, unless I have orders from you to make it less. I am well aware that diphtheria quarantine varies in different places, and that books on practice, and even on sanitation, rarely mention the time at all, but I took the standard of the Pennsylvania State Board of Health, feeling I could not go far wrong, and besides, I intended to make my mistake, if I made any, on the safe side. Will you kindly let me know at your earliest convenience what the minimum limit is which the State Board requires? I assure you I will make it stick, whatever it is.

"I forgot to mention an important point, namely, using my discretion in certain mild cases or ones that apparently recover quickly, in order to let them off sooner than others. I have always refused flatly to do this, considering that there should be a minimum to which every case should be held and after that to still hold them if any desquamation, discharges, etc., persisted.

"If you have yourself ever been a county health officer you know how much trouble this makes. Every family and every doctor has excuses to make showing why the particular case in question should be released early, and if one case is released under time all the others clamor for it. I would prefer to throw up my job and quit altogether than to have any authority given me to let a case out of quarantine under a certain limit of time.

Very truly yours,

A. W. CLARK."

Replying to same, I wrote as follows:

"TOPEKA, KAN., September 14, 1903.

"A. W. Clark, M. D., Lawrence, Kan.:

"DEAR DOCTOR—Your letter of September 11 duly received. Regarding the length of time to quarantine case of diphtheria, I do not propose to interfere with your ruling in that matter. You have been local health officer there for a long time, and I think that in every instance your ruling is on the safe side, and the law and custom will back you up in what you do. The matter you speak of will be brought up at the coming meeting of the State Board of Health, on Friday, for discussion. Within the past week I have had two other cases from local health officers where the same matter had been taken up and where outside physicians were contending against health officers in regard to the time of quarantine. In every instance this office stands by local health officers, for in almost every case they are right in the position they take.

Very truly yours,

CHAS. LOWRY, M. D., *Secretary.*"

The matter of the time for quarantining diphtheria is a proper subject for discussion at the present meeting of the Board. It seems to me, as a result of a practice extending over forty years and rather an extensive observation in the treatment of diphtheria, that you cannot reasonably make one rule that will suit all cases in regard to the time of enforcing quarantine for diphtheria. Many cases are malignant, and the disease can undoubtedly be communicated for quite a long time. There are other cases, that are no doubt truly diphtheritic, where I doubt if the disease could be easily communicated, and while it may not be an easy matter for a health officer to discriminate, yet there are instances in which to hold a person in quarantine for forty days when he is practically well after ten days of sickness would work quite a hardship and injustice. I saw an instance of that kind on my recent trip to Baldwin. One of the cases quarantined by Doctor Boyd was one of the professors in the college, whose case many physicians would not pronounce diphtheria, but it was quarantined. In another case, in a negro family, there were two or three cases of malignant diphtheria, where, no doubt, a quarantine should be maintained for at least forty or possibly sixty days. The question of what to do in such cases is worthy of consideration by this Board.

On September 7 I received the following letter from Dr. W. E. Bartlett, health officer of Sumner county :

"BELLE PLAINE, KAN., September 7, 1903.

"*Dr. Chas. Lowry, Topeka, Kan. :*

"DEAR DOCTOR—Whooping-cough is now and has been prevalent here all summer. Can or should there be any action taken regarding children attending school? A large per cent. of the pupils have had the disease or are having it unobserved, and no attention at all paid to it, and I have advised that I knew of no law covering whooping-cough to such an extent as to excuse all from school that might have it. Answer at once.

W. E. BARTLETT."

Touching this matter of whooping-cough, so far as I know there has been no ruling made by this Board in regard to the handling of such cases looking to the prevention of the spread of the disease. I think this is a proper matter for discussion and resolution by the Board at this meeting.

While the quarantine law does not refer to whooping-cough in the list of infectious diseases, after naming the diseases to be quarantined, it says "all others dangerous to public health." This, I think, makes the case of whooping-cough a proper one for this Board to consider, and to establish some rule in regard to same.

Up to September 12 there were reported to this office from different parts of the state six cases of smallpox. On September 15 I received the following letter :

"COLUMBUS, KAN., September 14, 1903.

"DEAR DOCTOR—We are having smallpox again, brought here from Pittsburg, Kan., to the family of one Bennett, eight miles from town. They never reported, but have been the means of spreading it. When I heard of it first I went there, but did not find Mr. Bennett at home. Were all over it, nine of them, and during the time had hired help, haying, etc. August 8 was my first knowledge of it, and I looked after it the same day. Their nearest neighbor, with a family of five, had taken it, and the last three were just recovering. Last Saturday I quarantined three other families in the neighborhood, and there is no telling just where it is going to stop. So far there have been thirteen cases and there are now four cases in the families quarantined, with a membership of seventeen. There has undoubtedly been quite a number of exposures. I want

to prosecute for failure to report, violating section 2 of the quarantine law. Our county attorney has not been at home for over a week and the young man who is looking after the business of the office thinks it too late. Please reply by return mail and order me to prosecute these violators. I do not think it of any use to have a law unless it is enforced. It was no fault of mine that it was not attended to at the proper time, and other cases will likely occur of which no reports will be made. By teaching a few of them a lesson it will be beneficial all around. Those quarantined last Saturday did not report, and none of them had any medical attendance. Please reply by return mail.

Yours fraternally, D. WINTER, M. D."

To this I replied as follows:

"TOPEKA, KAN., September 14, 1903.

"D. Winter, M. D., Columbus, Kan.:

"DEAR DOCTOR—Your letter of September 14 duly received. In regard to the time in which to bring suit in cases mentioned in your letter, you have two years after commission of offense, and you are authorized to bring suit against the Bennett family for violation of section 2 of the quarantine law. I think with you, where there are such repeated and flagrant violations of law and so many are exposed to smallpox, an example should be made of one of the offending parties. Go ahead with your suit. Please let me hear what the result is.

CHAS. LOWRY, *Secretary.*"

FOURTH QUARTERLY MEETING.

The fourth quarterly meeting of the Kansas State Board of Health was held in the office of the secretary December 22, 1903, and was called to order by the president, Dr. G. E. Locke, at two P. M.

Roll-call showed the following members present: Drs. G. E. Locke, J. B. Carver, M. N. Gardner, J. M. Minick, A. S. Gish, L. A. Golden, and E. P. Mills. Absent: Doctors Crumbine and Alexander. Doctor Greenfield and Professors Marvin and Bailey, of the advisory board, were present.

The minutes of the last meeting were read and approved. The secretary then read his report, which was approved, and ordered placed on file.

Doctors Minick, Mills and Carver were appointed a committee to confer with the barbers' board in regard to revising rules 10 and 12 of the barbers' board.

A general discussion of the secretary's report was then carried on. First, the subject of the examination of eyes and ears of school children was taken up, which resulted in a resolution being passed, as follows:

WHEREAS, The value of perfect sight and hearing is not fully appreciated by educators, and neglect of the delicate organs of vision and hearing often leads to disease of these structures: therefore, be it

Resolved, That it is the sense of the Kansas State Board of Health that measures be taken by boards of health, boards of education, school authorities,

and, where possible, legislation be secured looking to the examination of ears and eyes of all school children, that disease in its incipency may be discovered and corrected. Furthermore, be it

Resolved, That to secure this end the county superintendents of this state be requested to distribute the blanks furnished by the State Board of Health among the teachers of each county, and that they request the teachers of each school to examine the eyes and ears of the pupils in accordance with the instructions furnished.

Doctor Carver moved, and Doctor Gardner seconded, that the secretary be instructed to have copies of the resolution and instructions to teachers made and so revised as he thinks best; also, have test cards made and sent to county superintendents. Carried.

The committee appointed to revise the barbers' rules then reported. Following are the two rules as they were amended:

RULE 10. All barber shops, schools and colleges shall hereafter be required to keep their premises in absolutely sanitary condition. The brushes, towels and linens must be sterilized or boiled before use. The razors, clippers and scissors must be cleansed and sterilized by vaporizing, dipping in an antiseptic solution, or boiling. The hands of the operator must be thoroughly cleansed before beginning on any customer; especial attention must be given to the finger tips, nails, and the cracks of the palms of the hands. All articles used on one customer must be thoroughly cleansed and disinfected before using the second time.

RULE 12. When serving persons who have eruptions on the face or scalp, the barber, instructor or student shall sterilize, as in rule 10, all metal tools, brushes, and combs, also strops, and be certain that all towels and cloths used shall be boiled before use again. The hands of the operator must be thoroughly washed and disinfected before serving another customer.

The subject of the disposal of the sanitary fund was then brought up, and Doctor Mills moved, and Doctor Gardner seconded, that the secretary take the matter up with the attorney-general, to see what power the State Board of Health has over the funds appropriated.

A discussion followed in regard to the power the State Board of Health has to force county health officers to make reports.

A motion was made and carried that a letter of sympathy from the Board be sent to Doctor Crumbine.

Motion for adjournment was then made and carried.

The following bills were audited and allowed:

J. M. Minick	\$23 85
G. E. Locke	9 70
A. S. Gish	12 22
M. N. Gardner	22 35
J. B. Carver	22 60
E. P. Mills	10 65
L. A. Golden	31 82
Total	<u>\$133 19</u>
F. O. Marvin	\$2 31
E. H. S. Bailey	2 31
Total	<u>\$4 62</u>

SECRETARY'S REPORT.

Mr. President and Members of the State Board of Health :

GENTLEMEN.—Soon after the last quarterly meeting, which was held September 18, blanks were sent out for the third quarterly report of the county health officers of the state, and seventy-four counties replied. The reports showed that for the third quarter of the year there had been reported 353 cases of tuberculosis, 628 cases of typhoid fever, 50 cases of smallpox, 170 cases of scarlet fever, and 91 cases of diphtheria. The reports were in the main complete. As usual, some failed to make any report, who have habitually neglected to do so; others were careless and incomplete. The usual full and complete report from Wyandotte county was received. Ellsworth failed to make any report, as usual. The report from Seward county showed a severe epidemic of dysentery during the summer. Health conditions during the fall have been as good, or possibly better than usual. There was an epidemic of smallpox reported from Crawford county, and recently quite a severe epidemic of smallpox and scarlet fever at Goodland, Sherman county. The conditions at Goodland have improved and the epidemic is under control, the cases all being quarantined and the health officer as far as possible compelling vaccination. In Topeka we have had within the last month something approaching an epidemic of scarlet fever, about twenty cases in all, mostly of a mild type. We have also had a few cases of diphtheria, somewhat malignant, as among the cases there have been three or four deaths.

At the last meeting a resolution was introduced by Doctor Alexander, requesting the president and secretary of the Board to investigate the cause of typhoid fever in Topeka, and in obedience to the resolution the secretary makes the following report:

During the months of August and September there were about 150 cases of typhoid fever in the city of Topeka and immediate vicinity. The history of thirty-two typical cases, in different parts of the city, was obtained by getting answers to the following questions:

1. Have you been with a case of typhoid fever, as nurse or otherwise?
2. Has boiled water been used continuously or only part of time?
3. Has water used been hydrant, well, or cistern?
4. Was well dug or driven?
5. Was well covered?
6. If cistern, is water filtered?
7. When was well or cistern cleaned?
8. Condition of cellar—is it dry and clean or damp and containing vegetables?
9. Is water-closet in house? If so, are traps in good condition?
10. If outside closet, how near well?

By classifying the causes, from answers to the above questions, I find that of the thirty-two cases six have been infected by being with other typhoid-fever patients, as nurse or member of the family, but in part of such cases the cause may have been the same as for the first member of the family infected.

In no case had boiled drinking water been used continuously. In twenty-nine of the thirty-two cases, the drinking water was not boiled at all.

In twenty-nine cases the water used was well-water; in three cases hydrant water.

In almost every case where well-water was used the wells have been dug wells. The evidence in most cases is that the wells have not been cleaned recently, and in nearly all such cases there is an outhouse with a dug vault within from fifty to seventy feet of the well.

In one of the three cases where hydrant water was used, the cause was unquestionably one of direct infection.

Cistern-water was not used in any of the above cases.

In only eight of the cases did I find cellars in damp or muddy condition.

Conclusions from the history of the cases investigated: The only conclusion to be reached is, that the prime cause of typhoid fever in Topeka, in nearly every case, has been the use of unboiled water from open wells not recently cleaned and too close to vaults.

The suspicion early in the season that the hydrant-water had been contaminated by the flood, and advice of physicians and agitation by the newspapers that such water should be boiled in all cases, has caused people to use greater precaution in boiling the hydrant-water, whereas, well-water, that has no doubt been more liable to become contaminated, has been used without boiling, and is undoubtedly the cause of the recent epidemic.

I have no doubt that the one general cause of typhoid fever everywhere greater than every other is the old-fashioned, unsanitary outhouse vault, from which typhoid germs can percolate through the soil a distance no one knows how far. A city ordinance compelling all who build new houses, which do not have sewer connections, to use only sanitary odorless earth-closets, which are much more inexpensive and absolutely safe, would be, in my opinion, a preventive measure of great value, and some steps should also be taken to clean and close old vaults everywhere.

All water used for drinking purposes should be boiled.

November 20, I received the following communication regarding the examination of eyes and ears of school children, which I think worthy of your consideration:

“OFFICE OF DR. FRANK ALLPORT,
CHICAGO, November 17, 1903.

“DEAR DOCTOR—You will perhaps remember that some time ago I wrote you concerning the annual and systematic examination of school children's eyes and ears by school teachers, throughout your state. It may not occur to you that there are in the United States over fifteen million public-school children, and that without doubt over ten million of these school children are suffering from some eye, ear, nose or throat disease, that impairs the health and militates against success in life.

“I think it must appeal to you that if the various state boards of health throughout the United States could simply, easily and cheaply institute proceedings which would emphatically lead to benefitting the physical condition of a large majority of these children, it should be done. Your State Board of Health can do this, if you will. All that is necessary for you to do is, at your next meeting, to adopt the resolution which I hereby enclose, and instruct the secretary of your board to send to all county superintendents a circular like the one I enclose, which is being used in the state of Illinois. You can readily see that the expense would be almost nothing, and yet you will have done a great public service.

“These circulars should be sent out annually, and after you have done that, it is up to the different county superintendents to take action or not, as they see fit. Your Board has simply advised them to take up the matter; you have made nothing compulsory; and the county superintendent is at liberty to do as he sees fit. In a large majority of cases, when he realizes that the matter is of sufficient importance to be taken up by the Board of Health, he will instigate proceedings that the school children in his county may be properly examined.

"At the last meeting of the American Medical Association I secured the passage of this resolution in the eye section, and also in the general meeting of the association. Since then the resolution has been adopted by the state medical societies of South Dakota, Michigan, Montana, Delaware, Minnesota, Colorado, New York, and southwest Missouri, and the Mississippi Valley association. In other words, almost all the state medical societies that have had a meeting since the last meeting of the American Medical Association have adopted them. The other states will take up the matter as they hold their meetings in the future. These resolutions have also been passed by the State Board of Education of Texas, and the state boards of health of Illinois and Montana. The resolutions have also been passed, as you are doubtless aware, by the State and Provincial Boards of Health of America and the American Public Health Association.

"Can you not see that this matter is taken up at the next meeting of your Board, that the resolutions are passed, that your secretary is instructed to send out circulars, similar to the ones in use in Illinois, to all county superintendents throughout your state? By performing this simple act you will be setting the ball in motion in your state, and bring about the possibility of the accomplishment of an immense amount of good.

"I will be glad to correspond with you upon this subject, if you desire, and I will also be much obliged to you if you will let me know if anything is accomplished by your Board, as I am gathering statistics on the subject.

Cordially yours, FRANK ALLPORT."

Accompanying the above letter were instructions to teachers for the examination to be made to ascertain if there was defective sight or hearing in school children. It is not contemplated that teachers shall be able to diagnose any disease of the eyes, but if, upon examination some defect of sight or hearing is found, the fact is reported to parents or guardian, and recommendations made that the child shall be taken to a physician for further examination and necessary treatment. The plan recommended above will have the hearty cooperation of our state department of public instruction, and if it should be deemed advisable for the State Board of Health to indorse and urge the adoption of the plan, the following resolution might be considered:

WHEREAS, The value of perfect sight and hearing is not fully appreciated by educators, and neglect of the delicate organs of vision and hearing often leads to disease of these structures: therefore, be it

Resolved, That it is the sense of the Kansas State Board of Health that measures be taken by the boards of health, boards of education, school authorities, and, where possible, legislation be secured, looking to the examination of eyes and ears of all school children, that disease in its incipency may be discovered and corrected.

I have assurances that, if it is desired by the State Board of Health, this matter will be taken up and advocated at the next meeting of the State Teachers' Association, which will occur in December of this year.

Some explanation should be made of how the rules and regulations of the barbers' examining board were adopted. On the 23d of July, at the request of the governor, the present members of the examining board, who had been applicants for appointment, were examined by the president and secretary of the State Board of Health as to their qualifications to fill the position. Your secretary had sent to the secretary of the barbers' board of the state of Missouri for a copy of all printed matter used by their board, as the law of Kansas was copied almost entirely from the Missouri law. At the time of the examination of the board by the president and secretary of the State Board of Health, the matter of rules:

and regulations was hurriedly considered, and it was decided to adopt the rules used in Missouri. It seems that there is quite a general complaint in regard to rules 10 and 12. It may be desired, also, that other rules also be amended. At the request of the governor, the Barbers' State Board of Examination and Inspection are summoned here for the purpose of conferring with the State Board of Health in regard to the amendment of their rules. I would suggest that a suitable committee be appointed to amend the rules, that the same be adopted by the barbers' board, and sanctioned by the State Board of Health.

On November 19 I received the following letters :

“OSWEGO, KAN., November 14, 1903.

“*Dr. J. H. Henson, Mound Valley, Kan. :*

“DEAR SIR—At a meeting of the board of health held here yesterday, a resolution was passed asking you to make an investigation of the water-supply of this city, in connection with the State Board of Health, for the purpose of determining the condition of the water being furnished by the water company, the sanitary condition of same, and what steps should be taken to remedy the defects, if any, found in the system. Very respectfully yours,

J. G. BRADLEY, *Mayor.*”

“MOUND VALLEY, November 17, 1903.

“*Chas. Lowry, M. D., Topeka, Kan. :*

“DEAR DOCTOR—I herewith hand you a letter, which partially explains itself. Upon receipt of the enclosed I went to Oswego, and found the following conditions, upon investigation: The Oswego Water-works Company has a water works plant in the city of Oswego, with the power-house located about one mile from the city limits, on the bank of the Neosho river, and the company above named gets its supply from the above-named stream, and the company has a franchise to furnish the city with water, and the contract, or franchise, is made a part of the city ordinance, and explicitly stipulates that the city shall be furnished pure and wholesome water, fit for domestic use, under chemical test, and at this time the water company has no filter whatever in operation, no settling-basin whatever, nor any sand-bed at intake. The company simply extends a pipe into the river, and pumps the water direct to the city, without any cleansing or clarifying process; also, they do not have any alum-distributing process, and I am informed that the dead ends of their mains have not been flushed since the plant was installed. The water is muddy, and has an unpleasant odor. The above are about the findings of the brief investigation which I made at Oswego. Please instruct me fully, and I will execute your instructions carefully and to the best of my ability. I had a talk with the county attorney, and he stated that he was only too anxious to take the matter up upon receipt of your instructions.

Fraternally yours, J. H. HENSON.”

The following letter was sent in reply to the above :

“TOPEKA, KAN., November 19, 1903.

“*J. H. Henson, M. D., Mound Valley, Kan. :*

“DEAR DOCTOR—I have written to Professor Marvin to go to Oswego and look over the plant for supplying the city with water. Will have a chemical test of the water made and as soon as this is completed will report to you. Will try to have it attended to as soon as possible.

Very truly yours,

CHAS. LOWRY, *Secretary.*”

Following is Professor Marvin's report in regard to the investigation:

"LAWRENCE, KAN., December 12, 1903.

"*Dr. Chas. Lowry, Secretary State Board of Health:*

"DEAR SIR—In accordance with your instructions, on November 27 last, I visited the city of Oswego to investigate the sanitary conditions of the public water-supply. I have the following report to make relative thereto:

"The complaints that have arisen and which came to my attention seem to be that the water furnished is variable in character, and often so dirty from the silt carried as to unfit it for domestic use; that it is not generally or constantly of requisite sanitary quality; and further, that there have been failures to supply an adequate pressure at times of fires. With the latter point this Board has naught to do, except as the general adequacy of the supply bears on the sanitary side of the matter.

"The plant is a small one, with a limited range of consumers, and, as the town has no sewerage system, it furnishes water to only a few consumers having house drainage with conveniences of baths and water closets, though having a number who use water in other domestic ways. The mains and branches are necessarily small, and there are several dead ends at the extremity of branch lines; not a good arrangement in its effect on the quality of the water delivered, especially where so few consumers are connected, yet one hardly to be avoided in so small a plant, in a small town with a somewhat scattered population. The water is taken from the Neosho river, and pumped through pressure filters directly into the mains. There are no reservoirs and no stand-pipe, and consequently no way of properly cleaning the filters; for when the filters need washing it can be done only by pumping river water through them in a reversed direction. This practice cannot result in a clean filter at all times, and from a sanitary point it probably cannot result in proper bacterial efficiency at any time.

"The plant is arranged to be used with alum as a coagulant in the filters; but the alum is used, as I learned from the operator of the plant, only when the river-water carries sediment, and not at all when the river is reasonably clear, and as raw river-water is used in washing the filters, these latter can afford little or no protection in a bacterial way. Pressure filters operated without alum will allow bacteria to pass through them, and, even with the use of alum, while it may, when properly managed, intercept the bacteria of the applied water, the washing of the sand by raw water will plant the micro-organisms in the body of the filter, from which they will be carried into the mains.

"As to the removal of sediment, the filters, as now run, will accomplish something, but will not prove very efficient. When run without alum, at times when the river-water is reasonably clear, some part of the sediment is carried through into the mains. When alum is used, even if it intercepts all the matter in suspension in the applied water, the silt of the wash-water will be left in the filter, to be afterwards carried into the mains; hence, I would expect the water furnished to be variable as to the amount of sediment, and this was stated to be a fact by several users of the water.

"In my judgment, a very marked improvement in the condition of the water and in the uniformity of its character would result from the use of stored water that had been filtered for the washing of filters. With this, and with a careful management of the filters, a proper dosing of the alum, especially if the chemical be applied continuously, as it should be, to insure the best sanitary results at all times, I cannot see why the plant should not furnish water of a satisfactory character.

"There is one source of danger which should be looked after and removed.

The intake pipes extend to the middle of the river, about midway between an old dam up stream and a rocky ledge that crosses the bed about 400 feet down stream. At times of low water, the pond formed between these barriers is so shallow that the intake pipes would be partly out of water were it not for a temporary dam which is raised on the rock ledge. Nearly opposite the end of the intake pipe and only about 100 feet distant from it, at the time of my visit, there trickles into this pond a small stream of water flowing down a ravine leading from near the center of the town, and into which the drainage of the largest hotel in the town discharges. This ravine also receives surface-washings from a considerable area. To prevent any danger of the flow from this ravine contaminating the public supply, it should be made to discharge into the river at a point below the rock ledge above spoken of.

“Three samples of water were collected on November 28, which have been analyzed by the chemist of the Board, Professor Bailey, with the result given below. No. 1 was from the Neosho river; No. 2 from a tap in the pump-house, on the city side of the filters; No. 3 from a tap in a drug-store, near the center of the town.

	Parts per million.		
	No. 1.	No. 2.	No. 3.
Turbidity.....	Slight.	Very slight.	Very slight.
Sediment.....	Slight.	•None.	None.
Color.....	None.	None.	None.
Total solids.....	453.0	418.0	426.0
Loss on ignition.....	144.0	142.0	140.0
Residue.....	309.0	276.0	286.0
Chlorine.....	9.0	9.2	9.0
Free ammonia.....	.029	.07	.03
Albuminoid ammonia.....	.163	.136	.136
Nitrates.....	.700	.9	0.8
Nitrites.....	None.	None.	None.
Hardness.....	280.0	280.0	292.0
Consumed oxygen.....	2.9	2.7	2.4

“So far as the analyses go they show that the water of the river on the above date was of very fair quality; also that the filters caused little change in the character of the water, except to increase the free ammonia, though this seems to be reduced in the mains to the amount present in the river water. The increase right at the filter was probably due to the decomposing organic matter stored in the filter. Whatever its cause, it is not due to any error in the analysis, as the analyst, noting the change, repeated and verified the work.

“A comparison of the figures for Nos. 1 and 3 shows that the water of the mains is practically that of the river. On May 2 last, Professor Bailey also took samples of water from the same plant, with results below:

	Parts per million.		
	Neosho river.	Filtered water.	Service pipes.
Total solids.....	430.0	320.4	312.8
Loss on ignition.....	18.0	20.7	15.1
Residue.....	412.0	299.7	297.7
Chlorine.....	7.23	6.80	7.08
Free ammonia.....	.098	.03	.02
Albuminoid ammonia.....	.418	.234	.284
Nitrates.....	.415	.881	.314
Nitrites.....	None.	None.	None.
Hardness.....	184.4	163.0	163.1
Oxygen consumed.....	5.67	3.120	2.9

“These indicate a poorer river water, with more organic matter, than that collected on November 28; but the filters were doing more for the water, taking out some twenty-seven per cent. of the mineral solids and reducing the free ammonia to a satisfactory degree, though having too much albuminoid ammonia.

“In reporting on the matter, Professor Bailey said: ‘Considering the whole analysis, it is evident that the water is greatly improved by this kind of filtra-

tion, and the water that is furnished is of fair quality. There is no doubt but that when the water is at its flood stage, without further treatment, it would be difficult to furnish a water that is entirely satisfactory.'

"In October, 1899, Professor Bailey also made analyses of this water sent him from Oswego, which seemed to show that there was at that time an exceptionally low amount of total solids and a slightly larger amount of organic matter in the river-water, but both largely increased in the filtered water, to such an extent that the water could not be considered potable.

"Summing the whole matter, it seems to me from a study of the analyses and the results of the observation that—

"1. The plant does not furnish a fair water continuously as it now stands and as now operated.

"2. That with filtered water for washing the filters and the proper use of the requisite amount of alum, it can furnish a satisfactory and safe water.

"3. All discharge of sewage or surface-drainage from the town into the river near the intake should be prevented. Respectfully submitted.

F. O. MARVIN."

Following is the report of the secretary of the embalmers' examining committee:

"HIAWATHA, KAN., December 19, 1903.

"To the Honorable State Board of Health:

"GENTLEMEN—I herewith submit my semiannual report as secretary of the embalmers' examining committee:

Number of examinations held since last report.....	1
Number of applicants.....	37
Number reexamined.....	4
Number who failed.....	4
Number of applicants paid and not present for examination.....	1
Number of certificates granted.....	36
Amount received for examinations.....	\$185.00
Amount received for renewals.....	\$146.00

"The following amounts have been paid, as per bills attached to treasurer's report:

I. W. Gill, expense and per diem.....	\$35 94
W. H. Eicholtz, expense and per diem.....	26 88
L. M. Penwell, expense and per diem.....	14 40
J. T. Barkley, expense and per diem.....	16 48
J. B. Hinthorn, salary and cash.....	150 92
Herington Printing Company.....	51 25
James W. Sexton, cadaver and rent.....	11 50
American Bonding Company, of Baltimore.....	5 00
Brown County World, printing new lists.....	16 00

"For the non-payment of the renewal fee it has been best to drop from the licensed list sixteen numbers, as follows: Nos. 93, 66, 55, 259, 91, 140, 125, 33, 223, 155, 106, 212, 181, 263, 122, 277. The above license numbers have been issued to our new applicants.

"It has been our lot to lose two of our members during the year by death. They are D. T. Dunbar, of Wichita, and J. F. Willoughby, of Moran.

"As far as I can learn peace and harmony prevail, and our new list of licensed embalmers is in the hands of each station agent throughout the state. The correspondence for the year has been quite heavy, and there has also been a heavy demand for shipping posters which have been promptly sent forth.

Fraternally submitted. J. B. HINTHORN, Secretary."

Following is the report of the treasurer :

“TOPEKA KAN., December 17, 1903.

“*State Board of Health, Topeka, Kan. :*

“GENTLEMEN— I herewith submit my report as treasurer of the embalmers’ examining committee :

June 26, 1903, received of J. B. Hinthorn, secretary.....	\$245 00
June 28, 1903, received of E. O. DeMoss, ex-treasurer.....	468 44
Total receipts.....	\$713 44
Total paid out.....	328 37
Balance in my hands December 17, 1903.....	<u>\$385 07</u>

Very respectfully, L. M. PENWELL ”

FIRST QUARTERLY MEETING, 1904.

The first quarterly meeting of the Kansas State Board of Health was held in the office of the secretary, at the state-house, Thursday, March 24, 1904, and was called to order by Dr. M. N. Gardner, who acted as chairman, in the absence of the president, Dr. G. E. Locke.

The following members were present : Drs. B. J. Alexander, M. N. Gardner, E. P. Mills, S. J. Crumbine, J. B. Carver, L. A. Golden, and Doctor Greenfield and Professor Bailey, of the advisory board. Dr. A. S. Gish and Dr. G. E. Locke were absent.

The minutes of the last meeting were read by the secretary, and approved as read. The secretary then read his report, which was approved and ordered placed on file. A general discussion of the report followed.

Doctor Mills moved that Doctors Alexander, Crumbine and Gardner act as a committee to draft resolutions of sympathy in regard to the death of Doctor Minick. This motion was seconded and carried. Following are the resolutions adopted by the Board :

WHEREAS, We learn with sorrow of the sudden and untimely death of our kindly and congenial colleague, Dr. J. M. Minick: therefore, be it

Resolved, That we extend our heartfelt sympathy to the bereaved family, and assure them that we miss his valuable and genial counsel and brotherly association. And further, be it

Resolved, That a copy of these resolutions be placed in the minutes of the meeting and a copy be sent to the family.

DR. S. J. CRUMBINE.
DR. M. N. GARDNER.
DR. B. J. ALEXANDER.

A matter concerning the embalmers’ examining committee was then taken up, and the following motion was made by Doctor Mills :

It is the sense of the State Board of Health that questions for the examination conducted by the Embalmers’ Association be submitted by mail rather than by a called meeting.

This motion was seconded by Doctor Carver, and was carried.

Doctor Crumbine moved that the Board be instructed to call an annual meeting the first Tuesday after the second Monday in July for examining candidates, and, if necessary, hold a second meeting in the course of the year in January, and that, in addition to questions submitted by the secretary, applicants be examined by use of cadaver.

This motion was seconded and carried.

The meeting then adjourned, to meet at the call of the secretary.

SECRETARY'S REPORT.

We miss to-day a man who has met regularly with us at our quarterly meetings for the past five years. He was as genial as the warm sunshine. When he spoke it was direct and to the point. He ever helped to promote the harmony that has always prevailed in our midst and was one of the most useful and agreeable members of this Board.

Dr. J. M. Minick was appointed a member of the Kansas State Board of Health by Governor Stanley at the time of the reorganization of the Board, five years ago this coming June. The following letter from his son will give briefly a sketch of the doctor's life and work:

" WICHITA, KAN., March 23, 1904.

" *Dr. Chas. Lowry, Topeka, Kan. :*

" DEAR DOCTOR—My father was born in Darke county, Ohio, June 24, 1841, and moved to northern Indiana in early youth. He served four years and eight months in the civil war, in the Forty-seventh Indiana volunteer infantry; was wounded several times and was several months in Tyler prison. At the close of the war he commenced the practice of medicine in Posey county, Indiana, but did not graduate until the early seventies. He was a graduate of the Cincinnati College of Medicine and Surgery and later from the Homoeopathic College of Missouri.

" He was taken sick Tuesday, February 16, with supposed attack of indigestion and next day with asthmatic attack; was recovering nicely, and on Monday, the 22d, sat up and ate a good meal. At 4:45 he was sitting on the edge of the bed and had just drunk a small cup of tea (he and mother were alone at this hour), when he said, 'I am smothering,' and raised his head and fell back across the bed dead; did not even breathe, as she says.

" I am confident that death was absolutely instantaneous. He was subject to heart disease and had hypertrophy of heart, and during his last illness fluid around the heart was abnormally in excess of what it should have been.

" Thanking you for your interest in my father in the past and your kind words of condolence in our bereavement, I remain,

Fraternally yours, DR. W. W. MINICK."

INFECTIOUS DISEASES.

Infectious diseases that have prevailed to the greatest extent over the state during the last quarter have been scarlet fever and measles. Either one or both have been epidemic in a large number of counties. It would be impossible to give in detail the parts of the state where the diseases have prevailed to the greatest extent. Some correspondence will be given showing the extent of the diseases in some localities. The following letter was received from Doctor Pegg, of Bird City, Cheyenne county:

"BIRD CITY, KAN., February 24, 1904.

"*Doctor Lowry, Topeka, Kan.:*

"DEAR DOCTOR—I write you to let you know the situation of scarlet fever at this place. I have had 190 cases in Cheyenne county and 45 cases in Rawlins county. I had three deaths. I will give you the situation of our county health board. This is the first epidemic they have had in this county. They have never organized as a county health board and have not adopted any rules and regulations to govern same. The chairman of the board of commissioners told me that he would call a special meeting and organize if I thought best. It has been very hard to enforce strict quarantine regulations, as there were so many families sick that it was hard to get help to look after them, and I had to let some one of the family go to town and get things they needed, and they took more liberty than was allowed them. There are only a few families I have not fumigated. At this time there are only five families that are not well enough to disinfect. I am using the formaldehyde gas generator that is giving good satisfaction. We have had several families that had the disease very light, and thought it did not amount to anything. They spread the disease a good deal before it was found out, and the worst thing I have had to contend with is a Christian Science family. The woman paid no attention to the quarantine. She went in and out as she pleased, and the worst part of it was, her son was keeping the post-office. He had the fever and they kept it a secret. He was in bed about a week, then got up and handled the mail, and spread the disease all over the country. Will you please let me know how I should manage such Christian Scientists? They claim they have the right to practice their faith and there is no law to stop it. If there is none there ought to be.

"Would you advise the county commissioners to call a special meeting to organize as a county health board, or would it be better to wait until the regular meeting in April?
Yours truly, G. R. PEGG."

To this letter I replied as follows:

"TOPEKA, KAN., February 27, 1904.

"*G. R. Pegg, M. D., Bird City, Kan.:*

"DEAR DOCTOR—Replying to your letter of February 24, will suggest that you follow the rules governing county and local health officers. that you will find in our last report, which I think you have. You understand that any one who does not quarantine cases of scarlet fever and all infectious diseases under their care, whether heads of families, owners of buildings, physicians, or any one responsible, are liable to prosecution and fine. This certainly will reach your Christian Science people, and you must inform those who are practicing Christian Science that they must quarantine every case of scarlet fever, and, if they fail to do so, bring suit and make an example of one of them. The fact that you have had such a large number of cases shows that something is radically wrong, and the thing for you to do now is to enforce a rigid quarantine in every case, and bring suit if law is violated. You must have been very busy to have attended 190 cases in your county and 45 in the adjoining county, and you had remarkable success to have only three deaths.

"It is not necessary for you to have a local board to enforce quarantine law. You are master of the situation yourself as county health officer.

Very truly yours, CHAS. LOWRY, *Secretary.*"

The following letter was received from Doctor Orendorff, county health officer of Woodson county:

"YATES CENTER, KAN., March 3, 1904.
 "Dr. Chas. Lowry, Topeka, Kan.:

"DEAR DOCTOR—There is a very extensive epidemic of measles on hand in the county and city. It is of such a light form that the people will not pay much attention to it and they resent any official interference. To quarantine and fumigate will entail an enormous expense. I wish to know if we cannot throw the bars down and let it go. It is almost impossible to do otherwise in the cases outside the cities, and so many cases have broken out while in school that I think all those not immune will develop the contagion soon. I have the scarlet fever well under control, there being two cases in town and but few outside. What shall be done with chicken-pox? The local physicians think it would be the best policy to let the epidemic of rubeola run its course without interference.
 Respectfully yours, OTIS ORENDORFF."

I replied as follows:

"TOPEKA, KAN., March 4, 1904.
 "Otis Orendorff, M. D., Yates Center, Kan.:

"DEAR DOCTOR—Replying to your letter of the 3d, in regard to measles, will say, use your own judgment in regard to it. I will be satisfied to have you do that. I understand the situation, and it is similar in other places. It is impossible and impracticable to enforce a rigid quarantine in such cases, but all houses where there is measles should be carded. Regarding chicken-pox, it is about the same. Am glad you have scarlet fever under control.

Fraternally yours, CHAS. LOWRY, *Secretary.*"

In regard to enforcement of quarantine regulations for scarlet fever and measles, the following letter and reply will give an idea of the extent to which we have gone to carry out same:

"GALENA, KAN., January 30, 1904.
 "Dr. Chas. Lowry, Topeka, Kan.:

"DEAR DOCTOR—As city physician of Galena and Empire City, I am having some trouble about the enforcement of the quarantine law, all of which arises from differences in the interpretation of the words 'quarantine' and 'disinfect' as used in the law.

"Does placarding the house and keeping the patient in while other members are allowed to come and go at will constitute quarantine, or is all communication absolutely prohibited? Does any other procedure than the use of formaldehyde constitute disinfection? I referred this matter to the county health officer without receiving a satisfactory answer, and also received a circular letter concerning smallpox issued by the State Board of Health, but it fails to give the desired information. I do not want to make the restriction on my own patients any more severe than the law demands, and yet I want to compel a full compliance on the part of other physicians. Please give me a full, concise statement of just what the law requires, at your earliest possible convenience, and I will enforce it.

Very respectfully, R. C. LOWDERMILK."

The reply to this letter follows:

"TOPEKA, KAN., February 1, 1904.
 "R. C. Lowdermilk, M. D., Galena, Kan.:

"DEAR DOCTOR—Replying to your letter of January 30, in regard to the meaning of the word 'quarantine' and what it contemplates, as used in restricting people with infectious diseases, would say, that ordinarily it is intended to

prohibit any communication with families where the diseases exist. Where there is a case of smallpox, scarlet fever or any other infectious disease in a house, it is understood that there is to be no going or coming, even though the people do not go into the room where the patient is kept. In some cases a little flexibility is allowable. For instance, I would say, in a sparsely settled country, if the patient was sick and confined in a remote room of the house and isolated completely, it might do to allow some coming and going; otherwise a great hardship would be worked in many cases. On the other hand, if the house was in a thickly settled part of the town, it would not do to allow any going and coming. This is a matter for some discretion on the part of the attending physician. As a rule, however, a house quarantined prohibits any communication, and the house must be flagged.

"Any disinfectant can be used. Burning sulphur is possibly as good as formaldehyde. The only trouble is that it injures things sometimes where formaldehyde does not; so formaldehyde is preferable for that reason. I think this answers all of your questions. Very truly yours,

CHAS. LOWRY, *Secretary.*"

As a rule, county health officers and local health officers have used their best efforts to cooperate with the State Board of Health in carrying out quarantine regulations. There was one notable exception to this rule, however, and the correspondence in regard to it will be given. On January 19 I received a telephone message from Doctor Brown, of Reading, informing me that quarantine regulations for scarlet fever were being entirely neglected by Dr. D. S. Fisher, and requesting me to come down and investigate. The following day I went to Reading and ascertained that they had been having scarlet fever in the village and the country around continuously for the past year and that so far as Doctor Fisher was concerned there was no quarantine enforced. The condition of things was what frequently occurs in communities where there are two doctors. Any position that one will take the other is sure to take the opposite. Doctor Brown had enforced rigid quarantine in all his cases of scarlet fever and in one case of death had no public funeral. Accordingly Doctor Fisher questioned the diagnosis, and in one case of his that died allowed a public funeral, severely criticizing Doctor Brown for having one of his patients, as he stated, "buried like a dog, without any decent funeral." In looking over the ground I found there was no question in regard to the diagnosis of the disease. It was scarlet fever. The day of my visit Doctor Fisher was out of town and I was unable to see him. On my return home I wrote him the following letter:

"TOPEKA, KAN., January 21, 1904.

"*Doctor Fisher, Reading, Kan.:*

"DEAR DOCTOR — I regret that you were not in town yesterday, when I was there to look up the matter that has been complained of; that is, your neglect to quarantine scarlet fever. I think, since I have been connected with the State Board of Health, which is nearly five years, I have never known in any community a more open, constant and unwarranted violation of the quarantine law than that which is and has been the case in Reading for the past year. That is undoubtedly the reason that the few cases of scarlet fever that broke out in your town about a year ago have spread, and you have had more or less cases, some mild and some malignant, ever since. If proper precautions had been taken at the onset the two children that are dead would undoubtedly have been living, but the facts are, that little or no attention has been paid to quarantining any of the cases. The most serious case of all, that in the Phillips family, where

there was a malignant case of scarlet fever, and the child died, no precaution was taken to prevent people from going to the house or leaving, and after death there was a public funeral.

"In the Newman family, that I visited, about a half a mile out of town, I found three cases, one just desquamating and two more coming down. All the children were together in one of the most public rooms in the house, and no card on the house. People were allowed to come and go as they chose. The family had received no instructions from you in regard to enforcing quarantine or in taking any precaution against the spread of the disease. In fact, I am told that you had suggested that the well children should go to school, thus carrying the infection with them and exposing other school children. These are but few of the cases of criminal neglect and want of precaution against spreading a disease always considered dangerous, and one of the most highly infectious diseases that there is.

"I was more surprised to find your wife in the post-office, with your own children sick with scarlet fever at home. While she informed me that she did not see the children, and I do not propose to question any one's veracity, I can scarcely believe that her motherly nature and instinct would not compel her to see her sick children more or less. I need not tell you how easily the contagion could be carried from your home to the post-office and communicated to others who come to so public a place, even though your wife did not go into the room where the children were sick. It is always customary in quarantining for infectious diseases to keep every one of the family in or out of the house where the disease exists. I further understand that in a number of instances where there have been cases of scarlet fever in families you have encouraged and permitted other children to attend school.

