THE TOPEKA IMPROVEMENT SURVEY

I

A PUBLIC HEALTH SURVEY OF TOPEKA

BY

FRANZ SCHNEIDER, JR.

II

DELINQUENCY AND CORRECTION

BY

ZENAS L. POTTER

III

MUNICIPAL ADMINISTRATION IN TOPEKA

BY

D. O. DECKER

IV

INDUSTRIAL CONDITIONS IN TOPEKA

BY

ZENAS L. POTTER

UNDER THE DIRECTION OF THE
DEPARTMENT OF SURVEYS AND EXHIBITS
RUSSELL SAGE FOUNDATION

SHELBY M. HARRISON
Director

TOPEKA IMPROVEMENT SURVEY
COMMITTEE
TOPEKA, KANSAS
1914

THE TOPEKA IMPROVEMENT SURVEY

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The Topeka Improvement Survey (the name was chosen deliberately and advisedly) was started in October, 1913, and the last of the reports were turned over to the Topeka committee within a little over a year. It took up public health and sanitation, delinquency and corrections, municipal administration, industrial conditions, city planning and recreation. The first four of the reports are included in this volume.

A representatve committee was appointed to the task. It included business men, large employers, labor leaders, workingmen, ministers, doctors, lawyers, teachers, social workers, city commissioners, and others specially related to particular problems or population groups. Judge T. F. Garver was made chairman, Harold T. Chase, secretary, and William Macferran, treasurer. The committee secured the Department of Surveys and Exhibits of the Russell Sage Foundation to make the survey, and the department in turn drafted in still other resurces. In fact, the survey was used as a sort of giant lens to draw together in one large co-operative whole the forces which sooner or later would touch Topeka, and which, by uniting, might strengthen the work of each other.

This striking co-operation is well illustrated in the investigation into public health and sanitation, made under the direction of Franz Schneider, Jr. The resources drawn on include the State Board of Health, the city Sanitary Department, the State University, the State Agricultural College, Washburn College, and the offices of the State Hotel and Dairy Commissioners.

City Commissioner W. L. Porter, for instance, delegated the city's three sanitary inspectors to the survey work. They were charged with the enumeration and inspection of all privy vaults and private wells, and the preparation of maps showing the data. Dr. S. J. Crumbine, secretary of the State Board of Health, brought in his five food and drug inspectors to assist the survey, and also helped in securing the milk and water analysis and the investigation of the sewer system. W. J. V. Deacon, vital statistician of the State Board, analyzed the vital statistics.

The State Educational Administrative Board, the State University, and Prof. C. C. Young, director of the State Water Survey, co-operated in making possible the remarkable service of analyzing 1,700 samples of well water, the analysis being made under Professor Young's direction. Prof. Granville R. Jones of the State University and engineer of the State Board of Health, inspected the sewer system; the state hotel commissioner, Miles Mulroy, inspected a number of lodging houses and restaurants; and the state dairy commissioner, G. S. Hine, went over the dairy and milk depot situation. The State

Agricultural College loaned assistance to the chemical and bacteriological examination of milk; and similarly Washburn College assisted through the bacteriological examination, under Prof. Edith M. Twiss, of samples of ice cream, and the inspection of place in which ice cream is handled; and students from Prof. D. M. Fisk's classes in sociology in Washburn College aided in collecting samples of well water.

In addition, a number of individuals gave personal help, among them, in marked degree, Mrs. Charles B. Thomas and Mary R. Vose, secretary of the Provident Association, and Mr. C. G. Blakely. The city commissioners appropriated $500, and gave office room in the city building—this not alone to the health work but to all divisions of the survey.

Similarly, valuable co-operation was received by Zenas L. Potter in his investigations into correctional work and industrial conditions; and by David O. Decker in the field of municipal administration. Among those to whom special acknowldegment of assistance in these investigations is made, are: Commissioner of Labor W. L. O'Brien; Miss Linna E. Bresette, also of the Kansas Labor Department; Mrs. Kate E. Pierson, formerly of the Kansas City Board of Public Welfare; Prof. L. D. Bushnell of the State Agricultural College; State Engineer W. S. Gearhart; City Engineer A. R. Young; and County Engineer Walter Arnold.

In view of this generous assistance, the survey represented a much larger financial outlay than the several thousand dollars raised by the Topeka committee. It was in fact a community enterprise,—backed, supported and assisted by individuals and agencies of the community.

In order to reach a still larger group of people than those who would see the printed reports or even the generous newspaper summaries, an exhibit of findings was prepared, and displayed in a vacant store building in the heart of the Topeka business district. In the ten days that it was open over 20,000 people viewed the maps, photographs, cartoons, diagrams, and other graphic material which aimed to make the facts of local conditions more easily understood and longer remembered. The hundred and more exhibit panels were prepared under the direction of E. G. Routzahn, Associate Director of the Department of Surveys and Exhibits, with the assistance of Walter Storey, Mary Swain Routzahn and Matilda Spence.

A PUBLIC HEALTH SURVEY OF TOPEKA

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SANITARIAN

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CONTENTS

		PAGE
I.	LIFE, DEATH AND DISEASE IN TOPEKA	
	The Death Rate	3
	The Birth Rate	5
	Ward Differences	7
	Causes of Death	8
	Preventable Diseases	11
II.	SANITARY CONDITIONS	
	Water Supply	19
	Sewerage and Sewage Disposal	21
	Milk Supply	28
	Food Supply	41
	Wells and Privies	46
	Other Sanitary Problems	
	Tuberculosis	55
	Infant Mortality	59
	Venereal Diseases	62
	Housing	63
	Refuse Disposal	64
	Physical Examination of School Children	67
III.	THE CITY HEALTH DEPARTMENT	
	Organization	71
	Financial Treatment	72
	Inspection Service	74
	Control of Communicable Diseases	75
	Records	77
	Summary of Deficiencies	77
	Recommendations for Improvement	78
IV.	SUMMARY AND CONCLUSIONS	81
V.	APPENDICES	88

FOREWORD

This Public Health Survey of Topeka is not the product of investigation by one individual or by an organized staff working under the direction of one individual, but is a product of co-operation by the public health forces of the City of Topeka and the State of Kansas. A mere recital of the resources drawn on is impressive, the list including the State Board of Health, the city Sanitary Department, the State University, the State Agricultural College, Washburn College, and the offices of the State Hotel and Dairy Commissioners. To the State Department of Health the Survey owes the investigations covering vital statistics and the food supply, as well as generous and valuable co-operation in securing milk and water analysis and the investigation of the sewer system. To the State University the Survey is indebted for the investigation of the sewerage, and for the remarkable feat of analyzing some seventeen hundred samples of water. The contribution of the city Sanitary Department is likewise a substantial one, covering the enumeration of all wells and privies in the city and the preparation of the maps representing this material. The State Agricultural College lent its energies to the chemical and bacteriological examination of milk; Washburn College to the bacteriological examination of samples of ice cream, and the inspection of the places in which ice cream was handled; the State Hotel Commissioner inspected a number of lodging houses and restaurants; while the State Dairy Commissioner visited Topeka and went over the dairy and milk depot situation.

Thanks are especially due Dr. S. J. Crumbine, secretary of the State Board of Health, for his constant interest, encouragement, and assistance; to W. J. V. Deacon for his painstaking analysis of vital statistics; to City Commissioner W. L Porter for his ready and cordial co-operation; and to J. A. Ramsey, sanitary sergeant. Others in this list are Prof. Granville R. Jones of the State University; Prof. C. C. Young, director of the State Water Survey; Prof. L. D. Bushnell of the State Agricultural College; Prof. Edith M. Twiss of Washburn College; State Dairy Commissioner George S. Hine; State Hotel Commissioner Miles Mulroy; Mrs. Charles B. Thomas and Miss Mary R. Vose. What a large part of the work was carried out by these co-operators readily can be seen, and to them thanks are due for the breadth of scope which it has been possible to give this survey.

A PUBLIC HEALTH SURVEY OF TOPEKA

I. LIFE, DEATH AND DISEASE.

Eight hundred and thirty-five persons died in Topeka in 1912, giving the city a death rate of 17.9 per 1,000 of the population as against 10.2 for the State of Kansas as a whole. The question naturally arises why 18 persons out of each thousand should die in Topeka while only ten die in the whole state. Is there an unusual and unnecessary amount of sickness and death in the city; or is there an unusual number of infants and old persons, whose death rates are always high; or is it a fact that the city's hospitals attract an unusual number of non-residents whose deaths go to swell the city's total? Such explanations will occur readily to natives of the city. Still Topeka is a young, normally-growing western city, such as usually has a low death rate, and we must inquire into the facts and see whether these or other special factors account for the excesslve mortality, or whether real evils exist.

The Death Rate.

The first and most obvious correction of the death rate is that which eliminates deaths of non-residents. In 1912 Topeka's complete death registration of 835 included 171 such persons. Making the corresponding correction, the rate falls to 14.2 per 1,000—a figure still 40 per cent higher than that of the state as a whole.

Taking now the resident deaths in Topeka (and in all calculations which follow only resident deaths will be considered) and comparing the city's mortality at different age groups

with that of the state, it is apparent that the city is always in excess. The figures are shown below:

TABLE 1. DEATH RATES BY AGE GROUPS, TOPEKA VS. STATE OF KANSAS, 1912.

Age	Topeka	State of Kan.	Topeka excess
Under 5 years.....	33.6	20.5	13.1
5-14 years.....	3.4	1.7	1.7
15-24 years.....	5.1	3.2	1.9
25-44 years.....	7.0	5.2	1.8
45-64 years.....	17.6	13.8	3.8
65 and over.....	72.1	63.8	8.3
All.	14.2	10.2	4.0

At the same time there is a slightly more favorable age distribution of population in the state; but when proper correction is applied[1] the reduction in the city's general death rate is small—from 14.2 to 13.2. This small reduction on account of age distribution will be surprising to many who have considered Topeka's "retired farmer" population as having an important influence on her death rate.

One more correction may be applied—that for color. Topeka has a negro element in her population of 10.4 per cent—as against 3.2 per cent for the entire state; and the crude death rate of these negroes was, in 1912, 22.9 as against 13.2 for the whites. This marked advantage of the whites will be considered again; for the present it is sufficient to note that a liberal correction of the city's death rate on this score drops it from 13.2 to 12.3, leaving it—after all corrections—still 20 per cent in excess of the state rate.

Compared with the United States Registration Area (about two-thirds of the country) Topeka appears somewhat more favorably; the relative figures being, after correction for non-residents, age, and sex[1], 18.1 for the Area as against 16.3 for the city. It must be remembered, however, that the Registration Area includes the principal large cities of the country, and that it would be expected to have a death rate considerably in excess of a city of Topeka's character.

To sum up the matter, Topeka has a high crude death rate, due in considerable degree to the deaths of non-residents. Eliminating these her rate compares favorably with that of

[1] For details see Appendix "A".

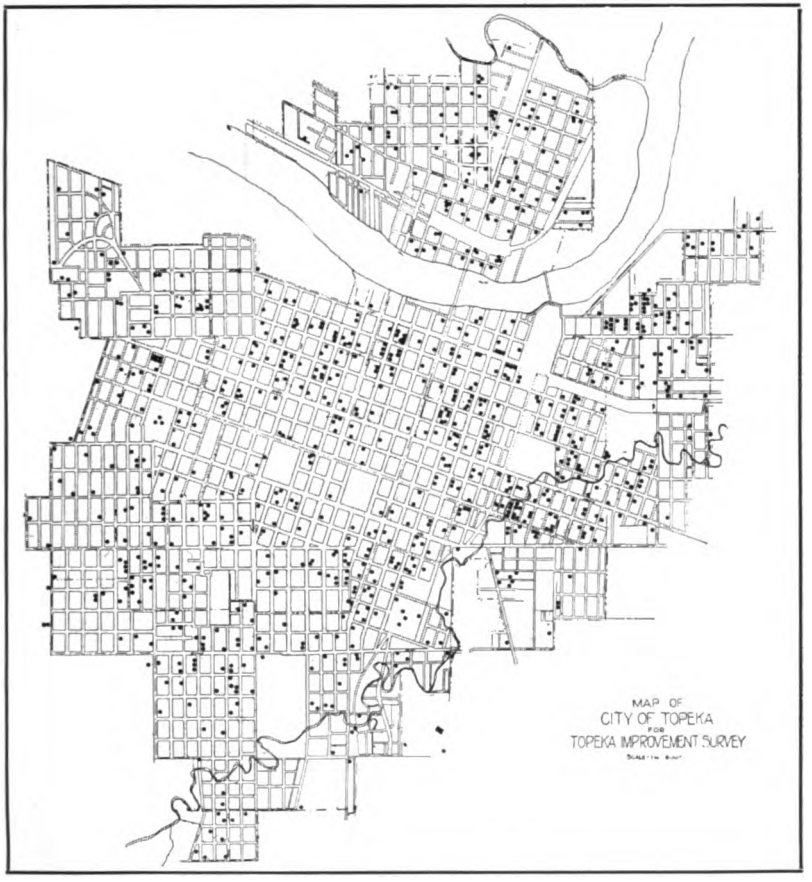
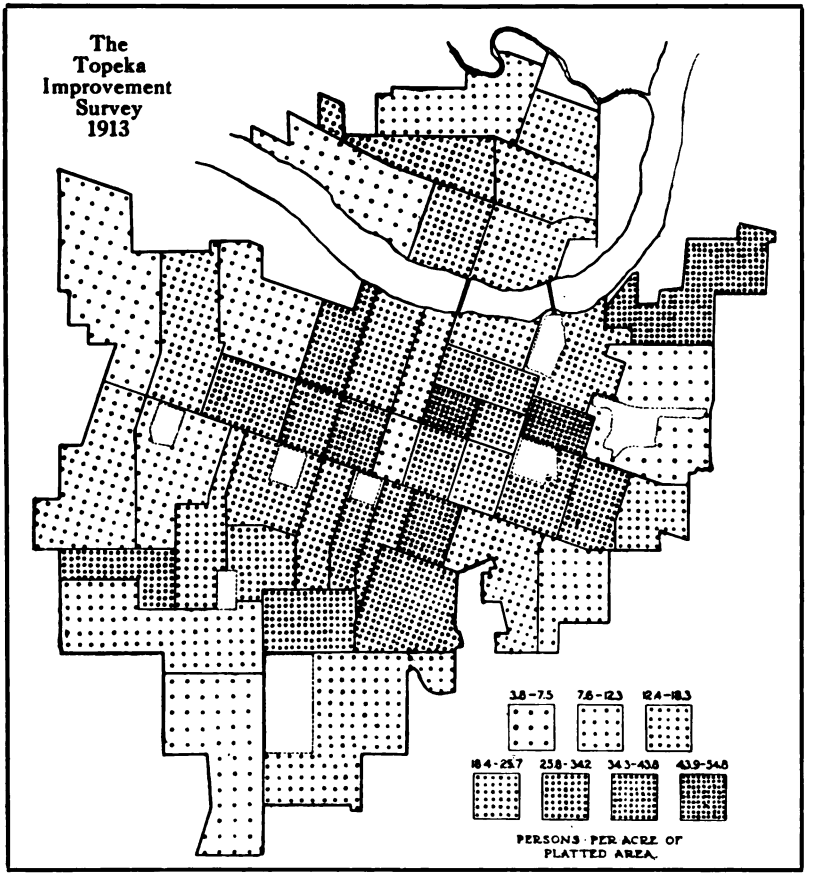