"I send you under separate cover the last report of this Board, which contains the quarantine law and your duties as local health officer. The law must be enforced in Reading. There is no mistaking the diagnosis in those cases. There is no use calling the disease scarlet rash. It is scarlet fever you have and have had for a year. Every case in the future must be quarantined rigidly. There is one other thing that I wish to call your attention to, and that is, fumigating after patient has been sick about ten days. It is useless to do that, for children will communicate the disease during the period of desquamation, which is usually not finished for from two to three weeks; so I would suggest that you do not fumigate any house under three weeks.

"I saw your county health officer, Doctor Morrison, after I was at Reading. He will assist you in enforcing quarantine, and either you or he can attend to fumigating the schoolhouse. The school had better be closed for two weeks. I suggested that to your board of trustees. The school has had too many children out of houses where others have had scarlet fever to make it safe until it has been thoroughly fumigated. It might be well for me to call your attention to the penalty for violating the quarantine law. It is from \$25 to \$100 for each offense. I am willing to give you the benefit of the doubt that the neglect to enforce quarantine in the past has not been wilful violation of the law, but possibly a misapprehension in regard to diagnosis and your duty as health officer. In the future you will be required to rigidly enforce the quarantine law, or the attention of the county prosecuting attorney will be called to the matter. I think Doctor Morrison will be in Reading in a day or two and will do all he can to cooperate with you in stamping out the epidemic.

Very truly yours, CHAS. LOWRY, *Secretary.*"

Doctor Fisher replied to the above letter as follows:

“READING, KAN., January 22, 1904.

“*Chas. Lowry, M. D., Topeka, Kan.:*

“DEAR DOCTOR—Yours to hand, and contents noted. Will say you have been misinformed in many ways. Something near a year ago Doctor Brown treated the present mayor's family, across the street from my home at that time. I heard nothing of scarlet fever then, only after being called to the house to see a girl who was stopping there working for the family, who was suffering with a slight rash, sore throat, and rheumatism. The rash was the small part of the matter. Mr. Bennett was the mayor at the time Doctor Brown was treating his family, and neither of them my friend, which put me in a sore place. Had just passed through a hard battle for postmaster, with Doctor Brown leading the forces against me, when I had not been told anything about the cases.

“As to the case at my home, it is twenty-five days since the child was taken. My sister-in-law was visiting here and stopping at her father's, two small rooms in the house and three in the family. I moved the child, wrapped in two blankets, and placed him up-stairs, cleaned and prepared the room, and have taken all precaution in the case. None of my family have had any access to him up to the present time. Have fumigated several times. I feel and know that capital is being made or trying to be made out of the matter. It will fall where it belongs, as right will prevail. I come to Topeka often. Will be there Kansas Day and will call on you. I was in town two hours before you left. Doctor Brown knew it. He saw me, but did not want you to see me. I wrote Doctor Morrison tonight. I will talk to you when I come up, and will tell you what I think of things in no short way.

“I will say that whatever course I take is objectionable to your informer and I will do what I believe to be right regardless of any one. I have never believed the disease was really scarlet fever and don't yet, although to satisfy Doctor Morrison I admitted it in a measure. I have been in practice twenty years and had charge of many responsible positions.

Yours respectfully, D. S. FISHER.”

To this I replied as follows:

“TOPEKA, KAN., January 22, 1904.

“*D. S. Fisher, M. D., Reading, Kan.:*

“DEAR DOCTOR—I received your letter this morning, and replying to same will say, any differences between Doctor Brown and yourself I know nothing about. There is apt to be rivalry between two physicians practicing in the same town. This I do not take into account in the least in my official duties. I was informed that you are having scarlet fever in your town and that little or no effort was made to quarantine cases, and that the disease had been running about a year; so I went there to investigate. I only wish now to refer to what I saw in the two or three families that I visited. I cannot help but note that Doctor Brown's cases are quarantined and yours are not. The disease is scarlet fever. You visited the Newman family the same morning that I was in Reading. As I stated in my former letter, one case is convalescing and desquamating. The fact that two other children in the house are coming down with scarlet fever proves the diagnosis. Nothing else can be made out of it. There was no card on the house and Mrs. Newman told me that you had left no orders to keep people out of the house, and you had taken no precautions whatever against the spread of the disease. This case alone shows that you neglect to quarantine.

“Even the parents of children who have infectious diseases are liable to a fine if they do not report the cases to a proper health officer. How much more are physicians, and especially health officers, censurable who neglect any such duty.

You do not claim to have quarantined the case of the child who died under your care, and you do not deny that there was a public funeral. You say you only admitted it was scarlet fever to please Doctor Morrison. In having the public funeral and not quarantining the case, no one knows how much was done to spread the disease. At any rate, it was the violation of the quarantine law that no health officer should be guilty of. All I ask of you now is to quarantine every case of scarlet fever in the future, and disinfect the houses and make every effort to stamp out the disease.

"I shall be glad to see you when you come to Topeka, and I hope before that time you will have accomplished a great deal towards stamping out the epidemic of scarlet fever. If it is about three weeks since the case occurred in your home and the house is fumigated, there is no danger of your wife carrying the disease, but a rigid quarantine means that no one shall leave or enter a house where there is an infectious disease. It subjects people to inconvenience at times, but it is the safe and right course to pursue. I do not wonder that you are being subjected to criticism in having your wife handle the mail when you have a case of scarlet fever in your house. In conclusion, I have only to ask of you again that you will enforce a rigid quarantine in every case.

Fraternally yours, CHAS. LOWRY, *Secretary.*"

In a letter from Doctor Brown recently, I was informed that all the cases in and around Reading are being quarantined, and since establishing quarantine they have had no new cases.

SMALLPOX.—There has been comparatively little smallpox in the state during the last quarter. At the time of the last meeting of the Board there was quite an epidemic at Goodland, Sherman county. In the last report received from there a short time ago there were no cases in the town, and scarlet fever, that also prevailed to quite an alarming extent there, has been stamped out. Other counties where there has been smallpox are Leavenworth, Johnson, and Cherokee, the latter county being seldom rid of the disease.

For the first time within the last year and a half there were reported some cases of cerebro-spinal meningitis or "spotted fever." The following correspondence that I will give, I think clearly indicates that some of the cases reported from Hodgeman county were "spotted fever."

On February 4 I received the following telegram:

"Chas. Lowry, M. D., Topeka, Kan.:

"Contagious disease here. Very bad. Want consultation. Answer.

A. B. SCOTT, Jetmore."

To this I replied by as follows:

"A. B. Scott, M. D., Jetmore:

"What disease have you? Have you many cases, and are they quarantined?
CHAS. LOWRY."

And received the following answer:

"Chas. Lowry, Topeka:

"Cases all quarantined. Not necessary for you to come. A. B. SCOTT."

On February 5 the following letter was sent to Doctor Scott:

"TOPEKA, KAN., February 5, 1904.

"A. B. Scott, M. D., Jetmore, Kan.:

"DEAR DOCTOR—I have received both your telegrams. I infer that your request for counsel is for treatment rather than for anything concerning quarantine regulations, as you say your cases are quarantined. If all the cases are quarantined, it is hardly advisable for me to go to Jetmore to consult with you in

regard to the treatment. If you need consultation for that purpose, get some one accessible to you that you have confidence in. One thing I wish to advise, and that is that no children from families where there are cases of scarlet fever shall be allowed to attend school and that the quarantine shall be as strict as possible. Please let me know how many cases of scarlet fever you have in all. You say there are three new cases and that you have had three deaths. Please give me the total number of cases and the number of families in which there is scarlet fever. If there is any trouble in quarantining or any need of my coming out there I will do so. Please let me know by return mail full particulars.

Fraternally yours, CHAS LOWRY, *Secretary.*"

To this letter I received the following letter:

"JETMORE, KAN., February 6, 1904.

"*Dr. Chas. Lowry, Topeka, Kan. :*

"DEAR SIR—Your letter received. In answer will say, I think we have the disease under check. The cases were Doctor Bowie's, in the northeast corner of the county. There were three deaths in one family in one week, two a few hours apart, and all grown people. I was called, but did not arrive until the last one died. I did not see the character of the eruption, but thought, from history, etc., it was a malignant form of scarlet fever. Doctor Bowie claimed the eruption was measles, and has traced to where they were exposed. We agree, however, that they died of cerebro-spinal meningitis. It was the report they brought me the next day that new cases were developed that caused me to send the word I did; but upon investigation, I found that the people were scared, in fact almost panic-stricken, and the other people that were down were sick from fright and shock. There are three other families sick, but no eruption has appeared so far, and we look for nothing more serious. All families exposed are quarantined, and all schools in the vicinity are closed. Our greatest trouble is in allaying the fears of the people and restoring their confidence. Should there be any unusual developments here I will advise you at once.

Fraternally, A. B. SCOTT."

Later I sent the following:

"TOPEKA, KAN., February 16, 1904.

"*A. B. Scott, M. D., Jetmore, Kan. :*

"DEAR DOCTOR—I have your letter of February 6, which should have been answered before, but I have been without help. Am glad to have your report of the fatal illness that you have had in your county. Was surprised to learn that the cases were cerebro-spinal meningitis, as they are the first cases that have been reported from anywhere in the state this winter. I will be glad if on receipt of this you will report to me the number of cases of infectious diseases of all kinds that you have in your county. Fraternaly yours, CHAS. LOWRY."

On February 23 I received the following reply:

"JETMORE, KAN., February 22, 1904.

"*Dr. Chas. Lowry, Topeka, Kan. :*

"DEAR DOCTOR—In answer to yours of the 16th will say, so far as has come to my knowledge, there have been two cases of scarlatina, six cases of measles, and four of a mixed eruptive fever; three of these died, having developed cerebro-spinal meningitis. All together there have been fewer cases of infectious diseases than for four years. Quarantine has been more prompt and effective. We made an example of one fellow for violating the quarantine regulations, and since then have had very little trouble. Of course, there has been lots of talk, those three dying in one family, but the people get panicky, and Hodgeman county was a

good place to stay out of for a week or two; but now I don't know of an infectious disease in the county.

A. B. SCOTT."

Referring to the resolution that was read in the minutes of the last meeting, regarding the examination of eyes and ears of school children by teachers, I would report as follows:

The matter was taken up by the State Teachers' Association at their meeting in December and referred to the meeting of county superintendents, where the resolution as passed by this Board was heartily and unanimously indorsed. So far as carrying out the plan contemplated by the resolution, we are prevented from so doing by want of funds. The test cards with instructions for the 10,000 teachers of the state will cost approximately \$300. We have no funds to use for the purpose and the matter will have to lie over until the next meeting of the legislature, when an effort can be made to secure an appropriation to carry out the plan. I sincerely hope that at this meeting of the legislature we can go further than is contemplated by the resolution, and have a law passed legalizing the movement.

ANNUAL MEETING—JUNE, 1904.

The first annual meeting of the State Board of Health and county health officers was held in Topeka, June 2, and was called to order at ten A. M.

Doctor Lowry introduced Governor Bailey, who made a short address of welcome.

The first paper on the program was "Preventive Medicine," by Doctor Mills. A general discussion followed.

Professor Marvin then gave a short address on "State Supervision of Public Water-supplies and Sewerage Systems."

At 1:15 a private meeting of the State Board of Health was held. Doctor Lowry presented his resignation as secretary of the Board, and thanked the county health officers and members of the Board for the courtesy shown him during his term of office.

Doctor Mills moved, that in accepting Doctor Lowry's resignation the Board extend to him a vote of thanks for his painstaking and efficient work as secretary. This motion was seconded and carried.

Nominations for president were then in order. Doctor Crumbine nominated Doctor Mills. There being no other nominations, a vote was taken and Doctor Mills was elected president.

Nominations for secretary were next in order. Doctor Golden nominated Doctor Crumbine, and Doctor Mills seconded the nomination. There being no others nominated, a vote was taken and Doctor Crumbine was elected.

The terms of Mr. Eicholtz and Mr. Gill, of the embalmers' examining committee, having expired, nominations were in order to fill the vacancies. Doctor Carver nominated Mr. Eicholtz and Doctor Mills seconded the nomination. Mr. Eicholtz received the full number of

votes and was elected. Doctor Mills nominated Mr. T. J. Kean, of Olathe, and Doctor Carver seconded the nomination. He also received full number of votes and was elected.

Doctor Mills moved that as there were sufficient funds on hand in the treasury of the embalmers' examining committee their request for an increase of their fee from one to two dollars be not granted at the present time. This motion was seconded and carried.

Doctor Crumbine moved that the embalmers' examining committee be compelled to comply with the rules laid down by the State Board of Health governing the committee, especially rule 20. This motion was seconded and carried.

At 2:30 the meeting of the Board with the health officers was resumed and Doctor Lowry read his quarterly report. This was accepted as read and ordered placed on file. A discussion of the report followed, and it was agreed that an effort should be made to secure legislation to enable the collection of vital statistics.

Doctor Crumbine then read a paper on "Quarantine, and the Necessity of Enforcing Same." A general discussion followed.

Doctor Crumbine then made a motion that, as the embalmers' examining committee were together in the city, they should meet and organize. This was in the form of a resolution, and was expressed as the wish of the State Board of Health. The motion was seconded and carried.

Doctor Greenfield then read a paper on "Sanitation in Tuberculosis," which was discussed at some length.

Doctor Carver moved that the entire advisory board be reelected. This was seconded and carried.

The following members of the Board were present: Doctors Locke, Crumbine, Gish, Mills, Carver, Carlile, Golden, and Doctor Greenfield, Professors Marvin and Bailey, of the advisory board.

The following county health officers were present: Dr. A. B. Scott, Jetmore, Hodgeman county; Dr. T. R. Conklin, Abilene, Dickinson county; Dr. N. D. Tobey, Salina, Saline county; Dr. C. H. Mielke, Alma, Wabaunsee county; Dr. Andrew Sabine, Garden City, Finney county; Doctor Ellinger, Topeka, Shawnee county; Doctor Lobdell, Beloit, Mitchell county; Dr. W. W. Carter, Wathena, Doniphan county; Doctor Paul, Mound City, Linn county; Dr. J. C. Shaw, Holton, Jackson county; Doctor Steele, Strong City, Chase county.

SECRETARY'S REPORT.

Mr. President and Members of the State Board of Health:

GENTLEMEN—It is now two months or a little more since our last quarterly meeting. This meeting is called much earlier than usual, as an accommodation to the incoming secretary, as it greatly suited his convenience to have it at this time. The fact that it is only two months since the last meeting and that there is usually not much sickness at this time of year makes little to report in regard to health conditions of the state. Since the last meeting I have been called out over the state on business relating to infectious diseases but once. On May 9 I received the following telegram:

“Dr. Chas. Lowry, Topeka, Kan.:

“Two cases of smallpox in extra gang on M. K. & T. railway in car on track near Parsons. County board of health and Parsons city board of health refuse to establish and maintain quarantine. Fifteen or twenty exposed and epidemic very probable. Would like for you to come here and adjust matters. When would it be convenient for you to meet county health officer in Parsons? Answer direct to Doctor Henson, Mound Valley. Send this at his request.

T. N. SEDGWICK, Attorney M. K. & T.”

The following day I went to Parsons and found some cases of smallpox, as reported, and a gang of laborers who had been exposed were under guard. Smallpox had broken out in an extra gang of railroad laborers quartered in a box car just inside the city limits. The railroad physician visited the gang and called attention of the city health officer to conditions, and requested that the city take charge, quarantine, feed and guard the gang, which they refused to do, on the ground that the laborers were non-residents, and that it was the duty of the railroad to take care of them. Then the railroad attorney applied to the county for assistance, which was refused by Doctor Henson, county health officer, on the ground that the sickness broke out while the gang was inside the city limits. This lack of authority and care soon bore fruit in the spread of the disease in other parts of the city, and the condition soon became alarming. At that time they sent for your secretary and the city began to realize the necessity of taking steps to control what seemed likely to be an epidemic of smallpox. Before I reached the city the city had assumed charge and was guarding and feeding the men, and the railroad company was furnishing two cars, one for the sick and one in which to house the exposed men who were under guard of an officer, and everything was in satisfactory condition. There is something for health officers to learn from this case, and that is, that in all cases where tramps, railroad laborers and indigent people of any kind are taken with an infectious disease they are a charge upon the county where they are taken sick, or, if in a corporation whose charter provides for a board of health, then they are a charge upon the corporation, and there is no getting around it or shirking duty in the matter. The railroad company, because it employs a large number of hands, is never responsible for their care in case of sickness. The railroad company in this case, referred to above, was very generous in providing one car to be used as a pest-house and another to be used as quarters for the other men. Of course, there was the selfish interest on the part of the railroad to keep their laborers together.

This is the season of the year when we expect but few reports from county health officers of epidemics of any kind. We have had reports from Crawford, Sherman, Greenwood and Thomas counties of a few cases of smallpox. The

most prevalent disease in the past few months, as shown by the quarterly reports of health officers received since our last meeting, has been measles. Jackson county reported 500 cases; Osage, 233; Leavenworth, 170; Wyandotte, 125; Clay, 100; Stafford, 600; Saline, 250; Lyon, 578; Barton, 300; Mitchell, 120; Riley, 150.

During the same period a few counties reported scarlet fever as follows: Jackson, 13; Osage, 62; Wyandotte, 90; Cheyenne, 194; Lyon, 68; Mitchell, 133; Rawlins, 112; Cherokee, 59; Kingman, 43.

Smallpox in the following counties was reported: Crawford, 49; Leavenworth, 39; Wyandotte, 25; Saline, 69; Marshall, 60.

This will give you an idea of the infectious diseases that have prevailed in this state during the past few months. There has been no such malignant epidemic of any disease as occurred in smallpox in Rice and Morris counties a year ago last winter.

Regarding the epidemic of measles that has occurred the past few months, it has probably been the most general of any epidemic that has prevailed in the state, unless it was smallpox five years ago. However, it has not been at all fatal. I regret to say that quarantine regulations have not been enforced as strictly as they should have been, many county health officers having written that it was simply impossible to enforce quarantine, and for that reason we only required that houses should be carded and no attempt was made to enforce a strict quarantine.

On May 16 I received the following letter:

“LYNDON, KAN., May 14, 1904.

“*Secretary State Board of Health, Topeka, Kan.:*

“DEAR DOCTOR—I have a complaint filed against the Quenemo sanitarium, of Quenemo, Kan. The conditions are as follows: The sanitarium people have a sewerage system running across the street from the building, and then it empties into a well and ravine, and is supposed to flow on top of the ground to the river. This sewer carries from the sanitarium all water used in the kitchen, the bath-room, and water-closets. The well at end of sewer is full, and in the summer-time gets stagnant, and is something awful. The people that live near by have to keep the doors and windows closed. My attention was called to this about a year ago. I investigated the matter, and, with the mayor, I saw the doctor, and he agreed to fix the thing at once. I told him what I thought ought to be done, and he said he would do it. He has done nothing, and, as summer is coming, the people living near the sanitarium would like to have this attended to. What shall I do about the trouble? I have not notified him this year, and I think it would do no good. Hope to hear from you soon.

Yours truly, C. W. BEASLEY, *County Health Officer.*”

To this I replied as follows:

“TOPEKA, KAN., May 16, 1904.

“*C. W. Beasley, M. D., Lyndon, Kan.:*

“DEAR DOCTOR—I have your letter of recent date in regard to the sanitarium sewer, and will say, if the people of the sanitarium refuse to abate the nuisance, the course for you to pursue will be to go to the county attorney, enter complaint, and have him bring suit. First, use every endeavor to have the nuisance abated without prosecution, but in case they absolutely refuse to do anything you have redress through the county attorney. I judge from what you write that the matter is dangerous to public health, and the trouble should be corrected. Hoping that you may be able to get the owners of the sanitarium to abate the nuisance, I am,

Very truly yours, CHAS. LOWRY, *Secretary.*”

The attention of the State Board of Health is frequently called by people in the state and county health officers to nuisances, and I would say that the State Board of Health has no jurisdiction in such matters, and I always give advice as is shown in the letter above.

We have had during the last two months the usual amount of routine work in the office.

This being my last quarterly report, and having been connected with this Board for the past five years, three years as a member and two years as secretary and executive officer, is my excuse for taking a retrospective view of the work done during that time, and a glance at what should be done in the future.

The members of the State Board of Health were all newly appointed by Governor Stanley in the spring of 1899, and were as follows: Drs. B. J. Alexander, A. S. Gish, S. J. Crumbine, J. M. Minick, R. J. Morton, Chas. Lowry, S. W. Williston, G. E. Locke, and G. W. Hollembeak. Only four of the original members are now connected with the Board. The Board was organized on the 14th of June, 1899, by the election of Dr. B. J. Alexander for president and Dr. W. B. Swan for secretary.

The general and severe epidemic of smallpox that followed soon after the organization was a test of the ability and resources of the new secretary. How well he did his work was shown by the fact that he was three times reelected secretary, giving full satisfaction to all members.

A bill to provide for a board of registration and examination had been considered by physicians in this state for a number of years and committees had been appointed by the respective state societies to endeavor to pass a law providing for such a board. But efforts to secure such legislation have failed. This was taken up by the State Board of Health in the fall of 1899. The bill was drafted by Professor Williston, revised by the State Board of Health, and passed the legislature the following winter, largely through the influence of Doctor Swan, the secretary. Other legislation that has been secured through the efforts of this Board during the past five years is a good quarantine law, and a law giving the members of the Board of Health a per diem.

While something quite tangible by way of legislation has been obtained by the State Board of Health in the past five years much remains to be accomplished. A larger appropriation for the use of the Board should be obtained from the next legislature. It will be remembered that a resolution was passed last December for teachers to examine the eyes and ears of all school children of the state once a year. The putting of this resolution into effect had to be deferred for want of funds to purchase the test cards with instructions for the 10,000 teachers in the state. This required an expenditure of only \$300 and would have been far-reaching in the good results that would have followed.

Some legislation to be obtained as early as possible is a law to enable the collection of vital statistics. There is a penalty for not reporting deaths, but it is optional with physicians to report births; so reports of vital statistics are so incomplete as to be entirely unreliable. There is a movement by different states and on the part of the general government, for census use, for a uniform and stringent law for the collection of vital statistics. I have given this matter some thought and will suggest the following law that perhaps would be as good as any that could be enacted:

"AN ACT relating to births, deaths, and burials.

"*Be it enacted by the Legislature of the State of Kansas:*

"SECTION 1. It is hereby made the duty of the county health officer of each county in the state of Kansas to furnish to all physicians practicing medicine in the

county suitable blanks for the purpose of making reports of all births and deaths occurring in his practice. Such blanks for births shall give the color, sex, date of birth, and the place where born. In case of deaths, the blanks shall state the name of the person, the cause of death, the color, age, and place where death occurred. Such blanks, when properly filled out, shall be signed by the physician, giving the date of such signature, and by him, without unnecessary delay, delivered to the county health officer of his county, whose duty it shall be to file the same in his office, and also record the same at length in a suitable record-book, which book shall be open at reasonable times to the inspection of the public. All blanks shall be provided and books necessary shall be provided at the expense of the respective counties of the state.

"SEC. 2. In case of death, it shall be the duty of the attending physician to deliver to the undertaker or other burial officer a certificate under his hand, giving the name, age, color, place and cause of death.

"SEC. 3. In case of death by violence, accident, unlawful means, or other causes, when the attendance of a physician cannot be had, and a coroner's inquest is held, such certificate shall be made by the coroner or other proper officer.

"SEC. 4. Any undertaker or other person burying a body without the certificate herein provided for shall be guilty of a misdemeanor and liable to a fine of not exceeding \$——.

"SEC. 5. Any physician failing to make report of any birth or death as herein provided for shall be guilty of a misdemeanor and liable to a fine of not exceeding \$——.

"SEC. 6. The certificates of death coming into the hands of an undertaker or other burial officer shall, after the burial of the body, be delivered to the county health officer of the county where the burial takes place, and shall be by him filed in his office, and recorded at length in a suitable book to be provided by the county, which book shall at all reasonable times be open to the inspection of the public.

"SEC. 7. For making reports of births, the physician making same shall be paid the sum of ten cents out of the general fund of the county.

"SEC. 8. The secretary of the State Board of Health shall furnish to each county a form of all books herein provided for, so that they may be uniform throughout the state. All books in which are recorded the births, deaths and burials shall be delivered to the secretary of the State Board of Health on the 1st day of November preceding each session of the legislature."

One hundred and fifty thousand deaths in this country annually of a preventable disease is an appalling fact staring us in the face that should arouse the interest and exertion of every man and woman. If it was from a war that had suddenly been precipitated that counted its dead in such numbers, sanitary and other societies would be organized; and not only physicians, but ministers, mothers, daughters, society girls and every one would offer their services to relieve the wounded and diseased. We are glad to be able to state that public sentiment is becoming aroused in favor of some action for the suppression of consumption. New York, Massachusetts and other states are building sanitariums by the score. What is going to be done in this state? That we should have some legislation on the subject at the earliest possible time there can be no doubt. My own feeling is that radical and extreme measures should be resorted to for the suppression and eradication of pulmonary tuberculosis. An important step to begin with would be the placing of a state bacteriologist on a salary, whose

services would be given free of charge to all physicians. I understand that a plan was inaugurated by the Kansas State Medical Society looking to the establishment of one sanitarium for consumptives under state supervision. This is certainly a movement in the right direction and should have the sympathy and cooperation of the State Board of Health.

I think all patients with tuberculosis should be reported by attending physicians to county health officers, and should have from county health officers such needed attention and instruction for the prevention of the spread of the disease which any infectious disease at the present time now receives. I would also favor having homes for such patients—one or more in the state—where they would receive the best and most scientific modern treatment; also, where the danger of infection would be reduced to the minimum. Since I have been secretary my attention has been called a number of times to instances where a number in the same family have died of tuberculosis within a short period. I have also at different times observed, where husbands or wives have been afflicted with tuberculosis, within a few months other members of the family have come down with the disease. This is no doubt well known and has been observed by other physicians, but these facts count for nothing unless some action is taken. In summing up, I earnestly recommend that an effort be made by the State Board of Health to secure needed legislation for the benefit of consumptives in this state.

Since the preparation of this report I have received the following communication from Morris county:

"WHEREAS, Morris county, state of Kansas, has recently, through its board of county commissioners, acting as county and local board of health, expended a considerable sum of money in sanitary regulations and supervision of the public health, and believing that said county ought to be reimbursed for the same by the State Board of Health out of any appropriation hereafter made by the legislature to defray the expenses of said Board of Health: therefore, be it

Resolved, By the board of county commissioners of said Morris county, Kansas, this 5th day of January, 1904, that the county clerk of said county make out and forward to the secretary of the State Board of Health a complete report and itemized statement of any and all expenditures made by said county board for smallpox condemnation and destruction of smallpox-infected property to the sum of \$720.80, the burial of carcasses of dead animals washed upon the soil by the recent flood, amounting to the sum of \$200, and all other necessary expenditures tending to prevent the spread of disease and for the preservation of public health. Also to furnish said secretary of State Board of Health with an accurate statement of the date, nature and amount paid on each expenditure for purposes aforesaid. The said clerk is also instructed to certify to the same and to forward therewith a certified copy of this resolution attached thereto.

H. KINGMAN, *Chairman.*
W. R. FORSYTH, *Member.*
E. F. HEBBANK, *Member.*

"I certify the above to be a true copy of the original resolution passed by the board of county commissioners of Morris county on the 5th day of January, 1904.

A. W. LOOMIS, *County Clerk.*"

I replied to the county clerk as follows:

"TOPEKA, KAN., May 25, 1904.

"A. W. Loomis, *County Clerk, Council Grove, Kan.:*

"DEAR SIR—Have received the bill which, by resolution of your commissioners, you sent to the State Board of Health. You have no valid claim against the State Board of Health for any such expense. The appropriation for the use of the Board is for specific purposes and does not include the payment of any such bill, and no county has ever made such a claim against the Board before. Shaw-

nee county paid several hundred dollars for burying cattle last spring, the same as you did, but they made no claim against the state for the expense. This opinion is not only my own, but that of the attorney-general also.

Very sincerely yours, CHAS. LOWRY, *Secretary.*"

Following is the report of the secretary of the embalmers' examining committee:

"HIAWATHA, KAN., May 28, 1904.

To the Honorable State Board of Health :

"GENTLEMEN—I herewith submit my semiannual report as secretary of the embalmers' examining committee:

Number of examinations held since last report.....	1
Number of applicants.....	18
Number reexamined.....	2
Number who failed to pass.....	5
Number of certificates granted.....	15
Amount received for examinations.....	\$90 00
Amount received for renewals to date.....	\$9 00

"The following bills have been paid, as per bills attached to the treasurer's report:

Harrington Printing Company.....	\$5 00
W. H. Eicholtz, expense and per diem.....	16 20
I. W. Gill, expense and per diem.....	11 55
L. M. Penwell, expense and per diem.....	3 00
J. T. Barkley, expense and per diem.....	3 00
J. B. Hinthorn, expense and per diem.....	16 42
J. B. Hinthorn, postage, express, and messages.....	26 72
E. W. Hughes, chairs and tables.....	1 35
Harrington Printing Company.....	6 75
Moore Printing Company.....	4 00
J. B. Hinthorn, salary as secretary, year.....	53 25

"Your committee at its last meeting discussed several topics of interest, and which we believe will be looked at as important ones when presented to your honorable Board.

"Among them is the revising and simplifying of our shipping paster for licensed men. The present one has proved to be of too great a dimension and more complicated than is necessary for the use of any one holding a certificate, and we earnestly hope you will give this matter a hearing when the appointed committee makes its report.

"Our renewal fee has already been spoken of at your previous meetings, but the fact still stares the committee in the face that it ought to be changed from one dollar per year to that of two dollars, which is a very insignificant sum for the practice of embalming for one year. And our receipts at our last meeting show a sum inadequate to meet the current expenses. While the examinations will be less in number and farther apart, the expense of printing, stationery and postage and the general expense will be more as the years go by, and we will need the increase of renewal fee, the same as our sister states have.

Respectfully submitted. J. B. HINTHORN."

"TOPEKA, KAN., May 27, 1904.

"Chas. Lowry, M. D., City:

"DEAR DOCTOR—I herewith submit my report as treasurer of the embalmers' examining committee up to and including May, 1904:

Balance on hand December 1, 1903.....		\$385 07
December 21, received of secretary, draft.....		86 00
May 7, 1904, received of secretary, cash.....		90 00
Total.....		\$561 07
January 6, 1904, paid on warrant No. 10.....	\$5 00	
May 9, " " " " 11.....	11 00	
" 9, " " " " 12.....	3 00	
" 7, " " " " 13.....	16 00	
" 9, " " " " 14.....	4 00	
" 9, " " " " 15.....	16 42	
" 7, " " " " 16.....	26 72	
" 7, " " " " 17.....	52 25	
" 7, " " " " 18.....	6 75	
" 7, " " " " 19.....	3 00	
" 12, " " " " 20.....	1 25	
Total.....		145 39
May 27, 1904, balance cash on hand in bank.....		<u>\$414 95</u>

Respectfully submitted.

L. M. PENWELL, *Treasurer.*"

THIRD QUARTERLY MEETING, 1904.

The Kansas State Board of Health met in the office of the secretary at Topeka, Thursday, September 15. The meeting was called to order at two P. M. by the president.

The following members and advisory members were present: Doctors Mills, Golden, Lowry, Carver, Scott, Locke, Carlile, and Greenfield, and Professor Bailey.

The minutes of the annual meeting were read by the secretary and ordered placed on file.

The secretary then read his report and a general discussion of same followed.

Doctor Scott moved that Doctor Crumbine, accompanied by Professor Marvin, go to Abilene, make an investigation of the trouble there, and make a report at the next meeting of the Board. This motion was seconded and carried.

Doctor Carver moved that Professors Bailey and Marvin be appointed a committee to prepare a bill giving the State Board of Health jurisdiction in the matter of public water-supplies and sewerage systems. This motion was seconded and carried.

A discussion of the pure-food laws followed, but no motions were made or resolutions adopted.

Doctor Lowry moved, and Doctor Locke seconded, that the report of secretary be placed on file.

The question of appointing a committee to go over and revise the

rules and literature of the Board then came up. Doctor Lowry moved that Doctors Carlile, Scott and Crumbine be a committee to revise such rules and regulations and all literature of the Board. This motion was seconded and carried.

Doctor Carlile introduced the following resolution :

WHEREAS, There is an apparent almost daily necessity of sending the rules and regulations of the State Board of Health, quarantine law and decisions thereon to county health officers and physicians of the state; and

WHEREAS, Such rules are not arranged in convenient form for transmission: therefore, be it

Resolved, That the secretary be instructed to compile and arrange such rules and regulations in a suitable circular or pamphlet that can be sent through the mails upon inquiry or request to physicians, county health officers, or others.

Doctor Locke moved that the resolution be adopted as read. This was seconded and carried.

The Board then adjourned.

The following bills were audited and allowed :

Dr. J. B. Carver.....	\$21 00
Dr. E. P. Mills.....	10 50
Dr. A. B. Scott.....	27 95
Dr. J. B. Carlile.....	30 15
Dr. Chas. Lowry.....	5 00
Dr. G. E. Locke.....	9 48
Total.....	\$104 08
Prof. E. H. S. Bailey.....	\$2 40

SECRETARY'S REPORT.

To the Members of the State Board of Health :

GENTLEMEN—On July 15 I assumed the duties of the office of your secretary, having been unavoidably delayed in getting away from Dodge City; it was with mixed feelings of doubt as to the wisdom of removing from my home and the giving up of my practice to accept this honorable position, and of an ambitious pride to continue and enlarge the usefulness of this Board to the profession of Kansas and the public in general. In the accomplishment of this latter purpose I ask your hearty and earnest cooperation.

Doctor Lowry continued to act in the capacity of executive officer of the Board from the time of the annual meeting until the 15th of July. The first thing of importance which engaged his attention was the following matter :

On May 14 the following letter was received from Dr. J. C. Shaw, county health officer of Jackson county :

“Dr. Chas. Lowry, Topeka, Kan. :

“DEAR DOCTOR—I write relative to a condition of sanitation which has given us considerable annoyance. I have about exhausted my resources and ingenuity in the matter and am decided that I want you to come up and see the matter, and, as you are an entire stranger and disinterested from a personal standpoint, and also a state officer, I believe you can do much to help us out. Let me know when you can come up and I will meet you at the train. I spoke to our county attorney about the matter and he thinks it well for you to come. If I under-

stand the law properly, I can do nothing toward abating the nuisance other than declaring it unsanitary and by 'punching' up the ones who can abate it. I want you to come up and help me do the 'punching.'

www.libtool.com.cn

Very truly yours, J. C. SHAW."

At the time of receiving this letter it was impossible to visit Holton, and the matter was deferred until June, and on the 15th of June I went to Holton. Upon investigation, I found that it was a matter that required the opinion of the sanitary engineer, and arranged for Professor Marvin to go there at an early date. He made a thorough investigation and submitted the following report:

"LAWRENCE, KAN., June 27, 1904.

"*Dr. Chas. Lowry, Secretary State Board of Health, Topeka, Kan.:*

"DEAR SIR—In accordance with your instructions, I visited the city of Holton on June 20 and 21 to investigate some complaints made because of alleged nuisances caused by the drainage of wastes from certain hotels. The conditions found are as follows:

"The city has no public water-supply and no sewerage system. Private water-supply is derived from wells of moderate depth, reaching an open, porous sand that is water-bearing and which seems to furnish an ample supply for local uses. The City hotel uses about twenty-five or thirty barrels per day, the greater part of which finds its way to the hotel sewer through the liquid kitchen wastes and the water closets.

"This private sewer is an eight-inch sewer-pipe, laid with cement joints for a length of one block. It discharges into a large tile sewer, which connects with an old stone arch culvert of considerable size and from which leads another line of large tile, the latter discharging into the ditch at the side of a street and adjacent to several dwellings. The entire sewer from hotel to outlet is a little over two blocks long. The old culvert is closed at both ends and the upper end is said to be two feet lower than the down-stream end. Storm-water from the streets is admitted to the large tile and culvert and this is supposed to flush the sewer clean; yet there seemed to be a considerable deposit within the culvert at the time of my visit, and I believe there will always be a deposit of filth there under existing conditions.

"The large tile is not laid with cement joints, and, as it lies at a shallow depth below the surface of the street, which has been filled in, its flow line is slightly, if any, below the surface of the ground in adjacent yards.

"At the time of my inspection there was a small pool, two or three feet square, at the outlet of this sewer, but no flow therefrom. All the flow was lost in the sandy soil, either at the outlet or as leaks from the open joints of the tile sewer. To ascertain if this leakage was a source of danger to adjacent wells. I took samples of water from two wells on the east side of New York avenue and distant from the sewer about forty and sixty feet, respectively. These are numbered 1 and 2 in the report of the chemical analyses attached to this report.

"The significant figures here are the high amounts of the residue, the nitrates and nitrites. The chlorine may be significant, but this cannot positively be asserted, in the absence of a knowledge of the normal amount of chlorine in the ground-water of that section.

"There can be no question about these wells being polluted by leakage from this sewer, and any analyst would condemn the water as unsafe for domestic use. These facts also throw suspicion on other adjacent wells.

"The sewage from the Hotel Reinhard, which also has its own water-supply and drainage, is carried in sewer-pipe with cement joints across the street to a vacant lot and discharged into a brick reservoir, the overflow from which passes into and through two other reservoirs without bottoms. The overflow from the

last is supposed to go into a bored well that reaches down to the water-bearing sand. During rainy spells this well will not hold the sewage overflow, and it spreads over the adjacent ground, causing offensive odors that annoy the people of the vicinity.

"The evident design was that the first reservoir should act as a septic tank, where the solids should be broken up by bacterial action and put into solution; and that the resulting foul liquid should be drained off in the open, porous underlying sand stratum—a good theory, but one not applicable to a location in the center of a town and surrounded by dwellings. Moreover, the system is evidently not properly designed, for it does not do its work. The first reservoir, where there should be practically no deposit, I was informed needs cleansing every six weeks, and that several wagon-loads of semisolid matter are removed each time.

"As in the other case, there is danger here of the contamination of adjacent wells, and that the danger exists is proven by analysis No. 3, of water from a well about 150 feet north of the series of sewage-tanks and wells. The pollution is not so great as in the cases of the other wells examined, but much more than sufficient to place the water in the dangerous class.

"These results also have another bearing. I was informed that it is a common matter for citizens to dig deep pits in their yards for cesspools or for the reception of excrementitious matter, because they had found by experience that the porous subsoil drained away the liquid parts—a practice pernicious in the extreme and likely to become more so as the years go on. Holton lies on a knoll formed of drift material. The surface soil is quite sandy, while the subsoil is sand or gravel and water-bearing. Under such conditions every precaution should be taken to preserve the underlying sheet-water from pollution, or all private wells should be abandoned and water obtained from a public supply from a source well protected from contamination.

"As to the two hotel sewers, I consider them both as unsanitary and sources of danger to health. The city authorities should at once provide for a different disposal of their contents. A half-mile of well-built sewer, which might well fit into a scheme for subsequently sewerage the entire town, would not only take care of the wastes from these hotels, but would also provide for sanitary drainage from the business section of the town, which now greatly needs such provision, and, further, would place the outlet on the outskirts of the town, away from the thickly settled portion.

"A copy of the chemical analyses is attached to this report. I wish to acknowledge courtesies shown me by Mayor Webster, Health Officer Shaw, and Messrs. Linscott and Reinhard, owners of the hotels in question.

Respectfully submitted. F. O. MARVIN."

Analyses of water from Holton, Kan., received through Prof. F. O. Marvin, June 22, 1904:

Laboratory number.....	No. 1.	No. 2.	No. 3.
Turbidity.....	433	434	435
Sediment.....	None.	Very slight.	Very slight.
Color.....	None.	None.	None.
Residue of evaporation.....	3020.0	2270.0	1080.0
Loss on ignition.....	930.0	642.0	318.0
Residue.....	2090.0	1628.0	762.0
Chlorine.....	48.53	43.54	43.42
Free ammonia.....	.026	.038	.08
Albuminoid ammonia.....	.131	.220	.13
Nitrogen as nitrates.....	50.0	50.0	25.0
Nitrogen as nitrites.....	.024	.010	.006
Hardness, soap test.....	1198.0	950.0	590.0
Consumed oxygen.....	1.17	1.82	1.66
Iron.....	.7	1.1	1.5
Alkalinity.....	148.2	125.6	92.4
Normal hardness.....	941.2	754.8	288.2

EDWARD BARTOW, *Analyst.*

On July 2 I learned through Mr. Nation, who had received a letter from Osborne, that scarlet fever was prevailing in that town, and that no attention was being given to quarantine regulations. I immediately sent Doctor Dillon, the county health officer, the following telegram:

"Enforce strict quarantine in family of county clerk, whose sister has scarlet fever. Any violation of quarantine in future will be followed by suit and fine.
CHAS. LOWRY."

I sent the the following message to Dr. L. A. Golden, member of the State Board of Health:

"Scarlet fever at Osborne. Public funeral. Please go there and enforce rigid quarantine.
CHAS. LOWRY."

I received no reply whatever to these telegrams, but received two letters from Doctors Hudson and Felix complaining of the lax condition of quarantine regulations, and requesting the state health officer to make a personal investigation. After receiving these letters, I wrote to Doctor Dillon as follows:

"A. C. Dillon, M. D., Osborne, Kan.:"

"TOPEKA KAN., July 6, 1904.

"DEAR DOCTOR—Information was received here last week of a case of public funeral where death occurred from scarlet fever; also of another case of scarlet fever in the family without strict quarantine being enforced. No reply has been received from you since I wired you last Saturday to look into the matter. Will you kindly write at once the conditions, as people here having friends in Osborne are anxious to know about the situation, and, furthermore, the State Board of Health is entitled to some knowledge of such affairs.

Very truly yours, CHAS. LOWRY, *Secretary.*"

Receiving no answer to this letter, I again wired Doctor Dillon and made arrangements to visit Osborne. Just before leaving I received the following telegram from Doctor Dillon, dated July 11: "One case of scarlet fever convalescent, strictly quarantined."