FIG. 1. REGISTERED BIRTHS, TOPEKA, 1913.

the country as a whole, but unfavorably with that of the State of Kansas. It would appear that Topeka suffers from some of the health handicaps incidental to city life; and that while the amount of her disadvantage is not alarming, it is of sufficient magnitude to demand a careful scrutiny of existing sanitary conditions.

The Birth Rate.

Over against her 664 resident deaths occurring in 1912 Topeka can set 923 births; giving a birth rate (or ratio of re-



MAP SHOWING DENSITY OF POPULATION, TOPEKA, 1910.

ported births per thousand population) of 19.8, and a natural rate of increase (excess of births over deaths) of 5.6 per 1,000. This birth rate is not large, and the rate of increase is but a small part of that (30 per 1,000) actually maintained throughout the decade 1900-1910. By far the most important source of the city's growth is evidently immigration from outside.

The number of births registered in 1913 showed a falling off, the rate dropping to 17.4 per 1,000, and the comparison of these figures with those for the State of Kansas, given in Table 2, shows the city at a disadvantage. Topeka's death

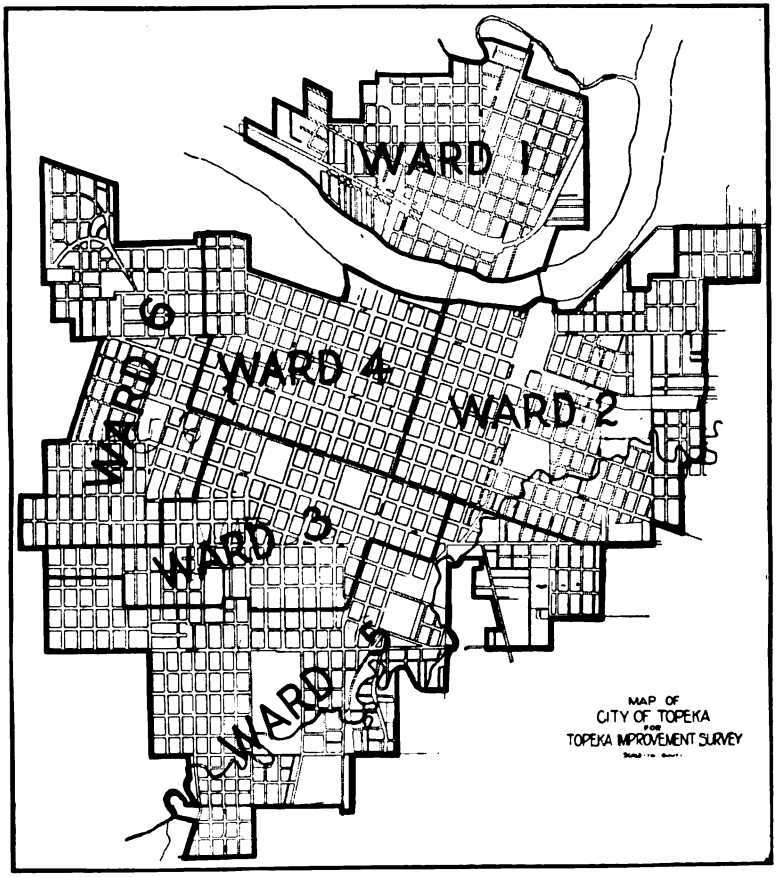
rate is higher, and her birth rate lower, than that of the whole state.

TABLE 2. BIRTH RATE, TOPEKA VS. STATE OF KANSAS.

	Topeka	State of Kan.	Topeka's Deficiency
1912.....	19.8	22.5	2.7
1913.....	17.4	21.0	3.6

WARD DIFFERENCES.

The distribution of births throughout the city is indicated in Figure 1; that of births and deaths, as expressed in



WARD MAP OF TOPEKA.

rates, is shown in Table 3. The marked variations exhibited between the wards, from 7.6 to 19.1 in the death rate and from 10.7 to 26.4 in the birth rate are doubtless a result, to a large degree, of differences in the character of the population. Ward 3, for example, including some of the best parts of town, has at once the highest death rate and the lowest birth rate, being the center, no doubt, of the "retired farmer" population. Ward 5, which embraces the southern edge of the city, has, on the other hand, the combination of highest birth and lowest death rate—and so may lay claim to considerable hygienic credit. Its rate of natural increase for the year was over twice that of any other ward.

TABLE 3. WARD BIRTH AND DEATH RATES, TOPEKA, 1912.

Ward	Population	Death Rate	Birth Rate	Natural Rate of Increase
1.....	6,388	16.2	18.8	2.6
2.....	12,378	16.1	21.0	4.9
3.....	8,522	19.1	10.7	—8.4
4.....	7,312	12.0	17.8	5.8
5.....	7,611	7.6	26.4	18.8
6.....	4,376	11.6	18.5	6.9
City...	46,578	14.2	19.8	5.6

These differences, while not accurate indications of actual degrees of healthfulness, are large enough to be of some real significance; and reinforce the suggestion of our analysis of the general death rate, i. e.—the necessity for careful scrutiny of existing sanitary conditions.