This telegram, however, did not deter my visit to Osborne as contemplated. I found after arriving there and having an interview with all the doctors in town that there had been in the neighborhood of twelve or fifteen cases of scarlet fever in the town and in the country around. There had been two or three deaths, and I found that until after my second telegram to Doctor Dillon no attention had been given to quarantine, but the day before I arrived the one case in town and a number outside were put under quarantine and houses carded. In case of death of one of the patients a public funeral had been held, and people had been allowed to come and go with very little restriction. My interview with Doctor Dillon was very satisfactory, he admitting that they had been a little lax in their quarantine regulations. He promised me that in the future all cases would be quarantined.

CHAS. LOWRY, *Secretary.*

On July 15 I took charge of the office of secretary. Deeming it of importance to determine whether or not the flood, which covered so much of the state in the past months, had left an unsanitary condition, on July 22 I addressed the following letter to county health officers of Coffey, Labette, Lyon, Reno, Sedgwick, Cowley, Neosho, Allen, Marion, Sumner, Chase, Morris, Geary, Wyandotte, Douglas, Shawnee, Clay, Saline, Dickinson, Mitchell, Republic, Rice, McPherson, Harvey, Franklin, Miami and Linn counties:

"TOPEKA, KAN., July 22, 1904.

"DEAR DOCTOR—From newspaper accounts and other sources I am reliably

informed that your county has suffered seriously from flood in the last few months. It is fortunate indeed that so few lives have been lost by drowning, but there certainly exist throughout the flooded districts unsanitary conditions which are a menace to the public health of your county, and which might prove to be the cause of a large mortality later on. I therefore beg to urge that you confer at once with your county commissioners, who, together with yourself, constitute the county board of health, and that a systematic and thorough investigation be made of the sanitary conditions of your county by a personal visitation, whereby you may be actually acquainted with the needs and may be able to suggest methods whereby your county may be saved much serious sickness and perhaps many deaths. Stagnant pools should be drained, carcasses of animals cremated or buried, debris and sediment removed from cellars, and instructions be given to people in advanced methods of disinfection. Will you not kindly call this meeting of your county health board at once, and advise me of conditions found and remedies applied for the betterment of public health. With kind personal regards, I am,

Very truly yours, S. J. CRUMBINE, *Secretary.*"

But few replies were received from these letters, but all those received indicated that the sanitary conditions were even better than before the flood. One county health officer probably stated the condition quite precisely when he said: "The sanitary condition is better than before the water was so high, for with such a swift current everything was washed away that might be detrimental, leaving the valleys and flooded districts in a comparatively clean condition."

The only complaint, and that spoken of by a number reporting, was that they feared contamination of the city water-supplies of the larger towns in their county. This brings the Board face to face with that ever-recurring problem of lack of authority in the municipal water-supply and sewerage system. It is my earnest hope that the Board may take such action and inaugurate such a campaign as will result in adequate legislation this coming winter on the much-needed authority that the Board should have in such cases.

On August 17 the following letter was received from the county health officer of Chautauqua county:

"SEDAN, KAN., August 16, 1904.

"*Secretary State Board of Health, Topeka, Kan.:*

"DEAR DOCTOR—I report to you that I have two cases of smallpox quarantined in the northwest part of our county, near the Elk county line. I learn that there are a number of cases at Moline and that they are not enforcing quarantine regulations; consequently the spread of the disease. I also have a case of scarlet fever quarantined near Peru, Kan. The scarlet-fever case is of the severest form, eruption, blood red, with severe throat complications.

Respectfully, W. T. COURTWRIGHT "

Not having received a report of cases at Moline, the following letter was sent to the county health officer of Elk county:

"TOPEKA, KAN., August 17, 1904.

"*Dr. W. F. Flack, Longton, Kan.:*

"DEAR DOCTOR—Reports have come to this office that there are cases of smallpox at Moline and that quarantine regulations are not being observed. Will you kindly investigate at once and report to me.

Very truly yours, S. J. CRUMBINE, *Secretary.*

To this Doctor Flack replied as follows:

"LONGTON, KAN., August 19, 1904.

"S. J. Crumbine, M. D., Topeka, Kan.:

"DEAR DOCTOR—Yours just received, this morning, and in answer will say we have smallpox at Moline, Howard, and Elk Falls, but some of our smart doctors say it is no such thing. Some of them call it Cuban itch and some chickenpox, but I tell you it is genuine smallpox, and that is all there is to it. I have put them under quarantine the best I can, and if they do not stay under I shall have to call on your board or some one to keep them there. Nearly all of our doctors in this county will not report their contagious diseases at all, or births and deaths either; so if you can help me some way to get these reports I would be glad to have you do it.

Very respectfully, W. F. FLACK."

Upon the same day of the receipt of the reply from Doctor Flack came a letter addressed to the governor, written by a citizen of Moline, complaining of the situation there, of the large number of cases of smallpox, and the failure of the county health authorities to properly quarantine, whereupon I immediately wrote the county health officers of Elk and Chautauqua counties to meet me at Moline on Monday evening, August 22, for the purpose of carefully canvassing the situation and enforcing such regulations as would protect the interests of the public health. Arriving in Moline Monday evening, I met the county commissioners, county attorney, the mayor of the city of Moline, together with the county health officer, Doctor Flack.

In company with the county health officer, I visited five infected houses, containing eight cases, and there was no difficulty in making a positive diagnosis that the disease was really smallpox. After this visitation a meeting with the county health board and city officials was held, together with two of the local physicians, when I stated the case to them as I found it, and insisted that a complete and effective quarantine be established immediately. To this they agreed, and I felt that no further trouble would be encountered. The next morning, however, I was informed that the sister of a young lady suffering from the disease, and one who had been visited the evening before, was as usual in her place at the city telephone exchange. Her father had also been seen on the streets, and there seemed to be a general disposition among city officials to disregard the advice and suggestions of the health authorities; whereupon I notified the mayor to notify these parties once more that they should observe the quarantine, which, if they violated another time, they should be promptly arrested and detained behind iron bars, where we could be more certain they were isolated. Upon taking the train at the depot I was amazed at seeing a young lady all covered with smallpox scabs mingling among a crowd of about fifty people on the depot platform. The brakeman running on the passenger-train out of Moline was continuing his daily duties, regardless of the fact that his son was sick at home with smallpox. The county commissioners' attention was called to these facts, and I finally, before leaving, notified the mayor and commissioners that if they could not see to a strict and proper quarantine of all the cases I would be compelled to place their town under lock and key.

The cases at Longton and Howard were properly isolated, and I was advised by local authorities that no trouble was being experienced towards violation of the law.

On August 26 I received the following letter from the city marshal of Moline:

"MOLINE, KAN., August 25, 1904.

"S. J. Crumbine, Topeka, Kan.:

DEAR SIR—We have got the cases well in hand, all property quarantined, and

all are staying in. One new case developed since you were here, and that of a lady who had it two months ago. All told, since this broke out, there have been about 145 cases, to the best of my judgment. Will report again, also to Doctor Flack. He was here to-day and went around with me.

Yours respectfully, L. W. COLLYER."

On August 25 I sent the following letter to the attorney-general:

"TOPEKA, KAN., August 25, 1904.

"*Mr. C. C. Coleman, Attorney-general, City:*

"DEAR SIR—I herewith submit the following questions for your opinion:

"*First.* Has the State Board of Health power to enforce their published rules for the transportation of dead bodies? (See section 6660, General Statutes for 1901.)

"*Second.* What power, if any, has the state or local board of health in cities of the first and second class to condemn as nuisances stagnant pools of water and to compel removal or drainage of same?

"*Third.* Who is the proper authority to enforce the adulteration of foods, drinks and drugs law? If the State Board of Health has jurisdiction, could the secretary or executive officer have authority and funds at his disposal for buying samples of suspected food, drugs or drinks and have them properly analyzed, with the end in view to make prosecutions under such law, if such food, drugs or drinks were found to be adulterated?

"*Fourth.* Has the State Board of Health authority to compel county clerks to return assessors' reports of births, deaths and marriages from their respective counties?

"An early reply will be appreciated. Very truly yours,

S J. CRUMBINE, *Secretary.*"

To these questions Mr. Coleman replied as follows:

"TOPEKA, KAN., August 31, 1904.

"*S. J. Crumbine, Secretary State Board of Health, Topeka, Kan.:*

DEAR SIR—In reply to yours of August 25, asking my opinion on several propositions, I beg leave to say:

"*First.* The State Board of Health has the authority to enforce their published rules relative to the transportation of dead bodies for burial. That section provides that any person in charge of a railway-train, vessel or other vehicle transporting a body in violation of such rules is liable to a fine of ten dollars.

"*Second.* The statute gives cities of the first and second class abundant authority to enact all proper and necessary ordinances to remove, abate and prevent nuisances and to protect the health of the community. Section 56, page 188, Laws of 1903, confers this authority on cities of the first class, and section 1001, General Statutes of 1901, on cities of the second class.

"*Third.* The statute does not make it the duty of any particular officer to enforce the pure-food laws. The duty of enforcing these laws is with the general executive officers of the state, the same as other laws. I do not find any provision in the statute which authorizes your Board to buy samples of foods, drugs, etc., for the purpose of having them analyzed, for the purpose of ascertaining when such foods are adulterated. The only provision which could possibly be construed to give such authority is the item in the appropriation for your Board by the legislature of 1903, 'sanitary work'; but I think this appropriation was to carry out the provisions of section 6661, General Statutes of 1901. This section, as a whole, I construe to authorize your Board to employ experts to examine public works, such as systems of water-works, sewerage, sanitation

of public buildings, and the like. I don't think there is at present any appropriation available to buy samples of foods for the purposes above indicated.

"Fourth. There is no statute by which your Board can require the several county clerks to return to you the returns of assessors' reports of births, deaths, and marriages, but under sections 6663 and 6665, General Statutes of 1901, such returns can be required of the local health officer.

Yours very truly, C. C. COLEMAN, *Attorney-general.*"

Upon receipt of this opinion from the attorney-general, I sent the following letter to members of the embalmers' examining committee:

"TOPEKA, KAN., August 31, 1904.

"DEAR SIR—I have the opinion of the attorney-general this morning that the State Board of Health has authority to enforce the published rules relative to the transportation of dead bodies for burial. That section provides that any person in charge of a railway-train, vessel or other vehicle transporting a body in violation of said rules is liable to fine of ten dollars. Your committee will therefore report all violations of said rules to this office, when proper steps will be taken to prevent their recurrence.

Very truly yours, S. J. CRUMBINE, *Secretary.*"

Requisition was then made for 2000 copies of the following poster:

RULES OF THE KANSAS STATE BOARD OF HEALTH FOR THE TRANSPORTATION OF DEAD BODIES.

These rules, having been duly adopted and properly published, have the full force of law (sec. 9, ch. 75, Gen. Stat. 1897).

RULE 1. The transportation of bodies dead of smallpox, Asiatic cholera, yellow fever, typhus fever or bubonic plague is absolutely forbidden.

RULE 2. The bodies of those who have died of diphtheria (membranous croup), scarlet fever (scarlatina, scarlet rash), glanders, anthrax or leprosy shall not be accepted for transportation unless prepared for shipment by being thoroughly disinfected by (a) arterial and cavity injection with an approved disinfectant fluid; (b) disinfecting and stopping of all orifices with absorbent cotton; and (c) washing the body with the disinfectant, all of which must be done by an embalmer holding a certificate as such approved by the State Board of Health or other state health authority. After being disinfected as above, such body shall be enveloped in a layer of cotton not less than one inch thick, completely wrapped in a sheet and bandaged, and encased in an air-tight zinc, tin, copper or lead-lined coffin or casket, all joints and seams hermetically soldered, and all enclosed in a strong, tight, wooden box. Or, the body, being prepared for shipment by disinfecting and wrapping as above, may be placed in a strong coffin or casket, and said coffin or casket encased in an air-tight zinc, copper or tin case, all joints and seams hermetically soldered, and all enclosed in a strong outside wooden box.

RULE 3. The bodies of those dead of typhoid fever, puerperal fever, erysipelas, tuberculosis, and measles, or other dangerous communicable diseases other than those specified in rules 1 and 2, may be received for transportation when prepared for shipment by filling cavities with an approved disinfectant, washing the exterior of body with same, stopping all orifices with absorbent cotton, and enveloping the entire body with a layer of cotton not less than one inch thick, and all wrapped in a sheet and bandaged, and encased in an air tight coffin or casket; provided, that this shall apply only to bodies which can reach their destination within forty-eight hours from time of death. In all other cases such bodies shall be prepared for transportation in conformity with rule 2. But when the body has been prepared for shipment by being thoroughly disinfected by an embalmer holding a certificate as in rule 2, the air-tight sealing may be dispensed with.

RULE 4. The bodies of those dead of diseases that are not contagious, infectious or communicable may be received for transportation when encased in a sound coffin or casket and enclosed in a strong outside wooden box, provided they can reach their destination within thirty hours from time of death. If the

body cannot reach its destination within thirty hours from time of death, it must be prepared for shipment by filling cavities with an approved disinfectant, washing the exterior of the body with same, stopping all orifices with absorbent cotton, and enveloping the entire body with a layer of cotton not less than one inch thick, and all wrapped in a sheet and bandaged, and encased in an air-tight coffin or casket. But when the body has been prepared for shipment by being thoroughly disinfected by an embalmer holding a certificate as in rule 2, the air-tight sealing may be dispensed with:

RULE 5. In cases of contagious, infectious or communicable diseases, the body must not be accompanied by persons or articles which have been exposed to the infection of the disease, unless certified by the health officer as having been properly disinfected; and before selling passage tickets, agents shall carefully examine the transit permit and note the name of the passenger in charge, and of any others proposing to accompany the body, and see that all necessary precautions have been taken to prevent the spread of the disease. The transit permit in such cases shall specifically state who is authorized by the health authorities to accompany the remains. In all cases where bodies are forwarded, under rule 2, notice must be sent by telegraph to health officer at destination, advising the date and train on which the body may be expected. This notice must be sent by or in the name of the health officer at initial point, and is to enable the health officer at destination to take all necessary precautions at that point.

RULE 8. Every disinterred body, dead from any disease or cause, shall be treated as infectious or dangerous to public health, and shall not be accepted for transportation unless said removal has been approved by the state or provincial health authorities having jurisdiction where such body is disinterred, and the consent of the health authorities of the locality to which the corpse is consigned has first been obtained; and all such disinterred remains shall be enclosed in a hermetically sealed (soldered) zinc, tin or copper-lined coffin or box. Bodies deposited in receiving vaults shall be treated and considered the same as buried bodies.

RULE 31. The following regulations respecting the transportation of dead bodies beyond the county where the death occurred will be observed: No body which has died of any infectious or contagious disease shall be received for transportation by any transportation company in this state unless it shall have been embalmed by an undertaker holding an embalmer's certificate, properly signed by the president and secretary of the State Board of Health. Every undertaker shall enter the number of his embalmer's certificate upon every permit which he fills out. In all such cases the said Board of Health shall require the coupons attached to such permit to be detached and preserved by every common carrier or the person in charge of any vessel, railway-train or vehicle to which dead bodies shall be delivered for transportation. No permit shall be issued for the transportation of bodies which have died of any infectious or contagious disease except in accordance with the foregoing rule. Any violation of these rules shall subject the offender to a fine of ten dollars for each offense.

IMPORTANT NOTICE.

Only licensed embalmers holding license from the State Board of Health are authorized to use the yellow paster.

The yellow transit permit should be used in the transportation of all bodies dead of diseases specified in rule 2, and all in rule 3 where the body cannot reach its destination within thirty hours from time of death.

By order of Kansas State Board of Health.

S. J. CRUMBINE, M. D., *Secretary.*

Complaint having been made so frequently to this office through embalmers and embalmers' examining committee that the rules governing the transportation of bodies in this state were violated by both transportation companies and undertakers and physicians not holding a license, the following letter was written to the managers of the various transportation companies in this state:

"DEAR SIR—Complaint has been frequently made to this office that transportation companies are violating the rules of the Kansas State Board of Health for the transportation of the dead, in that they receive bodies that are not prop-

erly prepared, and from undertakers embalming, or claiming to embalm, who are not licensed by the State Board of Health, all of which is in violation of the published rules of the State Board of Health.

"We have had printed, in the shape of a large poster, the rules of the State Board of Health for the transportation of dead bodies in sufficient quantities to provide one for each of the stations on your system in Kansas, which will be furnished upon requisition. It is requested that they be posted in a conspicuous place and that station agents be warned that prosecutions will follow any violations of said rules. It should be especially noted that the yellow transit permit can be used only by those embalmers who hold a license signed by the secretary and president of the State Board of Health, which should give the number of the license on the undertaker's certificate. These rules, a copy of which I enclose, having been duly adopted by the State Board of Health and having been published, have the force and validity of law, by virtue of the authority vested in said Board of Health by section 9, chapter 75, General Statutes of Kansas for 1897. Very truly yours, S. J. CRUMBINE, *Secretary.*"

On the evening of August 30 I received the following telegram:

"LA CYGNE, KAN., August 30, 1904.

"*Secretary Board of Health, Topeka, Kan. :*

"Have smallpox. Come and establish quarantine. Officials do not realize situation. Answer. H. L. CLARKE."

Whereupon I sent a telegram to Doctor Carver, of Fort Scott, requesting him to go to La Cygne, investigate, and establish quarantine if necessary. He promptly replied that he would go the following morning. On September 2 I received the following report from Doctor Carver, who was kind enough to make the visit to La Cygne for the secretary:

"FORT SCOTT, KAN, September 1, 1904.

"*Dr. S. J. Crumbine, Secretary State Board of Health, Topeka, Kan. :*

"DEAR DOCTOR—At your request of August 30, I visited La Cygne and found the following cases of smallpox:

"Family of Carl Grahs, three in family. Wife and baby had the disease and husband had been recently vaccinated.

"Colored family named Pinke, two in family. Mrs. Pinke has case of confluent smallpox. Mr. Pinke had smallpox some years ago.

"Downing family, one case, three in family. Ordered the other members vaccinated.

"Quick family, colored, three convalescent and ready to be released from quarantine. Ordered the house thoroughly scrubbed and whitewashed.

"One shanty, nine in family, one well-marked case. Seven had been vaccinated and ordered the other two vaccinated.

"Echart family, five in family. All been exposed, but all recently vaccinated. Ordered quarantine for this family for two weeks.

"One case, five miles in country, nine in family of W. B. Hurt. Ordered the other members of the family vaccinated.

"Also, the family of T. H. Reed, three in family. Mr. Reed and baby have smallpox. Mrs. Reed had it some years ago. In this house I found Mrs. Reed's brother, who was going to leave that afternoon. He had recently been vaccinated, but I quarantined him and gave him orders not to leave, under penalty of arrest. This family is in Valley township. I notified Doctors Green and Ashley, of Pleasanton, to look after this family, as they are the contract physicians for this township. All the other cases are under the care of Doctor Clarke, of

La Cygne. It seems Doctor Clarke established a detention hospital one-fourth mile south of the city, which consisted of two tents, and he had five cases quarantined there. The night following the patients all returned to town. The mayor and city marshal thought Doctor Clarke had no authority to quarantine and were afraid to restrict these patients. The patients are in the shanty I spoke of, where there are nine in the family. After looking the situation over, I had a talk with the deputy sheriff and mayor and ordered all houses where this disease existed quarantined, and in the house where the nine bad niggers are, ordered a guard night and day until Doctor Clarke saw fit to raise quarantine. If they did not follow instructions, to have them arrested and placed in jail. I also saw one member of the school board, and I don't know whether I exceeded my authority or not, but told him to issue an order for all school children to be vaccinated or show certificate of successful vaccination before they were allowed to enter school. I told him I thought this was the law. He seemed to think well of the idea and said he would bring the matter before the school board. I left the impression with the mayor and deputy sheriff that if they failed to follow my instructions the town would be quarantined.

"Dr. A. L. Carlton published an article in one of the papers denying the existence of smallpox, and called it a mild form of skin disease. Some of the citizens were very much surprised when I made the statement that there were several cases of well-developed smallpox in their city. I could not find the origin of this trouble; but Doctor Clarke thinks it was brought there by some Italians that were working on the railroad. Doctor Clarke is working hard to suppress the disease, but has had all the city officials to contend with, they thinking he did not have the authority; but since I gave them instructions I think they will all work in harmony and prevent it going further. A great deal of credit is due Doctor Clarke for the work he has done. He put in nearly all day with me, showing every case that had any suspicion of smallpox, and taking me, at his own expense, about seven miles in the country, where we found the three cases mentioned.

"I think it would be a good idea if you would send a letter to the La Cygne papers, apprising them of the existing condition of affairs, and instructing the citizens to work together in checking this disease.

Very truly yours, J. B. CARVER."

Subsequent reports from La Cygne indicate that the quarantine is well in hand and being observed.

On September 4 I received the following letter from J. B. Campbell, of Abilene:

"ABILENE, KAN., September 3, 1904.

"*State Board of Health, Topeka, Kan.:*

"GENTLEMEN—On behalf of Mr. Isaac Swisher, I herewith hand you his petition, properly sworn to before a notary public, which petition I ask that you cause to be filed before your State Board of Health in the legal manner, and that your secretary inform me as to any steps necessary to be taken in regard to producing further proof of the matters and things therein alleged. There is no question but what the State Board of Health ought to take cognizance of this matter. I thought the method to obtain attention of the Board and its action with respect to the same would be by petition. I should be pleased to hear from your secretary with respect to filing petition, etc. Truly yours,

J. P. CAMPBELL."

THE PETITION.

STATE OF KANSAS, COUNTY OF DICKINSON, ss.

The State Board of Health, Topeka, Kan.: Comes now your petitioner, Isaac Swisher, and gives your honorable Board to be informed and understand that he is owner of the following described premises, to wit: Section 21, township 13, range 2 east of the sixth principal meridian, as well as other certain lands adjoining the same, all in Dickinson county, Kansas, being his homestead, the same being just out of the corporate limits of Abilene, Kan., and occupied as the homestead of your petitioner, his wife and family, the family consisting of five persons at home.

Your petitioner further says, some time since a sewerage system was located and established in said city of Abilene, Dickinson county, Kansas. That the general course or piping of said system was southeasterly from Abilene, and southeast through the farm of your petitioner, or rather a portion of said farm, comprising about twenty-five acres of said farm, thence to the Smoky Hill river. Your petitioner says that in connection with said sewerage system, in construction of same, there was located and established upon said twenty-five acres three manholes, and another manhole nearly north from your petitioner's house, about 200 feet distant. Your petitioner says that the said manholes are about 300 feet apart, the first of the three mentioned being nearly east from the house and some less than 600 feet distant; the third southeast from the house and not more than 800 feet distant therefrom. Your petitioner says that the Belle Springs Creamery Company have and maintain a certain creamery building, which building is located in the corporate limits of the city of Abilene, something like 120 rods northwest from your petitioner's place of residence on said farm; that in the agitation of construction of said sewerage system, it was published and largely claimed that the system was being put in for the benefit and convenience of said Belle Springs Creamery Company. Your petitioner says that the sewerage committee, managers or supervisors of said sewerage system constantly permit the covers or perforated caps of said manholes to remain in such condition as that an unbearable stench arises therefrom, the same being swept through the place of residence by the winds, making his home at times all but unbearable to reside in, greatly to injury of health of your petitioner, his wife and members of his family, the same of course being worse according to direction the wind may be blowing.

Your petitioner says there are many holes or openings in the covers or caps on said manholes, thereby permitting stench, fumes or evaporations to be emitted therefrom. Your petitioner further says that the said Belle Springs Creamery Company are constantly in the habit of using said sewerage system to permit their waste, decayed and rotten buttermilk offal to be conveyed through said sewerage system; that the stench arising therefrom, through and from the covers of said manholes, creates such a nuisance, stench and unbearable accumulation of fumes as to make said sewerage system, as conducted and managed, a nuisance, not only to the health of your petitioner, but to other residents located along said line. Your petitioner says he made application to the local physician and health officer of the State Board of Health, Dr. A. S. Gish, something like a year since, to have the matter remedied; no action resulting therefrom of a beneficial nature to your petitioner, in way of removing the grievance complained of. Your petitioner is informed that the said Doctor Gish has made effort at various times with the city authorities of Abilene to get the matter remedied, no action resulting therefrom. Your petitioner says that he has been personally to Acting Mayor Humphrey, of the city of Abilene, asking that the annoyance be remedied; that he has made frequent efforts with the city officials, complaining of the stench, and asking that steps be taken looking to controlling of said conditions, all to no purpose.

Wherefore, and by reason thereof, your petitioner prays your honorable Board of Health to permit this petition to be filed before the said Board, in a legal and proper manner; to have such action and investigation of the matters and things complained of herein as may be proper and legal under the law; that your honorable Board may appoint a committee to investigate, designating a time and place where and when further evidence may be submitted and adduced by your petitioner in support of the matters and things alleged herein; that your Board may conduct such inquiry or investigation into the matters and things complained of as is provided by the statutes of the state of Kansas, and that upon final hearing your honorable Board may issue such order, mandate or direction to the mayor

and common council of the city of Abilene, and to its sewerage committee, as will remedy, remove and abate such nuisance, that the health of your petitioner and the members of his family may be protected and provided for, as against results of said stench and fumes arising from said sewerage system; and for this your petitioner will ever pray.

Subscribed and sworn to before me, the undersigned notary public in and for Dickinson county, Kansas, this 3d day of September, 1904.

ISAAC SWISHER.

W. T. DAVIDSON, *Notary Public*.

My commission expires May 15, 1906.

Upon receipt of this petition I wrote to Dr. T. R. Conklin, county health officer of Dickinson county, asking him to make an investigation of the matter, and the following is his report:

“ABILENE, KAN., September 7, 1904.

“S. J. Crumbine, M. D., Topeka, Kan.:

“DEAR DOCTOR— I made a thorough examination of the sewerage system through Mr. Swisher's farm, and also of the sanitary condition of the creamery. I have been through the creamery many times before and always found it scrupulously clean. In fact, a great many of our private homes could take lessons from it. The creamery sewerage connects with the main sewerage about one block from creamery. That would be about one-half mile from the Swisher residence. From the manholes covered we could scarcely detect any odor at all. And I uncovered them and went down in them, and the odor was not foul, only a hot steam. There was a swift stream of water running. I went down in manholes at the hours they are cleaning tanks and running off the surplus milk, buttermilk, etc., after churning. The buttermilk is never left until putrid; left not longer than twelve hours. They have very little buttermilk left, as the farmers get almost all of it, and the milk also. Their engines pump 11,175 gallons of water per hour night and day. This all goes into the sewer, part of it passes over the steam for making the sterilized water and has a temperature of 120 to 130 degrees. They use Sand Springs water, which is 99.99 per cent. pure. Even if they run all the buttermilk and milk through the sewer there could not and would not be any odor from it.

“The nearest manhole to Mr. Swisher's house is one block and more. Mrs. Swisher said there had been one day she had gotten a smell from the manhole; that is the only time she mentioned. Mr. Swisher intends to collect damage for his land now, after giving a deed which is on record, and it is just time for him to do anything, I think, and of course he expects to make as big a thing out of it as possible, so as to collect. I have no interest in either side and made a just investigation for both sides, and hand you my report in the light of health officer. If any more is needed please let me know, and I shall look after it immediately.

“We, the city of Abilene, paid an expert engineer to oversee the work. He has no interest in the sewer company and worked to the city's interest, and we feel we have one of the best sewer systems in existence, of modern make. The manholes near my office would be more apt to give off odors than at Swisher's farm, because it is highly diluted by the time it reaches there, and we have had no complaint whatever in the business districts. The milk as it comes from the creamery at manhole just outside of door, is so highly diluted with water that you cannot detect the color of milk. One reason the sewer was built was to keep the creamery here, as they intended to move where they could have the sewerage system. The plant is one of the largest in the state, has cold storage and makes its own ice. Let me know if anything further comes up.

Yours fraternally, T. R. CONKLIN”

On September 10, I received from the attorney of Mr. Swisher a request to send affidavits to present to the Board, which request was granted.

The president has made the following committee appointments:

1. *On heating, lighting, ventilation, and general sanitation.*—Doctors Locke, Alexander, and Carver.
2. *On epidemic and endemic diseases and quarantine.*—Doctors Alexander, Scott, and Bentley.
3. *On topography, meteorology, hygiene, and inspection of public, state and charitable institutions.*—Doctors Carlile, Lowry, and Golden.
4. *Water sources, drainage, and disposal of substances dangerous to public health.*—Doctors Golden, Carver, and Bentley.
5. *Special sources of danger to life and health.*—Doctors Lowry, Locke, and Scott.
6. *Adulteration of foods, drugs, and drinks*—Doctors Scott, Locke, and Carlile.
7. *Vital statistics, registration, and nomenclature.*—Doctors Alexander, Golden, and Locke.
8. *Finance and executive.*—Doctors Carver, Carlile, and Bentley.

Following is a list of the counties reporting scarlet fever and smallpox during the quarter ending July 1, 1904:

	Scarlet fever.	Smallpox.
Allen	4	3
Atchison.....	0	1
Barton.....	59	5
Barber.....	10	0
Bourbon.....	0	8
Brown.....	6	0
Cloud.....	2	0
Cowley.....	9	5
Cherokee.....	12	31
Cheyenne.....	24	0
Crawford.....	14	6
Decatur.....	2	0
Dickinson.....	5	16
Doniphan.....	5	13
Douglas.....	0	11
Ellis.....	0	19
Hamilton.....	12	0
Harvey.....	1	8
Jefferson.....	40	0
Jackson.....	1	1
Johnson.....	0	2
Kingman.....	14	1
Labette.....	16	31
Leavenworth.....	7	12
Lyon.....	20	6
Marshall.....	0	1
Montgomery ..	0	4
Nemaha.....	1	0
Neosho.....	2	0
Osborne.....	15	0
Pottawatomie.....	2	0
Pratt.....	2	0
Riley.....	3	0
Rice.....	2	0
Saline.....	1	35
Sherman.....	0	4
Sumner.....	6	1
Wabaunsee.....	2	0
Washington.....	0	1

During July one case of smallpox was reported from Ness City, one from Sharon Springs, and one from Olathe.

FOURTH QUARTERLY MEETING, 1904.

DECEMBER 15, 1904.

The fourth quarterly meeting of the Kansas State Board of Health was held in the office of the secretary, at Topeka, and was called to order by the president at 1:30 P. M.

The following members were present: Drs. E. P. Mills, H. M. Bentley, J. B. Carver, J. B. Carlile, B. J. Alexander, A. B. Scott, L. A. Golden, Mr. W. F. Schoch, and Doctor Greenfield, Professors Bailey and Marvin, of the advisory board. Doctor Lowry and Doctor Locke were absent.

The minutes of the last meeting were read and approved.

The secretary then read his report, covering the conduct of the office from the time of the last meeting to this date, September 15, and, upon motion, the report was received and ordered placed on file.

The following resolution was unanimously adopted:

WHEREAS, Smallpox exists in a malignant form, with a number of fatal cases, in Woods county, Oklahoma; and

WHEREAS, A petition from Harper county, Kansas, has been presented to this Board praying that a state-line quarantine be established against Woods county: therefore, be it

Resolved, That the secretary is hereby authorized and empowered to use his judgment and discretion in the matter of establishing said state-line quarantine, either at this place or any other on the Oklahoma border.

The matter of the Wellington typhoid-fever epidemic, which had become a historical curiosity, was then taken up and discussed, the secretary reporting that investigations had been made concerning the probable infection of the wedding party from which these cases had taken down, but no definite source of infection was discovered.

Upon motion, the secretary was instructed to renew the subscription to the *Popular Science Monthly*, and the sum of three dollars was appropriated for that purpose.

The reports of the secretary and treasurer of the embalmers' examining committee were then read, and, upon motion, approved and ordered placed on file.

A general discussion followed concerning the rules of the State Board of Health for the transportation of the dead and the issuance of the yellow transit permits by the secretary of the examining committee, and it was unanimously ordered that no duplicates of licenses should be used in any case should such number become vacant, and that no temporary certificate or license be granted pending examination of such applicant.

The following resolution was then offered and unanimously adopted :

RULE 22. When a licensed embalmer shall have lapsed for any reason whatsoever, his license and number may be reinstated by the proper application of such embalmer, said application to be accompanied by all back dues to date, whereupon the examining committee may reinstate such applicant, using their judgment and discretion therein, provided such lapsation shall not have been over three years.

Upon motion, the annual dues of licensed embalmers was raised from one to two dollars annually, payable in advance, such dues to take effect in 1905.

A memorandum was presented for the expenses of two of the members of the examining committee for attending national conference of undertakers at St. Louis, in October, and upon motion it was laid upon the table.

The committee appointed at the last meeting for the purpose of preparing a bill whereby the municipal water-supply and sewerage systems be placed under the direct jurisdiction of the State Board of Health made its report, Professor Marvin presenting such a bill; whereupon it was moved and carried that such a measure receive the hearty approval of this Board, and that its members labor for such enactment during the coming session of the legislature.

Doctor Carver introduced the following resolution :

WHEREAS, The office of secretary of the State Board of Health is one which in the very nature of its manifold duties and in the interest of the public service should not be subject to frequent change ; and

WHEREAS, The present secretary has shown by his energetic, progressive and aggressive action to be eminently fitted for the honored position of secretary ; and

WHEREAS, The law creating the State Board of Health contemplates the term of its secretary as being during good, efficient service : therefore, be it

Resolved, That the election of Dr. S. J. Crumbine as secretary of this Board shall be for the constitutional term, namely, that of four years, dating from July 1, 1904.

This resolution was unanimously adopted.

The following resolution was unanimously adopted :

It is with very great regret that we learn of the serious illness of our esteemed colleague, Dr. Charles Lowry, and take this manner of expressing our sorrow and sympathy and of conveying to him our respect and esteem. May he be sustained and soothed by an unflinching trust in Him who bears the burdens of us all.

The following bills were audited and allowed :

H. M. Bentley	\$22 50
E. P. Mills	11 10
J. B. Carver.....	23 50
J. B. Carlile.....	23 00
B. J. Alexander.....	11 80

A. B. Scott.....	\$29 40
W. F. Schoch.....	5 00
L. A. Golden.....	31 40
Total.....	\$157 70
F. O. Marvin.....	\$2 66
E. H. S. Bailey.....	2 66
Total.....	\$5 32

SECRETARY'S REPORT.

Mr. President and Members of the Board:

GENTLEMEN—The day following the last quarterly meeting of the Board, September 16, Doctors Scott and Carlile met with the secretary, in compliance with the order of the Board, and revised the rules and blanks of the State Board of Health. The law creating the State Board of Health, together with other laws pertaining thereto, including the quarantine law, rules and suggestions for county health officers, opinions of attorneys-general, rules for transportation of dead bodies and the medical-practice law were compiled and tabulated in convenient form, and 1000 copies in the shape of a pamphlet suitable for mailing were printed, a copy of which has been sent to each county and city health officer in the state, members of the Board, and the embalmers' examining committee.

On September 21 the following letter was received from E. N. Draper, of Atchison, concerning the power of school board or State Board of Health in the matter complained of in the letter:

“ATCHISON, KAN., September 19, 1904.

“*Secretary of State Board of Health, Topeka, Kan.:*

“DEAR DOCTOR—Kindly give me the information asked for in the following: A school board employs a teacher and enters into a contract. Later a suspicion arises that said teacher has tuberculosis, she having had several hemorrhages of the lungs. Now what can the school board do in the premises? Can they compel the teacher to submit to an examination? You understand there is only a suspicion that she has consumption, based upon the fact that she has had hemorrhages. Now, what is to be done in the case? Any information you may give will be thankfully received. Yours truly, E. N. DRAPER.”

After submitting the same to the attorney-general he gave it as his opinion that the matter in question was not within the jurisdiction of the State Board of Health. Mr. Draper was accordingly advised.

Pursuant to the order of this Board at the last quarterly meeting, on September 24 Professor Marvin and the secretary went to Abilene to investigate the sewer system of that city. As you will remember, a formal complaint, supported by numerous affidavits, had been filed with this Board, alleging that the odors emanating from certain manholes were intolerable and unhealthy. The result of this investigation may be summarized in Professor Marvin's report and the letter of the secretary which accompanied it to the complaining parties, a copy of which was also sent to the president of the common council of Abilene. The report follows:

“TOPEKA, KAN., October 11, 1904.

“*Mr. J. P. Campbell, Abilene, Kan.:*

“DEAR SIR—I herewith enclose you copy of Professor Marvin's report to me concerning the matter complained of in your city by Isaac Swisher and others.

Supplementary to the suggestions made by Professor Marvin, I desire to say that in all modern ventilated mains for sewers, such as Abilene has, the air rarely contains sufficient carbon dioxide or other gases to be prejudicial to life. It is preferable that the gases escape into the open air and be largely diluted, rather than be retained in the sewerage system, and, by defective plumbing, enter houses in considerable quantities. Moderate quantities of sewer air from a well-ventilated system are probably without appreciable effect on the health of those inhaling same. On the other hand, large quantities but little diluted may depress the vital resistance, and thereby favor the entrance and growth of morbid agents. Moreover, sewer air contains comparatively small quantities of bacteria. It is a noticeable fact that men employed in sewerage systems and breathing sewer air many hours daily not infrequently exceed the average laborer in health and vigor. Notwithstanding these facts, where the manholes of a sewer system are so situated that the escaping sewer-gas is offensive to the people living near by in their homes or places of work, it may justly be considered a nuisance, and such means should be adopted as will give sufficient ventilation at these places, or other places, as may be needful in the premises without causing offense to the sense of smell. The erection of steel ventilating shafts, as suggested by Professor Marvin, seems to me to be the practical way out of the difficulty.

Very truly yours, S. J. CRUMBINE, *Secretary.*"

PROFESSOR MARVIN'S REPORT.

"LAWRENCE, KAN., September 29, 1904.

"*Dr. S. J. Crumbine, Secretary State Board of Health, Topeka, Kan.:*

"DEAR SIR—In accordance with your instructions, and in your company, I visited Abilene, Kan., on Saturday, the 24th inst., for the purpose of examining into the cause of certain complaints against the operation of the public sewerage system of said town, allegations being that offensive odors arose from the sewers, rising through the manhole in certain sections of the town, polluting the air to such a degree as to prove detrimental to the health of the near-by inhabitants.

"A personal examination was made of the sewer system, which was found to be of good design and apparently well constructed. Owing to the heavy rain of late spring or early summer, and to the fact that the town was flooded, the sewer contains at the present time a considerable deposit of fine silt, which undoubtedly was carried in at the flood time, and which now obstructs the free flow of the sewage; this deposit can be and surely ought to be removed by proper flushing. This deposit does not seem to be the cause of the trouble complained of.

"This is rather to be found in the refuse products discharged from the Belle Springs creamery factory into the public sewer, which are of such a nature that under favorable condition of temperature would quickly ferment, causing disagreeable odors. This action takes place most readily within two or three blocks of said factory, because of the temperature of the water discharged with the waste, and it is in this section where the trouble occurs.

"At the time of my visit there was little or no odor in or about some of the manholes, other than the natural musty odor characteristic of any sewage. At other manholes nearer the creamery there was some faint disagreeable odor arising, but not of a sufficient amount to be offensive; these odors are not detrimental to health directly, though they may be much more offensive than at the time of my visit. If they are found to be prevalent and disagreeable to the people of the immediate vicinity, they may be regarded as causing a nuisance, but could not be charged with being the cause of any disease.

"As to the abatement of the nuisance, if such should be proven, I have two

suggestions to make: First, that the sewer air carrying these odors might be filtered through charcoal carried in wire baskets suspended in the manhole; or, secondly, that over one of the manholes, at a point perhaps a short distance south of the Parker Amusement Company's factory, there might be erected an iron or steel stack, thirty or forty feet high, which would act as a ventilator for the sewer, and adjacent manholes might then be covered with tight covers instead of those now in use.

"While the buttermilk and washings from the creamery furnish products that are easily decomposed, the water from the cold-storage part of the factory is, on the other hand, a very great advantage, the flow being about thirty gallons per minute, night and day, and many times larger than from the entire residential part of the town. This relative large flow tends to rapidly carry off all organic matter, and without it there might be much more trouble than at present exists. Another suggestion might be made, that the water coming from the ice-making plant could be turned into a flush tank, which would be discharged intermittently, thereby causing a more efficient flushing of the sewer than it now gets from the city flush tanks scattered over the town at the ends of the laterals.

Respectfully yours, F. O. MARVIN."

On October 5 I received a letter from Doctor Marner, county health officer of Marion county, enclosing a letter from the county health officer of McPherson county, in which it was alleged that a patient under quarantine for smallpox at Inman had jumped the quarantine and gone to Hillsboro, Marion county, whereupon Doctor Marner proceeded to Hillsboro, found the man in his mother's home, and established a strict quarantine. This man it is further alleged, succeeded in inoculating five other members of his family. Doctor Marner also said it was the wish of the board of health of McPherson county that when the man was well of the disease they be notified, that he might be prosecuted, and he concluded the letter by asking my advice in regard to the matter. In response he was advised to keep a close watch of the man, and upon his recovery to have him promptly arrested and tried for violation of the quarantine law. Shortly after a letter was received from the county attorney of McPherson county reciting the case in detail and making inquiry as to what constituted a legal quarantine, to which the following reply was sent:

"TOPEKA, KAN., October 11, 1904.

"D. P. Lindsey, County Attorney, McPherson, Kan.:

"DEAR SIR—I have yours of the 8th, and in reply would say that the facts as stated by Doctor Blake in his letter to the county health officer of McPherson county constitute a legal quarantine, in my judgment. Quarantine does not consist of simply placarding a house; but when a diagnosis was made and this man ordered by Doctor Blake and Doctor Groves to remain in the house because of smallpox, that no one should be allowed to come into the house nor to send out any mail, he had sufficient notice that he was suffering from a contagious disease and was under quarantine. Moreover, in section 5 of the quarantine law, Session Laws of 1901, chapter 285, you will find that he had violated this particular section, and is therefore guilty of violation of the quarantine law. This man, by reason of failure to observe the quarantine, has caused five other people to contract the disease, and I believe should be made to feel the iron hand of the law. Any assistance the State Board of Health can give in the matter will be cheerfully given. Very truly yours, S. J. CRUMBINE, *Secretary.*"

On October 24 a Mr. J. A. Collins, of Houston, Kan., complained to this Board of a contemplated change of the location of the schoolhouse in his dis-

trict, alleging that the new site was extremely unsanitary, in that it was the bed of a dry lake, which, during the wet season, was covered with water. The matter was referred to Doctor Scott, being in his home county, and after investigation I received the doctor's report, which is as follows:

"JETMORE, KAN., October 28, 1904.

"*Dr. S. J. Crumbine, Topeka, Kan.:*

"DEAR SIR—Answering yours of the 24th instant, will say I have investigated sanitary condition of new site of schoolhouse in school district No. 16, Hodgeman county, and find same satisfactory. I think water could stand in the lake bed only a few hours, and that after a heavy rain. Buffalo-grass grows in the bottom of the old lake bed, and you know it won't do this if it continues wet or water stands very much. I find this complaint the result of a school fight and the last kick of the losing party.

Yours truly,
A. B. SCOTT."

Deeming it would be of great value to county health officers especially and to the profession in general to issue a monthly bulletin containing the number and location of contagious diseases throughout the state, whereby health officers might be acquainted with conditions and state of health in adjoining counties and be thereby better enabled to protect their own counties from infection, such a bulletin was issued the 31st of October. I am pleased to say it received a prompt and hearty response. A number of letters of congratulation and appreciation were received. These bulletins have also been sent to the managers of the transportation companies, in order that we may have their cooperation in such preventive measures as would seem from time to time advisable in given cases. These also received a very hearty indorsement, and am glad to say we have found the railroad companies generally willing to cooperate in any measures proposed by this Board for the protection of the public health.

Having failed to receive the indorsement of the printing committee regarding the rules for the transportation of corpses to be distributed to station agents in Kansas, a conference with the embalmers' examining committee was fruitful in having their indorsement of such expense of printing, and accordingly a sufficient number of posters was printed to supply all agents. These were sent to the various transportation, railroad and express companies, upon requisition, and accompanying same were lists of licensed embalmers. In the letter of transmittal to the several managers it was urged that agents be requested to post in a conspicuous place, and that they be warned that any violations of said rules would subject the offender to prompt and vigorous prosecution. I believe now that every railroad and express office in the state has been furnished with a copy of these rules, and that its effect has been salutary has been evidenced on every side by uncovering a number of cases of fraudulent indorsement on shipping permits on the one hand, and of the refusal of agents to accept improperly embalmed corpses on the other. The secretary of the embalmers' committee, Mr. Kean of Olathe, has been instructed to issue the yellow transit permits to licensed embalmers only, charging such embalmers with the number of permits received, and entering his registered number thereon, in fact, inaugurating a ticket auditing system, and thereby eliminating chances of fraud and imposition by the undertakers themselves. I am of the opinion that the matter of the transportation of the dead has never been in quite such a satisfactory condition as it is at the present time. There are certain matters of detail and changes of rules which this committee desire to hand to the Board, and will be taken up under the order of new business.

CONTAGIOUS DISEASES.

The following report of contagious diseases for the quarter ending September 30 shows an unusual prevalence of scarlet fever and diphtheria. Nineteen counties, out of seventy reporting, show epidemic or sporadic cases of diphtheria, and twenty-four counties, out of seventy reporting, show scarlet fever. This is unprecedented for the midsummer months and does not augur well for the coming winter. For the past year scarlet fever has been doing continuous service in the majority of the counties of the state at some period during the year, with occasional association of diphtheria. That the irritation of the throat remaining after an attack of scarlet fever or even common sore throat is a most fertile field for the development of the bacilli of diphtheria there can be no doubt, and indeed the diseases of scarlet fever and diphtheria are often associated together in a so-called mixed infection. A no less authority than Professor Loomis says: "Diphtheria is as frequently met with in the mild as the severer types of scarlatina and may occur in every stage of the disease. It is often present during the period of incubation, so that the symptoms of the two diseases appear simultaneously. Again, it is met with during the period of convalescence. In some instances scarlatina seems to complicate diphtheria."

I conceive it the duty of this Board to make public the quarterly collection of vital statistics and contagious and infectious diseases—not that it may occasion alarm among the people, but that it may serve as a warning and excite caution on the part of parents, school-teachers, and physicians. Indications at present point to a general and wide-spread epidemic of scarlet fever, and that more dangerous disease, diphtheria, the coming winter, unless unusual caution and strict quarantine be observed. The present situation emphasizes the necessity of medical school inspection at stated and frequent intervals; also the frequent fumigation of schoolhouses and other places of public assembly. Physicians are urged to have a fresh supply of antidiphtheritic serum on hand, as time is an important factor in the treatment of the disease. The most rigid quarantine should be practiced in cases of these two diseases, which should be sufficiently prolonged as to be certain there is no doubt as to complete recovery and the absence of communicability to the well.

It should be noticed that smallpox and typhoid fever are quite prevalent. These are among the preventable diseases and such precautionary measures should be taken as to insure immunity therefrom. A recent and successful vaccination can confidently be relied upon to secure immunity from smallpox; and the boiling of drinking water, the proper cleansing and cooking of vegetables, the rejection of overripe or bruised fruit that might be infected by insects, and the effective screening of houses against flies, mosquitos, and other insects, to prevent the infection of foods and drinks, will ordinarily be sufficient to protect one from typhoid fever.

Since the quarterly reports have been received a number of reports of severe epidemics of diphtheria at other places have been received, Labette, Lyon and Jewell counties reporting the largest numbers.

OFFICE STATE BOARD OF HEALTH,
TOPEKA, KAN., October 31, 1904.

The following contagious diseases have been reported to this office for the quarter ending September 30:

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DIPHTHERIA.

County.	Cases.	Deaths.	County.	Cases.	Deaths.
Atchison.....	1	1	Labette.....	9	2
Bourbon.....	5	1	Leavenworth.....	5	1
Cherokee.....	1	1	Lyon.....	3	0
Cloud.....	2	0	Marshall.....	1	0
Cowley.....	4	1	Osage.....	3	1
Crawford.....	15	2	Sedgwick.....	8	3
Doniphan.....	3	0	Washington.....	2	0
Douglas.....	1	0	Topeka city.....	31	5
Greenwood.....	1	1	Leavenworth city.....	4	1
Harvey.....	1	1	Wichita city.....	6	3
Jackson.....	2	0			
Jefferson.....	1	0	Totals.....	109	24

SCARLET FEVER.

County.	Cases.	Deaths.	County.	Cases.	Deaths.
Barton.....	3	0	Marshall.....	5	0
Cloud.....	1	0	Meade.....	5	0
Cowley.....	6	0	Mitchell.....	18	0
Crawford.....	6	0	Nemaha.....	2	0
Doniphan.....	3	0	Osage.....	5	0
Graham.....	1	0	Ottawa.....	16	0
Harvey.....	3	0	Reno.....	1	0
Jackson.....	10	0	Rice.....	16	8
Jefferson.....	6	1	Sedgwick.....	1	0
Kingman.....	4	0	Sumner.....	5	0
Labette.....	14	4	Topeka city.....	31	3
Lane.....	1	0	Wichita city.....	1	1
Leavenworth.....	1	0			
Lyon.....	3	1	Totals.....	168	18

TYPHOID FEVER.

County.	Cases.	Deaths.	County.	Cases.	Deaths.
Barber.....	2	0	McPherson.....	2	2
Barton.....	12	1	Mitchell.....	12	1
Bourbon.....	5	0	Nemaha.....	4	0
Brown.....	5	0	Neosho.....	14	4
Butler.....	12	2	Osborne.....	7	2
Cherokee.....	8	8	Pawnee.....	10	0
Cheyenne.....	25	1	Pratt.....	24	5
Comanche.....	1	1	Rawlins.....	14	7
Crawford.....	20	15	Reno.....	1	1
Decatur.....	10	1	Rice.....	1	1
Dickinson.....	2	1	Saline.....	1	1
Douglas.....	6	1	Sedgwick.....	48	4
Edwards.....	8	1	Sherman.....	4	0
Ellis.....	6	0	Stafford.....	9	0
Graham.....	2	0	Sumner.....	25	2
Gray.....	3	0	Thomas.....	2	2
Greenwood.....	3	1	Washington.....	5	1
Hamilton.....	3	0	Woodson.....	1	1
Hodgeman.....	2	0	Topeka city.....	6	6
Jackson.....	1	0	Leavenworth city.....	1	1
Jefferson.....	21	4	Wichita city.....	21	2
Logan.....	3	0			
Marshall.....	5	2	Totals.....	353	82

SMALLPOX.

County.	Cases.	Deaths.	County.	Cases.	Deaths.
Dickinson.....	7	0	Ottawa.....	3	3
Elk.....	123	0	Sumner.....	2	0
Jackson.....	10	0	Wallace.....	1	0
Labette.....	6	0	Topeka city.....	9	0
Lane.....	4	0			
Lyon.....	6	0	Totals.....	173	3
McPherson.....	2	0			

Since receiving the quarterly reports, epidemics of diphteria in Lyon and Jewell counties have been reported and six cases in Labette; fifty cases of typhoid in Crawford county; two cases of smallpox at Neodesha and three cases in Kiowa county.

S. J. CRUMBINE, M. D., Secretary.

On November 19 a bulletin on diphtheria was issued:

"OFFICE OF THE STATE BOARD OF HEALTH,
TOPEKA, KAN., November 19, 1904.

"The following cases of diphtheria have been reported to this office for the month of October and up to the 15th of November:

County.	Cases.	Deaths.
Barton	4	1
Crawford	4	0
Jewell	4	0
Labette	6	2
Lyon	3	1
Marshall	1	1
Pottawatomie	2	1
Republic	4	0
Sherman	2	1
Wabaunsee	1	0
Topeka city	27	3
Wichita city	22	2
Totals	80	11

"County health officers are urgently requested to report their cases of contagious diseases weekly, especially diphtheria and scarlet fever. If necessity should arise, this Board will issue weekly bulletins to keep county health officers posted as to the state of health throughout the state.

S. J. CRUMBINE, M. D., *Secretary.*"

On November 24 I received a telegram from Doctor Mullins, of Dighton, county health officer of Lane county, to go out there and make a diagnosis of suspected diphtheria; also a wire from Doctor Pegg, of Bird City, to go to that point and settle dispute over alleged cases of scarlet fever; also a telegram from Doctor Callender, county health officer of Rooks county, to go to Plainville to confirm diagnosis of smallpox and institute quarantine. It being quite an impossible matter to divide myself into three equal parts and go to each one of these places, which are widely separated, I accordingly wired Doctor Golden, requesting that he go to Bird City for me. This he kindly consented to do. Doctor Mullins was telegraphed to send a swabbing of the throat, whereby the bacteriologist would be better able to make a diagnosis than by a visit of the secretary; and I proceeded on my way to Plainville, arriving there at 9:20 in the evening, and I was met by Doctor Callender, of Stockton, county health officer, and with him and two local physicians visited a man who was sick, confined in the town council room. There was no difficulty in making a positive diagnosis of smallpox in this case, as the eruption was profuse and characteristic of the disease. Several other cases were visited, two of whom had not called a physician. We found upon inquiry that two of the children had been going to school regularly up to within two days before; that there had been no quarantine established in any of the numerous cases prevailing in the town and country about, and one of the merchants was attending to his business when covered with the eruption, and no effort had been made to maintain a quarantine.

The county health officer was advised that the schools be closed for at least two weeks, all infected houses placarded and quarantined, the revival meeting then in progress be stopped, and that the most stringent measures be taken to prevent the further spread of the disease. Upon inquiry, it was found there had been from forty to fifty cases since July. The local physicians expressed their willingness to cooperate with the county health officer in any measures undertaken to prevent the further spread of the disease.

On November 28 I received Doctor Golden's report.

"KENSINGTON, KAN., November 27, 1904.

"Dr. S. J. Crumbine, Topeka, Kan.:

"DEAR DOCTOR—In compliance with your telegram of the 24th, I went to Bird City, Kan., in consultation with Dr. G. R. Pegg, county health officer for Cheyenne county. I found that Doctor Pegg had ordered the public schools to be closed and a revival meeting that had been going on in the town, and also all public gatherings; and because of this order of Doctor Pegg, some of the people and the school-teachers were very indignant. The reason was that they had a doctor from St. Francis, who was there in an intoxicated condition, so I was told by the family, and he told them there was no scarlet fever about it. I went with Doctor Pegg to the home of John Shrader and obtained the following facts:

"Last winter the family was supposed to have a mild form of scarlet fever. The wife had a rash which the doctor pronounced scarlet fever. A babe was born in June, and the mother died of puerperal fever a few days after confinement. The babe was broken out with rash when born. The history of the death of these four children is as follows: Two of these children were at Goodland, Kan., on the 13th, 14th, 15th and 16th of November. There have been a number of scarlet fever cases at Goodland, with several deaths, the past three weeks. The oldest child came home and took sick three days later; a boy twelve years old and a girl eight took sick three days later. These were both mild cases of scarlet fever and recovered, and are both up and about the house now. These two children are Mrs. McSee's, John Shrader's housekeeper. The first child of Mrs. Shrader to take sick was Saturday, November 19, a girl aged six years, and died on the 24th. The second child to take sick, five years old, on the 20th, and died on the 22d. The third child, two years old, was taken sick on the 22d and died on the 23d—was sick only thirty-six hours. The fourth child, four years old, was taken sick on the 23d and died on the 24th—was sick about twenty-three hours. This makes four deaths in the family in three days. Another boy, nine years of age, broke out on the 25th, and when I saw him yesterday his temperature was 103½ and pulse 120, and scarlet rash fully developed from head to foot. The baby, five months old, has had a slight rash, but was apparently well yesterday. There is no question but what this is malignant scarlet fever, as all these cases were preceded with vomiting, slightly sore throat, and a well-developed scarlatina rash on all eight cases. I advised Doctor Pegg that if these people did not obey the quarantine law to call the sheriff and place a deputy over each house, and I believe now, that after these four deaths have occurred in one family he will have no further trouble, as he was absolutely correct in his diagnosis.

Yours truly, L. A. GOLDEN."

Subsequent reports from Doctor Pegg indicate that the epidemic has about spent its force and matters are well in hand. Doctor Golden has the sincere thanks of your secretary for his prompt and kind compliance with his request, which, under the circumstances, was of great help in conducting the affairs of this office at that particular time.

On November 29 the secretary met with the new barbers' board, as appointed by Governor Bailey, and gave them the required examination. Doctor Lowry, being indisposed, was not able to attend; so the secretary proceeded with the examination, which constituted more of a school of instruction than an endeavor to find out what they did not know about contagious diseases. The examination proved to be satisfactory and certificates of confirmation were issued to the following-named members: Roy Hammon, Topeka; Walter M. Stevenson, Pittsburg; and N. B. McCammon, Hutchinson.

On December 2 several letters were received complaining that a large num-

ber of cases of smallpox existed in Ellis county, and that no effort was being made to inaugurate quarantine; whereupon the county health officer was requested to investigate conditions and quarantine every case, and report conditions to this office. After considerable correspondence and searching throughout the county, Doctor Snyder reported nine cases quarantined in Hays, but he was unable to quarantine the large number of Russians living in settlements in other portions of the county.

On December 2, in response to a telegram from Doctor McNaughton, county health officer of Gove county, I went to Grainfield, where I was met the following morning by Doctor McNaughton, and we drove to the town of Buffalo Park to investigate and determine the diagnosis of an eruptive disease there, which was declared by a majority of the neighbors and the entire family affected to be nothing serious. They threatened personal violence to the county health officer and to bring suit for damage if the case was not released. This threat was the occasion of Doctor McNaughton requesting the secretary's presence, that his diagnosis might be confirmed and he be strengthened in his purpose of enforcing quarantine, and of having sufficient evidence in case of suit that he might not suffer pecuniary loss. There was no difficulty in establishing the fact that the family was suffering from smallpox, and they were told in plain and forcible language that the county health officer's mandates must be observed, which they promised to do.

On December 7, in response to two urgent telegrams to come to Hill City, I proceeded to that place, was met by the county health officer, Doctor Smith, and in the dead hours of the night taken to see a suspected case of smallpox. This case had been causing the doctor and citizens in general a great amount of trouble, as there had been a determination on the part of the patient, members of the family and a certain physician of the town to violate the quarantine law, and to discredit any power of action that the county health officer might take in the matter. The visit at this point was productive of good, I am sure, as no other complaints have come from that source. Leaving Hill City a few hours afterwards, I proceeded to Plainville, where I learned that a certain member of the clergy did not see fit to observe the quarantine law. A personal conference with the aforesaid gentleman of the cloth resulted in a promise on his part to obey the law, and as no further complaint has come from that source this visit seems to have been productive of good.

I might say that on my way to Hill City I noticed a gentleman in the smoking coach of the Union Pacific train, on the Colby branch, who was just recovering from smallpox; indeed, all the scales were not removed from his wrists and arms. I telegraphed the county health officer at Lincoln to meet me at the depot, where I had a personal conference with him, and he advised me that he had spent the last few days scouring the town and country around, and quarantining all cases that could be diagnosed smallpox, and promising that no further complaint should be made concerning the city of Lincoln, at least. In this connection, it might be mentioned that complaint had been made from Salina that Lincoln had smallpox and had failed to quarantine.

In consideration of the large number of cases along this branch road, and coming in contact with this particular case on the train, I sent the following letter to the general manager of the Union Pacific Railway Company:

"TOPEKA, KAN., December 9, 1904.

"E. L. Lomax, G. P. A., Union Pacific Railway Co., Omaha, Neb.:

"DEAR SIR—I have just returned from a trip to Lincoln, Plainville, Hill City, and Hays, Kan., where I found extensive epidemics of smallpox in each

town, with the exception of Hill City, which at present has but one or two cases, although the country round about has been pretty generally exposed. There are in the neighborhood of fifty cases in Lincoln, as many more in Plainville, nine cases in the city of Hays, and in the neighborhood of 300 in the county. Up until the last ten days no effort has been made in the matter of quarantine. People have been going and coming at will, riding on railway-trains, and utterly regardless of the health of the community or the quarantine laws. On the train on my way to Lincoln I discovered a man in the smoking-coach who had just recovered from smallpox, and who was not then fit to be in a public place, although he had left Lincoln ten days previous and was just returning home, evidently infecting every passenger-coach he had ridden in between Lincoln and Missouri, where he had been. The cases are pretty generally quarantined now, but I write this to request that you order the passenger-coaches on the Colby branch to be each of them thoroughly fumigated at their terminal stations immediately after receiving notice, by the use of formaldehyde gas, after which the coaches should be scrubbed out and thoroughly cleansed. I request also that you warn agents on your lines in these counties to refuse to sell a ticket to any one having an eruption or whom they know to be infected with the disease. Most of the towns are small; so that your agents would probably be pretty well informed whether or not the cases under suspicion are ones in which they should exercise this discretion.

"The public schools, churches and other places of public assemblage have been closed in the town of Plainville, but complaint was made to me yesterday, while there, that the depot was the scene of a nightly gathering of men and boys. This, I hope, you will prohibit in the future, and I suspect it is contrary to your rules and regulations to use such places for loafing. This same rule might properly apply to all other station-houses in these counties, although complaint has been made only at this point.

Very truly yours, S. J. CRUMBINE, *Secretary.*"

Having the entire day to put in at Plainville, in order to wait for a train, I thought my time could be used to better advantage by driving across the country thirty miles to Hays, Ellis county, where I might have an opportunity to investigate conditions at this place. Arriving at that place after a weary ride of five hours through slush and mud, I was gratified to find that the county health officer was doing all in his power toward quarantining smallpox. As most of the Russians infected at this point are members of the Catholic church, a conference with the Catholic priest resulted in assurances on his part to cooperate with Doctor Snyder. It was estimated that, all together, in the last three months, there have been 300 cases of smallpox in Ellis county.

On December 12 the following petition was received from Corwin, Harper county, Kansas:

"To the Honorable State Board of Health, Topeka, Kan. :

"GENTLEMEN—On account of smallpox now existing in Woods county, Oklahoma, where three cases have been fatal, and not further than six miles south of the state line, therefore, we, the undersigned citizens of Harper county, Kansas, do hereby petition your honorable board to establish a suitable quarantine line for our protection." (Signed by twenty-one citizens.)

Upon receipt of this petition the following telegrams were sent out:

"C. E. Reessler, County Health Officer, Anthony, Kan. :

"Petition received from Corwin to establish quarantine, state line, against Woods county, Oklahoma, account of smallpox. Please investigate immediately and wire recommendations.

S. J. CRUMBINE, *Secretary.*"

“County Health Officer, Alva, Okla. :

“Petition received to quarantine at state line against Woods county, account of smallpox. Please wire conditions and towns infected.

S. J. CRUMBINE, *Secretary.*”

To these the following replies were received :

“S. J. Crumbine, Topeka, Kan. :

“Have no fear. No smallpox in Harper county. Was at Corwin three weeks ago and have since investigated. Have parties keeping me posted by telephone.

C. E. RESSLER.”

“Secretary Board of Health, Topeka, Kan. :

“Was in smallpox regions yesterday. No towns infected. Three cases in country, all under strict quarantine. L. L. LONG, *Secretary of Health.*”

These replies indicating that the situation was not sufficiently urgent to establish a state-line quarantine, the following letter was sent to the petitioners :

“TOPEKA, KAN., December 13, 1904.

“W. W. Andrew, Corwin, Kan. :

“DEAR SIR—I have received reports from county health officer of Harper county, also the health officer of Woods county, and I do not think the situation is sufficiently grave to warrant the establishment of a state-line quarantine. This can only be established in case of great emergency and by the order of the Board, the consent of the Executive Council of the state, and the approval of the judge of the judicial district which would be placed under quarantine, all of which is an expensive arrangement. It also comprehends the establishment of a large number of deputy health inspectors, the inspection of every passenger-coach and train passing the state line, together with articles of commerce that might carry infection. Hence you see it is a matter that should be used only in great danger to public health. I would say, however, that should the time arrive demanding such procedure the State Board of Health would not hesitate on these accounts to give the citizens of Kansas ample protection.

Very truly yours, S. J. CRUMBINE, *Secretary.*”

On December 13 the bulletin for the month of November was issued :

KANSAS STATE BOARD OF HEALTH,
CAPITOL BUILDING, TOPEKA, December 13, 1904.

The following cases of contagious diseases were reported to this office during the month of November :

DIPHTHERIA.

County.	Cases.	Deaths.	County.	Cases.	Deaths.
Allen	6	2	Lyon	2	0
Anderson	4	0	Marshall	1	0
Atchison	1	0	McPherson	8	1
Barton	7	1	Montgomery	4	1
Brown	10	1	Nemaha	1	0
Butler	3	0	Osage	5	2
Chautauqua	3	0	Pottawatomie	2	1
Cherokee	10	3	Pratt	1	0
Coffey	8	2	Republic	3	0
Crawford	5	0	Saline	1	0
Dickinson	1	0	Sedgwick	12	1
Douglas	1	0	Sherman	3	2
Elk	12	2	Wabaunsee	6	2
Ford	2	1	Wilson	12	3
Greenwood	5	2	Leavenworth city	22	4
Harvey	2	0	Topeka city	33	4
Jefferson	3	0	Wichita city	13	5
Labette	10	2			
Lane	1	0	Totals	224	42
Leavenworth	1	0			

SCARLET FEVER.

County.	Cases.	Deaths.	County.	Cases.	Deaths.
Allen	2	0	Montgomery	16	0
Barton	1	0	Neosho	1	0
Brown	1	0	Osage	4	0
Chautauqua	12	0	Reno	1	0
Cherokee	5	0	Republic	2	1
Cheyenne	11	4	Rooks	5	0
Clay	10	0	Saline	1	0
Crawford	23	0	Sedgwick	1	0
Dickinson	5	0	Sherman	4	0
Kingman	11	0	Wilson	40	1
Labette	5	0	Woodson	1	0
Lyon	1	0	Topeka city	19	1
Marion	6	0	Wichita city	1	0
Marshall	2	0			
McPherson	3	0	Totals	195	7
Mitchell	16	0			

SMALLPOX.

County.	Cases.	County.	Cases.
Allen	1	McPherson	1
Bourbon	30	Montgomery	1
Cherokee	5	Neosho	4
Coffey	4	Osage	16
Crawford	1	Rooks	50
Ellis	89	Saline	2
Elk	1	Wilson	7
Gove	6	Woodson	15
Graham	6	Topeka city	2
Greenwood	1	Leavenworth city	11
Leavenworth	3		
Lincoln	50	Total	318
Lyon	12		

No deaths reported.

TYPHOID FEVER.

County.	Cases.	Deaths.	County.	Cases.	Deaths.
Allen	12	4	Hamilton	3	1
Atchison	1	0	Labette	2	0
Barber	1	1	Nemaha	1	0
Barton	4	0	Osborne	1	0
Bourbon	4	0	Reno	1	0
Brown	1	0	Sedgwick	8	0
Cherokee	8	2	Sherman	2	0
Cheyenne	1	0	Stafford	4	0
Crawford	2	0	Leavenworth city	30	0
Dickinson	1	0	Topeka city	3	3
Douglas	7	1	Wichita city	13	2
Edwards	2	0			
Ford	2	0	Totals	130	16
Gove	6	2			

DEAR DOCTOR—Out of a total of 102 counties having county health officers but sixty have reported. From the number of cases of diphtheria and smallpox reported from these counties, should the same ratio obtain in the counties not reporting, it would show the prevalence of these two diseases to rather an alarming extent. As the season progresses the infection of diphtheria, scarlet fever and smallpox seems to increase in malignancy, and it is of the utmost importance that a strict quarantine be maintained in all these cases. General vaccination should be insisted upon, and fresh supplies of antidiphtheritic serum should be within convenient reach of every physician in the various counties. I bespeak the cooperation of county health officers in that they report their contagious diseases promptly, especially in making returns for the monthly bulletin.

A number of fatal cases of smallpox have been reported from Oklahoma, where in certain localities the disease seems to be particularly malignant, and a request has been made for quarantine at the state line, but from present indications it would seem that such procedure is not warranted. It emphasizes, however, the very great importance of special effort to prevent the spread of this disease. County health officers along the border are urged to be on the lookout for new cases of infection coming from that direction.

We will mail you in a few days blanks for your annual report, and I urge that on the first day of the year the blank be filled out and mailed to this office, in order that the material for our biennial report be at hand, enabling us also to issue our monthly bulletin early in the month. Fraternaly submitted.

S. J. CRUMBINE, M. D., Secretary.

EXAMINATIONS BY BACTERIOLOGIST.

Following is the report of examinations made by the bacteriologist for the Kansas State Board of Health from July 1, 1903, to January 1, 1905:

Examinations of sputum	86
Examinations for diphtheria	32
Examinations of water	3
Total	121

RECOMMENDATION.—That the bacteriologist for the Kansas State Board of Health be placed on a salary, and that the services of the laboratory be extended to all physicians within the state for the examination for diphtheria and tuberculosis, and for any other contagious diseases which can be diagnosed by means of the microscope. This shall not apply to physicians practicing in cities of the first class having local boards of health; that examination of water shall be made, when approved by the secretary of the State Board of Health or a member of the Board.

S. A. GREENFIELD, M. D., *Bacteriologist.*

KANSAS EMBALMERS' EXAMINING COMMITTEE.

The present members of the embalmers' examining committee are as follows: J. T. Barkley, president, Topeka; W. H. Eicholtz, vice-president, Abilene; T. J. Kean, secretary, Olathe; L. M. Penwell, treasurer, Topeka; J. B. Hinthorn, Hiawatha.

The work accomplished by the embalmers' examining committee during the past two years has been such as to place this important department of the State Board of Health on an equality with similar departments in other states. The examinations of applicants for license are sufficiently rigid yet practical, and include demonstrations on the cadaver. The committee has been untiring in its endeavors to enforce the laws, rules and regulations concerning the transportation of bodies, and, in conjunction with the secretary of the State Board of Health, has devised a check system, whereby violations of the law can be uncovered and the guilty parties brought to account. Large posters, containing printed instructions, rules, and regulations, have been displayed in every railway station and express office in Kansas, and transportation companies advised that violations of such rules will subject the offender to penalties. We are pleased to note that these rules are quite generally observed, and that the present status of licensed embalmers in their relation to the public health and transportation companies is quite satisfactory. The following reports are submitted by the secretary and treasurer:

“OLATHE, KAN., December 14, 1904.

“To the Officers and Members of the State Board of Health:

“GENTLEMEN—I beg to make the following report from June 3, 1904, to December 14, 1904:

Receipts for dues, at \$1	\$247 00
Receipts for fees, forty-five, at \$5, Kansas City examination,	225 00
Total	<u>\$472 00</u>
July 23, paid to treasurer	\$150 00
November 17, paid to treasurer	150 00
November 21, paid to treasurer	172 00
Total treasurer's receipts	<u>\$472 00</u>

Respectfully submitted.

T. J. KEAN, *Secretary.*

"TOPEKA, KAN., December 12, 1904.

"To Kansas State Board of Health:

"GENTLEMEN—I herewith submit my semiannual report as treasurer of the embalmers' examining committee:

Balance on hand at last report, May 27, 1904.....	\$414 93	
June 6, received of Hinthorn, secretary.....	9 00	
June 25, received of Hinthorn, secretary.....	18 00	
July 26, received of T. J. Kean, secretary.....	150 00	
November 17, received of T. J. Kean, secretary.....	150 00	
November 23, received of T. J. Kean, secretary.....	68 65	
December 9, received of T. J. Kean, secretary.....	103 35	
Total.....		\$913 93
June 6, paid Harrington Printing Company.....	\$23 50	
June 16, paid I. W. Gill.....	1 01	
June 16, paid J. B. Hinthorn.....	35 75	
July 21, paid John V. Abrahams.....	5 00	
November 17, paid Hotel Baltimore.....	2 00	
November 17, paid W. H. Eicholtz.....	33 80	
November 17, paid J. T. Barkley.....	28 00	
November 17, paid T. J. Kean.....	26 10	
November 17, paid J. B. Hinthorn.....	15 00	
November 17, paid Adams Brothers.....	17 50	
November 17, paid L. M. Penwell.....	28 00	
December 8, paid T. J. Kean.....	53 35	
December 8, paid T. J. Kean.....	50 00	
December 12, paid Adams Brothers.....	17 50	
Total.....		336 51
December 12, balance on hand in bank.....		\$577 42

"There is a difference between myself and the bank of \$1.10 in the bank's favor, which as yet we have been unable to locate.

Respectfully submitted. L. M. PENWELL, *Treasurer.*"

"GENTLEMEN—I would respectfully recommend that your Board permit us to raise our annual renewal fee from one dollar per year, as it now is, to two dollars per year. It is true that we have a nice balance at the present time, as we just had a large and successful class, which we cannot hope to have again in this state. And the expense next year will be larger on account of the violations of the law which are constantly being brought to our notice, and which so far we have been fortunate in settling without bringing suit, which in all probability we will have to do the coming year. Respectfully, L. M. PENWELL."

FINANCIAL STATEMENT OF STATE BOARD OF HEALTH.

STATEMENT of the amount of money expended by the State Board of Health for the two years ending December 31, 1904.

ITEM.		Salary of secretary.	Salary of clerk.	Special sanitary work.	Ex-penses of Board.
1903.					
Jan.	1.... Balance unexpended.....	\$800 00	\$270 00	\$701 94	\$208 69
Jan.	7.... Pacific Express Company.....				\$1 18
	8.... Stenographer.....				2 06
	9.... Missouri & Kansas Telephone Company,			\$2 45	
	S. E. Greenfield, sanitary work.....			5 00	
	24.... Postage for report.....				25 00
	30.... Secretary.....	\$100 00			
Feb.	30.... Clerk.....		\$45 00		
	2.... S. E. Greenfield.....			5 00	
	3.... Wells, Fargo & Co.'s Express.....				1 89
	3.... Pacific Express.....				1 45
	3.... United States Express.....				77
	9.... Western Union Telegraph Company.....				38
	9.... Missouri & Kansas Telephone Company,				9 00
	The Sanitarian.....				4 00
	10.... Postage.....				20 00
	26.... Secretary.....	100 00			
	28.... Clerk.....		45 00		
Mar.	3.... Wells, Fargo & Co.'s Express.....				3 76
	5.... Pacific Express.....				2 97
	5.... S. E. Greenfield.....			5 75	
	5.... E. H. S. Bailey.....			2 50	
	5.... E. H. S. Bailey.....			27 00	
	5.... A. S. Gish, meeting.....				12 22
	5.... B. J. Alexander, meeting.....				11 10
	5.... G. E. Locke, meeting.....				9 80
	5.... J. M. Minick, meeting.....				25 55
	5.... M. N. Gardner.....				21 90
	5.... S. J. Crumbine.....				32 99
	5.... J. B. Dykes.....				23 74
	30.... Secretary.....	100 00			
	30.... Clerk.....		45 00		
April	2.... S. E. Greenfield.....			3 70	
	8.... S. E. Greenfield.....			4 00	
	17.... E. H. S. Bailey.....			7 00	
	17.... Sputum boxes.....			16 46	
	21.... Stamps for sanitary work.....			20 00	
	26.... S. E. Greenfield.....			10 00	
	26.... F. O. Marvin.....			30 00	
	26.... Edward Bartow.....			21 00	
	27.... Chas. Lowry.....			29 05	
	28.... Chas. Lowry.....			23 10	
	30.... Secretary.....	100 00			
May	15.... S. E. Greenfield.....			14 00	
	15.... Chas. Lowry.....			26 38	
	25.... E. H. S. Bailey.....			18 52	
	30.... Secretary.....	100 00			
	30.... Clerk.....		45 00		
June	15.... E. H. S. Bailey.....			15 00	
	25.... J. M. Minick, meeting.....				14 00
	25.... M. N. Gardner, meeting.....				11 86
	15.... G. E. Locke, meeting.....				5 30
	25.... S. J. Crumbine, meeting.....				11 50
	29.... Secretary.....	100 00			
	29.... Clerk.....		45 00		
	30.... Unexpended balance.....			416 03	
Totals.....		\$800 00	\$270 00	\$701 94	\$208 69

FINANCIAL STATEMENT—CONTINUED.

Item.		Salary of secretary.	Salary of clerk.	Special sanitary work.	Ex-penses of Board.
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1903.					
July 1	Appropriation for fiscal year	\$1,200 00	\$800 00	\$400 00	\$900 00
July 7	Postage				\$25 00
15	S. E. Greenfield			\$14 00	
16	Edward Bartow			7 50	
23	G. E. Locke				7 30
23	Telephone Company				9 00
30	Secretary	\$100 00			
30	Clerk		\$50 00		
Aug. 30	Secretary	100 00			
30	Clerk		50 00		
Sept. 4	Chas. Lowry			5 10	
4	United States Express				4 02
4	Wells, Fargo & Co.'s Express				7 47
4	Pacific Express				9 00
14	Independent Telephone Company				20 00
14	Postage				
17	E. H. S. Bailey			3 06	
18	S. J. Crumbine, meeting				27 14
18	G. E. Locke, meeting				9 40
18	M. N. Gardner, meeting				17 83
18	A. S. Gish, meeting				9 36
18	J. M. Minick, meeting				20 90
18	B. J. Alexander, meeting				18 40
18	J. B. Carver, meeting				20 85
26	S. E. Greenfield			25 00	
30	Secretary	100 00			
30	Clerk		50 00		
Oct. 1	Chas. Lowry				10 00
30	Secretary	100 00			
30	Clerk		50 00		
Nov. 1	S. E. Greenfield			16 00	
29	Secretary	100 00			
29	Clerk		50 00		
Dec. 1	Chas. Lowry, postage				20 00
1	Independent Telephone Company				9 00
15	F. O. Marvin			16 46	
22	F. O. Marvin, meeting			2 31	
22	E. H. S. Bailey, meeting			2 31	
22	J. M. Minick, meeting				23 85
22	G. E. Locke, meeting				9 70
22	A. S. Gish, meeting				12 22
22	M. N. Gardner, meeting				22 25
22	J. B. Carver, meeting				22 60
22	E. P. Mills, meeting				10 65
22	L. A. Golden, meeting				30 82
28	E. H. S. Bailey			21 00	
29	S. E. Greenfield			26 65	
30	Secretary	100 00			
30	Clerk		50 00		
1904.					
Jan. 21	Chas. Lowry			4 60	
31	S. E. Greenfield			22 25	
31	Secretary	100 00			
31	Clerk		50 00		
Feb. 23	Secretary	100 00			
23	Clerk		50 00		
Mar. 1	Independent Telephone Company				9 00
15	Postage				20 00
24	Meeting				137 01
30	Secretary	100 00			
30	Clerk		50 00		
30	L. A. Golden			18 40	
30	E. H. S. Bailey			2 76	
30	S. E. Greenfield			18 30	
April 1	Postage				20 00
2	Independent Telephone Company				9 00
15	Postage and express				10 00
28	S. E. Greenfield			14 40	
28	S. E. Greenfield			17 15	
29	Chas. Lowry			21 15	
29	S. E. Greenfield			17 25	
29	Secretary	100 00			
29	Clerk		50 00		
May 1	Postage				15 00
30	Secretary	100 00			
30	Clerk		50 00		
June 2	E. P. Mills, meeting				15 25
2	J. B. Carver, meeting				20 35

SECOND BIENNIAL REPORT.

FINANCIAL STATEMENT—CONCLUDED.

ITEM.		Salary of secretary.	Salary of clerk.	Special sanitary work.	Ex-penses of Board.
1904.					
June	2.... A. S. Gish, meeting				\$9 90
	2.... S. J. Crumbine, meeting				23 89
	2.... L. A. Golden, meeting				31 32
	2.... G. E. Locke, meeting				15 20
	2.... J. B. Carlile, meeting				19 90
	2.... E. H. S. Bailey			\$3 90	
	2.... F. O. Marvin			2 15	
	15.... Chas. Lowry			3 20	
	29.... F. O. Marvin			18 75	
	29.... Edward Bartow			22 50	
	29.... Chas. Lowry			28 85	
	29.... E. H. S. Bailey			10 00	
	29.... S. E. Greenfield			11 50	
	30.... Postage				25 50
	30.... Secretary	\$100 00			
	30.... Clerk		\$50 00		
	30.... Unexpended balances			23 50	36 34
	Totals	\$1,200 00	\$600 00	\$400 00	\$300 00
July	1.... Appropriations for fiscal year	\$1,200 00	\$600 00	\$400 00	\$300 00
July	15.... Chas. Lowry, sanitary work			\$18 30	
	28.... Postage and expressage				\$20 00
	28.... S. E. Greenfield			8 00	
	29.... Independent Telephone Company				9 00
	31.... Secretary	\$100 00			
	31.... Stenographer		\$50 00		
Aug.	24.... S. J. Crumbine, trip to Moline			14 39	
	31.... S. E. Greenfield			12 00	
	31.... Secretary	100 00			
	31.... Stenographer		50 00		
Sept.	2.... J. B. Carver, expenses to La Cygne			9 75	
	5.... Postage and expressage				29 78
	15.... J. B. Carver, meeting				21 00
	15.... E. P. Mills, meeting				10 50
	15.... A. B. Scott, meeting				27 96
	15.... J. B. Carlile, meeting				30 15
	15.... Chas. Lowry, meeting				5 00
	15.... G. E. Locke, meeting				9 48
	15.... L. A. Golden, meeting				31 40
	15.... E. H. S. Bailey			2 40	
	24.... F. O. Marvin, expenses to Abilene			16 60	
	24.... S. J. Crumbine, expenses to Abilene			7 38	
	30.... S. E. Greenfield			11 55	
	30.... Secretary	100 00			
	30.... Stenographer		50 00		
Oct.	12.... Independent Telephone Company				9 00
	31.... Secretary	100 00			
	31.... Stenographer		50 00		
Nov.	1.... S. E. Greenfield			28 75	
	10.... Postage and expressage				22 70
	29.... S. J. Crumbine, expenses to Plainville			15 78	
	30.... Secretary	100 00			
	30.... Stenographer		50 00		
Dec.	1.... S. E. Greenfield			31 75	
	5.... S. J. Crumbine, expenses to Grainfield			21 34	
	9.... S. J. Crumbine, expenses to Grainfield			22 73	
	10.... Western Union Telegraph Company			5 89	
	11.... Postage and expressage				21 34
	15.... <i>Popular Science Monthly</i>				3 10
	15.... H. M. Bentley, meeting				22 50
	15.... E. P. Mills, meeting				11 10
	15.... J. B. Carver, meeting				23 50
	15.... J. B. Carlile, meeting				23 00
	15.... B. J. Alexander, meeting				11 30
	15.... A. B. Scott, meeting				29 40
	15.... W. F. Schoch, meeting				5 00
	15.... L. A. Golden, meeting				31 40
	15.... F. O. Marvin			2 66	
	15.... E. H. S. Bailey			2 66	
	20.... L. A. Golden, expenses to Osborne and Bird City			51 80	
	31.... Secretary	100 00			
	31.... Stenographer		50 00		
	Totals expended for six months	\$600 00	\$300 00	\$283 50	\$408 10

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REPORTS OF STATE INSTITUTIONS.