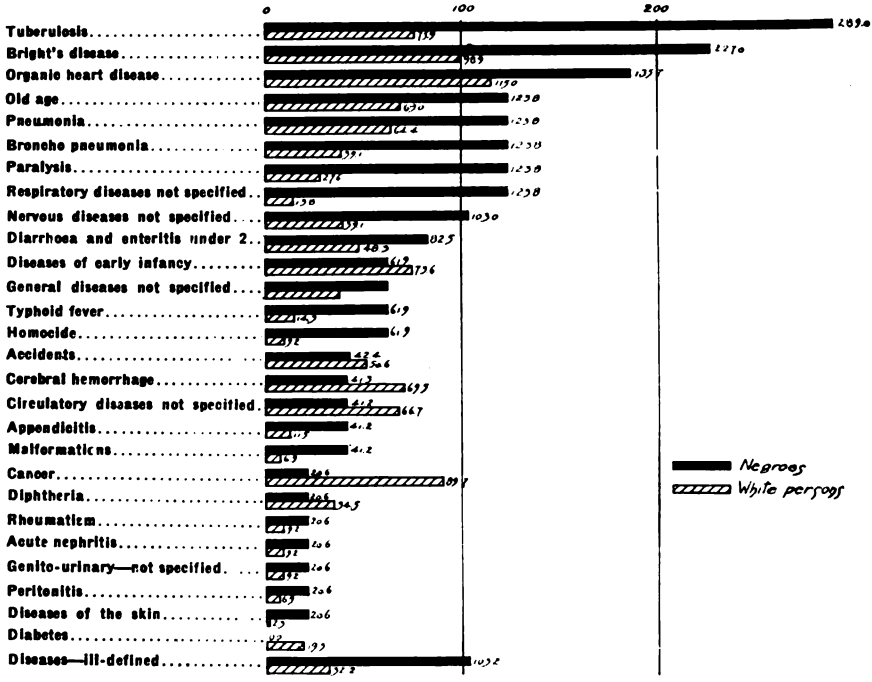
CAUSES OF DEATH.

The next test that may be applied to Topeka's mortality statistics is the most illuminating of all: it is the examination of the causes of death. Modern science recognizes two great groups of diseases: constitutional —as a naturally weak heart, or a congenial deformity; and infectious—those produced by external influences, and of which typhoid fever is a type. With the constitutional diseases little can be done, except as it may be possible to prevent the breeding of the unfit; but great advances have been made in the last few years in our knowledge of the infectious diseases and here a great field for the protection of health and happiness has been

opened up. Prominent among the infections are the germ diseases—sometimes referred to as the communicable diseases, and including the so-called contagious diseases; but poisonings by industrial processes, or by ptomaines, and the like, are included under any liberal interpretation of the term. It is with this great group of environmentally produced, preventable deaths that we are primarily concerned: and it is with this point of view that we direct our attention to the causes of Topeka's mortality.

LEADING CAUSES OF DEATH, TOPEKA, 1912.

(Rates per 100,000 Population.)



The most striking feature of the above chart is, of course, the almost invariable excess of mortality among the negroes, and the particular disproportion with respect to tuberculosis. The negro's experience in Topeka is but an illustration of a general principle—his relative inability to cope with the health hazards of our city life. His physical inheritance is

such as offers the least resistance to the white man's city-life diseases, and his social and economic position is such that he lacks most of the white man's artificial defenses. With their general death rate nearly twice that of the white inhabitants, it is evident that Topeka needs make special provision for public health work among her 5,000 negroes.

Notable among the causes of death among Topeka's white citizens are certain constitutional diseases — such as of the heart and kidneys, regarding which little of a directly preventive nature can be done; and several infectious diseases,

TABLE 4. PREVENTABLE DEATHS, TOPEKA, 1912.

Diseases commonly regarded preventable.	Deaths		Rate per 100,000.	
Tuberculosis (all forms)	47		102.2	
Diarrhoea and enteritis under 2	25		54.4	
Diphtheria	16		34.8	
Typhoid fever	9		19.3	
Dysentery	3		6.5	
Whooping cough	2		4.3	
Scarlet fever	1		2.2	
Smallpox	1	104	2.2	225.9
Diseases in which factor of preventability enters.				
Diseases of early infancy	35		76.2	
Pneumonia	34		73.8	
Broncho pneumonia	23		50.0	
Accidents	26		56.5	
Puerperal state	10		21.7	
Meningitis	5	133	10.8	289.0
Totals		237		514.9

by far the most prominent of which is tuberculosis. Deaths from the constitutional diseases are, on the whole, the more numerous; but, brought together, as in Table 4, the principal infections (and accidents) present no mean array.

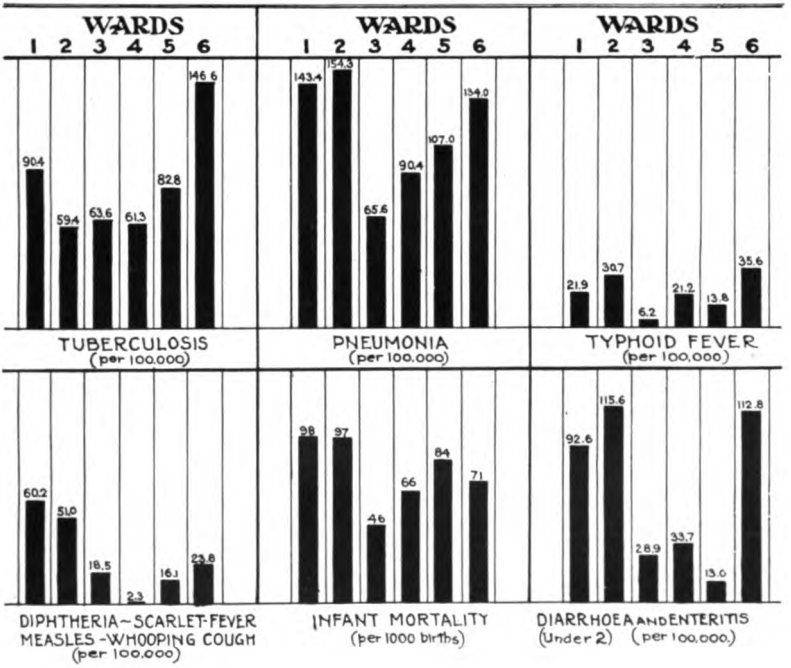
Thus from diseases of unquestionable preventability Topeka has suffered, in a single year, 104 deaths; and from certain other diseases 133 deaths—a goodly number of which are probably preventable. Avoidable, therefore, were 15.7 per cent of the year's deaths; with another 20 per cent as a potential premium. And these figures take no account of the incidental cases of non-fatal illness — probably ten-fold in number. No extended discussion is needed to emphasize the

importance of the situation: it will probably be some time before Topeka gets to prevent all this mortality, but she can hasten toward the goal if she will, and much of the way is easily to be traveled if she cares to adopt the accepted features of a modern public health program.

Distribution of Preventable Diseases.

Study of the distribution of preventable diseases throughout a city is not only interesting in itself, but is profitable from the standpoint of diagnosing the situation and laying

WARD DEATH RATES FROM PREVENTABLE CAUSES, TOPEKA.[1]



out a program. Such a study is, in Topeka, unusually difficult, owing to the fact that prior to 1912 only about half the deaths were registered, while prior to the fall of 1913 no records at all were made of cases of contagious diseases. These unfortunate and uncivilized conditions are now being remedied—in the first instance thanks to the state vital statistics

[1] For further details see Appendix "B".