The following reports were received from the various public institutions of the state, for the year ending December 31, 1903:

State Hospital at Osawatomie. At the close of the year there were 1260 inmates in this institution. During the year 143 deaths occurred, from the following causes: Chronic melancholia, 6; acute melancholia, 1; tuberculosis, 17; pneumonia, 3; cancer, 1; senile debility, 13; peritonitis, 3; gastritis, 3; epilepsy, 14; cerebral hemorrhage, 6; acute mania, 4; gangrene, 2; apoplexy, 6; exhaustion from chronic insanity, 22; dysentery, 6; malnutrition, 1; acute enteritis, 1; paucis, 11; paralysis, 2; pulmonary hemorrhage, 1; dropsy, 4; heart thrombus, 1; congestive chill, 1; Bright's disease, 2; abscess of lung, 1; suicide, 1; chronic nephritis, 2; cardiac insufficiency, 1; la grippe, 2; meningitis, 1; embolism, 1; mitral insufficiency, 2; chorea, 1.—L. L. UHLS, M. D., *Superintendent.*

State Hospital at Topeka. At the close of the year there were 984 inmates in this institution. During the year 51 deaths occurred, from the following causes: Pneumonia, 1; epilepsy, 5; acute mania, 2; tuberculosis of bowels, 1; paresis, 5; phthisis pulmonalis, 8; apoplexy, 2; exhaustion, chronic mania, 5; dropsy, 1; suicide, 1; carcinoma, 1; pernicious anemia, 1; senile dementia, 6; dysentery, 1; nephritis, 5; cardiac disease, 3; result of injury, 1.—T. C. BIDDLE, M. D., *Superintendent.*

Boys' Industrial School, North Topeka. At the close of the year there were 173 inmates in this institution. During the year 86 cases of contagious diseases occurred, 55 cases of mumps and 31 of measles. One death occurred, from accidental drowning.—H. W. CHARLES, *Superintendent.*

The Soldiers' Orphans' Home, Atchison. At the close of the year there were 160 inmates in this institution. During the year there were three cases of scarlatina. No deaths occurred.—E. L. HILLIS, *Superintendent.*

School for Feeble-minded Youth, Winfield. At the close of the year there were 342 inmates in this institution. During the year there were 22 cases of contagious diseases, all chicken-pox. Nineteen deaths occurred, from the following causes: Scrofula, 1; marasmus, 4; cholera morbus, 2; physical decay, 1; consumption, 1; disease of heart, 1; pneumonia, 1; abscess of lungs, 1; inflammation of bowels, 1; tubercular meningitis, 1; septicaemia, 2; hemorrhage of lungs, 1; epileptic convulsions, 2.—C. S. NEWLON, M. D., *Superintendent.*

Industrial School for Girls, Beloit. At the close of the year there were 155 inmates in this institution. One death occurred during the year; cause, tuberculosis.—JULIA B. PERRY, *Superintendent.*

Kansas School for the Blind, Kansas City. At the close of the year there were 105 inmates in this institution. During the year three cases of typhoid occurred. No deaths.—LAPIER WILLIAMS, *Superintendent.*

State Industrial Reformatory, Hutchinson. At the close of the year there were 293 inmates in this institution. During the year there were 20 cases of contagious diseases—1 case of scarlet fever and 19 of smallpox. One death occurred, from ascending spinal sclerosis.—H. M. STEWART, M. D.

State Soldiers' Home, Fort Dodge. At the close of the year there were 555 inmates in the institution. During the year about 15 cases of scarlet fever occurred. There were 11 deaths, from the following causes: Typhoid fever, 1; pneumonia, 1; pulmonary tuberculosis, 3; general paralysis, 2; scarlet fever, 1; chronic dysentery, 1; bronchitis, 1; intestinal obstruction, 1.—J. B. DRAPER, *Surgeon.*

Kansas State Penitentiary, Lansing.—At the close of the year there were 1154 inmates in this institution. During the year there were 84 cases of contagious diseases: Mumps, 82; measles, 2. Twelve deaths occurred during the year, from the following causes: Accident, 1; paralysis, 2; consumption, 3; pneumonia, 2; sclerosis, 1; killed, 1; hemorrhage of lungs, 2.—C. E. GRIGSBY, *Prison Physician.*

The following reports were received from the institutions for the year ending December 31, 1904:

State Hospital at Osawatimie. At the close of the year there were 1214 inmates in this institution. During the year 157 deaths occurred, from the following causes: Apoplexy, 6; pulmonary tuberculosis, 32; cancer, 3; epilepsy, 8; enteritis, 11; nephritis, 4; pneumonia, 5; melancholia, 13; mania, 15; mitral insufficiency, 4; la grippe, 2; paresis, 5; asthma, 1; uremic poisoning, 1; cerebral hemorrhage, 6; diabetes, 1; peritonitis, 2; angina pectoris, 1; aortic stenosis, 1; senility, 4; strangulated hernia, 1; cerebral meningitis, 2; chronic hepatitis, 1; gangrene, 1.—L. L. UHLS, M. D., *Superintendent.*

State Hospital at Topeka. At the close of the year there were 1016 inmates in this institution. During the year there were 28 cases of contagious diseases, as follows: Dysentery, 1; erysipelas, 5; measles, 10; tuberculosis, 10; typhoid fever, 2. During the year 72 deaths occurred, as follows: Cardiac diseases, 9; cerebral hemorrhage, 7; cerebritis, 1; cerebral thrombus, 1; dysentery, 1; epilepsy, 3; erysipelas, 1; exhaustion, chronic insanity, 7; locomotor ataxia, 1; nephritis, 3; paresis, 7; anemia, 1; pneumonia, 3; pneumonia (broncho), 3; pulmonary tuberculosis, 10; purpura hemorrhagica, 1; senile dementia, 9; septicemia, 1; suicide, 2; uremia, 1. A separate cottage for the care of tubercular patients is desired at this institution.—T. C. BIDDLE, M. D., *Superintendent.*

Boys' Industrial School, North Topeka. At the close of the year there were 204 inmates in this institution. No contagious diseases occurred during the year, and but one death, from tuberculosis.—H. W. CHARLES, *Superintendent.*

Soldiers' Orphans' Home, Atchison. At the close of the year there were 148 inmates in this institution. Seventy-one cases of contagious diseases occurred during the year, as follows: Scarlet fever, 24; measles, 44; typhoid fever, 3. There were 3 deaths during the year: Heart disease, sequence of inflammatory rheumatism, 1; chronic anemia, 1; measles, 1.—E. L. HILLIS, *Superintendent.*

School for Feeble-minded Youth, Winfield. At the close of the year there were 400 inmates in this institution. No cases of contagious diseases occurred during the year. There were 8 deaths, from the following causes: Disease of the lungs, 3; epileptic convulsions, 3; erysipelas, 1; septicemia, 1.—C. S. NEWLON, M. D., *Superintendent.*

Girls' Industrial School, Beloit. At the close of the year there were 173 inmates in this institution. There were no deaths and no contagious diseases during the year.—JULIA B. PERRY, *Superintendent.*

School for the Blind, Kansas City. At the close of the year there were

105 inmates in this institution. During the year there were 13 cases of contagious diseases, as follows: Typhoid fever, 3; pneumonia, 3; German measles, 7. No deaths occurred.—LAPIER WILLIAMS, *Superintendent*.

State Industrial Reformatory, Hutchinson. At the close of the year there were 361 inmates in this institution. There were 10 cases of contagious diseases during the year, as follows: Measles, 5; chicken-pox, 5. No deaths.—E. E. MARSHALL, *Superintendent*.

Kansas State Soldiers' Home, Fort Dodge. At the close of the year there were 631 inmates in this institution. During the year there were 58 cases of contagious diseases, as follows: Diphtheria, 3; consumption, 5; measles, 50. Twenty-two deaths occurred during the year, from the following causes: Diphtheria, 1; pneumonia, 1; uremia, 1; cerebral meningitis, 1; pulmonary tuberculosis, 1; diabetes mellitus, 1; influenza, 1; general paresis, 2; cerebral apoplexy, 1; arterio-sclerosis, 1; spastic spinal paralysis, 1; bulbar paralysis, 1; aortic stenosis, 1; cancer, 3; typhoid fever, 1; gastritis, 1; gunshot wounds, 2; cirrhosis of liver and asthma, 1. The following improvements are needed in the buildings: Hot-water pipe in every room in new barracks, a complete sewer system for the whole home, and electric lights in every house. A general laundry is needed now and will be absolutely indispensable within a year or two.—S. H. THOMAS, *Commandant*.

State Penitentiary, Lansing. At the close of the year there were 1157 inmates in this institution. During the year 31 cases of mumps occurred. Ten deaths occurred during the year, as follows: Consumption, 5; killed, 2; paralysis, 1; suicide, 1; abscess of lung, 1.—C. E. GRIGSBY, *Prison Physician*.

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LAWS, RULES AND REGULATIONS OF THE KANSAS
STATE BOARD OF HEALTH.

LAW CREATING THE BOARD OF HEALTH.

Session Laws of 1885, chapter 129; General Statutes of 1901, page 1340.
As amended by Session Laws of 1903, chapter 357.

— BOARD OF HEALTH. SECTION 1. Within thirty days after this act shall take effect, the governor, by and with the advice and consent of the senate, if it then be in session, shall appoint from the different parts of the state nine physicians, who shall be men of good moral character and temperate habits, distinguished for their devotion to the study of medicine and allied sciences, and not less than seven years' continuous practice in their profession, and each of whom shall be a graduate of a reputable medical college. The governor shall also appoint one other person not a member of the medical profession (preferably an attorney interested in sanitary sciences), and said persons, when so appointed and confirmed, shall be known as "The Kansas State Board of Health." Three of the members of said Board shall be appointed for one year, three for two years, and four for three years; and annually thereafter the governor shall in like manner appoint successors of like character and qualifications to fill the vacancies occurring in said Board by reason of the expiration of the terms of service as herein provided, and the persons so appointed shall hold their respective offices for the like term of three years, and until their successors are appointed and qualified; but in no case shall the governor appoint a majority of the physicians that shall constitute said Board of Health from any one school of medical practice, nor shall said Board at any time be composed of persons a majority of whom shall be of the same school of medical practice. Upon the appointment of the persons provided for in this act, the secretary of state shall issue to each of them a certificate of his appointment, and within twenty days after such appointment the said ten persons shall meet in the city of Topeka, and they shall each take and subscribe to the oath prescribed by law for state officers, which shall be filed with the secretary of state; and thereupon said Board shall immediately organize by electing one member of the Board president. The member of said Board who is not a physician shall have no vote in the election of officers, but shall have a vote on all other questions arising in the regular quarterly meetings of the Board. The president of said Board shall have no vote on any matter other than the election of officers unless there is a tie vote, when he shall have the deciding vote. The Board shall also elect a secretary, and said secretary shall be the executive officer of said Board, but not a member thereof. The secretary shall execute to the state of Kansas a bond in the sum of \$5000, with sureties, to be approved by the governor, and when approved it shall be filed in the office of the secretary of state. Said bond shall be conditioned for the faithful performance of duties of his office as such secretary, and he shall take and file a like oath to that prescribed for the members of said Board. The Board may elect one of its own number secretary, but in such case such election shall create a vacancy in the Board, which shall be filled by the governor. It shall be the duty of the governor to fill all vacancies which may occur in the Board; and

all appointments, whether original or to fill vacancies, made during the recess of the legislature, shall be submitted by the governor to the senate at its first session after such appointment is made, for its action; but all lawful actions of the members of the Board made before confirmation or rejection shall be valid. The Executive Council shall provide the State Board of Health with a suitable office at the city of Topeka for the transaction of its business.

— RULES; MEETING; SALARY. SEC. 2. The State Board of Health shall make, adopt and publish such rules and order of business as may be necessary to make this act effective and facilitate the transaction of its business. It shall provide a seal, and all correspondence and papers emanating from it shall be under the seal of said Board. It shall meet quarterly and oftener if deemed necessary, at such place as it may designate, the first meeting to be held in the city of Topeka. The annual meeting after the first shall be held during the month of June in each and every year, at Topeka; and a majority of its members shall constitute a quorum for the transaction of business. The compensation for the members of said Board shall be five dollars for each and every day actually spent in the discharge of their duties, and the actual and necessary traveling expenses of said members shall, while employed on the business of the Board, be allowed and paid. The secretary shall receive such compensation as may be allowed by said Board of Health and approved by the governor, and to be paid him in the same manner as the salaries of other state officers are paid, and such necessary expenses shall be allowed him as the secretary of state shall admit, on the presentation of an itemized account, having vouchers annexed, together with the certificate of the Board.

6568. SECRETARY. SEC. 3. The secretary shall hold his office so long as he shall faithfully discharge the duties thereof; but may be removed for just cause at any regular meeting of the Board, by a majority of all members of the Board. He shall keep a record of all the transactions of the Board; shall have the custody of all books, papers, documents, and other property belonging to the office; shall communicate with other state boards of health, and with the local boards of health within this state; shall file and keep all reports received from such boards, and all correspondence of the office appertaining to the business of the Board. He shall perform all other duties prescribed in this act for the said secretary or directed by the State Board of Health.

6569. DUTIES OF BOARD. SEC. 4. The State Board of Health shall supervise the health interests of the people of this state. They shall make careful inquiry in respect to the cause of disease, and especially of epidemics, and investigate the sources of mortality, and the effects of localities, employments, conditions, ingesta, habits and surroundings on the health of the people. They shall advise officers of government, or other state boards, in regard to location, drainage, water supply, disposal of excreta, heating and ventilation of public buildings. They shall collect and preserve such information relating to forms of disease and death as may be useful in the discharge of the duties of said Board. All health officers of local boards of health in the state shall transmit to said State Board of Health copies of the reports and publications, and such sanitary information as may be useful to the people of the state.

6660. REGISTRATION; CARRIERS. SEC. 5. The State Board of Health shall supervise the registration of marriages, births, and deaths, and also the registration of forms of disease prevalent in the state; and the secretary of said Board shall superintend the registration of the vital statistics of the state. They shall prepare the blank forms necessary for obtaining and preserving such records,

and forward such of them to the health officers of local boards as may be required by physicians, assessors, local boards, and others whose duty it is to gather information in relation to the vital statistics of the state. The State Board of Health shall also prepare the forms and establish the rules by which permits for transporting the dead bodies of persons for burial beyond the county where the death occurs; and in all cases the said Board of Health shall require the coupons to be attached to such permits to be detached and preserved by every common carrier, or the person in charge of any vessel, railroad-train, or vehicle, to which dead bodies shall be delivered for transportation. Any violation of these rules shall subject the offender to a fine of ten dollars for each offense.

6661. SANITARY SERVICE. SEC. 6. The State Board of Health shall, when they think best to do so, appoint committees, or engage suitable persons to render special sanitary service, to make or supervise practical or scientific investigations and examinations requiring expert skill, and to prepare plans and report thereon. And it is hereby made the duty of all officers and agents having the control, charge or custody of any public structure, work, ground, or erection, or any plan, description, outline drawings, charts thereof or relating thereto, made, kept or controlled under any public authority, to permit and facilitate any examination and inspection ordered by said Board; and the members of said Board, and such other officer or person as may at any time be by said Board authorized, may without fee or hindrance enter, examine and survey all grounds, erections, vehicles, structures, apartments, buildings, and places; but the legislature shall first determine the amount which shall be expended during the year for such special sanitary work, and the expenditures shall not exceed the amount thus determined and set apart for the year.

6662. LOCAL BOARDS. SEC. 7. The county commissioners of the several counties of this state shall act as local boards of health for their respective counties. Each local board thus created shall elect a physician, preference being given to adepts in sanitary science, who shall be *ex officio* a member of said local board and the health officer of the same. He shall hold his office during the pleasure of the board, but may be removed for just cause at any regular meeting of the same by a majority of the members voting therefor, on which motion he shall not vote. The local boards of health hereby created shall not supersede or in any way interfere with such boards established by municipal regulations in any of the counties of this state; but all local boards of health of this state, created by this act, or existing by authority of municipal law, shall be governed by the provisions of this act.

6663. HEALTH OFFICER. SEC. 8. The health officer of the several local boards of health throughout the state, immediately after his election, shall notify the State Board of the fact, and give his post office address. He shall receive and distribute, without delay, in the county for which he is appointed, all forms from the State Board of Health to the rightful persons, and all returns from physicians, assessors and local boards to the said State Board of Health, and he shall perform such other duties as this act, his local board or the State Board of Health may require of him. He shall receive for his services such reasonable compensation as his board may allow, to be paid out of the county treasury. And for any failure or neglect of said health officer to perform any of the duties prescribed in this act, he shall upon conviction thereof be fined ten dollars for each and every offense.

6664. RECORD OF DEATHS. SEC. 9. It shall be the duty of every physician

practicing his profession in the state of Kansas to keep a record of the deaths occurring in his practice, or that may come to his knowledge, where death occurs without medical attendance, noting the form of the disease, and as far as possible the cause which produced it, and to report the same to the local board of health where the same occurs, at the time and in the manner prescribed by the State Board of Health; and any failure to do so will subject said physician to a fine of ten dollars for each and every offense.

6665. ASSESSORS. SEC. 10. It shall be the duty of assessors of personal property in the several townships and wards of cities throughout the state, annually, to collect such information as to marriages, births and deaths as may be required by the State Board of Health, and report the same at the time and in the manner prescribed by the said Board to the local board of health.

6666. REPORT. SEC. 11. It shall be the duty of the State Board of Health, on or before the first Monday in January of each year, to make a report in writing to the governor of the state upon the vital statistics and the sanitary conditions and prospects of the state; and said report shall set forth the action of said Board and its officers and agents, and the names thereof, and also the names of physicians registered for the past year, and shall suggest any further legislative action deemed proper for the better protection of life and health, and may contain any useful information which said Board may desire to communicate. The annual report of said Board shall contain a detailed account of the money paid out by or on account of said Board, and a detailed statement of the manner of its expenditure, during the past year, but the amount so paid out shall not aggregate a sum exceeding \$5000 in any year. The report of the State Board of Health shall be published in form and manner as other state reports.*

6667. PROSECUTION. SEC. 12. All prosecutions under this act shall be conducted by the county attorney for the county in which the offense was committed, in the court having jurisdiction, and all fines imposed and collected shall be paid into the county treasury, to the credit of the school fund.

THE QUARANTINE LAW.

Session Laws of 1901, chapter 285; General Statutes of 1901, page 699.
As amended by Session Laws of 1905, chapter 339.

3306. DANGEROUS DISEASES. SECTION 1. Whenever any physician shall know or have reason to believe that any person whom he is called to visit, or any person sick within his knowledge without the care of a physician, is sick with or has died of cholera, smallpox, scarlet fever, diphtheria, epidemic cerebro-spinal meningitis, or any disease dangerous to the public health, he shall immediately give notice thereof to the nearest board of health or health officer, and, if the case occurs in his own practice, shall at once cause a red or yellow cloth or card not less than twelve inches square, with the name of the disease written or printed thereon in large characters, to be fastened upon the front door or other conspicuous part of the building wherein the sickness prevails; such cloth or card to be maintained during the existence of the disease, and until such time as the health officer, or, in his absence, the attending physician, acting by his authority and approval, is satisfied that the premises have been thoroughly disinfected and are fit for reoccupation.

3307. DUTY OF HOUSEHOLDER. SEC. 2. Whenever any householder shall

* Biennial reports. See Session Laws of 1901, chapter 293; General Statutes of 1901, page 1328, § 6609.

know that any of his family is sick with or has died of smallpox, cholera, scarlet fever, diphtheria, epidemic cerebro-spinal meningitis, or any disease dangerous to the public health, he shall immediately give notice thereof to the nearest board of health or health officer, and shall cause the house to be placarded as prescribed in section 1.

3308. DUTY OF HEALTH OFFICERS. SEC. 3. Any municipal or county board of health or health officer having knowledge of any infectious or contagious disease, or of a death from such disease, within their jurisdiction, shall immediately exercise and maintain a supervision over such case or cases during their continuance, seeing that all such cases are properly cared for and that the provisions of this act as to isolation, restriction of communication, placarding, quarantine and disinfection are duly enforced. The local board of health or health officer shall communicate without delay all information as to existing conditions to the State Board of Health. Said health officer shall confer personally, if practicable, otherwise by letter, with the physician in attendance upon the case, as to its future management and control, and with the authorities of the place, as to their duties in the premises. Should the disease show a tendency to become epidemic, the public and private schools must be closed, and, in extreme cases, church services suspended and public assemblages of people at shows, circuses, theaters, fairs or other gatherings prohibited. In case of smallpox, a general and thorough vaccination should be recommended and insisted upon.

3309. QUARANTINE. SEC. 4. All persons sick with smallpox, cholera, scarlet fever, diphtheria, epidemic cerebro-spinal meningitis or any contagious or infectious diseases dangerous to the public health shall be thoroughly isolated from the public and properly quarantined.

— THE SAME. SEC. 5. No member of any household in which cholera and [or] smallpox exists and no person afflicted with or recovering from any such disease shall be permitted to appear on the public streets or highways or in any public place, or attend any place of public amusement, worship, or visit any other private house, until after danger from contagion is passed and said household premises thoroughly disinfected.

3311. NOT ATTEND SCHOOL. SEC. 6. No person inflicted with any infectious or contagious disease dangerous to the public health shall be admitted into any public or private school. No parent, guardian, tutor or other person having charge or control of children whose residence is infected with smallpox, cholera, scarlet fever, diphtheria, epidemic cerebro-spinal meningitis or other infectious or contagious disease dangerous to the public health shall allow or permit them to attend any public or private school during the continuance of such infection, or until the premises have been thoroughly disinfected and all danger from contagion has passed.

3312. FUNERAL. SEC. 7. No public funeral shall be allowed, either at the house or church, where death occurs from smallpox, cholera, scarlet fever, diphtheria, epidemic cerebro-spinal meningitis, or other infectious disease dangerous to the public health.

3313. DIPHTHERITIC SEC 8. Diphtheritic croup, croupous diphtheria, membranous croup, croup other than spasmodic, putrid fever, diphtheritic sore throat, and sloughing sore throat, occurring in communities where diphtheria is prevalent, shall be included among the diseases dangerous to the public health, and subject to the same precautions as diphtheria. In like manner, patients suffering from or exposed to scarlatina or scarlet rash or varioloid shall be required to undergo the precautions prescribed for scarlet fever and smallpox, respectively.

3314. DUTY OF PHYSICIAN. SEC. 9. It shall be the duty of every physician in attendance upon any person afflicted with any contagious or infectious disease designated in this act to notify the proper health officer when said premises are ready for disinfection, so that the same may be properly disinfected under the directions of said health officer or some other person under his authority.

3315. QUARANTINE COMMUNITIES. SEC. 10. Whenever cholera, smallpox, diphtheria, scarlet fever, epidemic cerebro-spinal meningitis, or other infectious or contagious diseases show a tendency to become epidemic, and the local health authorities neglect to properly isolate and quarantine such diseases, the State Board of Health or its executive officer may quarantine any city, township or county in which any of these diseases may show a tendency to become epidemic.

3316. PENALTY. SEC. 11. Any person found guilty of violating any of the provisions of this act or failing to comply with any requirements thereof shall be, upon conviction, fined not less than \$25 nor more than \$100 for each offense.

RULES OF THE STATE BOARD OF HEALTH.

RULE I. No privy vault, cesspool or reservoir into which a privy vault, water-closet, stable or sink is drained, except it be water-tight, shall be permitted within fifty feet of any well, spring or other source of water used for drinking and culinary purposes; nor shall any such open into any stream, ditch, or drain, except common sewers.

RULE II. Earth privies or earth-closets, with no vault below the surface of the ground, shall be excepted in rule I, but sufficient dry earth or coal ashes must be used daily to absorb all the fluid parts of the deposit, and the entire contents must be removed monthly.

RULE III. All privy vaults, cesspools or reservoirs named in rule I must be cleaned at least once a year; and from the 1st day of May to the 1st of November of each year shall be thoroughly deodorized by adding to the contents of the vault once every month a solution of copperas in the proportion of one or two pounds to a pailful of water for each member of the family.

RULE IV. No night-soil or contents of cesspool shall be removed unless previously deodorized by the copperas solution as above, or disinfected with the corrosive-sublimate solution, and during removal material shall be covered with a layer of fresh earth, unless the removal be by the odorless excavating process.

RULE V. No sewer drain shall empty into any lake, pond, or other source of water used for drinking or other culinary purposes, nor into any pond, lake, or running water. Such drains passing within fifty feet in ordinary soil, or eighty feet in sandy soil, of any source of water-supply, shall be water-tight. All stagnant ponds must be drained or filled up.

RULE VI. The collection of refuse matter in or around the immediate vicinity of any dwelling or place of business, such as swill, waste of meat, fish or shells, bones, decaying vegetables, dead carcasses, excrement, or any kind of offal that may decompose and generate disease germs or unhealthy gases, and thus affect the purity of the air, shall be considered the worst kind of nuisance, and must be removed or disposed of, either by burial, burning, or otherwise, and in such manner as not to be offensive.

RULE VII. No diseased animal, or its flesh, and no decayed or diseased meat, fish, vegetables, or fruit, no impure or adulterated milk or other article used for food, shall be sold or offered for sale. No dead animal or offensive refuse shall

be thrown upon the streets or adjoining lot to the street, or into or near any stream, spring, or well.

RULE VIII. No pig-pen shall be maintained within 100 feet of any well or spring of water used for drinking purposes, or within thirty feet of any street or inhabited house. Such pens shall be kept in such a manner as not to be offensive, by being freely deodorized at short intervals. No pigs shall be kept within the limits of any incorporated city between May 1 and November 1 of any year.

RULE IX. Every person owning, leasing or occupying any place, room or building wherein cattle, sheep or swine are killed or dressed, and every person being the owner, lessee or occupant of any stable wherein animals are kept, or of any market, public or private, shall cause such place, room, building, stable or market to be kept at all times thoroughly cleansed and purified, and all offal, blood, fat, garbage, stable manure or other unwholesome or offensive refuse shall be removed therefrom at least once in every twenty-four hours, if used continuously, or, if only used occasionally, within twenty-four hours after using; and the floors of such building, place or premises shall be so constructed as to prevent blood, foul liquid or washings from being absorbed. No blood pit, dung pit, offal pit or privy well shall remain or be constructed within any such place, room, or building; nor shall swine be kept in the same enclosure with a slaughter-house, nor fed there or elsewhere upon the offal of slaughtered animals.

RULE X. No person shall maintain any manufactory or place of business where unwholesome, offensive or deleterious odors, gases, smoke or exhalations are generated, such as tanneries, establishments for boiling bones of dead animals, etc., except such establishments shall be kept clean and wholesome; nor shall any offensive or deleterious or waste substance, refuse or injurious matter from such establishments be allowed to accumulate upon the premises, or be thrown or allowed to run into any public waters, stream, watercourse, street, road, or public place. And every person or company conducting such manufactory or business shall use all reasonable means to prevent the escape of smoke, gases, and odors, and to protect the health and safety of all operatives employed therein.

RULE XI. Whenever any householder shall know that any member of his family is taken sick or has died of smallpox, cholera, scarlet fever, diphtheria, or any other disease dangerous to the public health, he shall immediately give notice thereof to the nearest board of health or health officer, placing the case at once in charge of a physician, and placarding the house as prescribed in the following rule.

RULE XII. Whenever any physician shall know, or have reason to believe, that any person whom he is called to visit, or any person sick within his knowledge without the care of a physician, is infected with or has died of cholera, smallpox, scarlet fever, diphtheria, or any disease dangerous to the public health, he shall immediately give notice thereof to the nearest board of health or health officer; and, if the case occurs in his own practice, shall at once cause a red or yellow cloth or card, not less than twelve inches square, with the name of the disease written or printed thereon in large characters, to be fastened upon the front door or other conspicuous part of the building in which the sickness prevails; such cloth or card to be maintained during the existence of the disease and until such time as the health officer, or, in his absence, the attending physician, acting by his authority and approval, is satisfied that the premises have been thoroughly disinfected and are fit for reoccupation.

RULE XIII. Any local board of health or health officer having knowledge of

the existence of contagious or infectious disease, or of a death from such disease, within their jurisdiction, shall immediately exercise and maintain a supervision over such case or cases during their continuance, seeing that the provisions of these rules and of the duties of the local boards of health and health officers in such cases, as to isolation, restriction of communication, placarding, etc., shall be duly fulfilled. The health officer shall communicate without delay such information as to existing conditions as he possesses to the State Board of Health. He will confer personally, if practicable, otherwise by letter, with the physician in attendance upon the case, as to its future management and control, and with the authorities of the place as to their duties in the premises. Should the disease show a tendency to become epidemic, the public and private schools must be closed, and, in extreme cases, church service suspended, and public assemblages of people at shows, circuses, theaters, fairs or other gatherings prohibited. In case of smallpox, a general and thorough vaccination should be recommended and insisted upon.

RULE XIV. All persons sick with smallpox, cholera, scarlet fever, diphtheria, or other contagious or infectious disease shall be thoroughly isolated from the public. Four hundred feet is suggested as the minimum distance for the thorough isolation of smallpox.

RULE XV. Members of any household in which cholera, smallpox, diphtheria, scarlet fever or measles exist should be required to abstain from attending places of public amusement, worship, or education, and, as far as possible, from visiting other private houses. No person recovering from such disease should be permitted to appear on the public streets or highways, or in any public place, until after danger from contagion is past. (See rule XXII.)

RULE XVI. In the event of death from any such disease, the clothing in which the body is attired should be sprinkled with thymol water, the body wrapped in disinfected cerecloth (a sheet thoroughly soaked in zinc disinfectant, double strength), and placed in an air-tight coffin, which is to remain in the sick-room until removed for burial. No public funeral must be allowed, either at the house or church, and no more persons should be permitted to go to the cemetery than are necessary to inter the corpse.

RULE XVII. The room occupied by a person sick with contagious or infectious disease must previously be cleared of all carpets, needless clothing, drapery, and all other articles likely to harbor disease. After death or recovery, the room, furniture and other contents not to be destroyed must be immediately and thoroughly disinfected. The paper on the walls and ceiling must be removed and burned. The floor, woodwork and wooden furniture must be painted over with corrosive-sublimate solution, letting it remain one hour, and then washing it off with clean water. The walls, if not papered, must be thoroughly scrubbed and whitewashed. For use in the sick-room, small pieces of rags should be substituted for handkerchiefs, and when once used must be immediately burned.

RULE XVIII. Soiled bed and body linen must be placed in vessels and saturated with sulphate of zinc solution, then boiled one hour before removed from the premises.

RULE XIX. The discharges from the patient must be received into vessels containing some known disinfectant, and, if not buried at once, must be thrown into a cesspool or water-closet, but never on the ground, nor into a running stream. Perfect cleanliness on the part of the nurses and attendants is enjoined.

RULE XX. Fumigation with brimstone may be employed for disinfecting the premises. For this purpose the rooms to be disinfected must be vacated. Heavy

clothing, blankets, bedding, and other articles which cannot be treated with zinc solution, must be opened and exposed during fumigation. To disinfect an ordinary room with brimstone: Having tightly closed all openings of the room, place in an open earthen dish, upon a couple of bricks, in a tub partly filled with water, three pounds of brimstone, in powder or small fragments, moistened with a little alcohol, and burn until consumed. After fumigation, the rooms must be thoroughly aired before reoccupation. (See rule XVII)

RULE XXI. All articles which have been in contact with persons sick with contagious or infectious diseases, too valuable to be destroyed, should be treated as follows: Cotton, linen, flannels, blankets, etc., should be put, piece by piece, into a boiling-hot zinc solution, and boiled for at least one hour. Heavy woolen clothing, silks, furs, stuffed bed covers, and other articles which cannot be treated with the zinc solution, should be hung in the room during the fumigation, their surfaces thoroughly exposed; afterward, they should be hung in the open air, beaten, and shaken. Pillows, beds, stuffed mattresses, upholstered furniture, etc., should be cut open, the contents spread out, and thoroughly fumigated. Carpets are best fumigated on the floor, but must afterward be removed to the open air and thoroughly beaten.

RULE XXII. Diphtheritic croup, croupous diphtheria, membranous croup, croup, putrid fever, diphtheritic sore throat, and sloughing sore throat, occurring in communities where diphtheria is prevalent, should be included among the diseases dangerous to public health, and subject to the same precautions as diphtheria. In like manner, patients suffering from or exposed to scarlatina or scarlet rash, or varioloid, should be required to undergo the precautions prescribed for scarlet fever and smallpox, respectively. (See rule xv.)

RULE XXIII. All births and deaths occurring in the practice of physicians shall be reported to the local board of health where the same occur within ten days after the expiration of the month in which they occur, in the manner indicated in the blank forms prepared by this Board from time to time, and distributed through the county health officers; provided, that deaths occurring from infectious or contagious diseases shall be reported, as above described, within twenty-four hours after their occurrence.

RULE XXIV. It shall be the duty of undertakers doing business within the state to keep a record of the burial cases sold by them, and to transmit monthly a record of same to the local board of health or health officer having jurisdiction over the territory in which the case is used.

RULE XXV. No person afflicted with any contagious or infectious disease dangerous to public health shall be admitted into any public or private school. No parent, guardian, tutor or other person having charge or control of children whose residence is infected with scarlet fever, diphtheria, cholera, smallpox or other contagious or infectious disease dangerous to the public health shall allow or permit them to attend any public or private school during the continuance of such infection. No person, until after being successfully vaccinated, shall be admitted into public or private schools or institutions of learning, either in the capacity of teacher or pupil. The vaccination should be repeated after the age of sixteen. The local boards of health shall exercise especial hygienic supervision over the schools and schoolhouses within their respective jurisdictions, and, where hygienic faults are found, said boards shall immediately call the attention of the school authorities thereto.

RULE XXVI. The following rule is made with respect to public institutions: It is respectfully recommended to the Board of Trustees of the State Charitable

Institutions, the several boards of education, the trustees or directors of the several hospitals within the state, the officers and regents of the State University, Normal School, and Agricultural College, and other institutions of higher education, to make or cause to be made, by their health officers or attending physicians, or by one or more experts in sanitary science, at intervals of not exceeding one month, a thorough and critical examination of the institutions under their charge, with special reference to the purity of the water-supply, the disposal of slops and garbage, the draining and sewerage, cellars, cesspools, privy vaults, urinals, pig-pens, and especially sleeping apartments, and also report the same once a quarter to the State Board of Health. It is likewise recommended that the local boards of health exercise especial hygienic supervision over all such institutions within their jurisdiction.

RULE XXVII. The following regulations respecting the disinterment and transportation of dead bodies will be observed: Disinterment of bodies.—The removal of any body from its place of original interment is declared to be a nuisance, dangerous to the public health, and is prohibited unless the same be done under the directions and by permission of the local board of health or health authorities. The disinterment of the body of any person dead of any contagious or infectious disease is strictly prohibited, unless by special authority and upon such conditions as the local board of health or health authorities may impose.

RULE XXVIII. All books, reports and papers of an official character in the hands of the county health officer are the property of the county or state; and all such property in the hands of such county health officer should be, and are hereby required to be, turned over, at the expiration of their term of office, to their successors in office.

RULE XXIX. It shall be the duty of every county health officer to collect and forward monthly returns of deaths, births and marriages reported by the physicians and midwives practicing in his county. It is his duty to see that the law is enforced in cases of neglect to make such reports to him.

RULE XXX. In accordance with section 6665, "It shall be the duty of assessors of personal property in the several townships and wards of cities throughout the state, annually, to collect such information as to marriages, births and deaths as may be required by the State Board of Health, and report the same, at the time and in the manner prescribed by the said Board, to the local board of health." County health officers will see to it that the above section shall be carried out by the assessors, and that the necessary blanks be furnished in due time, as to form, and time as required.

RULE XXXI. The following regulations respecting the transportation of dead bodies for burial beyond the county where the death occurred will be observed: No body which has died of any infectious or contagious disease shall be received for transportation by any transportation company in this state unless it shall have been embalmed by an undertaker holding an embalmer's certificate properly signed by the president and secretary of the State Board of Health. Every undertaker shall enter the number of his embalmer's certificate upon every permit which he fills out. In all such cases the said Board of Health shall require the coupons attached to such permit to be detached and preserved by every common carrier, or the person in charge of any vessel, railway-train or vehicle to which dead bodies shall be delivered for transportation. No permit shall be issued for the transportation of bodies which have died of any infectious or contagious disease except in accordance with the foregoing rule. Any violation of these rules shall subject the offender to a fine of ten dollars for each offense.

RULE XXXII. Whenever any part of this state appears to be threatened with Asiatic cholera, smallpox or other infectious or contagious disease, from any adjoining state or territory, the secretary and executive officer of this Board shall have the power, and it shall be his duty, when requested by the mayor and council of any city of this state or by any local board of health of any city of this state or by the local board of health of any county of this state, to establish and maintain quarantine stations at the limits of the state at such points as may be deemed necessary, and to enforce thereat such rules and regulations as he may adopt and publish for the purpose of preventing or obstructing the introduction or spread of such disease, by the inspection of all persons, places, and things, and the exclusion of all infected or suspected persons and goods, and the purification of all infected places and things. In the interim between the meetings of the State Board of Health, the secretary and executive officer of this Board shall have the same power and authority to adopt and enforce all rules and regulations which may be necessary to prevent the introduction or spread of such disease as is conferred upon the State Board of Health by law.

RULE XXXIII. No person who is suffering from gonorrhoea shall be served in a public bath-room in this state, and no person suffering from syphilis shall be served in any barber shop; such prohibition to continue until six months has elapsed from date of infection.

SMALLPOX, ITS PREVENTION AND RESTRICTION.

Circular issued by Kansas State Board of Health to physicians, health officers, members of local boards of health, and others. Read carefully and preserve for future reference.

OFFICE OF SECRETARY OF STATE BOARD OF HEALTH, TOPEKA, KAN.

Owing to the prevalence during the past four years (1900-1904) of an eruptive contagious disease in many parts of the United States which presents many of the characteristics of smallpox, and yet which is so mild in character that the mortality does not average more than one per cent., many have consequently failed to properly diagnose the disease as a mild form of smallpox. On account of this failure to recognize the true character of the disease, our state has during the last two years passed through two epidemics of smallpox. It is true these two epidemics have not caused the loss of many lives, but they have caused a great deal of suffering, much loss of valuable time, and the expenditure of large sums of money on the part of the state, counties, and municipalities. The disease will undoubtedly reappear in many of the same localities during the coming winter as it has during the past two years. If any laxity is allowed many new localities will be infected. Under the new state law it becomes not only the duty of every practicing physician of this state to report all cases of smallpox to the nearest health officer, but this same obligation rests with equal force upon every citizen in whose family the disease may exist.

Smallpox is a contagious disease, which usually can be suppressed only by the prompt action of the health authorities, assisted by the cooperation of the people. It is the duty of all health authorities to be prompt and vigorous in enforcing such well-advised measures in the care of those who may, unfortunately, become afflicted (and of their families and households) as will prevent any spread of the disease. Under no circumstances must such cases be allowed to go at large, or be sent away to escape the cost and care of their proper treatment.

Concert of action between neighboring towns or communities, whose sanitary

interests are often identical, is strongly enjoined upon the health authorities. Friction, clashing of authority and unnecessary expense may thus be avoided. Where there is no medical man upon a board of health, the advice and cooperation of the county medical officer should be secured; or, if this is impracticable, a competent and legally qualified physician should be employed. If a district or locality becomes seriously infected, better work will be secured, with less danger of the contagion being spread, if such district or locality be put in charge of one medical officer, instead of allowing several physicians to visit individual patients or families. Such officer should be selected not only for his medical skill and experience, but also for his knowledge and ability as a sanitary executive.

Local boards and authorities are strongly advised against the policy of concealment. Smallpox cannot be suppressed by denying its existence. It will out, more certainly than murder. Official reticence in this is not only useless to protect commercial interests and reputation, but is in the highest degree mischievous, in that it begets false confidence which may lead the innocent and unwary into such danger as an honest announcement of the facts would have warned them to avoid. Insist upon prompt publicity in every instance.

County and municipal health boards should report at once the presence of each case of contagious disease to the State Board. Should the disease assume the proportions of an epidemic, all public assemblies, such as churches, schools, and gatherings of any kind, should be interdicted by the authorities. The law demands that this shall be done.

When a case appears, immediately enforce strict isolation and quarantine of the patient, and this should be continued for at least two weeks after the recovery of the case, and after the crusts have all separated. When the patient cannot be removed to a hospital, but must remain in a private house, secure a room, if possible, on the uppermost floor, and remove from it all articles and furnishings which will not absolutely be needed. For a nurse, have some person who has been recently and successfully vaccinated or who has had smallpox. Keep all others away from the room. All other persons in the house and neighborhood should be immediately be vaccinated.

During the past four years many disputes have arisen, between both physicians and the laity, concerning the character of the disease. It has erroneously been called "chicken-pox," "Puerto Rican chicken-pox," "elephant itch," "Cuban itch," "the bumps," "the yaws," etc. Such contentions are both useless and dangerous. The law of this state requires the reporting of all contagious diseases dangerous to the public health. No physician who values his reputation will deny the contagious character of the disease. Even if all cannot agree upon the name of the disease, we are agreed upon its contagious character, and under the law it becomes our duty to report the same to the nearest health officer, so that the public health may be properly protected. The following expressions from competent authorities may be of value.

William M. Welsh, M. D., of Philadelphia, in a circular issued by the Pennsylvania State Board of Health, is quoted, in substance, as follows:

"After a careful examination, I have no hesitation in saying that the disease about P. t. s. b. u. r. g. is smallpox. It is extremely mild in character; so mild that many of the more usual symptoms are either absent or so indistinctly marked as to be overlooked. No weight should be given to the absence of the so called characteristic smallpox odor, or of the secondary suppurative fever."

"The observation of the marine hospital bureau has been that in the majority of mistaken diagnoses with regard to smallpox the disease has been called chicken-pox. This is more strictly a disease of children, affecting especially those under six years of age. Chicken-pox is a contagious disease, and many

local health authorities require its isolation. Particularly when smallpox is prevalent, any case of supposed chicken-pox should be isolated and guarded as if it were smallpox; at least until the diagnosis is proved beyond doubt."—*Precis upon the Diagnosis and Prevention of Smallpox, U. S. Marine Hospital Service, 1899.*

"I am aware of no disease called 'Cuban itch' which could be mistaken for smallpox. There are several erythemic eruptions in Cuba called 'Cuban itch,' but they are prickly heat or ringworm."—Surgeon General U. S. Hospital Service, to Illinois State Board of Health, December 7, 1899.

"If an eruptive disease appears in a district, it is the duty of the authorities to learn the nature of that disease, and, if it seems contagious, it should be isolated. If a doubt exists, an expert should be called to settle the diagnosis. All cases of so-called 'chicken-pox,' 'Cuban itch,' 'elephant itch,' 'nigger itch,' and the like, should be at once isolated; in nine out of ten cases these prove to be smallpox."—Public Health Reports, U. S. Marine Hospital Service.

"There is no type of chicken-pox which is peculiar to the island of Puerto Rico; there is no such disease as Puerto Rican chicken-pox. A chicken-pox-like eruption in adults almost certainly indicates smallpox."—The Illinois State Board of Health.

"The prevalent epidemic is one of smallpox (*variola*). To refuse to accept this fact is to be guilty of egregious folly and to commit a dangerous blunder. Fortunately, the symptoms thus far exhibited have been those of modified or mitigated smallpox. The question of chief interest thus awakened concerns chiefly the difference to be established between unmitigated, unmodified smallpox (so-called *Variola vera*) and the mild or mitigated form from which so large a number of our people have lately suffered. The history, symptoms and career of unmodified smallpox have been so systematically and fully recorded in medical literature that it will be needless in these pages to recount them. They are equally accessible to physicians and to laymen in the pages of standard treatises devoted to the subject."—James Nevins Hyde, M. D., in an open letter to the State Board of Health of Illinois, 1900.

"*Variola benigna*.—Van Swieten and others have described a form of natural smallpox under the title *Variola verrucosa*, or cornea, stone-pock, horn-pock, and wort-pock, which we sometimes see in these days, and in which the disease is of a mild, modified character. It is ushered in with symptoms as severe as in the dangerous, confluent form, but on the third or fourth day of eruption all the severe symptoms begin to subside; the eruption assumes a modified form, such as we constantly see in post-vaccinal cases. We have often had an opportunity of observing this form of the disease in children whose mothers were at the hospital with them, and who knew perfectly well no attempts had been made at vaccination. The pustules are of unequal size, some shriveling and dying off while others are maturing; there is no secondary fever, and no pitting. These are examples of mild natural smallpox, such as have occurred no doubt at all periods to a few favored individuals, and which, fortunately for the objects attacked, the disease leaves no trace behind."—Reynolds's System of Medicine, 1879.

"Even the mildest form of modified smallpox in one person may cause pure hemorrhagic smallpox in another, and *vice versa*."—Allbutt's System of Medicine, 1897.

"It must not be forgotten that an unprotected person may contract a very virulent form of the disease from the mild varioloid."—Osler's Practice of Medicine, 1898.

"There is no relation between the severity of the type of the disease in the individual who is the source of the infection and in the individual who receives it. The lightest case may cause the most malignant, provided the susceptibility or predisposition of the victim who receives the infection is strong. On the other hand, the most severe confluent or malignant case may give rise to a very mild attack in a person whose susceptibility or predisposition is slight."—Twentieth Century Practice of Medicine, 1898.

At the June meeting (1901) of the American Medical Association a symposium was held, at which the nature of the eruptive disease now prevalent in the

country was carefully and thoroughly discussed, and it was unanimously decided that the disease is smallpox.

Smallpox must be stamped out in this state at whatever cost. The very first case which appears in any community must be properly quarantined and isolated, if the community would save itself an epidemic and commercial and financial loss. Three things ought always to be observed to handle smallpox successfully, viz., vaccination, isolation, and disinfection. If these requirements are rigidly enforced smallpox can be controlled.

VACCINATION.

(From Public Health Reports.)

The most efficient means for preventing the spread of smallpox is by vaccination. The protection, provided the virus is pure, is believed to be as complete against contagion as is that of smallpox against a second attack, though not of as long duration, but revaccination, whenever smallpox is prevalent in a community, will continue this protection indefinitely. Therefore, the first measure after isolation of a person suffering with smallpox is the immediate vaccination of all persons who have been exposed to the disease and revaccination in five or six days, if there is no indication of the previous virus having been effective.

In order to secure pure vaccine the supply should be obtained from an accredited source, and as bovine virus only is now used, the dangers which heretofore existed from arm-to-arm vaccination are eliminated.

The operation of vaccinating a person, although fairly well understood, may be briefly described as follows:

Usually, the left arm above the middle third is selected, although in some cases the wishes of the person receiving it may be consulted. The part to be vaccinated is bared and the skin rendered aseptic by means of soap and water and alcohol, after which, if a needle or lancet is used, it should first be passed through a flame or sterilized by means of alcohol, and the part scarified in one or more places. The virus is then rubbed in. Of course, it is understood that the same needle shall be used on but one person, and, if a lancet is used, it should be sterilized for each case. If the vaccination has been successful, it will be found that in the course of three or four days a small papule will appear, which soon after becomes vesicular, and is surrounded by a circumscribed areola; this gradually increases until the seventh or eighth day. In the meantime a crust forms, which in due course falls off, leaving the characteristic scar, resembling the pits of smallpox, the whole process occupying about three weeks.

Due care should be exercised to prevent the vaccination from being irritated or the "seal" from being broken, and to prevent the wound from becoming infected. A vaccine shield is best for this purpose, and it is recommended that one, provided by the dealers or improvised, be used; but if a vaccine shield is not used, care should be taken, as above stated, to prevent the breaking of the "seal" and undue rubbing of the part by the clothing. Adhesive plaster should not be used for this purpose.

In the communities where compulsory vaccination is not required for children going to public schools, it will frequently be found that a large proportion of the pupils, unless an epidemic of the disease has recently occurred, have not been vaccinated, and it is among these that smallpox is more apt to be spread.

ISOLATION.

1. *Suspects:* Cases of illness suspected of being smallpox or chicken pox should be isolated and kept away from others until the character of the illness is determined. This applies equally to those who have been exposed to small-

pox, having a fever at the end of the period of incubation, and to those suffering from an eruption.

2. *Cases:* When the character of illness is determined to be smallpox, isolation of the patient should be continued, so that there will be no danger of the disease spreading from the case. Isolation is best accomplished in places especially prepared for the purpose. A hospital or lazaretto for smallpox should be located at least 2000 feet distant from, and to leeward of, habitations—prevailing winds being considered. It is possible under the most favorable circumstances to isolate a smallpox case in a house or residence, but it is not to be recommended. Accidents usually attendant on such isolation are responsible for new food of the disease among the adjacent residents.*

3. *Provisions for treatment of cases:* On removal of cases to a hospital or lazaretto, ample provision should be made for their care and treatment, and the patients should be provided with as many comforts as possible. In fact, these comforts are required by reason of the nature of the disease, and neglect of proper care will result fatally.

Case of varioloid, or smallpox modified by vaccination, should always be treated in the same manner as the virulent type; these cases are equally dangerous, if not more so, from a sanitary standpoint.

As soon as a case of smallpox has been removed from a house or apartment, immediate steps should be taken to prevent the spread of the disease through these agencies. A disinfection of all infected material should be performed at once. Those persons who have been in direct contact with the case, or have been exposed to the infection otherwise, should be immediately vaccinated, unless they have been protected by a recent successful vaccination, or have had the disease.

Persons who have been exposed to the disease should be considered under two classes:

1. Those who have been exposed but once to the infection and are immediately vaccinated. These should be kept under observation until there are unmistakable evidences of the success of vaccination, when they can be discharged from further surveillance.

2. Persons who have been exposed to smallpox and several days (over four) have elapsed before vaccination. They should be kept under observation until the period of incubation has passed. The period of incubation should be considered to date from the time of vaccination.

Persons who have been exposed to smallpox should be kept under the observation of a physician, who should inspect them at least once daily during the period of incubation. These persons are not infectious until after the initial fever appears, and then slightly so in the first forty-eight hours—that is to say, before the eruption makes its appearance on the mucuous membrane and skin.

Suspects should be kept under observation. Under certain circumstances this may best be done by segregating them in observation camps or hospitals. Under other circumstances it may be done by surveillance at their residences.

Cases of smallpox under treatment should not be discharged until the process of desquamation is complete. This is variable, depending entirely on the case. A safe rule is to await the disappearance of the peculiar red specks at the bottom of the pits or scars. So long as this condition is present, desquamation is going on.

* The various departments of a smallpox hospital, in which cases of the disease and suspects are confined, should be thoroughly isolated from each other, so that there will be no danger of the suspects being exposed anew to the infection.

On the termination of the case in recovery, the patient should be given an antiseptic bath (1-1000 bichloride of mercury) followed by a second bath of water, and then provided with sterile clothing.

Cases dead of the disease should be encased in sheets saturated with a strong antiseptic, preferably bichloride of mercury (1-500), enclosed in a metallic casket hermetically sealed, and immediately buried. Cremation is also recommended. It is needless to add, funerals, public or private, are interdicted. Burials should be conducted under the direction of the board of health officers.

DISINFECTION.

The measures to be put in practice for disinfection are the same in general as those applicable to other infectious diseases, and may be considered under the following: (1) Disinfection of infected premises. (2) Disinfection of the person and his belongings.

Premises: On the removal of a patient from a house or apartment, it is always best to have the contents of the room remain *in situ* while a preliminary disinfection is given. The object of this is to reduce the danger in handling the disinfected articles, preliminary to their final and complete disinfection.

Room and contents: This may be accomplished by one of the following methods: (a) By formaldehyde gas,* in not less than four per cent. strength, for not less than twelve hours; (b) by exposure to sulphur dioxide for twenty-four hours, four pounds of sulphur to each 1000 cubic feet, plus due allowance made for waste.

At the end of the time specified, the apartment and its contents should be arranged for a final disinfection. (a) The room should be made as air-tight as possible. (b) Clothing, bedding (exclusive of pillows and mattresses), hangings and carpets should be so arranged as to permit all surfaces to be freely exposed to the action of the gas, and then exposed to either (1) formaldehyde gas in not less than four per cent. volume strength, for not less than twelve hours, or by (2) sulphur dioxide for twenty-four hours, by burning not less than four pounds of sulphur to each 1000 cubic feet, plus due allowance made for waste.

Disinfection of a room can be also performed by wetting the walls, ceiling and floor with an efficient germicidal solution.

It is impracticable to thoroughly disinfect feather pillows and feather beds by either formaldehyde or sulphur dioxide. It is recommended that where there is no apparatus for disinfecting fabrics, etc., these should be destroyed by burning. Where it is practicable to do so, it is recommended that clothing, bedding, carpets, articles of furniture and the like be disinfected by—(a) Exposure to steam at a temperature of 100 to 102 degrees C. for thirty minutes. (b) Boiling, the article to be completely submerged. (c) Saturation with an efficient germicidal solution. (d) Thoroughly wetting the surfaces of the article with a 40-per-cent. aqueous solution of formaldehyde, and confining it in a small closed space for not less than twelve hours (applicable for upholstered furniture). The commercial preparations known as formol, formalin, formalose, are 40-per-cent. solutions of formaldehyde. (e) The application of formaldehyde gas in a special apparatus for this purpose.

Disinfection of a person and his belongings: As previously referred to under the head of isolation, cases recovered from smallpox should be given a bath with an efficient germicide, and special care should be taken to see that the hair is thoroughly washed, particularly in the case of negroes

*If formaldehyde gas is used, evaporate at least eight ounces of formaldehyde for every 1000 cubic feet.

Clothing, bedding and articles used in the care and treatment of the sick should invariably be disinfected in the manner as outlined, or be destroyed by fire.

The dejecta of smallpox patients should be disinfected by bichloride of mercury solution, 1-500; carbolic acid solution, 1-49; trikesol in solution, 1-100; solution of chlorinated lime, or milk of lime.

As the contagium of smallpox will live for a great many years, no one knows how long, it is absolutely necessary that the infected premises, together with household goods and furnishings, be thoroughly disinfected after the disease has run its course.

The state laws give ample authority to health officers to compel the reporting of smallpox cases, and if properly observed and enforced the disease will be prevented from spreading to new localities, and controlled in the localities where it has existed heretofore. The State Board of Health will instruct all law officers to enforce the law relating to public health against all violators of the same, whether they are physicians or householders. All health officers are hereby instructed that it is their duty to cause the arrest of any and all persons who fail or neglect to report all cases of smallpox. One or two successful prosecutions in a community will beget respect for law.

All dogs, cats and other pet animals exposed to the disease should be killed and burned.

Whenever a case of smallpox is found on any railway-train, passenger coach, or other public vehicle or conveyance, it is the duty of the health officer whose attention is called to the case to have the car so infected immediately set out on a side-track, a suitable distance from other habitations, to be used as a temporary smallpox hospital. The passengers in the infected coach or car should be thoroughly disinfected before they are allowed to continue their journey. When the smallpox case is removed from the coach or car the vehicle must be disinfected. If the city or county has a smallpox hospital, the patient should be removed to that hospital, if the life of the patient is not endangered by such removal. Health officers are authorized by law as to the above procedure.

S. J. CRUMBINE, M. D.,

Secretary and Executive Officer, Kansas State Board of Health.

E. P. MILLS, M. D., *President.*

RESOLUTIONS, RECOMMENDATIONS, AND INSTRUCTIONS.

RESOLUTIONS OF THE BOARD.

Resolved, That a sanitary inspector for each county be appointed by the Board to make volunteer reports of the sanitary condition of their respective counties to the State Board of Health, as often as may be deemed necessary by the State Board, or oftener if deemed necessary by said inspectors.

Resolved, That we, the State Board of Health, earnestly recommend that all school boards of cities of the first and second classes elect or appoint a sanitary school inspector for the schools of their respective cities, who shall inspect and report to said school boards upon all matters pertaining to sanitary measures affecting the health of said schools.

Resolved, That the time of quarantine of all contagious diseases, or diseases dangerous to the public health, be such time as in the judgment of the city or county health officer it may appear safe to raise the quarantine after the house and premises have been fumigated according to the requirements of the quarantine law.

Resolved, That in the opinion of this Board cases of whooping-cough, during the contagious stage, should be excluded from the public schools and other places of public assembly.

RECOMMENDATIONS.

The State Board of Health recommends that the several county health officers receive as compensation, according to size of county and duties to be performed, not less than \$25 per annum, to \$350; and that they be required by the county boards of health to perform their duties promptly and faithfully.

Health officers are requested to give the above the widest practical publicity among those concerned. Before instituting legal proceedings for the collection of death reports, the health officer should be prepared to prove conclusively, in a given case, that a copy or notice of said rule 23, as given herein, had been delivered personally, or given to the mails for transmission, to the delinquent before the date of the delinquency charged, and that he had, in like manner, supplied or offered to supply the delinquent with the necessary blank forms. An account should be kept with all parties to whom you are required by law to distribute forms, and in making future issues notify all concerned of the above requirements until they be duly informed.

Prosecution for the collection of death returns must be instituted within sixty days of the date of the death. It therefore devolves upon the health officer to call upon the delinquent promptly after the 10th of each month.

DUTIES AND POWERS OF LOCAL BOARDS OF HEALTH.

The following instructions are published by the State Board of Health for the purpose of acquainting local boards with the nature and extent of their duties and authority, and to define their relation to the State Board, that there may be substantial uniformity in the administration of the health laws of the state. In every county of the state there exists a local board of health. The law reads:

"Sec. 11. The county commissioners of the several counties of the state shall act as local boards of health for their respective counties. Each local board thus created shall elect a physician, who shall be, *ex officio*, a member of the board, and the health officer of the same. . . ."

It makes no difference as against this fact that, in some counties, no formal organization has thus far been effected, and no meeting of the board held. The responsibility, in case of disaster, is with them. It was not the intention to create local boards of health for a merely nominal existence; they have duties to perform.

The boards thus created are subordinate to the State Board, which has prepared rules for their guidance. Such rules should be formally adopted, and enacted by ordinance or otherwise; and it is the duty of each board to formulate and adopt such additional rules and regulations as may be necessary to meet special conditions. All rules must be duly published.

INSTRUCTIONS AND SUGGESTIONS TO COUNTY HEALTH OFFICERS.

It is required by law, under certain prescribed penalties, that upon the appointment of a health officer he shall report the fact, with his post-office address, to the State Board of Health, and that he shall thereafter perform such duties as his local board or the State Board may require of him. Among these duties is the prompt distribution of all forms from the State Board to the rightful persons, and the transmittal of returns from physicians, assessors and other local boards (including those existing by municipal regulations) to the State Board; the transmittal to the State Board of copies of the reports and publications of his board, and such sanitary information as may be useful to the people of the state.

The law constitutes him the medium of communication between all local boards of health (including those existing by municipal regulation) within his county and the State Board of Health.

The health officer is a member of the board of health of his county by virtue of his office. He should also be its secretary, sanitary adviser, and executive officer. His powers, when not expressly stated in the statute, are only such as are conferred by his board. They should, therefore, be fully and clearly defined by resolutions or orders. He should be duly empowered to act in emergencies, as has been heretofore suggested.

As the sanitary adviser of his board, he will have influence in determining the action of the board in proportion to his knowledge of sanitary science and his honest effort for the promotion of the public health. He should make himself thoroughly acquainted with the health laws of the state and rules of his board and of the State Board of Health. With this knowledge, if he be a trained physician, he will be equipped for service.

The reports of the health officer are a part of the records of the State Board, to be kept for future reference and comparison with future conditions which will arise respecting their localities. This fact should stimulate him to contribute all that is possible to be obtained upon the subjects presented.

The following are suggested as the health officer's most important duties, viz.:

To order the prompt and thorough isolation of those sick or infected with contagious disease, so long as there is danger of their communicating the disease to other persons. The key-note of safety in such cases is the immediate, thorough and continued separation of the sick from the well.

To order the prompt vaccination and isolation of persons who have been exposed to smallpox.

To see that no person suffers for lack of nurses, or other necessaries, because of isolation for the public good.

To give public notice of infected places, by newspaper notice and placard on the premises, and otherwise if necessary; and to disseminate the rules for disinfection, etc.

To promptly notify teachers or superintendents of schools concerning families in which are contagious diseases; to exercise especial hygienic supervision over the schools and schoolhouses within his jurisdiction.

To supervise funerals of persons dead from scarlet fever, diphtheria, smallpox, or other communicable diseases which endanger the public health.

To determine what shall be considered nuisances prejudicial to health, and to take measures for their abatement or removal.

To be vigilant as to violations of the law governing the sale or exposure for sale of adulterated or unwholesome articles intended for food or medicine; adulterated or watered milk should especially receive his attention.

To investigate the condition of buildings with reference to means of escape in case of fire, and to report such as are found unsafe.

To notify parties liable to suffer in health from impure water, the source of which is near cesspools or privies or other accumulation of filth, or is polluted by sewage or other contaminations, and to make preliminary tests of such water when necessary.

To collect, tabulate, and transmit to the State Board of Health, as may be required, the various reports and returns as to the births, deaths, marriages, registration of physicians, and sanitary conditions pertaining to his county.

In the performance of these various duties, valuable suggestions will be afforded by an examination of the rules adopted by the State Board and the

health laws of the state. It is expected that he will fully communicate with the Board as to questions that may arise in connection with the performance of his duties, especially as to what measures he has inaugurated in the interests of public health, [the nuisances abated, etc.

DISINFECTANT.

Formaldehyde is now the approved disinfectant for all surface disinfection.

MISCELLANEOUS LAWS OF IMPORTANCE TO HEALTH OFFICERS.

PROHIBITING THE SALE OF MORPHINE, COCAINE, AND CHLORAL.

General Statutes of 1901, § 2349.

2349. Any person, company or corporation who shall sell, trade or give to any other person any morphine, cocaine or chloral except upon the prescription of a physician shall be deemed guilty of a misdemeanor, and shall upon conviction be punished by a fine of not less than \$25 nor more \$100, or by imprisonment in the county jail for a period of not less than thirty days nor more than ninety days, either or both, in the discretion of the court.

NUISANCES.

General Statutes of 1901, page 493.

2351. *Dead animal into well, etc.* If any person or persons shall put any dead animal, carcass, or part thereof, into a well, or into any spring, brook or branch of running water, of which use is made for domestic purposes, every person so offending shall, on conviction thereof, be fined in any sum not less than \$2 or more than \$100.

2352. *Slaughter-houses.* If any owner or owners, occupier or occupiers of any slaughter-house, or of any premises where hogs, beeves or other animals are slaughtered, shall permit the same to remain unclean, to the annoyance of the citizens of this state, or any of them, every person so offending shall be fined for every such offense any sum not less than five dollars nor more than fifty dollars; and if such nuisance be not removed within five days thereafter, it shall be deemed a second offense against the provisions of this act; and every like neglect of each succeeding five days thereafter shall be considered an additional offense against the provisions of this act.

2353. *Soap factories, etc., unclean.* If any owner or owners, occupier or occupiers of any soap factory, candle factory, oil factory, glue factory, varnish factory, pork house, sausage house or lard house shall permit the same to remain unclean, to the annoyance of the citizens of this state, or any of them, to a greater extent than is required for the necessary prosecution of their business, every person so offending shall be fined for every such offense any sum not less than \$10 nor more than \$100; and if such nuisance be not removed within five days thereafter, it shall be deemed a second offense against the provisions of this act; and for every like neglect of each succeeding five days thereafter, shall be considered an additional offense against the provisions of this act.

2354. *Carcass into river, creek, etc.* If any person or persons shall put any part of the carcass of any dead animal into any river, creek, pond, road, street, alley, lane, lot, field, meadow, or common, or if the owner or owners thereof shall knowingly permit the same to remain in any of the aforesaid places, to the injury of the health or to the annoyance of the citizens of this state, or any of them, every person so offending shall, on conviction thereof before any justice of the peace of the county, be fined in a sum not less than one dollar nor

more than twenty-five dollars; and every twenty-four hours during which said owner may permit the same to remain thereafter shall be deemed an additional offense against the provisions of this act.

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INOCULATING WITH SMALLPOX.

General Statutes of 1901, page 481.

2280. If any person shall inoculate himself or any other person, or shall suffer himself to be inoculated with the smallpox, within this state, with intent to cause the prevalence or spread of this infectious disease, he shall be punished by imprisonment in the state prison not more than three years nor less than one year.

DRAINAGE.

General Statutes of 1901, page 538.

2535. That the township trustee of any township in this state shall have power, whenever in his opinion the same is demanded by or will be conducive to the public health, convenience, or welfare, to cause to be established, located, and constructed, as hereinafter provided, any ditch, drain or watercourse within such township.

WATERCOURSES — MAY BE CHANGED, ETC.

General Statutes of 1901, page 232.

999. The council may establish, alter and change the channels of water-courses, and wall them and cover them over; and may establish, make and regulate public wells, cisterns, aqueducts and reservoirs of water, and provide for filling the same.

PROHIBITING THE DISCHARGE OF SEWERS WITHIN CERTAIN DISTANCE OF WATER SUPPLY.

General Statutes of 1901, pages 173, 174.

741. The mayor and council of any city of the first class shall have power and authority to construct flushing ditches or conduits, discharging sewers or outlets for sewers, and to connect the same with any creek or river at any point within five miles of the corporate limits of the city, and for this purpose the right of eminent domain is hereby granted to cities of the first class.

743. . . . Provided, that no sewer shall be permitted to empty into any stream from which a water-supply is obtained within three miles above the point where said water-supply is obtained.

CONTAGIOUS DISEASES—QUARANTINE.

General Statutes of 1901, page 233.

1002. The council may make regulations to prevent the introduction of contagious diseases into the city, may make quarantine laws for that purpose, and enforce the same within five miles of the city.

(A city of the second class has power through proper ordinances to contract with persons to perform services at a place used substantially as a pest-house during a smallpox epidemic and to pay for infected bedclothing and other articles taken by the city. City of McPherson v. Nichols, 48 Kan. 430.)

SELLING DISEASED ANIMALS.

General Statutes of 1901, page 490.

2331. Any person being the owner of any domestic animal or animals, or having the same in charge, who shall turn out or suffer any such domestic animal or animals having any contagious or infectious disease, knowing the same to be so diseased, to run at large upon any unenclosed land, common, or highway, or shall let the same approach within 100 feet of any highway, or shall sell or

dispose of any domestic animal or animals, knowing the same to be so diseased, without fully disclosing the fact to the purchaser, shall be deemed guilty of a misdemeanor, and shall be punished by a fine in any amount not exceeding \$500 or imprisoned in the county jail not more than six months.

2332. Any person violating any of the provisions of this act, in addition to the penalties herein provided, shall be liable for all damages that may accrue to the party damaged by reason of said diseased animal or animals imparting disease.

STATE UNIVERSITY AND AGRICULTURAL COLLEGE TO MAKE ANALYSIS OF FOOD PRODUCTS.

Chapter 482, Laws of 1905.

AN ACT prescribing duties of the chemistry departments of the State University and the State Agricultural College, and state, county and city boards of health.

Be it enacted by the Legislature of the state of Kansas:

SECTION 1. It shall be and is hereby made the duty of the departments of chemistry of the Kansas State University and State Agricultural College, of the state of Kansas, to make a thorough and complete analysis of all samples of food products and beverages manufactured or prepared for domestic use sent to said chemistry departments by the State Board of Health, or any county or city board of health of the state of Kansas, and make a report to the State Board of Health, giving a correct analysis of all such samples of food or beverage, together with the name of the article or sample analyzed, and of the manufacturer thereof, when the same is known to the state chemist in charge.

SEC. 2. It shall be the duty of the State Board of Health to make a record of the reports received from the said chemistry departments of the said Kansas University and State Agricultural College, and said State Board of Health shall have compiled and printed quarterly, and a copy thereof sent to each county and city board of health within the state of Kansas. Said Board of Health shall examine said reports and analyses therein contained, and in all cases wherein any impure or poisonous substance is contained, detrimental or injurious to the health of those consuming or using the same as food or drink, said Board of Health shall publish and cause to be made public the name of the article or articles so found to be impure and injurious to health and the name of the manufacturer thereof, where the same can be ascertained, the same to be published in the official county paper, and paid for as other county or city printing.

SEC. 3. This act shall take effect and be in force from and after its publication in the official state paper.

Approved March 4, 1905.

Published March 15, 1905.

DECISIONS OF ATTORNEYS-GENERAL.

AUGUST 16, 1897.—In reference to the enforcement of the law and rule 23 of the State Board of Health, concerning *death reports* :

"The law above referred to provides a penalty for failure to comply with its requirements, namely, a fine of ten dollars for each and every offense. Paragraph 6037, General Statutes of 1889 (sec. 16, ch. 75, 1897), imposes upon the county attorney the duty of conducting all prosecutions under said act. In case of neglect or refusal of any practicing physician to perform the duties imposed by said law, the local board of health or the health officer of said board may lodge complaint with the county attorney, whereupon it becomes the duty of said county attorney to prosecute. That would be, in my opinion, the advisable course for a county health officer to pursue, in order to procure the enforcement of the requirements provided by section 13, chapter 75, 1897, in regard to practicing physicians. In order to enforce the performance of his legal duties by the health officer, complaint might be in like manner lodged with the county attorney by the local board.

"As to whether rule 23, as published in the Eleventh Annual Report of the State Board of Health, exceeds the authority delegated by sections 8 and 9, chapter 75, General Statutes of 1897, to the State Board of Health, sections 5 and 6, chapter 75, General Statutes of 1897, authorize the State Board of Health to make, adopt and publish such rules and order of business as may be necessary to make the act effective and facilitate the transaction of its business.

"Rule 23, as published in the Eleventh Annual Report of the State Board of Health, is clearly in harmony with the provisions of section 9, chapter 75, General Statutes of 1897, and said paragraph provides a penalty for non-compliance therewith. The statutes provide the means of enforcing said rule 23.

L. C. BOYLE, *Attorney-general.*"

JULY 15, 1898.—In reference to the proper course to pursue to compel a county health officer to comply with the statutes of the state respecting his duties :

"The law provides that the county commissioners of the several counties shall act as local boards of health for their respective counties. Each such local board is directed to elect a physician, who shall be *ex officio* a member of said local board and the health officer of the same. Said health officer holds his office during the pleasure of the board, and he may be removed for just cause at any regular meeting of said board by a majority of the members (exclusive of the health officer) voting therefor. (Sec. 11, ch. 75, Gen. Stat. 1897.)

"Section 12 of said chapter 75 provides as follows regarding the duties of such local health officer, his compensation, and the penalty for failure or neglect to perform the duties therein prescribed :

"The health officer of the several local boards of health throughout the state, immediately after his election, shall notify the State Board of the fact, and give his post-office address. He shall receive and distribute, without delay, in the county for which he is appointed, all forms from the State Board of Health to the rightful persons, and all returns from physicians, assessors and local boards to the said State Board of Health, and he shall perform such other duties as this act, his local board or the State Board of Health may require of him. He shall receive for his services such reasonable compensation as his board may allow, to be paid out of the county treasury. And, for any failure or neglect of said health officer to perform any of the duties prescribed in this act, he shall, upon conviction thereof, be fined ten dollars for each and every offense."

"From the foregoing, it appears that the local health officer may be removed at any regular meeting of the local board by a majority vote of the members thereof (exclusive of said health officer), and for neglect of his official duties may be punished by a fine of ten dollars for each and every offense of which he shall be convicted. But before such fine can be adjudged against him he must be

legally convicted by a competent court, upon information or complaint specifically setting up the offense or offenses upon which he is to be prosecuted. It is the duty of the county attorney of the county in which the offense is committed to prosecute the same when called upon so to do.

L. C. BOYLE, *Attorney-general.*"

NOVEMBER 30, 1898.—Enforcement of rule 30 of the State Board of Health:

"It shall be the duty of every county health officer to collect and forward monthly returns of deaths, births and marriages reported by physicians and midwives practicing in his county. It is his duty to see that the law is enforced, in cases of neglect to make such reports to him."

"It is my judgment, where the statute gives the State Board of Health express authority to make rules and regulations, that the Board, under those circumstances, have full power to make these rules. The only way of enforcing a rule, when made by the State Board, is by a penalty which the legislature may have fixed at the time it gave the State Board the authority to enact these rules and regulations. With this thought in view, we will examine section 12 of chapter 75, Compiled Laws of 1897, which said section reads as follows, to wit:

"The health officer of the several local boards of health throughout the state, immediately after his election, shall notify the State Board of the fact and give his post office address. He shall receive and distribute without delay, in the county for which he is appointed, all forms from the State Board of Health to the rightful person, and all returns from physicians, assessors and local boards to the said State Board of Health, and he shall perform such other duties as this act, his local board or the State Board of Health may require of him. He shall receive for his services such reasonable compensation as his board may allow, to be paid out of the county treasury, and for any failure or neglect of said health officer to perform any of the duties prescribed in this act he shall, upon conviction thereof, be fined ten dollars for each and every offense."

"By carefully analyzing the section just quoted, it is clear to my mind that the health officer of the several local boards of health throughout the state is required to perform such duties as his local board or State Board may require of him; that is, such duties as would naturally be connected with the official position which he has assumed to occupy. This being true, it would not be any stretch of imagination, in my judgment, to say that his duty should be to see that the law is enforced in reference to the reports of deaths, births, and marriages. If he fails to do this, as prescribed in rule 30, after the same is called to his attention, I know of no reason why he should not be punished as provided in said section 12 above referred to; that is to say, for any failure or neglect of said health officer to perform any of the duties prescribed in this act he shall, upon conviction, be fined ten dollars for each and every offense.

L. O. BOYLE, *Attorney-general.*"

APRIL 10, 1899.—As to what means there is to compel county commissioners to appoint a county health officer:

"Your favor to-day, stating that certain county boards have failed to appoint county health officers, as required by section 11 of chapter 25, General Statutes of 1897, and inquiring what remedy there is, is at hand. Replying, I beg to state that, unless the county boards will appoint, as required, upon suggestion to them from you, the only remedy I know of to compel appointment is by an action in mandamus, and would suggest that, upon refusal of any county board to so appoint, you confer with the county attorney, with a view to compel action by such board.

A. A. GODARD, *Attorney-general.*"

TOPEKA, November 23, 1901.

Mr. W. G. Bissell, County Attorney, Phillipsburg, Kan.:

DEAR SIR—I beg to acknowledge receipt of yours of the 22d inst. Below I state your questions, followed by the answers which I desire to give:

"1. What is a regular meeting of the board of health, as contemplated by section 6382, General Statutes of 1899?"

Answer. The board of county commissioners is not the board of health as contemplated by the health statute. The individual members of the board of county commissioners are the persons who constitute the health board. By regularly organizing the board of health and adopting lawful rules and regulations, a regular time for meeting might be fixed. The laws providing for the regular meetings of the board of county commissioners as such do not necessarily govern as to what shall constitute a regular meeting of the board. But if no rules and regulations have been adopted fixing the time for regular meetings of the board of health, and if, by customary usage, the regular meeting time of the board of county commissioners has heretofore been adopted and employed as a regular meeting time for the board of health, such custom or usage will fix the time of the regular meeting. A regular meeting may be distinguished from a special meeting by the fact that it is held in obedience to an unvarying custom or law; whereas, a special meeting is held irregularly, in response to some special motion or action of a member of the board or other person.

"2. Would the refusal of the county commissioners to make any allowance to the health officer beyond his regular salary of \$12.50 per annum, and their neglect to investigate without delay a reported case of smallpox, be a violation of section 3, chapter 285, Laws of 1901, that would lay them liable criminally?"

Answer. This question must be divided: (a) The refusal of the commissioners to make any allowance to the health officer beyond his regular salary, if done in good faith, would not lay them liable criminally. (b) If, upon obtaining knowledge of a case of smallpox within their jurisdiction, the commissioners should fail to immediately exercise and maintain a supervision over such case during its continuance and to otherwise follow the direction of section 3, chapter 285, Laws of 1901, they would be liable to a fine under such statute.

"3. Could the county board of health compel the health officer of the county, who is employed for a salary of fifty dollars per annum, to do 'the routine work' of the office, to look after and maintain quarantine, without additional compensation?"

Answer. I think the county health officer must perform such duties as are enjoined upon him by law and such as his local board or the State Board of Health may require of him. As to compensation, that must depend upon the contract in each particular case, and where there is no contract, then upon what a jury shall determine to be "reasonable compensation." I would say that a contract to perform "routine work" does not cover the performance of services incidental to the control and management of an epidemic of smallpox.

Yours very truly, A. A. GODARD, *Attorney-general.*

AUGUST 31, 1904.—"Has the State Board of Health power to enforce their published rules for the transportation of dead bodies?"

The State Board of Health has the authority to enforce their published rules relative to the transportation of dead bodies for burial. That section provides that any person in charge of a railway-train, vessel or other vehicle transporting a body in violation of such rules is liable to a fine of ten dollars.

"What power, if any, has the state or local board of health in cities of the first and second class to condemn as nuisances stagnant pools of water, and to compel removal or drainage of same?"

The statute gives cities of the first and second class abundant authority to enact all proper and necessary ordinances to remove, abate and prevent nuisances and to protect the health of the community. Section 56, page 188, Laws of 1903, confers this authority on cities of the first class, and section 1001, General Statutes of 1901, on cities of the second class.

"Who is the proper authority to enforce the adulteration of foods, drinks and drugs law? If the State Board of Health has jurisdiction, could the secretary or executive officer have authority and funds at his disposal for buying samples of suspected foods, drugs, or drinks, and have them properly analyzed, with the end in view to make prosecutions under such law if such foods, drugs or drinks were found to be adulterated?"

The statute does not make it the duty of any particular officer to enforce the pure-food laws. The duty of enforcing these laws is with the general executive officers of the state, the same as other laws. I do not find any provision in the statute which authorizes your board to buy samples of food, drugs, etc., for the purpose of having them analyzed for the purpose of ascertaining when such foods are adulterated. The only provision which could possibly be construed to give such authority is the item in the appropriation for your Board by the legislature of 1903, "sanitary work"; but I think the appropriation was to carry out the provisions of section 6661, General Statutes of 1901. This section, as a whole, I construe to authorize your Board to employ experts to examine public works, such as systems of water-works, sewerage, sanitation of public buildings, and the like. I do not think there is at present any appropriation available to buy samples of foods for the purposes above indicated.

"Has the State Board of Health authority to compel county clerks to return assessors' reports of births, deaths and marriages from their respective counties?"

There is no statute by which your Board can require the several county clerks to return to you the returns of assessors' reports of births, deaths, and marriages, but under sections 6663 and 6665, General Statutes of 1901, such returns can be required of the local health officer. C. C. COLEMAN, *Attorney-general*.

EXAMINING EMBALMERS.

Rules of the Kansas State Board of Health to govern the embalmers' examining committee in examining the undertakers in the state of Kansas:

1. The examination of undertakers in this state shall be in charge of an examining committee of five undertakers, which shall be known as the embalmers' examining committee. This committee shall be elected by the State Board of Health and will at all times be directly under its supervision.
2. The members of the examining committee shall hold their office for the term of two years, or until their successors are elected and qualified. The election of these members shall be held at the annual business meeting of the State Board of Health. At this time three members of the committee shall be appointed whose term of office will expire in June, 1901, and two whose term of office will expire in June, 1902; and annually thereafter the State Board of Health shall elect the number allotted for that year.
3. In case of a vacancy occurring in the embalmers' examining committee,

the president of the State Board of Health shall appoint until the next annual meeting.

4. This committee shall organize by electing a president, vice-president, secretary, and treasurer, who shall serve for one year.

5. This committee shall meet in at least four different parts of the state, as nearly central as possible, to hold its examinations.

6. The member or members of the State Board of Health who reside nearest the place of meeting will be invited, as *ex officio* members, to attend these examinations.

7. It shall be the duty of every funeral director, undertaker or embalmer who may wish to qualify as competent to prepare the remains of one who has died of an infectious or contagious disease for transportation to comply with the following requirements: (a) He or she shall be at least twenty-one years of age and be actually engaged in the embalmer's business as an employee or proprietor. (b) He or she shall make application to the embalmers' examining committee for a certificate. Such application shall contain his or her full name, age, place of residence, and the certificate of two legal physicians of good repute as to his or her general standing. (c) The application shall be accompanied by a fee of five dollars, which shall entitle the applicant to examination as to his or her fitness for such special work and the issuing to him or her of a certificate stating that he or she has satisfactorily passed an examination. (d) He or she must be able to pass such an examination as shall be prescribed by the embalmers' examining committee in the visceral anatomy of the human body, the action and comparative value of germicides, the methods of embalming, the further precautions after embalming to insure safety in the transportation of bodies of those who have died of an infectious or contagious disease, the meaning of infection and disinfection, and such other topics as said committee may from time to time see fit to name.

8. This committee shall select the questions for examinations, but the same shall be submitted to the president and secretary of the State Board of Health for their approval.

9. At least twenty questions shall be submitted at each examination, but puzzling or irrelevant questions shall not be asked, and a practical examination on the cadaver shall be required.

10. The applicant for a certificate shall receive a mark of at least seventy-five per cent. in a scale of 100 before a certificate shall be granted.

11. This committee shall examine and mark all papers.

12. The State Board of Health may demand at any time to see or examine the papers of any applicant who has failed to pass a satisfactory examination; and if, in their judgment, said applicant has not been fairly examined, the State Board of Health may examine said party.

13. The committee shall provide its own certificates, fill in the names of those who have successfully passed the examination, and submit the same to the president and secretary of the State Board of Health for their signatures.

14. The certificate may be renewed annually by the payment of two dollars within thirty days after the expiration of the term of the certificate.

15. The failure of the holder of a certificate to comply with the regulations of the State Board of Health shall be deemed sufficient cause for the revocation of his certificate.

16. The traveling and incidental expenses, hotel bills, etc., of the examining committee shall be paid out of funds in the possession of the treasurer of the committee. Each member of the committee shall be allowed three dollars per

day for every day actually spent in the work of the committee; provided, that this per diem shall not be allowed for more than four days at any one examination.

17. The secretary of the embalmers' examining committee shall be allowed a salary of \$100 per year, and he shall keep a record, in which shall be registered the names and residences of all persons to whom certificates (as prescribed) have been granted, and the number and date of these certificates. A copy of this record shall be furnished to all those holding certificates and also to the various transportation companies within the state.

18. The treasurer of this committee shall be allowed a salary of five dollars per year, and shall be required to give to the State Board of Health a bond for the sum of \$1000. The bond shall be executed by some bonding company approved by the president of the State Board of Health. The expense of obtaining this bond shall be paid by the examining committee from any funds in their possession.

19. The treasurer of this committee shall keep a record of all fees received and expenses paid under these regulations and report the same to the State Board of Health at their quarterly meetings in June and December of each year. This report shall contain, as a part thereof, vouchers showing how and to whom these moneys are expended.

20. No money shall be paid by this committee except upon vouchers drawn upon the treasurer by the president of the committee, countersigned by the secretary. All vouchers shall state the specific purpose for which the money is drawn.

21. No part of the expenses incident to holding these examinations shall at any time be borne by the State Board of Health.

22. The committee may recognize the licenses of all other states whose requirements come up to our standard of requirements, upon payment of the fee by the applicant, provided the application is accompanied by a certificate of good standing from the secretary of the Board or committee of the state in which said applicant was examined and granted a license.

TRANSPORTATION OF DEAD BODIES.

These rules for the transportation of dead bodies, having been duly adopted by the State Board of Health and properly published, have the full force of law.

RULE 1. The transportation of bodies dead of smallpox, Asiatic cholera, yellow fever, typhus fever or bubonic plague is absolutely forbidden.

RULE 2. The bodies of those who have died of diphtheria (membranous croup), scarlet fever (scarlatina, scarlet rash), glanders, anthrax or leprosy shall not be accepted for transportation unless prepared for shipment by being thoroughly disinfected by (a) arterial and cavity injection with an approved disinfectant fluid, (b) disinfecting and stopping of all orifices with absorbent cotton, and (c) washing the body with the disinfectant, all of which must be done by an embalmer holding a certificate as such approved by the State Board of Health or other state health authority. After being disinfected as above, such body shall be enveloped in a layer of cotton not less than one inch thick, completely wrapped in a sheet and bandaged, and encased in an air-tight zinc-, tin-, copper- or lead-lined coffin or iron casket, all joints and seams hermetically soldered, and all enclosed in a strong, tight wooden box. Or, the body, being prepared for shipment by disinfecting and wrapping as above, may be placed in a strong coffin or casket, and said coffin or casket encased in an air-tight zinc, copper or tin

case, all joints and seams hermetically soldered, and all enclosed in a strong outside wooden box.