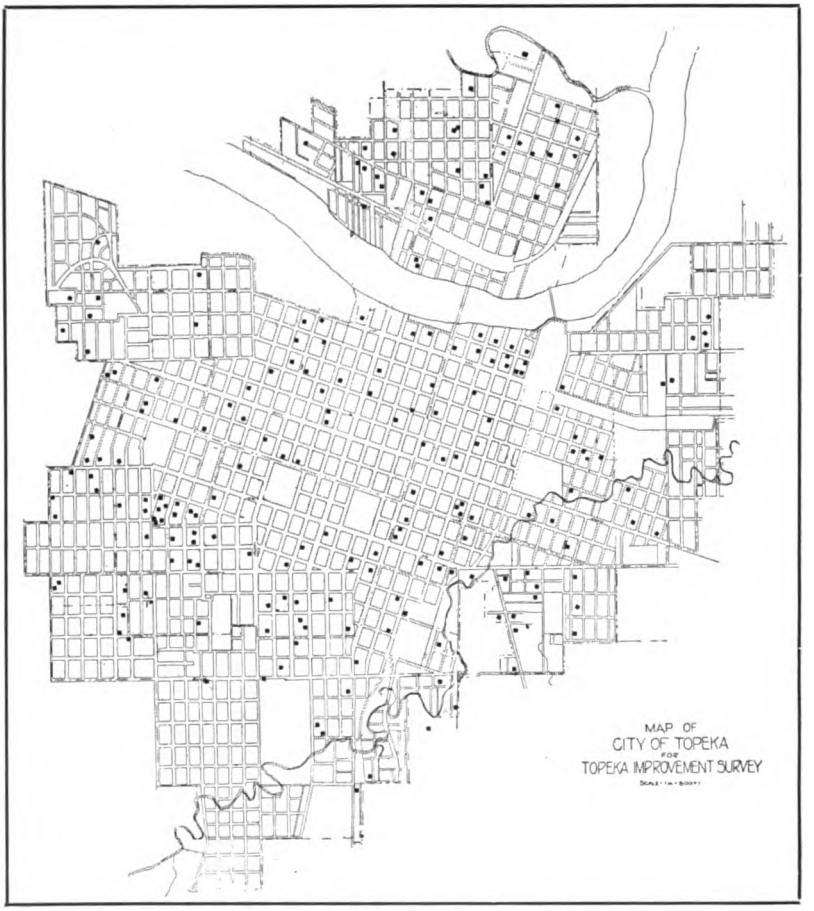


FIG. 2. DEATHS FROM TUBERCULOSIS, TOPEKA, 1908-1913.
(Registration incomplete)

law, in the second to the initiative of the present sanitary sergeant: but the information on file is lamentably meagre, is in some cases incomplete, and has to be interpreted with care. Death records must be relied on solely, and comparable periods cannot be taken in every case.

The facts, as far as they may be obtained for the different wards, are displayed in the chart on page 11; the more precise location of individual deaths being indicated in Figures 2 to 8, inclusive. Ward 3, for example, which we have seen to

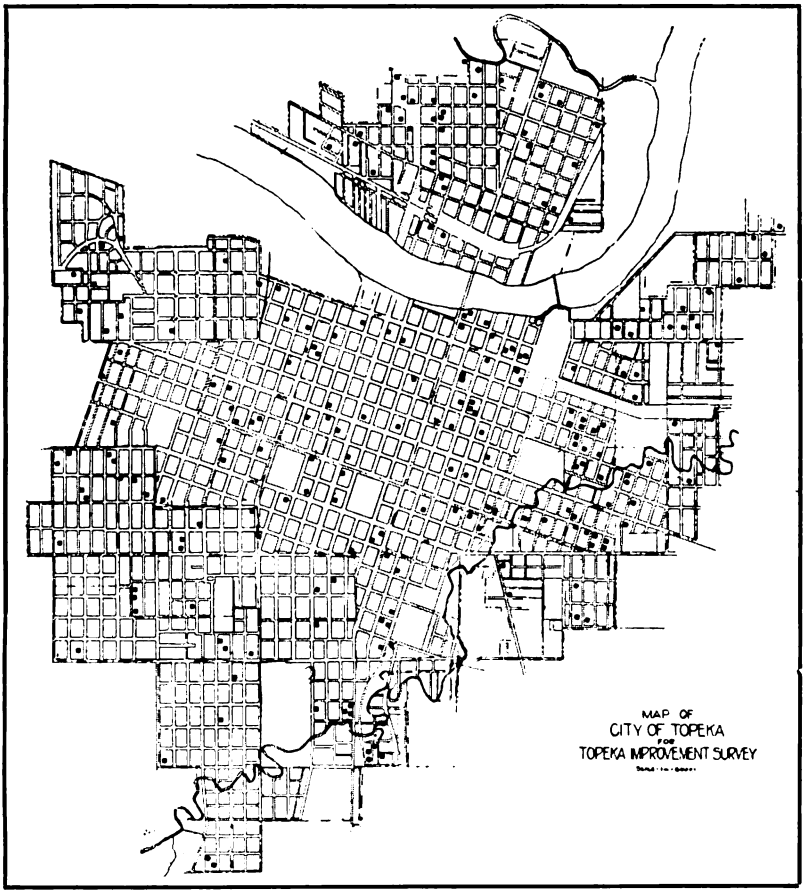


FIG. 3. DEATHS FROM PNEUMONIA, TOPEKA, 1910-1913.
(Registration incomplete)

have the highest general death rate, makes, with respect to these preventable diseases, a uniformly excellent showing: Wards 2 to 6, on the other hand, come off relatively badly. The figures for typhoid fever for another thing, while based on a somewhat small number of instances, are of real significance, especially when taken in connection with the facts regarding wells and privies, which are to be found later in this report. Again, the relative mortality from the common contagious diseases of children—diphtheria, scarlet fever, measles, and whooping cough, is entirely out of proportion to any pos-

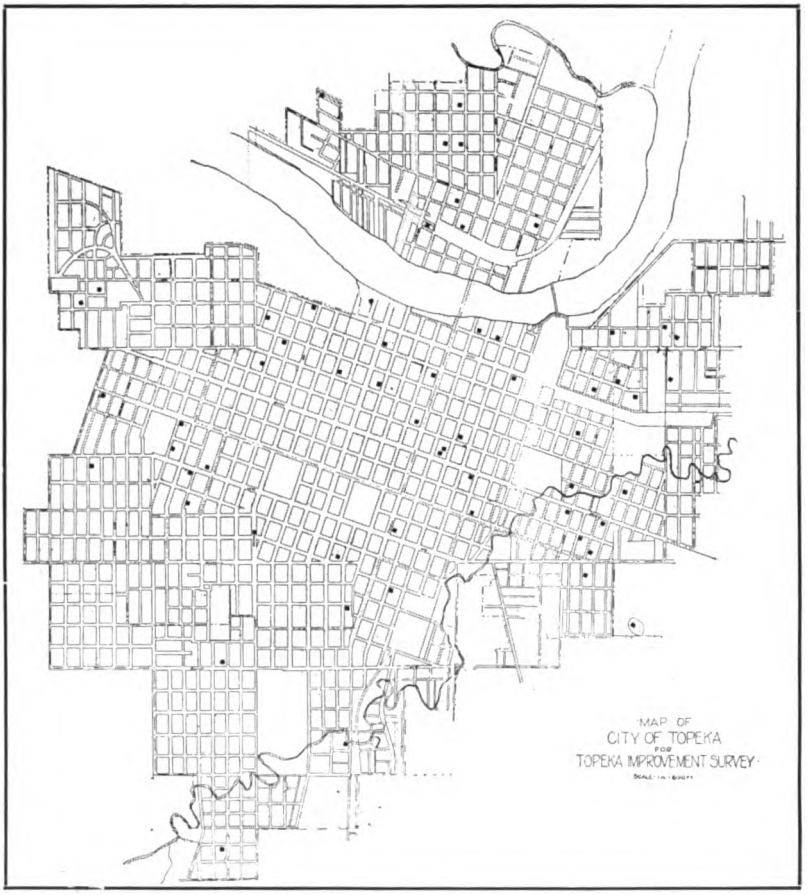


FIG. 4. DEATHS FROM TYPHOID, TOPEKA, 1908-1913.

(Registration incomplete)

Each death represents about 10 non-fatal cases.

sible differences in the number of children in the wards; and makes a stirring appeal for better administrative control. Diphtheria has been the most deadly of these diseases, and, as is clear from an examination of Figure 5, has centered in North Topeka and the east side. With each death representing another ten or twenty non-fatal cases, the size of the burden is more apparent; it is, in fact, entirely too great, and the same procedures that restrict it in Ward 3—prompt adminis-

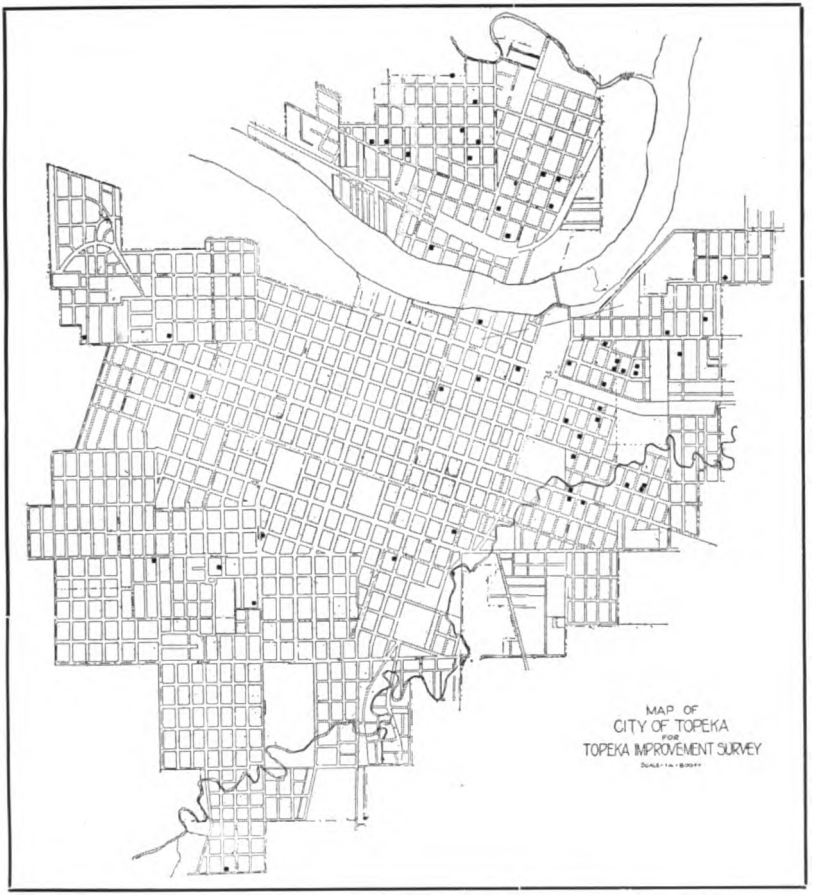


FIG. 5. DEATHS FROM DIPHTHERIA, TOPEKA, 1908-1913.

(Registration incomplete)

Note the marked localization in East and North Topeka. Each death represents another ten or twenty non-fatal cases.

tration of anti-toxin and proper isolation—will control it in Wards 1 and 2.

Similar arguments apply to infant mortality—especially that part represented by diarrhoea and enteritis. Relatively small expenditures for public health nurses have, in other cities, affected remarkable results in baby saving: there is every reason to believe that similar results would be obtainable in Topeka. This question, as well as those particularly

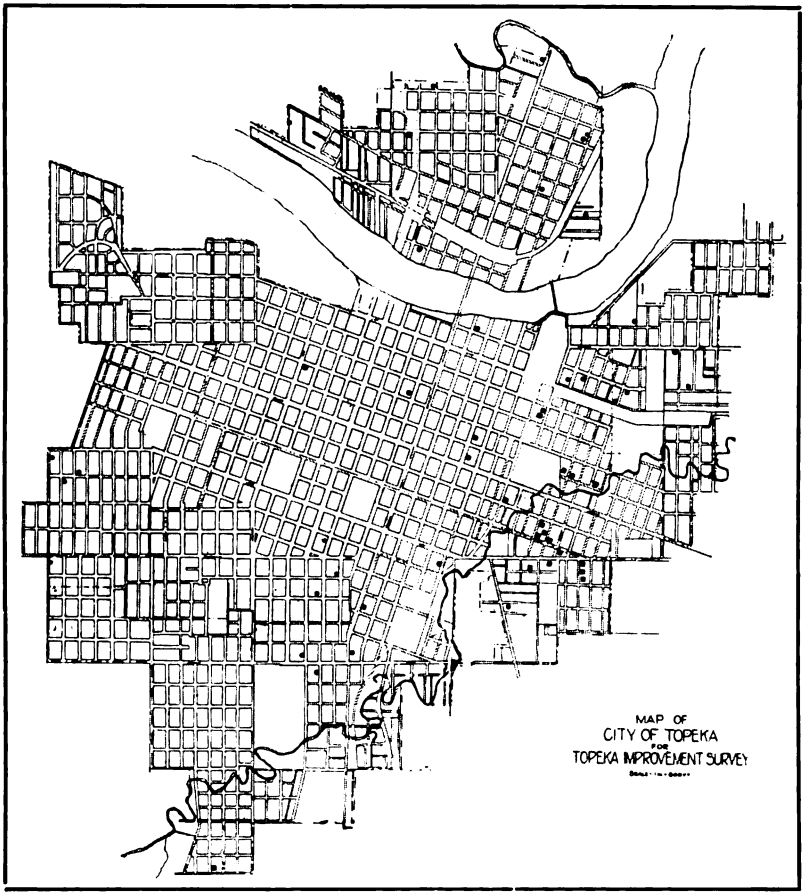


FIG. 6. DEATHS FROM SMALLPOX, MEASLES, SCARLET FEVER AND WHOOPING COUGH, TOPEKA, 1908-1913.