RULE 3. The bodies of those dead of typhoid fever, puerperal fever, erysipelas, tuberculosis, and measles, or other dangerous communicable diseases other than those specified in rules 1 and 2, may be received for transportation when prepared for shipment by filling cavities with an approved disinfectant, washing the exterior of the body with the same, stopping all orifices with absorbent cotton, and enveloping the entire body with a layer of cotton not less than one inch thick, and all wrapped in a sheet and bandaged, and encased in an air-tight coffin or casket; provided, that this shall apply only to bodies which can reach their destination within forty-eight hours from time of death. In all other cases such bodies shall be prepared for transportation in conformity with rule 2. But when the body has been prepared for shipment by being thoroughly disinfected by an embalmer holding a certificate as in rule 2, the air-tight sealing may be dispensed with.

RULE 4. The bodies of those dead of diseases that are not contagious, infectious or communicable may be received for transportation when encased in a sound coffin or casket and enclosed in a strong outside wooden box, provided they reach their destination within thirty hours from time of death. If the body cannot reach its destination within thirty hours from time of death, it must be prepared for shipment by filling cavities with an approved disinfectant, washing the exterior of the body with the same, stopping all orifices with absorbent cotton, and enveloping the entire body with a layer of cotton not less than one inch thick, and all wrapped in a sheet and bandaged, and encased in an air-tight coffin or casket. But when the body has been prepared for shipment by being thoroughly disinfected by an embalmer holding a certificate as in rule 2, the air-tight sealing may be dispensed with.

RULE 5. In cases of contagious, infectious or communicable diseases, the body must not be accompanied by persons or articles which have been exposed to the infection of the disease, unless certified by the health officer as having been properly disinfected; and before selling passage tickets, agents shall carefully examine the transit permit and note the name of the passenger in charge, and of any others proposing to accompany the body, and see that all necessary precautions have been taken to prevent the spread of the disease. The transit permit in such cases shall specifically state who is authorized by the health authorities to accompany the remains. In all cases where bodies are forwarded under rule No. 2, notice must be sent by telegraph to health officer at destination, advising the date and train on which the body may be expected. This notice must be sent by or in the name of the health officer at the initial point, and is to enable the health officer at destination to take all necessary precautions at that point.

RULE 6. Every dead body must be accompanied by a person in charge, who must be provided with a passage ticket and also present a full first class ticket marked "corpse" for the transportation of the body, and a transit permit, showing physician's or coroner's certificate, health officer's permit for removal, undertaker's certificate, name of deceased, date and hour of death, age, place of death, cause of death, and if of a contagious, infectious or communicable nature, the point to which the body is to be shipped, and, when death is caused by any of the diseases specified in rule No. 2, the names of those authorized by the health authorities to accompany the body. The transit permit must be made in duplicate, and the signatures of the physician or coroner, health officer and undertaker must be on both the original and duplicate copies. The undertaker's

certificate and paster of the *original* shall be detached from the transit permit and pasted on the end of the coffin box. The physician's certificate and transit permit shall be handed to the passenger in charge of the corpse. The whole duplicate copy shall be sent to the official in charge of the baggage department of the initial line, and by him to the secretary of the state or provincial board of health of the state or province from which such shipment was made.

RULE 7. When dead bodies are shipped by express, the whole original transit permit shall be pasted upon the outside box, and the duplicate forwarded by the express agent to the secretary of the state or provincial board of health of the state or province from which said shipment was made.

RULE 8. Every disinterred body, dead from any disease or cause, shall be treated as infectious or dangerous to the public health, and shall not be accepted for transportation unless said removal has been approved by the state or provincial health authorities having jurisdiction where such body is disinterred, and the consent of the health authorities of the locality to which the corpse is consigned has first been obtained; and all such disinterred remains shall be enclosed in a hermetically sealed (soldered) zinc-, tin- or copper-lined coffin or box. Bodies deposited in receiving vaults shall be treated and considered the same as buried bodies.

EXAMINATION AND REGISTRATION LAW.

Session Laws of 1901, chapter 254; General Statutes of 1901, page 1344.

AN ACT to create a State Board of Medical Registration and Examination and to regulate the practice of medicine, surgery and osteopathy in the state of Kansas, prescribing penalties for the violation thereof, and repealing chapter 68 of the Session Laws of 1870.

Be it enacted by the Legislature of the State of Kansas:

6669. BOARD OF EXAMINATION AND REGISTRATION. SECTION 1. Within sixty days after the passage of this act, the governor, by and with the consent of the senate, shall appoint a State Board of Medical Registration and Examination, consisting of seven members, one to serve for one year, two for two years, two for three years, and two for four years, and the successors of each shall be appointed in the same manner for the term of four years, who shall be physicians in good standing in their profession, and who shall have received the degree of doctor of medicine from some reputable medical college or university not less than six years prior to their appointment; representation to be given to the different schools of practice as nearly as possible in proportion to their numerical strength in this state, but no one school to have a majority of the whole board. Each member of the board shall take and subscribe the oath prescribed by law for state officers, which oath shall be filed with the secretary of state. The board shall organize by the selection of a president and secretary from among their own number, each to serve for such term as the board may designate, not exceeding four years. It shall have a common seal and shall formulate rules to govern its actions. Its president and secretary shall have power to administer oaths pertaining to all matters related to the business of the board. The secretary shall furnish to said board a satisfactory bond conditioned for the faithful performance of his official duties. Said board shall hold regular meetings on the second Tuesday in February, June and October of each year, and one other meeting, at such time and place as the board may designate, in such of the chief cities of the state as the board may designate. Five members shall constitute a quorum for the transaction of all business; but no license to practice medicine and surgery shall be

issued by the board upon less than five affirmative votes when the full board is present, or upon less than a majority affirmative votes when less than a full board is present. The board shall keep a record of all of its proceedings, and also a register of all applicants for license to practice medicine in all of its branches within the state, together with a record showing the age of the applicant, time spent in the study of medicine, and the name and location of the institution or institutions from which the applicant may have received degrees or certificates of medical instructions; also, whether candidate was licensed or rejected. Said books and register shall be *prima facie* evidence of all matters recorded therein.

6670. QUALIFICATIONS NECESSARY TO PRACTICE. SEC. 2. All persons engaged in the practice of medicine on the date of the passage of this act shall, within four months from the date of such passage, apply to the Board of Registration and Examination for a license to practice. To all such as present the following qualifications the board shall issue a license, upon payment of fee hereinafter specified: If a graduate in medicine or surgery, he shall, either personally or by letter or proxy, present his diploma to the State Board of Medical Registration and Examination for verification. Accompanying such diploma the applicant shall file his affidavit, duly attested, stating that the applicant is the person named in the diploma, and is the lawful possessor of the same, and giving his age and time spent in the study of medicine. If the board shall find the diploma to be genuine, and from a legally chartered medical institution in good standing, as determined by the board, and the person named therein be the person holding and presenting the same, the board shall issue its certificate to that effect, signed by its president and secretary, which, when left for record with the county clerk of the county in which said applicant practices, as hereinafter required, shall be conclusive evidence that its owner is entitled to practice medicine and surgery in this state. If a practitioner of medicine in Kansas at the time of the passage of this act, but not a graduate of medicine or surgery as above defined, he shall, either personally or by letter or proxy, furnish the board affidavits, duly attested, stating the period during which, and the places at which he has been engaged in the practice of medicine or surgery. If the board is satisfied from the affidavit and other information received that the applicant was a resident engaged continuously in the practice of medicine in the state of Kansas for seven years prior to the passage of this act, it shall issue its certificate to that effect, which, when left for record with the county clerk of the county in which he resides, shall be conclusive evidence that its owner is entitled to practice medicine and surgery in this state. If engaged in the practice of medicine in this state at the time of the passage of this act for a less period than seven years prior to the passage of this act, and not a graduate in medicine or surgery as above defined, the applicant shall present himself before the board and submit to such examination as to his qualifications for the practice of medicine and surgery as the board may require. If the applicant passes the examination satisfactory to the board, the board shall issue its certificate to that effect, which, when left for record with the county clerk of the county in which he resides, shall entitle its owner to practice medicine or surgery in this state. The board may refuse to grant a certificate to any person guilty of felony or gross immorality or addicted to the liquor or drug habit to such a degree as to render him unfit to practice medicine or surgery, and may, after notice and hearing, revoke the certificate for like cause.

6671. APPLICATIONS AND CERTIFICATES. SEC. 3. All persons intending to practice medicine, surgery or osteopathy after the passage of this act, and all

persons who shall not have complied with section 2 of this act, shall apply to said board at any regular meeting, or at any other time or place as may be designated by the board, for a license. Application shall be made in writing, and shall be accompanied by the fee hereinafter specified, together with the age and residence of the applicant, proof that he or she is of good moral character, and satisfactory evidence that he or she has devoted not less than three periods of six months each, no two within the same twelve months, or, if after April 1, 1902, four periods of not less than six months each, no two in the same twelve months, to the study of medicine and surgery. All such candidates, except as hereinafter provided, shall submit to an examination of a character to test their qualifications as practitioners of medicine or surgery, and which shall embrace all those topics and subjects a knowledge of which is generally required by reputable medical colleges of the United States for the degree of doctor of medicine; provided, that the examination in materia medica and therapeutics and in the theory and practice of medicine shall be conducted by those members only of the board who are of the same school of practice as the applicant claims to follow; provided further, that graduates of legally chartered medical institutions of the United States or foreign countries in good standing, as determined by the board, may be, at the discretion of the board, granted a license without examination; provided further, that any graduate of a legally chartered school of osteopathy, wherein the requirements for the giving of a diploma shall include a course of instruction of not less than four terms of five months each, in two or more separate years, shall be given a certificate of license to practice osteopathy upon the presentation of such diploma; provided further, that the board may in its discretion accept, in lieu of examination or diploma, the certificate of the board of registration and examination of any other state or territory of the United States or any foreign country whose standards of qualification for practice are equivalent to those of this state; provided, that a temporary certificate may be issued to any student of medicine or practitioner of medicine who is not qualified under the law, upon the written request of a majority of the practitioners of medicine under this act in the county in which he or she desires to practice, or, if there be no practitioners registered under this act in any county in this state, the board shall issue a temporary permit to persons as above described upon the application of the board of county commissioners of said county.

6672. RECORD OF CERTIFICATE. SEC. 4. Upon the completion of the examination or the acceptance of the diploma or certificate as herein provided, the said board shall, if it finds the applicant qualified, grant and issue a certificate to said applicant to practice medicine and surgery or osteopathy within this state, and which shall be signed by the president and secretary and attested by the seal of the board. Within thirty days of the date of any certificate of license having been granted and issued by the board, the owner thereof shall have it recorded as hereinafter provided in the office of the clerk of the county in which he resides, or, if a non-resident of this state, then of the county in which he has an office or intends to practice, and the date of recording shall be indorsed thereon; and until such certificate or license is recorded he shall not exercise any of the rights or privileges therein conferred. The county clerk shall keep in a book for the purpose a complete list of the certificates recorded by him, which book shall be open to public inspection during business hours. Between the 1st and 20th days of December in each year, the county clerk shall furnish the secretary of the board a list of all certificates recorded and in force, and also a list of all certificates which have been revoked or the owners of which have removed

from the county or died during the year. The fee for the recording and reporting of such certificates shall not exceed one dollar.

6673. **FEEs.** **SEC. 5.** The fee for the issuance of a certificate to all those found qualified to practice medicine, surgery or osteopathy without examination as provided under section 2 shall be two dollars. The fee for examination shall be fixed by the board, but shall not exceed fifteen dollars. The fee for examination of diploma or certificate from an examining board of another state shall also be fixed by the board, but shall not exceed ten dollars. All moneys received by the board shall be paid by the secretary thereof into the state treasury monthly. The compensation and actual traveling and other expenses of the board shall be paid from the treasury of the state; provided, that the total amount paid from the state treasury under the provisions of this act shall not exceed the amount paid into the treasury as herein provided. The compensation of the members of the board shall be six dollars for every day actually spent in the discharge of their duties. In addition to his actual traveling expenses, the secretary shall receive a salary, to be fixed by the board, but it shall not exceed \$800 per annum. All of such compensation and traveling expenses shall be approved by the president and secretary of the board. It shall be the duty of said board to make a report of their proceedings to the governor annually on or before the 15th day of November, which report shall include an account of all moneys received and disbursed by them.

6674. **"PRACTICING" DEFINED.** **SEC. 6.** Any person shall be regarded as practicing medicine and surgery within the meaning of this act who shall prescribe, or who shall recommend for a fee, for like use, any drug or medicine, or perform any surgical operation of whatever nature for the cure or relief of any wounds, fracture, or bodily injury, infirmity or disease of another person, or who shall use the words or letters "Dr.," "Doctor," "M. D.," or any other title in connection with his name which in any way represents him as engaged in the practice of medicine and surgery; but nothing in this act shall be construed as interfering with any religious beliefs in the treatment of disease, provided that quarantine regulations relating to contagious diseases are not infringed upon. All persons who practice osteopathy shall be registered and licensed as doctors of osteopathy, as hereinbefore provided, but they shall not administer drugs or medicines of any kind nor perform operations in surgery. This act shall not apply to any commissioned medical officer of the United States army, navy, or marine service, in the discharge of his official duties; nor to any legally qualified dentist, when engaged in the legitimate practice of his profession; nor to any physician or surgeon who is called from another state or territory in consultation with a licensed physician of this state, or to treat a particular case in conjunction with a licensed practitioner of the state, and who does not otherwise practice in the state. Nor shall anything in this act apply to the administration of domestic medicines nor to prohibit gratuitous services; provided, any person holding a diploma issued by an optical college, and who has studied the anatomy of the eye and contiguous parts, human physiology and natural philosophy for at least six months under a competent teacher and who shall pass examination satisfactory to the State Board of Medical Registration and Examination, shall be eligible to register as an optician or doctor of optics, and shall be otherwise governed by this act so far as the same is applicable.

6675. **PENALTY.** **SEC. 7.** From and after the 1st day of September, 1901, any person who shall practice medicine and surgery or osteopathy in the state of Kansas without having received and had recorded a certificate under the provisions

of this act, or any person violating any of the provisions of this act, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall pay a fine of not less than \$50 nor more than \$200 for each offense, and in no case wherein this act shall have been violated shall any person so violating receive compensation for services rendered. It shall be the duty of the secretary of the State Board of Registration and Examination to see that this act is enforced.

6676. PERJURY. SEC. 8. Any person who shall swear falsely in any affidavit or oral testimony made or given by virtue of the provisions of this act or the regulations of said Board of Registration shall be deemed guilty of perjury.

6677. REPEAL. SEC. 9. Chapter 68 of the Session Laws of 1870 is hereby repealed.

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**VITAL STATISTICS FOR KANSAS,
COMPRISING RETURNS OF MARRIAGES, BIRTHS, AND DEATHS;
ALSO, ANNUAL REPORTS OF COUNTY HEALTH
OFFICERS.**

(139)

TABLE No. 1.—RETURNS OF VITAL STATISTICS BY ASSESSORS FOR THE YEAR ENDING MARCH 1, 1903.

COUNTY.	MARRIAGES.		BIRTHS.				DEATHS.						
	Number.....	White.....	Colored.....	Number.....	Male.....	Female.....	White.....	Colored.....	Number.....	Male.....	Female.....	White.....	Colored.....
Allen.....	112	102	10	402	201	201	398	4	132	69	63	110	22
Anderson.....	83	82	1	191	83	103	191	1	61	43	18	57	4
Atchison.....	37	33	4	117	56	61	116	1	42	18	24	41	1
Barber.....	23	23	0	79	51	28	77	2	20	11	9	17	3
Barton.....	102	93	9	234	115	119	230	4	63	27	86	59	4
Bourbon.....	128	118	10	293	151	142	282	11	221	124	97	204	17
Brown.....	123	119	4	364	199	165	355	9	110	52	58	94	16
Butler.....	111	106	5	276	140	136	274	2	94	50	44	90	4
Chase.....	45	44	1	132	76	56	130	2	38	19	19	37	1
Chautauqua.....	75	73	2	187	83	104	183	4	66	26	40	64	2
Cherokee.....	122	103	19	462	253	209	418	44	178	94	84	156	22
Cheyenne.....	21	16	5	65	27	38	58	7	7	2	5	6	1
Clark.....													
Clay.....													
Cloud.....	115	110	5	323	158	165	314	9	116	63	53	108	8
Coffey.....	86	84	2	197	111	86	173	24	93	52	41	86	7
Comanche.....	8	8	0	18	13	5	18	3	3	2	1	3	0
Cowley.....	256	256	0	499	259	240	489	10	179	103	76	177	2
Crawford.....	230	210	20	549	293	256	532	17	225	118	107	212	13
Decatur.....	39	39	0	168	83	85	157	11	24	10	14	23	1
Dickinson.....	156	154	2	368	193	175	364	4	112	57	55	108	4
Doniphan.....	64	62	2	248	125	123	231	17	113	58	55	92	21
Douglas.....	153	140	13	336	178	158	300	36	190	101	89	157	33
Edwards.....	33	32	1	113	54	59	112	1	34	21	13	32	2
Elk.....	95	93	2	196	107	89	196	0	73	38	35	73	0
Ellis.....	68	66	2	269	130	139	268	1	65	33	32	65	0
Ellsworth.....	49	48	1	182	96	86	178	4	54	34	20	52	2
Finney.....	38	36	2	24	10	14	24	0	31	15	16	31	0
Ford.....	12	12	0	40	22	18	40	0	16	8	8	16	0
Franklin.....	85	85	0	234	99	125	228	6	90	45	45	84	6
Geary.....	61	59	2	134	73	61	130	4	56	30	26	53	3
Gove.....	20	15	5	73	36	37	73	3	13	8	5	13	0
Graham.....	8	8	0	40	18	22	40	0	9	5	4	9	0
Grant.....	6	6	0	13	6	7	13	2	2	1	1	2	0
Gray.....	16	15	1	19	7	12	19	0	7	4	3	7	0
Greeley.....	3	3	0	16	9	7	16	0	2	1	1	2	0
Greenwood.....	117	107	10	255	116	139	245	10	73	37	36	67	6
Hamilton.....	7	7	0	22	13	9	22	0	13	10	3	13	0
Harper.....	88	86	2	195	102	93	193	2	79	47	32	79	0
Harvey.....	101	100	1	310	160	150	302	8	106	56	50	105	1
Haskell.....	5	5	0	12	6	6	12	0	2	2	0	2	0
Hodgeman.....	15	14	1	57	33	24	55	2	18	6	12	17	1
Jackson.....	75	75	0	181	93	88	177	4	69	42	27	69	0
Jefferson.....	114	101	13	312	153	159	300	12	100	51	49	90	10
Jewell.....	130	99	31	283	135	148	283	0	81	31	50	66	15
Johnson.....	81	77	4	260	120	140	248	12	180	72	58	115	15
Kearny.....	10	10	0	20	14	6	20	0	6	3	1	4	0
Kingman.....	41	39	2	135	71	64	133	3	34	18	16	33	1
Kiowa.....	14	14	0	33	15	18	26	5	13	3	10	13	0
Labette.....	162	135	27	280	129	151	250	30	103	36	67	91	12
Lane.....	10	10	0	44	24	20	44	0	9	4	5	9	0
Leavenworth.....	152	149	3	401	201	200	366	35	256	147	109	222	34
Lincoln.....	42	39	3	156	79	77	125	29	41	26	15	40	1
Linn.....	107	105	2	260	141	119	254	6	120	71	49	110	10
Logan.....	15	15	0	54	28	26	54	0	19	14	5	19	0
Lyon.....	142	132	10	343	183	160	323	15	123	75	48	111	13
Marion.....	171	169	2	405	207	198	405	0	119	52	67	118	1
Marshall.....	127	124	3	353	187	166	330	23	145	86	59	143	2
McPherson.....	110	106	4	362	174	188	347	15	124	65	59	117	7
Meade.....	3	3	0	33	21	12	33	0	4	2	2	4	0

TABLE No. 1—CONCLUDED.

COUNTY.	MARRIAGES.			BIRTHS.				DEATHS.					
	Number.....	White.....	Colored.....	Number.....	Male.....	Female.....	White.....	Colored.....	Number.....	Male.....	Female.....	White.....	Colored.....
Miami.....	87	85	2	280	136	124	286	24	89	60	39	87	2
Mitchell.....	92	90	2	223	117	106	222	1	68	32	36	56	2
Montgomery.....	146	140	6	416	212	204	398	18	120	71	49	112	8
Morris.....	57	54	3	147	86	61	143	4	48	29	19	43	5
Morton *.....													
Nemaha.....	116	111	5	323	142	181	320	3	92	50	42	91	1
Neosho.....	115	114	1	335	176	169	329	6	129	63	66	122	7
Ness.....	23	23		93	50	43	92	1	16	8	8	16	
Norton.....	53	52	1	155	79	77	148	7	53	24	29	48	5
Osage.....	63	62	1	219	107	112	213	6	85	42	43	81	4
Osborne.....	99	99		221	100	121	221		70	42	28	70	
Ottawa.....	62	61	1	169	78	91	166	3	82	53	29	80	2
Pawnee.....	55	53	2	117	56	61	114	3	44	24	20	42	2
Phillips.....	36	35	1	152	73	79	145	7	38	15	23	36	2
Pottawatomie.....	78	73	5	268	130	138	256	12	82	44	38	78	4
Pratt *.....													
Rawlins *.....													
Reno.....	171	166	5	549	283	266	538	11	232	117	115	217	15
Republic.....	115	105	10	335	173	162	313	22	84	50	34	80	4
Rice.....	91	91		240	122	118	238	2	82	44	38	80	2
Riley.....	76	76		242	125	117	235	7	96	56	40	94	2
Rooks.....	52	52		190	85	105	190		54	28	28	46	8
Rush.....	38	36	2	174	83	91	173	1	57	30	27	56	1
Russell.....	47	46	1	163	93	70	163		38	20	18	32	1
Satine.....	82	75	7	256	129	127	251	5	108	55	48	99	4
Scott.....	11	11		37	15	22	34	3	10	8	2	9	1
Sedgwick.....	307	298	9	849	466	383	814	35	275	149	126	263	12
Seward.....	8	8		19	10	9	19		6	4	2	6	
Shawnee.....	154	150	4	284	147	137	278	6	119	68	51	112	7
Sheridan.....	14	14		116	59	57	116		15	7	8	14	1
Sherman.....	33	33		60	24	36	60		13	6	7	13	
Smith.....	106	95	11	299	152	147	299		98	54	39	93	
Stafford *.....													
Stanton.....	6	6		5	3	2	5		1		1	1	
Stevens.....	3	3		5	2	3	5		2		2	2	
Sumner *.....													
Thomas.....	21	20	1	70	40	30	70		10	8	2	10	
Trego.....	19	19		64	31	33	57	7	12	8	4	12	
Wabauasee.....	80	76	4	213	108	105	201	12	71	41	30	66	5
Wallace.....	11	11		18	8	10	17	1	7	4	3	7	
Washington.....	64	62	2	226	116	110	215	11	70	41	29	69	1
Wichita *.....													
Wilson.....	77	76	1	255	102	153	254	1	71	36	35	71	
Woodson.....	65	55	10	122	49	73	100	22	29	17	12	29	
Wyandotte.....	236	224	12	686	346	340	643	43	342	167	175	311	31
Totals.....	7,391	7,034	357	20,202	10,227	9,975	19,473	729	7,222	3,866	3,356	6,761	461

*No returns.

TABLE No. 2.—RETURNS OF VITAL STATISTICS BY ASSESSORS FOR THE YEAR ENDING MARCH 1, 1904.

COUNTY.	MARRIAGES.			BIRTHS.				DEATHS.					
	Number...	White....	Colored...	Number...	Male.....	Female....	White....	Colored...	Number...	Male.....	Female....	White....	Colored...
Allen.....	66	66	...	315	162	153	308	7	82	35	47	80	2
Anderson.....	68	67	1	162	93	69	162	...	60	31	29	59	1
Atchison.....	34	34	...	117	57	60	112	5	35	18	17	34	1
Barber.....	17	17	...	62	33	29	62	...	15	10	8	18	...
Barton.....	55	55	...	280	136	124	256	4	75	38	39	73	2
Bourbon.....	125	118	7	314	155	159	308	6	205	106	99	179	26
Brown.....	101	99	2	443	245	198	434	9	148	80	68	143	5
Butler.....	107	107	...	272	129	143	271	1	92	46	46	91	1
Chase.....	32	32	...	104	46	58	103	1	31	15	16	31	...
Chautauqua.....	70	70	...	249	107	142	244	5	70	33	37	65	5
Cherokee.....	161	161	...	388	203	185	380	8	227	142	85	216	11
Cheyenne.....	14	14	...	54	26	28	54	...	11	4	7	11	...
Clark*.....	...	...	...	...	...	...	...	...	...	...	...	...	...
Clay.....	84	84	...	242	108	134	239	3	87	51	36	87	...
Cloud.....	91	91	...	302	167	145	302	...	87	46	41	87	...
Coffey.....	106	106	...	262	135	127	261	1	100	56	44	99	1
Comanche.....	11	11	...	28	18	10	28	...	10	8	2	10	...
Cowley.....	177	176	1	484	261	223	479	5	162	97	65	162	...
Crawford.....	186	183	3	579	281	298	567	12	157	82	75	155	2
Decatur.....	45	45	...	176	76	100	176	...	39	17	22	38	1
Dickinson.....	140	137	3	375	194	181	368	7	149	82	67	147	2
Doniphan.....	76	73	3	284	148	136	273	11	99	49	50	88	11
Douglas.....	112	101	11	314	165	149	296	18	156	79	77	127	29
Edwards.....	52	52	...	93	49	44	92	1	29	10	19	29	...
Elk.....	90	90	...	200	99	101	200	...	79	44	35	79	...
Ellis.....	101	101	...	266	126	140	264	2	80	45	35	80	...
Ellsworth.....	41	41	...	182	92	90	182	...	76	37	39	75	1
Finney.....	40	39	1	35	21	14	35	...	39	17	22	38	1
Ford.....	29	29	...	88	48	40	88	...	28	14	14	28	...
Franklin.....	75	74	1	245	116	129	244	1	67	28	41	64	3
Geary.....	94	92	2	178	87	91	177	1	95	45	50	93	2
Gove.....	21	21	...	90	43	47	90	...	19	15	4	19	...
Graham.....	27	25	2	132	64	68	119	18	24	12	12	24	...
Grant.....	6	6	...	9	4	5	9	...	3	2	1	3	...
Gray.....	20	20	...	32	17	15	32	...	9	3	6	9	...
Greeley*.....	...	...	...	...	...	...	...	...	...	...	...	...	...
Greenwood.....	96	96	...	258	133	125	258	...	73	44	29	72	1
Hamilton*.....	...	...	...	...	...	...	...	...	...	...	...	...	...
Harper.....	75	75	...	181	102	79	181	...	62	27	35	62	...
Harvey.....	63	63	...	167	98	69	167	...	62	34	28	61	1
Haskell.....	5	5	...	9	5	4	9	...	6	5	1	6	...
Hodgeman.....	14	14	...	72	39	33	66	6	11	3	8	11	...
Jackson.....	88	88	...	228	121	107	227	1	51	28	23	50	1
Jefferson.....	104	93	11	225	121	94	220	5	81	44	37	73	8
Jewell.....	111	111	...	346	180	166	346	...	99	51	48	99	...
Johnson.....	81	77	4	241	120	121	231	10	143	63	60	134	9
Kearny.....	6	6	...	19	9	10	19	...	6	3	3	6	...
Kingman.....	12	12	...	47	20	27	47	...	9	5	4	9	...
Kiowa.....	28	26	2	75	40	35	75	...	22	14	8	22	...
Labette.....	103	103	...	309	149	160	300	9	193	122	71	188	25
Lane.....	11	11	...	42	23	19	42	...	10	4	6	10	...
Leavenworth.....	222	199	23	441	233	208	404	37	262	141	121	215	47
Lincoln.....	53	53	...	214	116	98	214	...	55	32	23	53	2
Linn.....	73	70	3	266	121	145	262	4	83	44	39	77	6
Logan.....	11	11	...	38	19	19	38	...	10	6	4	9	1
Lyon*.....	...	...	...	...	...	...	...	...	...	...	...	...	...
Marion.....	173	173	...	395	204	191	395	...	112	57	55	112	...
Marshall.....	164	164	...	435	217	218	431	4	157	83	74	157	...
McPherson.....	108	108	...	363	183	180	363	...	106	46	60	106	...
Meade.....	20	20	...	51	21	30	51	...	13	8	5	13	...

TABLE No. 2—CONCLUDED.

COUNTY.	MARRIAGES.			BIRTHS.				DEATHS.					
	Number	White	Colored	Number	Male	Female	White	Colored	Number	Male	Female	White	Colored
Miami	143	140	3	293	172	121	290	3	87	45	42	81	6
Mitchell	76	76		246	127	119	246		75	49	26	74	
Montgomery	92	91	1	319	176	143	314	5	131	65	66	125	6
Morris*													
Morton	2	2		1		1	1		1	1		1	
Nemaha	115	114	1	360	176	184	359	1	102	62	40	101	1
Neosho	76	76		201	99	102	199	2	68	46	22	68	
Ness	34	34		96	44	52	96		21	11	11	21	
Norton	54	54		184	92	92	184		48	21	27	48	
Osage	65	64	1	303	159	144	302	1	84	51	33	83	1
Osborne	112	112		282	156	126	282		74	45	29	74	
Ottawa	48	48		159	92	67	159		55	34	21	55	
Pawnee	53	53		140	70	70	138	2	30	15	15	30	
Phillips	75	75		224	114	110	224		51	26	25	51	
Pottawatomie	72	72		242	128	114	241	1	73	36	37	73	
Pratt	61	60	1	164	84	80	163	1	28	14	14	28	
Rawlins*													
Reno	174	166	8	555	265	290	553	2	223	110	113	219	4
Republic	103	103		345	171	174	345		96	39	57	96	
Rice	96	96		285	155	130	282	3	67	35	32	67	
Riley	82	82		271	152	119	263	3	89	44	45	89	
Rooks	78	78		191	106	86	189	2	70	31	39	69	1
Rush	39	39		181	91	90	181		40	21	19	40	
Russell	51	51		172	82	90	171	1	28	13	15	28	
Saline	56	56		221	117	104	219	2	62	35	27	62	
Scott	4	4		96	15	21	96		13	4	9	13	
Sedgwick	264	257	7	853	466	417	850	33	348	206	142	331	17
Seward	6	6		20	11	9	20		5	3	2	5	
Shawnee	418	395	23	794	390	404	718	86	391	192	199	394	57
Sheridan	35	35		106	54	52	106		21	13	8	21	
Sherman	40	40		70	32	38	70		25	14	11	25	
Smith	112	112		327	168	159	326	1	75	39	36	75	
Stafford	62	62		217	109	108	212	5	44	21	23	41	3
Stanton	3	3		8	7	1	8		1	1		1	
Stevens	4	4		11	8	3	11		3	2	1	3	
Sumner*													
Thomas	23	23		93	46	47	93		30	13	17	30	
Trego	25	25		80	42	38	80		25	14	11	25	
Wabausee	64	62	2	208	114	94	194	14	73	39	34	66	7
Wallace	10	10		16	11	5	16		9	7	2	9	
Washington	123	123		300	160	140	300		72	39	33	72	
Wichita*													
Wilson	65	65		185	114	71	184	1	49	29	20	49	
Woodson	36	36		122	54	68	121	1	27	14	13	27	
Wyandotte	306	274	32	893	462	431	827	66	453	262	191	356	97
Totals	8,389	8,222	167	21,229	11,551	9,708	20,827	432	7,470	3,941	3,529	7,064	406

*No returns.

Göve	2,870	J. E. Vanderpool, M. D.	2	4						1	13	14	97	22	40 00	500 00
Graham	6,119	J. W. Smith, M. D.	2	4						1	21	29	35	43	50 00	
*Grant	394	G. W. Hollebeak, M. D.								2					25 00	
Gray	1,543	H. Paul Adams, M. D.									8	8	5	11	500 00	
Greeley	575										8					
Greenwood	16,087	E. J. Norman, M. D.	2	4						2	40	50	232	97	Fees.	
Hamilton	1,510	C. F. Harrison, M. D.	1	1						1	6	7	19	23	25 00	
*Harper	11,287	C. E. Reesler, M. D.														
Harvey	17,594	J. H. Cooper, M. D.	2	15						20	117	137		202	25 00	
*Haskell	504															
Hodeman	2,518	A. B. Scott, M. D.	1	2						3	21	24	78	9	300 00	
Jackson	15,598	J. C. Shaw, M. D.	5	6						5	44	49	160	174	600 00	
Jefferson	20,164	M. S. McCreight, M. D.	2	6						13	66	79	152	127	600 00	
Jewell	16,233	Dorothy D. Allen, M. D.	7	7						2	89	100	106	183	50 00	
*Johnson	16,840	B. F. Stout, M. D.								11	89	100	106	183	50 00	
Kearny	1,158	Geo. W. Richards, M. D.	1	1						3	4	7	6	3	35 00	49 00
Kingman	11,211	M. H. Haskins, M. D.	3	3						7	61	63	133	128	40 00	40 00
Kiowa	3,059	J. A. Gardner, M. D.	3	3						1	23	23	72	31	44 00	27 00
Labette	28,183	H. H. Henson, M. D.	5	5						17	88	105	324	376	100 00	650 00
Lane	1,946	R. B. Mullins, M. D.	1	1						4	9	10	23	9	25 00	16 50
Leavenworth	41,044	S. B. Langworthy, M. D.	4	25						44	327	371	479	553	120 00	
Lincoln	9,849	Alfred Hultner, M. D.	3	8						14	56	70	119	80	80 00	
Linn	15,534	Stanley H. Brooks, M. D.								2	22	22	12			
Lyon	2,127	H. Austin Shoup, M. D.								15	25	11	25	11	40 00	920 00
Lyon	25,944	J. F. Morrison, M. D.	10	10						28	188	161	373	322	75 00	
Marion	21,455	G. P. Marner, M. D.	1	5						7	30	37	164		100 00	200 00
Marshall	23,851	B. P. Hatch, M. D.	3	22						4	232	319	398	209	200 00	
McPherson	20,772	John W. Brown, M. D.	3	10						24	69	84	94	153	470 00	
Meade	1,592	W. F. Fee, M. D.	1	1						2	12	14	43	13	100 00	50 00
Miami	20,284	D. W. Hays, M. D.	1	3						6	19	25	34	135	60 00	
Mitchell	13,034	Mary J. Lobdell, M. D.	2	8						12	87	98	198	130	100 00	
Montgomery	33,473	B. F. Mastermann, M. D.	2	4						1	41	50	213		200 00	
*Morris	11,704	D. H. Painter, M. D.														
Morton	2,246	T. Ormbee, M. D.														
Nemaha	20,268	Urban G. Iles, M. D.		10						17	146	163	359	2	150 00	50 00
Neosho	22,253	U. G. Hohaw, M. D.		9						7	80	98	126	86	200 00	
Ness	4,976	C. Cranville-Eccerton, M. D.		2						5	24	29	46	45	125 00	40 00
Norton	10,564	F. B. Runsey, M. D.														
Osage	22,371	C. W. Beasley, M. D.		1						3	24	40	47	63	80 00	
Osborne	11,283	Drs. Dillion & Fouts		2												
Ottawa	10,479	R. M. Clark, M. D.	2	2						8	100	108	178	68	240 00	
Pannee	5,706	J. E. Ingels, M. D.	3	4						6	46	60	56	66	100 00	
*Phillips	13,186	C. E. Nelson, M. D.														
Pottawatomie	17,279	W. P. Wilson, M. D.		3						6	49	55	169	83	225 00	

TABLE No. 3 - CONCLUDED.

COUNTY.	Popu-lation.	Health officer.	Address.	Deaths from communicable diseases.										Total number of deaths.....	Deaths from other causes.....	Total number of deaths.....	Total number of births.....	Total number of Marriages.....	Salary of health officer.....	Expenses incurred by counties in controlling contagious diseases.....			
				Cholera infantum.....	Consumption ..	Croup.....	Diphtheria.....	Measles.....	Scarlet fever...	Smallpox.....	Typhoid fever..	Total number of deaths....											
Pratt.....	7,766	J. I. Douthart, M. D.	Pratt.....	2	2	2	2	2	2	2	2	2	2	2	68	70	109	95	\$50 00	\$35 00			
Rawlins.....	5,040	Louis G. Graves, M. D.	Atwood.....	2	17	2	2	2	2	2	2	2	2	2	48	49	56	32	28 00	610 00			
Reno.....	29,142	Claud Mayfield, M. D.	Hutchinson.....	2	4	4	1	2	4	4	4	4	4	4	198	221	221	185	640 00	285 75			
Republic.....	16,457	J. S. Hillingsley, M. D.	Belleville.....	3	2	2	2	2	2	2	2	2	2	2	107	194	107	145	Fees.	285 75			
Rice.....	13,746	F. W. Koons, M. D.	Chase.....	3	2	2	2	2	2	2	2	2	2	69	83	62	134	50 00	.....	.....	
Riley.....	13,738	J. D. Colt, jr., M. D.	Manhattan.....	1	2	2	2	2	2	2	2	2	2	125	148	148	57	20 00	.....	.....	
Rooks.....	8,274	N. L. Book, M. D.	Stockton.....	1	1	1	1	1	1	1	1	1	1	77	82	115	57	20 00	.....	.....	
Rush.....	6,470	W. C. Brownell, M. D.	McCracken.....	3	1	1	1	1	1	1	1	1	1	10	15	45	68	100 00	.....	.....	
Russell.....	8,377	W. W. Bowles, M. D.	Bunker Hill.....	5	18	2	2	2	2	2	2	2	2	134	162	236	168	75 00	50 00	.....	.....
Saline.....	18,249	J. W. Jenney, M. D.	Salina.....	3	2	2	2	2	2	2	2	2	2	10	15	45	68	100 00	.....	.....	
*Scott.....	1,820	J. K. Farmer, M. D.	Scott City.....	4	4	4	4	4	4	4	4	4	4	117	130	130	11	50 00	.....	.....	
Sedgwick.....	51,175	J. D. Clark, M. D.	Wichita.....	2	2	2	2	2	2	2	2	2	2	8	10	21	11	50 00	.....	.....	
Seward.....	3,524	Geo. S. Smith, M. D.	Liberal.....	3	2	2	2	2	2	2	2	2	2	651	654	362	736	100 00	25 00	.....	.....
Shawnee.....	57,060	G. W. Ellinger, M. D.	Topeka.....	3	2	2	2	2	2	2	2	2	2	36	41	72	34	300 00	.....	.....	
Sheridan.....	4,083	F. A. Hall, M. D.	Hoxie.....	3	2	2	2	2	2	2	2	2	2	3	4	4	4	.....	.....	.....	.....
Sherman.....	3,416	F. H. Smith, M. D.	Goodland.....	1	1	1	1	1	1	1	1	1	1	3	3	3	3	.....	.....	.....	.....
*Smith.....	15,077	W. B. Slagle, M. D.	Smith Center.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....	.....	.....	.....
*Stafford.....	10,083	W. R. Willcox, M. D.	St. John.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.....	.....	.....	.....
*Stanton.....	349	J. J. Spencer, M. D.	Hugoton.....	2	10	10	10	10	10	10	10	10	10	10	10	10	10	10	200 00	450 00	.....	.....
Stevens.....	670	W. E. Bartlett, M. D.	Belle Plaine.....	2	10	10	10	10	10	10	10	10	10	10	10	10	10	10	100 00	200 00	.....	.....
Summer.....	25,636	V. C. Eddy, M. D.	Colby.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	75 00	.....	.....	.....
Thomas.....	3,916	A. E. Jones, M. D.	Wa Keeney.....	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	200 00	600 00	.....	.....
Trego.....	3,091	C. E. Smith, M. D.	Alma.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	200 00	700 00	.....	.....
Wabunsee.....	12,391	E. P. B. Wilder, M. D.	Sharon Springs.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	25 00	.....	.....	.....
Wallace.....	1,073	W. M. Earnest, M. D.	Washington.....	8	5	5	5	5	5	5	5	5	5	5	5	5	5	5	80 00	150 00	.....	.....
Washington.....	20,694	J. F. White, M. D.	Leoti.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	20 00	.....	.....	.....
*Wichita.....	1,229	F. M. Wiley, M. D.	Fredonia.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	80 00	.....	.....	.....
*Wilson.....	16,286	Otis Orendorff, M. D.	Yates Center.....	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	50 00	.....	.....	.....
Woodson.....	10,072	C. W. McLaughlin, M. D.	Kansas City.....	40	119	119	119	119	119	119	119	119	119	119	119	119	119	119	1,207	1,168	.....	.....
Wyandotte.....	74,287	.....	.....	161	613	613	613	613	613	613	613	613	613	613	613	613	613	613	10,419	89,262	.....	.....
Totals.....	1,274	7,515	7,515	7,515	7,515	7,515	7,515	7,515	7,515	7,515	7,515	7,515	7,515	7,515	7,515	1,153	10,419	89,262

*No returns.

TABLE No. 4.—SYNOPSIS OF REPORTS FROM COUNTY HEALTH OFFICERS FOR THE YEAR ENDING DECEMBER 31, 1894.