(Registration incomplete)

Squares indicate smallpox
Solid circles indicate measles
Stars indicate scarlet fever
Open circles indicate whooping cough
Note localization in eastern part of the city

affecting tuberculosis, will be discussed later in the present report.

Summary and Conclusions.

In our study of Topeka's vital statistics we have seen that her death rate, while comparing favorably with that of the

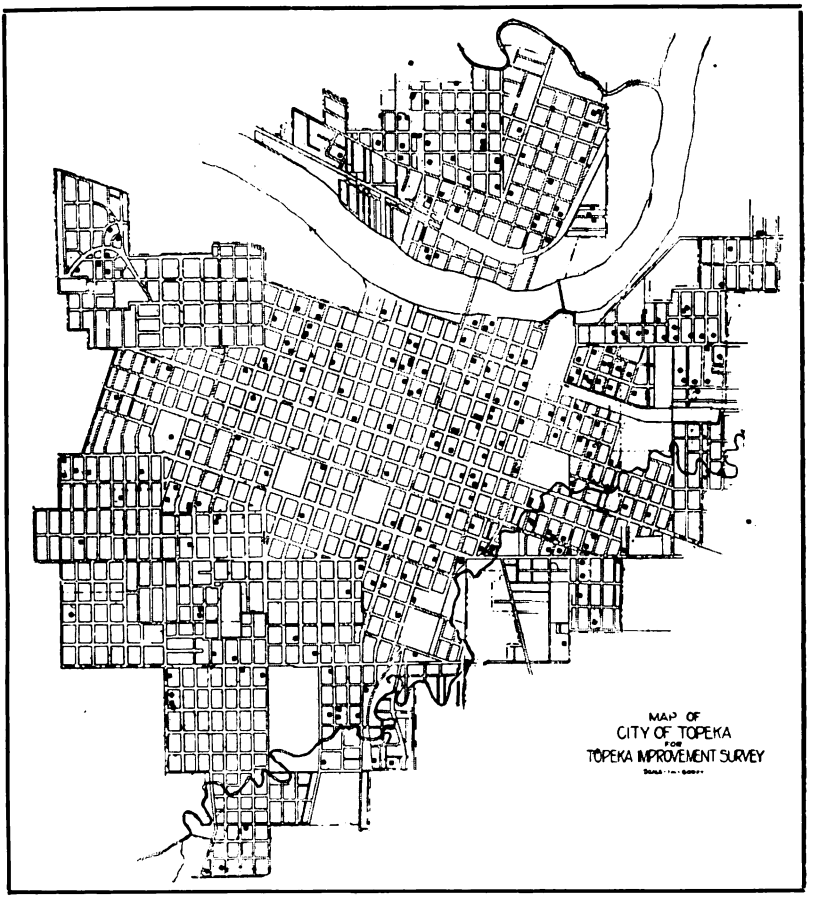


FIG. 7. INFANT DEATHS (UNDER 1), TOPEKA, 1910-1913
(Registration incomplete)
Compare with distribution of births as indicated in Fig. 1.

country at large, is, after applying the proper corrections, still 20 per cent in excess of that of the state of Kansas; that her birth rate is in general somewhat low, and over a tenth lower than the state's; that her people suffer real losses from preventable disease and death; and that these diseases are especially prevalent in certain parts of the city. The suggestion is clear that there is need for a careful scrutiny of existing sanitary conditions, and of the administrative measures of control. Topeka, in short, has, like other cities, a public health

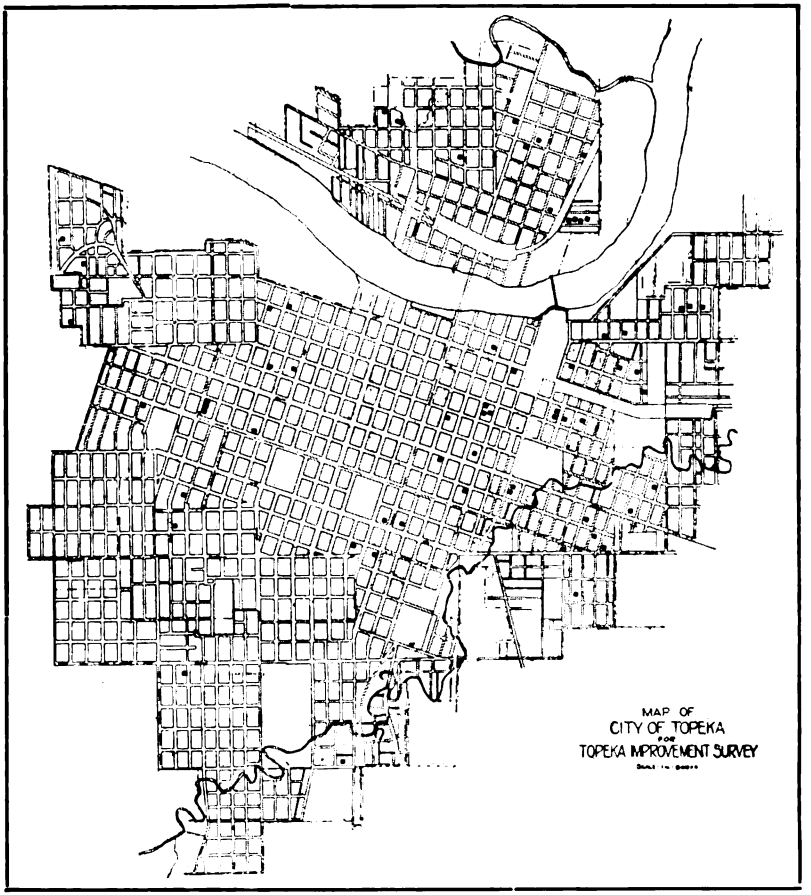


FIG 8. DEATHS FROM DIARRHOEA AND ENTERITIS, UNDER 2, TOPEKA, 1912-1913.

Compare with distribution of births as indicated in Fig. 1.

problem; while not alarmingly large, it is entirely definite and real. That it is of goodly proportions, witness the fact that 15 and possibly 30 per cent of the deaths in the city are from preventable diseases.

II. SANITARY CONDITIONS IN TOPEKA

CITY WATER SUPPLY.

Two principal water supply developments exist in Topeka —that of the Santa Fe Railroad and that of the municipality. Both supplies are taken from dug and driven wells located on the south bank of the Kansas river, and the two systems have a connection which permits pumping from one to the other at times of emergency. Because of this connection, and the corresponding possibility of the distribution of Santa Fe water in the city mains, both systems were inspected during the Survey and both waters were examined.