Country.	Population.	Health officer.	Address.	Death from communicable diseases.							Total number of deaths.....	Death from other causes.....	Total number of deaths.....	Total number of births.....	Total number of marriages.....	Salary of health officers.....	Expenses incurred by counties in controlling contagious diseases.....
				Cholera infantum.	Consumption..	Diphtheria.....	Measles.....	Scarlet fever...	Smallpox.....	Typhoid fever..							
Allen.....	30,454	H. L. Hendricks, M. D.	Iola.....			3		2			14	19	297	260	\$100 00		
*Anderson.....	13,264	M. T. Dingsess, M. D.	Atchison.....	7	21	6		1		5	40	220	248	305	500 00		
Atchison.....	30,155	T. A. Coleman, M. D.	Medicine Lodge.....										24	69	68	150 00	
Barber.....	6,651	O. P. McPherson, M. D.	Great Bend.....	3	1	1		3		2	12	44	103	48	100 00		
Barton.....	14,342												56	48			
Bourbon.....	27,057	R. Alkman, M. D.	Fort Scott.....	9	30	5	7	2		5	58	239	182	311	120 00	\$300 00	
Brown.....	20,868	L. W. Shannon, M. D.	Hiawatha.....			1						20	21	47	25 & fees.		
Butler.....	22,702	J. A. McKenzie, M. D.	El Dorado.....	6	6	4	3	3		2	24	131	155	190	181		
Butler.....	22,702												10	47	35	40 00	
*Chautauqua.....	8,035	Samuel Steele, M. D.	Strong City.....			1				1	3	7					
Chautauqua.....	12,872																
Cherokee.....	36,694	D. Winter, M. D.	Columbus.....	17	56	6	14	6		18	107	380	537	461	240 00	1,000 00	
Cheyenne.....	2,755	G. E. Pezr, M. D.	Bird City.....					7				7	11	18	23	25 & fees.	
Clark.....	1,764	W. F. Taylor, M. D.	Ashland.....			1							8	9	23	30	
Clay.....	15,356	Sam E. Reynolds, M. D.	Clay Center.....	4	6	1				1	12	116	128	88	141	120 00	
Cloud.....	17,592	A. R. Marcotte, M. D.	Concordia.....			3							34				
Coffey.....	15,797																
Comanche.....	1,670	Wm. Manson, M. D.	Burlington.....	1	20	2	7			2	32	127	159	148	75 00	150 00	
Cowley.....	32,029	J. S. Halliday, M. D.	Coldwater.....							1	2	20	24	41	20	28 00	
Crawford.....	45,070	H. D. Cooper, M. D.	Winfield.....			3						60	63			Fees.	
		J. W. Porter, M. D.	Pittsburg.....	7	40	40	14	8		31	140	547	697	758	672	420 00	
Decatur.....	9,025	S. L. Hubbard, M. D.	Abelene.....			1											
Dickinson.....	22,003	T. R. Conklin, M. D.	Abilene.....	3	4	2	1			3	8	20	28	20	67	100 00	
Doniphan.....	14,127	W. W. Carter, M. D.	Wathena.....	1	19	1				2	18	191	204	305	400 00		
Douglas.....	23,057	Arthur W. Clark, M. D.	Lawrence.....	2	32	5	5			9	53	309	362	227	245	80 00	
Edwards.....	5,286	M. De Tar, M. D.	Kinsley.....														
Elk.....	10,909	W. F. Flack, M. D.	Longton.....			2				2	4	42	46	57	38	40 00	
Ellis.....	11,117	George B. Snyder, M. D.	Hays.....			6				3	5	18	11	43	159	105	
*Ellsworth.....	8,583																
Finney.....	3,405	Andrew Sabine, M. D.	Garden City.....														
Ford.....	7,091	C. A. Milton, M. D.	Dodge City.....	2	5	1				3	12	50	63	30	33	50 00	
*Franklin.....	21,395												72	150	58	25 00	
Geary.....	16,682	L. R. King, M. D.	Junction City.....			6							103	24	124	100 00	

SECOND BIENNIAL REPORT.

*Morton.....	249		170	103	211	144	194	1,767	8,940	10,707	14,449	12,177	\$11,990.00	\$10,867.75				
Nemaha.....	20,180	Urban, G. Iles, M. D.											160	174	378	165	Fees.....	150.00
Nemadoc.....	25,372	U. G. Foshaw, M. D.											160	174	378	165	Fees.....	150.00
Nesse.....	5,172	F. B. Rumsey, M. D.											177	192	265	247	Fees.....	300.00
Osage.....	22,444	C. W. Reasley, M. D.												72	42	98	Fees.....	80.00
Osborne.....	17,533	A. C. Dillon, M. D.															Fees.....	50.00
Ottawa.....	10,503	John Miller, M. D.															Fees.....	175.00
Palmer.....	6,181	J. E. Ingels, M. D.															Fees.....	160.00
Phillips.....	13,575	J. Jeurink, M. D.															Fees.....	75.00
Pottawatomie.....	16,773	W. P. Wilson, M. D.															Fees.....	225 & fees.
Pratt.....	7,771	J. I. Douthett, M. D.															Fees.....	50.00
Rawlins.....	5,080	W. G. Weaver, M. D.															Fees.....	40 & fees.
Reyno.....	30,028	Claud Mayfield, M. D.															Fees.....	700.00
Republic.....	16,711	J. S. Billingatey, M. D.															Fees.....	1,141.80
Rice.....	13,616	Chas. E. Fisher, M. D.															Fees.....	50.00
Riley.....	13,827	W. B. Callender, M. D.															Fees.....	20.00
Rocks.....	6,588																Fees.....	
*Russell.....	8,626																Fees.....	
Saline.....	18,598	N. D. Tobey, M. D.															Fees.....	75.00
Scott.....	1,409	Chas. J. Cahill, M. D.															Fees.....	200.00
Seawick.....	51,307	J. D. Clark, M. D.															Fees.....	656
Shawnee.....	51,973	Geo. S. Smith, M. D.															Fees.....	50.00
Shawnee.....	57,086	G. W. Ellinger, M. D.															Fees.....	100.00
Sheridan.....	4,492	F. A. Hall, M. D.															Fees.....	300.00
Sherman.....	3,686	A. C. Gulick, M. D.															Fees.....	200.00
*Smith.....	15,294	J. P. H. Dykes, M. D.															Fees.....	50.00
Stafford.....	10,053																Fees.....	37.50
*Stanton.....	844																Fees.....	
Stevens.....	724	S. S. Holloway, M. D.															Fees.....	50.00
Sumner.....	25,701	L. F. Harmon, M. D.															Fees.....	400.00
Thomas.....	4,229	V. C. Eddy, M. D.															Fees.....	20.00
Trigo.....	3,360	A. B. Jones, M. D.															Fees.....	300.00
Wagoner.....	12,160	C. H. Mielke, M. D.															Fees.....	
Wallace.....	1,081	E. P. B. Wilder, M. D.															Fees.....	25.00
Washington.....	20,287	W. M. Earnest, M. D.															Fees.....	80.00
Wichita.....	1,291	J. F. White, M. D.															Fees.....	20.00
Wilson.....	18,210	F. M. Wiley, M. D.															Fees.....	20.00
Woodson.....	10,115	Oris Orendorff, M. D.															Fees.....	50.00
Wyandotte.....	82,532	J. F. Haasig, M. D.															Fees.....	900.00
Topeka city.....	44,000	W. D. Storrs, M. D.															Fees.....	660.00
Leavenworth city.....	23,000	A. L. Suwalsky, M. D.															Fees.....	589
Wichita city.....	31,857	D. E. De Ross, M. D.															Fees.....	30.00
Totals.....			170	103	211	144	194	1,767	8,940	10,707	14,449	12,177	\$11,990.00	\$10,867.75				

* No returns.

TABLE No. 5.—RETURNS OF DEATHS, ACCORDING TO DISEASES, BY ASSESSORS, FOR THE YEARS 1903 AND 1904.
NOTE.—The first column of figures under each heading represents returns for 1903; the second column for 1904.

COUNTY.	Abscess.	Apoplexy.	Asthma.	Accident.	Aneurism.	Angina pectoris.	Appendicitis.	Bright's disease.	Brain disease.	Brain fever.	Bronchitis.	Bilious remittent fever.
Allen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Anderson	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Atchison	1	3	6	5	2	4	11	4	.....	1	5	6
Barber	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Barton	2	2	5	4	2	10	5	.....	.....	.....	.....	1
Bourbon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Brown	1	3	8	1	1	24	22	.....	.....	.....	.....	1
Butler	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Butler	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chase	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chautauqua	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cherokee	6	7	2	4	4	6	33	50	.....	.....	.....	8
Cheyenne	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clark	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clay	2	2	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clay	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Clond	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Coffey	3	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Comanche	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cowley	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Crawford	3	3	5	7	1	14	58	37	.....	.....	.....	.....
Decatur	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dickinson	2	1	7	5	.....	.....	.....	.....	.....	.....	.....	.....
Doniphan	3	5	5	1	.....	.....	.....	.....	.....	.....	.....	.....
Douglas	2	2	14	.....	.....	.....	.....	.....	.....	.....	.....	.....
Edwards	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Elk	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ellis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ellisworth	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Finney	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ford	2	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Franklin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Franklin	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Geary	.....	3	4	1	3	3	.....	.....	.....	.....	.....	.....

TABLE No. 5 - CONTINUED.

COUNTY.	Abscess.....	Apoplexy.....	Asthma	Accident.....	Aneurism	Angina pectoris....	Appendicitis	Bright's disease.....	Brain disease.....	Brain fever.....	Bronchitis	Bilious remittent fever.....												
Pratt.....	1	2	1	5	2	2	1	3	1	1	1	1												
Rawlins.....	2	2	1	4	2	2	2	1	1	1	1	1												
Republic.....	2	1	3	40	4	5	5	7	1	1	3	1												
Reano.....	3	1	1	2	6	1	2	2	1	1	1	1												
Rice.....	1	2	1	2	6	1	2	2	1	1	1	1												
Riley.....	1	2	1	4	1	1	1	3	3	1	1	1												
Rooks.....	1	1	1	1	1	1	1	1	1	1	1	1												
Rush.....	1	1	1	1	1	1	1	1	1	1	1	1												
Russell.....	3	2	3	11	11	1	2	6	2	2	1	1												
Saline.....	1	6	1	9	1	1	1	2	1	1	1	1												
Scott.....	1	1	1	3	1	1	1	1	1	1	1	1												
Sedgwick.....	1	1	1	1	1	1	1	1	1	1	1	1												
Seward.....	1	1	1	1	1	1	1	1	1	1	1	1												
Shawnee.....	1	1	1	1	1	1	1	1	1	1	1	1												
Sheridan.....	1	1	1	1	1	1	1	1	1	1	1	1												
Sherman.....	1	1	1	4	1	1	1	1	1	2	1	1												
Smith.....	1	1	1	1	1	1	1	1	1	1	1	1												
Stafford.....	2	2	1	4	4	4	4	3	4	1	1	1												
Stanton.....	1	1	1	1	1	1	1	1	1	1	1	1												
Stanton.....	1	1	1	1	1	1	1	1	1	1	1	1												
Stevens.....	1	1	1	1	1	1	1	1	1	1	1	1												
Stevens.....	1	1	1	1	1	1	1	1	1	1	1	1												
Sumner.....	2	1	1	8	2	1	3	1	1	1	1	1												
Thomas.....	1	2	1	2	2	1	1	2	1	1	1	1												
Trigo.....	2	1	1	2	2	1	1	1	1	1	1	1												
Wabunsee.....	1	1	1	1	1	1	1	1	1	1	1	1												
Wallace.....	1	1	1	1	1	1	1	1	1	1	1	1												
Washington.....	2	2	1	4	7	1	1	3	1	5	2	1												
Wichita.....	1	1	1	1	1	1	1	1	1	1	1	1												
Wichita.....	1	1	1	1	1	1	1	1	1	1	1	1												
Wilson.....	1	1	1	3	5	1	1	2	3	1	1	1												
Woodson.....	5	17	8	11	30	48	6	11	22	13	5	1												
Wyandotte.....	1	1	1	1	1	1	1	1	1	1	1	1												
Leavenworth city.....	1	3	6	14	1	1	8	9	7	1	3	1												
Topeka city.....	1	17	1	53	1	1	11	10	7	1	8	1												
Wichita city.....	4	1	2	20	2	1	13	9	1	1	2	1												
Totals.....	60	69	131	190	33	80	381	502	4	7	18	20	64	104	171	198	20	59	26	32	80	102	12	28

TABLE No. 5 — CONTINUED.

COUNTY.	Bilious intermittent fever	Cancer	Cancer of the breast.	Cancer of the womb.	Cancer of the stomach.....	Cancer of the liver...	Cancer of the bowels.	Chicken-pox	Cholera morbus.....	Cholera infantum ...	Catarrhal fever.....	Congestion of lungs..
Gove.....	1	1	1		1	1				3		
Graham.....										6		
Grant.....		1				1						
Gray.....						1						
Greeley.....												
Greenwood.....	4	2				1			2			1
Hamilton.....												
Harper.....												
Harvey.....	5	5			3				2			
Haskell.....					1							
Hodgeman.....												
Jackson.....	2	1			2	1				1		
Jefferson.....	2	5				1		1		2		1
Jewell.....												
Johnson.....												
Kearny.....												
Kingman.....		1	3	2	1	5				1		
Kiowa.....		1	1							3		
Labette.....		1	3	1	1	1				3		1
Lane.....												
Leavenworth.....			2		1	2				4		3
Lincoln.....		15	4	2	1	8				3		
Linn.....												
Logan.....												
Lyon.....												
Marion.....		1	5		2					10		
Marshall.....		3	10	1	1	1				1		
McPherson.....										3		
Meade.....		1	1		1				1	2		
Miami.....		1	1							1		1
Mitchell.....		1	1		1		1			2		2

Montgomery.....																					2															
Morris.....																																				
Morton.....																																				
Munaha.....																																				
Noosno.....	3	1	5	2				2	2	6	1	1																								
Ness.....																																				
Norton.....				2						6																										
Oberge.....																																				
Osburne.....											1																									
Ottawa.....				4																																
Payne.....																																				
Phillips.....																																				
Pottawatomie.....	8																																			
Peet.....	8										1																									
Rawlins.....	8		8																																	
Republic.....	2											3	1																							
Rice.....	6																																			
Riley.....	7										4	3																								
Rooks.....	1													2																						
Rush.....																																				
Russell.....	2																																			
Saline.....	4																																			
Scott.....	1																																			
Sedgwick.....				4																																
Seward.....																																				
Shawnee.....																																				
Sheridan.....											1																									
Sherman.....																																				
Smith.....																																				
Stafford.....									2																											
Stanton.....																																				
Stevens.....																																				
Sumner.....	4			2								1																								
Thomas.....																																				
Thomson.....													1																							
Trego.....																																				
Wagoner.....	2								1																											
Wallace.....	1																																			
Washington.....											2	1																								
Wichita.....	2																																			
Wilson.....																																				
Woodson.....																																				
Wyandotte.....	8																																			
Wyandotte.....	1																																			
Wyandotte.....	2																																			
Leavenworth city.....	3																																			
Leavenworth city.....	2																																			
Leavenworth city.....	9																																			
Topeka city.....	20																																			
Wichita city.....	2																																			
Wichita city.....	2																																			
Totals.....	4	18	164	219	24	11	17	24	63	63	21	27	5	19		3	32	16	158	170	4	14	18	49												

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TABLE No. 5—CONTINUED.

COUNTY.	Congestion of brain..	Congestion of heart..	Congestion of bowels.	Cerebral hemor- rhage.....	Cerebral tumor.....	Complications.....	Convulsions.....	Cyanosis.....	Catarrh.....	Consumption.....	Catarrh of the stomach.....	Catarrh of the intestines.....												
Pratt.....						1	1																	
Rawlins.....							5			13														
Republic.....							1			10														
Reno.....						1				17	3													
Rice.....										2														
Riley.....									1	6	2													
Rooks.....										2	1													
Rush.....										1														
Russell.....						3	4			1														
Saline.....	1									18	17	1												
Scott.....																								
Sedwick.....		2			1	1	2			4	8													
Seward.....										2	2													
Shawnee.....										2	1													
Sheridan.....						5				2	3													
Sherman.....	1																							
Smith.....																								
Stafford.....							4																	
Stanton.....																								
Stevens.....			1																					
Sunmer.....																								
Thomas.....				1						10	6													
Trego.....	1						1			1	1													
Wabunsee.....										2														
Wallace.....						1																		
Washington.....			1																					
Wichita.....	1								1	5	14	2												
Wilson.....																								
Woodson.....							1			10	10													
Wyandotte.....	7	2	1	3	5	2	8	1		119	112	4												
Leavenworth city.....		5		2		8						26												
Topeka city.....												49												
Wichita city.....	4	1	2	8	1	5	5	1				53												
Totals.....	20	25	4	12	24	26	34	52	4	6	28	49	87	54	20	7	4	8	628	708	31	24	12	8

TABLE No. 5 - CONTINUED.

COUNTY.	Cystitis	Diabetes	Diphtheria	Dropsy	Disease of the liver.	Diarrhea, chronic....	Dysentery	Enterocolitis.....	Erysipelas.....	Epilepsy.....	Enteritis.....	Embolism.....
Allen.....												
Anderson.....			8	16	2	6			1	2		
Atchison.....	1		1	2	1				1			
Barber.....	1	5	1	2	1	3	2		1			
Barton.....												
Bourbon.....		3	5	12	9	2	1		2	1		
Brown.....		1						1				
Butler.....			4	16								
Chase.....			1	1								
Chautauqua.....												
Cherokee.....	8	2	2	6	10	13	1	1	2	19	2	1
Cheyenne.....												
Clark.....				1	2							
Clay.....		1	2	1	5	2		1	4			1
Cloud.....												
Coffey.....		2	2	8	2	6			1			1
Comanche.....		1	2				1	1				1
Cowley.....	1		3	1								3
Crawford.....	7	1	18	40	9	27	1	6	6	32	18	1
Decatur.....				3	1	3						
Dickinson.....	1		8	8	1	3	2	1				
Doniphan.....		1	1	4	1	3	1	3				
Douglas.....			2	5	7				1	1		
Edwards.....	1											
Elk.....		1		2					2	1	1	1
Ellis.....			2									
Ellsworth.....												
Finney.....				1	1							
Ford.....		1		3	1							1
Franklin.....												
Franklin.....												
Geary.....		1		4	2	3						

TABLE No. 5—CONTINUED.

COUNTY.	Endocarditis.....	Fatty degeneration of the heart.....	Gastritis.....	Gastro-enteric catarrh.....	Gangrene.....	Hemophilia.....	Hemorrhage of the bowels.....	Heart failure.....	Heart disease.....	Heart disease, valvular.....	Heart paralysis.....	Hydrocephalus.....
Allen.....												
Anderson.....			1	1				5	11			
Arclison.....					3			2	17			1
Barber.....			2				1	1	1			
Barton.....												
Bourbon.....			1	4			1	7	15	10		
Brown.....												
Buider.....								22	3			
Chase.....								1				
Chautauqua.....												
Cherokee.....	1		7	8	2	1		18	10	22	12	2
Cheyenne.....												
Clark.....					1		1	2	1	8		
Clay.....												
Cloud.....												
Coffey.....			2					10	12	1		
Comanche.....				1								
Cowley.....					2		2	1	19	20	18	1
Crawford.....			1	15								
Decatur.....												
Dickinson.....	1		1	8	5	1	3	13	22	18	16	1
Doniphan.....												
Douglas.....			4	2		1		3	18	29		
Edwards.....								1				
Ellis.....												
Ellisworth.....								2	1	1	1	
Finney.....												
Ford.....	1		1	3				3	5	3		1
Franklin.....												
Geary.....					1		3	1	3			

TABLE No. 5 - CONTINUED.

COUNTY.	Hemorrhage of the lungs.....	Inanition	Intussusception	La grippe.....	Malarial fever.....	Marasmus.....	Measles	Meningitis.....	Murder.....	Myelitis.....	Nervous prostration.	Neuralgia of the heart.....
Gore.....												
Graham.....												
Grant.....				3								
Gray.....				2			2					
Greasley.....												
Greenwood.....	1			1	1	1	1					
Hamilton.....				1								
Harper.....				1								
Harvey.....				2								
Haskell.....												
Hodgeman.....												
Jackson.....	3			1			3	1				
Jefferson.....				1			1	1				
Jewell.....	1			3			1	1				
Johnson.....												
Kearny.....												1
Kingman.....		2										
Kiowa.....				4								
Klota.....												
Labette.....		2	1	1			3	4				1
Lane.....												
Leavenworth.....	1	6		3	4		4	9	6		1	1
Lincoln.....							2					
Linn.....												
Logan.....												
Lyon.....				1								
Marion.....				2								
Marshall.....	2	6		1	5		2	2				1
McPherson.....												
Meade.....	1			1								
Miami.....												
Miami hell.....		2	2	2	1							1

TABLE No. 5—CONTINUED.

COUNTY.	Nephritis.	Old age.	Pneumonia.	Pernicious anemia.	Peritonitis.	Paralysis.	Paresis.	Pericarditis.	Perforation of the bowels.	Puerperal fever.	Rheumatism.	Scarlet fever.
Allen	1	25	22	1	1	13	2	1	1	1	2	1
Anderson	1	21	16	1	2	10	1	1	1	1	4	1
Archison	1	1	2	1	1	1	1	1	1	1	4	3
Barber	1	2	1	1	1	1	1	1	1	1	2	3
Barton	1	2	1	1	1	1	1	1	1	1	3	3
Bourbon	1	4	29	32	4	15	9	1	1	1	5	2
Brown	1	10	3	3	1	1	1	1	1	1	2	1
Butler	1	16	16	1	1	1	1	1	1	1	3	1
Chase	1	4	5	1	1	1	1	1	1	1	1	1
Chautauqua	1	4	1	1	1	1	1	1	1	1	1	1
Cherokee	3	20	32	65	4	10	7	2	4	9	3	1
Cheyenne	1	1	1	1	4	2	1	1	1	1	1	2
Clark	1	2	11	12	1	1	1	1	1	1	1	7
Clay	1	2	11	12	1	1	1	1	1	1	1	3
Cloud	1	1	1	3	2	1	1	1	1	1	1	1
Coffey	3	19	17	21	2	8	11	3	1	1	2	2
Comanche	1	5	5	1	2	1	1	1	1	1	1	1
Cowley	6	22	27	59	8	16	21	1	4	3	3	8
Crawford	3	21	27	59	1	1	1	1	1	1	1	1
Decatur	3	13	6	20	3	1	1	1	1	1	2	1
Dickinson	2	39	4	1	1	18	7	1	1	1	1	1
Doniphan	2	9	4	1	3	6	8	1	1	1	1	1
Douglas	14	26	27	36	1	6	1	1	1	1	3	4
Edwards	4	1	6	1	1	1	1	1	1	1	1	1
Elk	2	5	2	1	1	1	1	1	1	1	1	3
Ellis	2	5	2	1	1	1	1	1	1	1	1	1
Ellsworth	1	1	1	1	1	1	1	1	1	1	1	1
Finney	3	1	3	4	1	3	6	1	1	1	1	1
Ford	3	1	3	6	1	6	1	1	1	1	1	1
Franklin	3	1	3	6	1	6	1	1	1	1	1	1
Geary	10	17	7	15	5	5	6	1	1	1	1	1

TABLE No. 5—CONTINUED.

COUNTY.	Nephritis	Old age	Pneumonia	Pernicious anemia	Peritonitis	Paralysis	Paresis	Pericarditis	Perforation of the bowels	Puerperal fever	Rheumatism	Scarlet fever												
Pratt	...	4	8	...	...	2	2	...	...	3	2	1								
Ravins	...	16	2	...	...	1	...	...	2	...	...	12						
Republic	4	18	21	1	1	2	...	...	1	2	...	68										
Reno	...	21	26	...	2	6	...	...	...	...	2	1								
Rice	4	27	5	...	1	3	...	...	...	...	2	1								
Riley	...	...	...	...	...	...	...	...	...	...	...	...
Rocks	1	10	8	...	2	1	...	...	...	...	2	1								
Rush	...	...	...	...	...	...	...	...	...	...	...	...
Russell	...	...	...	...	1	...	...	...	...	...	...	...					
Sallie	...	14	12	...	3	6	...	...	...	1	2	3									
Scott	...	...	...	...	...	...	...	...	...	...	...	...
Seckwick	2	6	24	...	1	4	...	1	...	...	...	3									
Shaw	...	...	2	2	...	1	...	...	...	...	...	...						
Shawnee	...	2	4	...	...	1	...	...	...	...	...	...						
Sheridan	1	1	...	1	...	...	...	...	...	...	...	...				
Sherman	...	...	...	...	...	1	...	...	...	...	...	...						
Smith	...	1	...	...	...	...	...	...	...	...	...	5			
Stanford	...	3	3	...	1	2	...	...	...	...	...	...						
Stanton	...	...	...	...	...	...	...	...	...	...	...	...
Stevens	...	...	1	...	...	...	...	...	...	...	...	...			
Sumner	1	1	10	...	2	3	...	...	...	...	...	2							
Thomas	...	...	3	...	1	4	...	...	...	...	...	...						
Trego	...	1	3	...	1	1	...	...	1	...	...	2								
Wallace	...	...	2	...	...	2	...	...	...	...	...	...						
Washington	3	14	7	...	...	...	...	...	...	...	...	...			
Wichita	...	20	8	1	...	2	...	1	...	1	...	6												
Wilson	...	3	2	...	...	1	...	...	...	...	...	...						
Woodson	...	9	4	...	1	6	...	...	...	...	...	1							
Wyandotte	20	31	180	...	29	14	8	3	5	2	1	3												
Leavenworth city	...	...	53	...	4	12	3	...	1	...	...	1								
Topeka city	2	43	31	...	16	18	6	...	...	...	...	10								
Wichita city	...	10	41	...	9	12	2	...	2	...	...	4										
Totals	62	75	896	483	636	1,283	14	12	92	142	219	301	8	19	14	13	7	9	7	22	47	39	79	194

TABLE No. 5 - CONTINUED.

COUNTY.	Stenosis.....	Suicide.....	Septicemia.....	Senile dementia.....	Senile prostration.....	Smallpox.....	Sunstroke.....	Stomatitis.....	Strangulated hernia.....	Spinal sclerosis.....	Spinal meningitis.....	Tetanus.....
Allen.....												
Anderson.....		2	2		3	1				1		
Atchison.....		3										
Barber.....												
Barton.....												
Bourbon.....		2						6	2		5	
Brown.....												
Butler.....						2						
Chase.....					1							
Chautauqua.....												
Cherokee.....		7	5				1		2	4		2
Cheyenne.....												
Clark.....										1		
Clay.....		1								1		
Cloud.....												1
Coffey.....												
Comanche.....		1	1					2		7		
Cowley.....		3	4									1
Crawford.....		2	4	15	10	1	2		4			1
Decatur.....		1	1	1								
Dickinson.....		1	3	1								2
Doniphan.....		1	4	10	5	1			1	2		2
Douglas.....		3	8	1	4	1						2
Edwards.....		1		1								
Elk.....												
Ellis.....												
Ellsworth.....												
Finney.....												
Ford.....												
Franklin.....		1										
Geary.....	1	1	3						2			

TABLE No. 5 - CONCLUDED.

COUNTY.	Tumor of the brain..	Tumor of the liver...	Typhoid fever.....	Ulceration of the throat.....	Ulceration of the stomach.....	Uremic coma.....	Uremia.....	Whooping-cough.....	Yellow atrophy of the liver.....	Still-born and premature.....	Unknown.....	Unclassified.....	
Pratt.....			2	1				2		2		3	
Rawlins.....			12							3		8	
Republic.....			3									9	
Reno.....			6	1			1			5		2	
Rice.....			4							3		8	
Riley.....			2				1	1		9		22	
Rooks.....			2							2		9	
Rush.....			4									7	
Russell.....			5					7		6		2	
Saline.....			1									6	
Scott.....			3				1			10		3	
Sedgwick.....			3									6	
Seward.....			2				2					1	
Shawnee.....	1		1				1					2	
Sheridan.....					1							6	
Sherman.....												3	
Smith.....												1	
Stafford.....			4									1	
Stanton.....												2	
Stevens.....												2	
Sumner.....												5	
Thomas.....			1									1	
Trego.....			4									1	
Wabunsee.....			1									1	
Wallace.....								1				2	
Washington.....		1	3									4	
Wichita.....			4			2				2		37	
Wilson.....												4	
Woodson.....			1									1	
Wyandotte.....		2	2	1			2			3		9	
Leavenworth city.....		3	73	56	1		7	12	4	69		59	
Topeka city.....		1	11							20		30	
Wichita city.....		2	15	2	2	1	8		1	20		93	
Totals.....	2	5	242	339	2	4	6	14	15	16	30	39	63
			8	75	6	3	282	315	697	714	198	525	

TABLE No. 6.—CONTAGIOUS DISEASES OCCURRING DURING 1903 AND 1904.

COUNTY.	DIPHTHERIA.				SCARLET FEVER.				SMALLPOX.			
	1903.		1904.		1903.		1904.		1903.		1904.	
	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....
Allen.....												
Anderson.....												
Atchison.....	60	8	16	6	119	4	6	1	3	1		
Barber.....					80	2						
Barton.....	5		10	1	23		40	3	32		30	
Bourbon.....	20	5	19	5	20		20	2			48	
Brown.....			12	1			19				37	
Butler.....			27	4	17	3	41	3	47	2	18	
Chase.....	2	1	1	1	1				30	1		
Chautauqua.....												
Cherokee.....	2	2	17	6	45	2	117	6	49		47	
Cheyenne.....							228	7				
Clark.....					3	3	33					
Clay.....	25	4	12	1								
Cloud.....			19	3			1				11	
Coffey.....	35	8	10	2	75	2	12		1		9	
Comanche.....												
Cowley.....			7	3			40				2	
Crawford.....	43	13	48	40	188	8	54	3	9		28	
Decatur.....			12	3	5	2	4	1	7			
Dickinson.....	12	3	2		6		17	1	12		18	
Doniphan.....	4		5	1	20		10				10	
Douglas.....	3	2	15	5	71	4	14		4		26	
Edwards.....									2			
Elk.....			9	2			33	3	2		165	2
Ellis.....	5	2							5		1,000	
Ellsworth.....												
Finney.....									1			
Ford.....	13	1	2	1	50	1	40	1				
Franklin.....												
Geary.....	4	4			2	2	3				15	
Gove.....							5		3	1	30	
Graham.....					2		2				4	
Grant.....												
Gray.....							1					
Greeley.....												
Greenwood.....	1	1	6	2			21	1			1	
Hamilton.....							12					
Harper.....												
Harvey.....	14	2	3	1	6		20	2	1		2	
Haskell.....												
Hodgeman.....												
Jackson.....	5		3		50		23		3		17	
Jefferson.....	1	1	18		30	2	60	4				
Jewell.....	7	2			35	1			6			
Johnson.....												
Kearny.....					4							
Kingman.....	2		3		51	3	72	4			1	
Kiowa.....												
Labette.....	4	2	35	8	12	3	40	7	12		10	3
Lane.....					5		2				7	
Leavenworth.....	44	3	117	7	92	1	16	1	24		55	1
Lincoln.....	1	1			8				1		100	
Linn.....					1							
Logan.....							2					
Lyon.....	12	12	28	3		4	95	4	7		52	1
Marion.....			4				14	2			5	
Marshall.....	10	4	2	1	25	2	13	2	2			

TABLE No. 6.—CONTINUED.

COUNTY.	DIPHTHERIA.				SCARLET FEVER.				SMALLPOX.			
	1903.		1904.		1903.		1904.		1903.		1904.	
	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....
McPherson.....	9	3	9	1	48	2	9		1		35	
Meade.....	2	1	2		6	1	11				45	
Miami.....	1	1	10	2	6	1	15		4		45	
Mitchell.....	3		8		55		205				4	
Montgomery.....	5	2	7				1				4	
Morris.....												
Morton.....												
Nemaha.....	6	2	7		48	1	21		1			
Neosho.....			4	1	16		16	3			28	
Ness.....					19	3			3			
Norton.....			2		36		186					
Osage.....	7	1	2	2	7	1	11		2		25	
Osborne.....	19	2	2	1	2		22	2			30	
Ottawa.....	1				43	3	16				8	3
Pawnee.....	3	1	1	1			10				20	
Phillips.....							400					
Pottawatomie.....			2	1	16	1	1				15	
Pratt.....			3		13		12		3		1	
Rawlins.....			4		48		13					
Republic.....	31	2	24	7	66	2	154	12	10		1	
Reno.....	48	4	5	5	69	1	129	68	11	2	12	3
Rice.....	2				25	2	38	1	11	5	7	
Riley.....					7	1			2			
Rock.....			4	2	20	3	25	4			120	
Rush.....	8	5							4			
Russell.....					11							
Saline.....	2	2	3				33	7			132	
Scott.....												
Sedgwick.....	7	3	6	2	33	2	35	3	1	1	3	
Seward.....												
Shawnee.....	1	1			10		4					
Sheridan.....											34	
Sherman.....	3	1	3	5	31	2	56	5	62		100	
Smith.....												
Stafford.....			12	2			5					
Stanton.....												
Stevens.....					1				28			
Sumner.....	10	3	3	1	23		21	2	50	1	7	
Thomas.....									27		27	
Trego.....					15	2	18	1			7	
Wabauwsee.....			9	2			9				5	
Wallace.....	8	4									1	
Washington.....			5	1	19	1	10	6	12		4	2
Wichita.....												
Wilson.....			5	5			2	2				
Woodson.....	1	1					19				15	
Wyandotte.....	65	6	117	17	169	3	47	1	5		360	
Leavenworth city.....			113	6			12	1			19	1
Topeka city.....			146	17			162	10			40	
Wichita city.....			54	13			35				8	
Totals.....	587	136	1,054	201	1,813	79	2,936	194	526	12	2,360	16

TABLE No. 6—CONTINUED.

COUNTY.	MEASLES.				TYPHOID FEVER.				CHICKEN-POX.			
	1903.		1904.		1903.		1904.		1903.		1904.	
	Number of cases.	Deaths.	Number of cases.	Deaths.	Number of cases.	Deaths.	Number of cases.	Deaths.	Number of cases.	Deaths.	Number of cases.	Deaths.
Allen												
Anderson												
Atchison	10		1		16	6	9	5	4			
Barber			40	1	3	1	5	1				
Barton	30		100	2	28	4	31	2	100			
Bourbon	75	6	37	7	15	7	10	5				
Brown												
Butler	72	5	65	3	18		38	2			14	
Chase	38				9		1	1				
Chautauqua												
Cherokee	69	2	230	14	17	17	18	18			13	
Cheyenne			5				10					
Clark	8											
Clay			100		1	1	1	1			1	
Cloud												
Coffey			7	7	12	3	2	2				
Comanche	8		4	1			1	1				
Cowley												
Crawford	5	2	30	14	75	17	69	31			6	1
Decatur	3		1	1	10	1	11	3	4		10	
Dickinson	9		7	2	15	8	8	3	20			
Doniphan			1		17		1					
Douglas	38		250	5	32	6	27	9				
Edwards			35	2	17	1	23	2			22	
Elk			3									
Ellis					10	1	50					
Ellsworth												
Finney												
Finney												
Ford	15		10		30	2	20	3	150		15	
Franklin												
Geary					1	1	3	3				
Gove			45		10		18	4				
Graham	1		2		2	2	2	2				
Grant							10	3				
Gray	12		21		5		5	1	11		2	
Greeley												
Greenwood	7	1	15	1	7	2	9	3				
Hamilton	4	1					8	2				
Harper												
Harvey			1	1	1	1	5	5				
Haskell							3					
Hodgeman	20		129	3	7		7				2	
Jackson	5		142	1	5		5				1	
Jefferson	15		25	1	2	2	14	3	15		1	1
Jewell	10	1			15	2			30			
Johnson												
Kearny					15	2	11					
Kingman	13		27		4	1	7	2				
Kiowa												
Labette	36	3	200	4	23	4	47	6	19		22	
Lane			6									
Leavenworth	77		198	4	11	11	16	16			3	
Lincoln					2	2	6	6				
Linn												
Logan							90					
Lyon			633	8	2	2	4	4			92	1
Marion			4	4	1	1	1	1				
Marshall	16	2			10	4	10	5	5			

TABLE No. 6—CONTINUED.

COUNTY.	MEASLES.				TYPHOID FEVER.				CHICKEN-POX.			
	1903.		1904.		1903.		1904.		1903.		1904.	
	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....
McPherson.....	24	1	93	.....	5	5	.....	.....	.....	.....	7	.....
Meade.....	.....	.....	.....	.....	2	1	.....	.....	.....	.....	.....	.....
Miami.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....
Mitchell.....	23	.....	182	6	9	2	15	3	58	.....	57	.....
Montgomery.....	.....	.....	12	.....	4	1	.....	.....	.....	.....	.....	.....
Morris.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Morton.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nemaha.....	91	.....	350	3	11	4	13	4	23	.....	17	.....
Neosho.....	.....	.....	112	4	13	7	3	3	.....	.....	8	.....
Ness.....	100	.....	.....	.....	7	.....	.....	.....	.....	.....	.....	.....
Norton.....	.....	.....	49	.....	.....	.....	7	.....	.....	.....	.....	.....
Osage.....	5	.....	326	.....	.....	.....	.....	.....	.....	.....	4	.....
Osborne.....	3	.....	10	.....	1	.....	8	2	10	.....	.....	.....
Ottawa.....	.....	.....	12	5	5	.....	.....	.....	21	.....	.....	.....
Pawnee.....	.....	.....	.....	.....	15	6	.....	.....	.....	.....	.....	.....
Phillips.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pottawatomie.....	3	.....	55	1	7	2	7	3	.....	.....	.....	.....
Pratt.....	.....	.....	.....	2	20	2	20	13	50	.....	.....	.....
Rawlins.....	5	.....	11	.....	12	4	9	3	.....	.....	.....	.....
Republic.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Reno.....	1	.....	60	.....	6	4	4	.....	.....	.....	.....	.....
Rice.....	.....	.....	38	1	2	2	7	2	3	.....	.....	.....
Riley.....	400	6	.....	.....	12	4	.....	.....	.....	.....	.....	.....
Books.....	2	1	.....	8	.....	.....	30	5	.....	.....	.....	.....
Rush.....	31	.....	.....	.....	8	.....	.....	.....	.....	.....	.....	.....
Russell.....	.....	.....	.....	.....	6	1	.....	.....	3	.....	.....	.....
Saline.....	.....	.....	300	3	3	3	5	2	.....	.....	.....	.....
Scott.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sedgwick.....	1	1	40	.....	19	3	.....	.....	.....	.....	.....	.....
Seward.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Shawnee.....	4	.....	26	2	6	.....	.....	.....	.....	.....	.....	.....
Sheridan.....	31	.....	75	.....	.....	.....	1	.....	.....	.....	5	.....
Sherman.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Smith.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stafford.....	.....	.....	190	3	.....	.....	34	4	.....	.....	.....	.....
Stanton.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stevens.....	10	.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....
Sumner.....	54	1	38	.....	2	1	40	6	2	.....	2	.....
Thomas.....	56	1	50	.....	.....	.....	25	4	.....	.....	.....	.....
Trego.....	30	.....	136	.....	.....	.....	36	4	40	.....	22	.....
Wabaunsee.....	.....	.....	18	.....	5	1	.....	.....	2	.....	.....	.....
Wallace.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington.....	.....	.....	.....	.....	2	3	4	4	.....	.....	.....	.....
Wichita.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wilson.....	.....	.....	.....	.....	.....	.....	2	2	.....	.....	.....	.....
Woodson.....	8	.....	8	2	1	1	2	2	.....	.....	.....	.....
Wyandotte.....	270	1	261	2	73	73	56	56	.....	.....	.....	.....
Leavenworth city.....	.....	.....	119	1	.....	.....	11	11	.....	.....	3	.....
Topeka city.....	.....	.....	436	4	.....	.....	50	40	.....	.....	49	.....
Wichita city.....	.....	.....	218	.....	.....	.....	74	15	.....	.....	.....	.....
Totals.....	1,733	35	6,563	144	758	242	1,061	339	570	.....	380	3

TABLE No. 6—CONTINUED.

COUNTY.	CHOLERA INFANTUM.				DYSENTERY.				CONSUMPTION.			
	1903.		1904.		1903.		1904.		1903.		1904.	
	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....	Number of cases.....	Deaths.....
Allen.....												
Anderson.....			7	7					52	41	21	21
Atchison.....									4		3	3
Barber.....	1								20	3	20	3
Barton.....	132	5	15	3			10	2				1
Bourbon.....	4	4	10	5			10	9	20	20	30	30
Brown.....			27	6			10				9	6
Butler.....									2	2	1	1
Chase.....												
Chautauqua.....												
Cherokee.....	20	20	17	17			9	9	45	45	56	56
Cheyenne.....											1	1
Clark.....			14	4	7	5			8	8	6	6
Clay.....	1	1									2	1
Cloud.....												
Coffey.....	1	1	1	1					18	18	20	20
Comanche.....			10		10		20	1				
Cowley.....												
Crawford.....	15	15	25	7	6	6	12	6	37	37	51	40
Decatur.....	1	1							2	1	1	1
Dickinson.....	1	1	8	3					18	11	10	4
Doniphan.....	4	4	11	2	3	3		1	17	17	19	19
Douglas.....			2	2			3	3	23	23	32	32
Edwards.....	2	2			1	1	31	1	4	4		
Elk.....												
Ellis.....	1	1							8	2		
Ellsworth.....												
Finney.....	1	1							6	6		
Ford.....	10	10	2		10		5		30	8	12	5
Franklin.....												
Geary.....									7	7	6	6
Gove.....			10									
Graham.....	2	2	6	6					4	4	2	
Grant.....											1	
Gray.....									1			
Greeley.....												
Greenwood.....	2	2			2	2			4	4	4	4
Hamilton.....									1	1	4	4
Harper.....												
Harvey.....	2	2			1	1			15	15	14	14
Haskell.....												
Hodgeman.....	2	1	4				14	2	3	2	1	1
Jackson.....					2	2			5	5	4	4
Jackson.....					1	1	2		15	6	18	18
Jefferson.....	6	2	9	5					7	7		
Jewell.....												
Johnson.....												
Kearny.....									1	1		
Kingman.....			3	3			1	1	3	3	2	2
Kiowa.....												
Labette.....	6		10	3	32		21	1	13	5	25	13
Lane.....									1	1	2	1
Leavenworth.....	4	4	6	6	1	1	2	2	25	25	20	20
Lincoln.....	3	3					1	1	8	8	2	2
Linn.....												
Logan.....									1			
Lyon.....	10	10	3	3	13	13					42	14
Marion.....	1	1							5	5	2	2
Marshall.....	20	3	14	7	6	1			30	22	19	19