The municipal supply is obtained from 48 small driven wells and three large dug wells, all located on the edge of the river, a short distance above the city. The small wells, which ordinarily contribute about 40 per cent of the supply, were located when driven in the low land on the bank; they are now, owing to a change in the river bed, entirely under water at all times. These wells are from 28 to 36 feet in depth, are six to eight inches in diameter, and are connected by a suction line to the pumps and so directly with the mains to the city.

The dug wells, contributing about 60 per cent of the supply, are three in number, two 60 feet in diameter and one of 48 feet. These wells penetrate successive layers of sand, loam, blue clay, and quicksand, and finally take their water from a stratum of coarse sand and gravel. The walls are of brick to the level of the ground, are continued then in concrete to above flood level, finally supporting suitable wooden roofs. Entering one of the wells for inspection, the water was seen to be making its way in under the wall on the uphill side (that farthest from the river); it is pumped, as the case may be, into one of the other wells or directly into the mains to the city.

Both city well systems seem to tap the same water-bearing stratum, and to secure water which appears to be of excellent sanitary quality, analyses[1] made during the Survey

[1] A typical analysis may be found in Appendix "C".

failing to disclose any trace whatever of pollution. Accordingly there is reason to believe that the city has secured water from the underflow water, which probably comes a very considerable distance, and so is safe from contamination. The city is indeed fortunate to secure such an abundant and satisfactory supply at so little effort.

Some criticism may properly be made of the older (driven) wells. Covered with river water at all times, they afford an opportunity for contamination from breaks in the suction line. Such breaks are bound to occur, the supply from these wells being shut off at the time of the Survey for this very reason. The properly protected dug wells now in use are the more commendable type, and future developments of the supply should undoubtedly take this form.

The Santa Fe supply is secured from one dug well some 30 feet in diameter and 12 drilled wells. From data available it would appear that the railroad wells, though driven somewhat deeper from the surface than the city wells, penetrate material of very similar nature, and obtain their water from a closely analogous stratum at a depth which, when referred to the high water mark of the 1903 flood, is very close to that of the city wells. Analysis of samples of the Santa Fe water taken from the dug well, the drilled wells, and a tap in the shops, all showed the water to be, at the time, of excellent sanitary quality.

The connection between the Santa Fe and city systems is maintained for mutual convenience, water being pumped occasionally from one system to the other in times of fire or other emergency. While both waters seem excellent at present, it is to the advantage of both parties that careful and regular analytical supervision be kept of both waters; and that the division valve be carefully protected, and that a record be kept of any interchanges of water.

In general, the city will be wise to adopt a liberal policy regarding the development of its present satisfactory water supply. Pumping from the river, such as was resorted to in 1910, should never be found necessary—a fact which cannot be stated too emphatically. The city mains extend well over that part of the city south of the river and west of Shunganunga

creek. Map opposite page 45 shows parts of the city now served. Some 4,738 service connections were in use in 1907, a figure which, according to water office estimates, accounted for about 24,000 persons—or some 55 per cent of the population. Realizing the great importance of pure water in the prevention of a number of important infectious diseases, we may recommend liberal extension of the city mains. This phase of the question will be discussed further in connection with that of wells and privies: for the present it is sufficient to note that the quality of the city water justifies the policy of its liberal extension.

SEWERAGE AND SEWAGE DISPOSAL

The sewerage of Topeka consists of eight systems; one in North Topeka, the other seven south of the river and west of Shunganunga creek. A few short storm-water drains have been laid on the east side, but sanitary sewers (for house sewage) are entirely lacking in that part of the city. Each of the eight systems has its own outfall into the river, as is shown in Figure 9, and all are "combined" sewers, i. e., designed to carry both house sewage and storm-water. The location and relative size of these systems is indicated below:

TOPEKA SEWER SYSTEMS, 1913.

Order in ascending river	Outfall at	Size at outfall, inches	Tributary area, acres	Population served
1	Fairchild St.	34x54	261	4,000
2	Jefferson St.	54x58	1067	12,000
3	Near Madison St.	24 round	28	450
4	Near Monroe St.	24 round	36	550
5	Near Quincy St.	15 round	52	900
6	City Park.	60x72	645	8,800
7	Quinton Blvd.	27 round	95	750
8	Hawthorne St.	15 round	483	3,600

It is evident that two of the systems—Jefferson street and City Park—are relatively large; two—North Topeka and Potwin—are of medium size; while the remaining four are of relative insignificance.

A comprehensive and valuable survey of these sewers was made possible by the co-operation of the State Board of Health as represented by Dr. S. J. Crumbine, and the University as

represented by Professor G. R. Jones, who is also Engineer of the State Board. The work was carried on under the personal direction of Professor Jones by Messrs. E. C. Richardson, H. D. King and W. A. Davenport, senior students at the Univer-

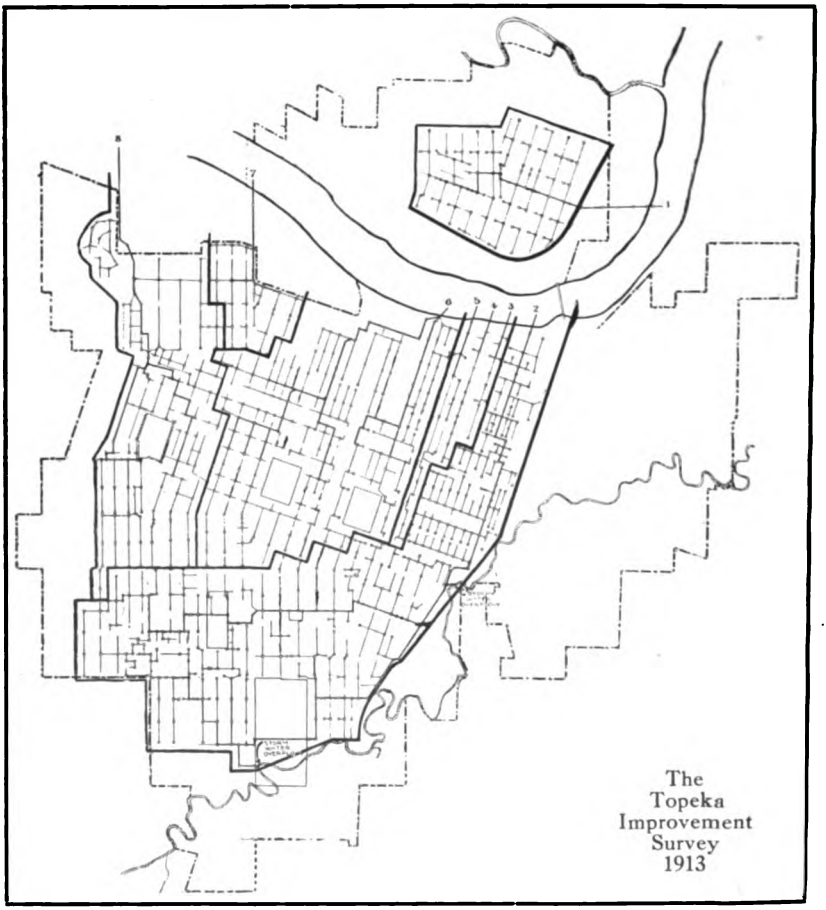
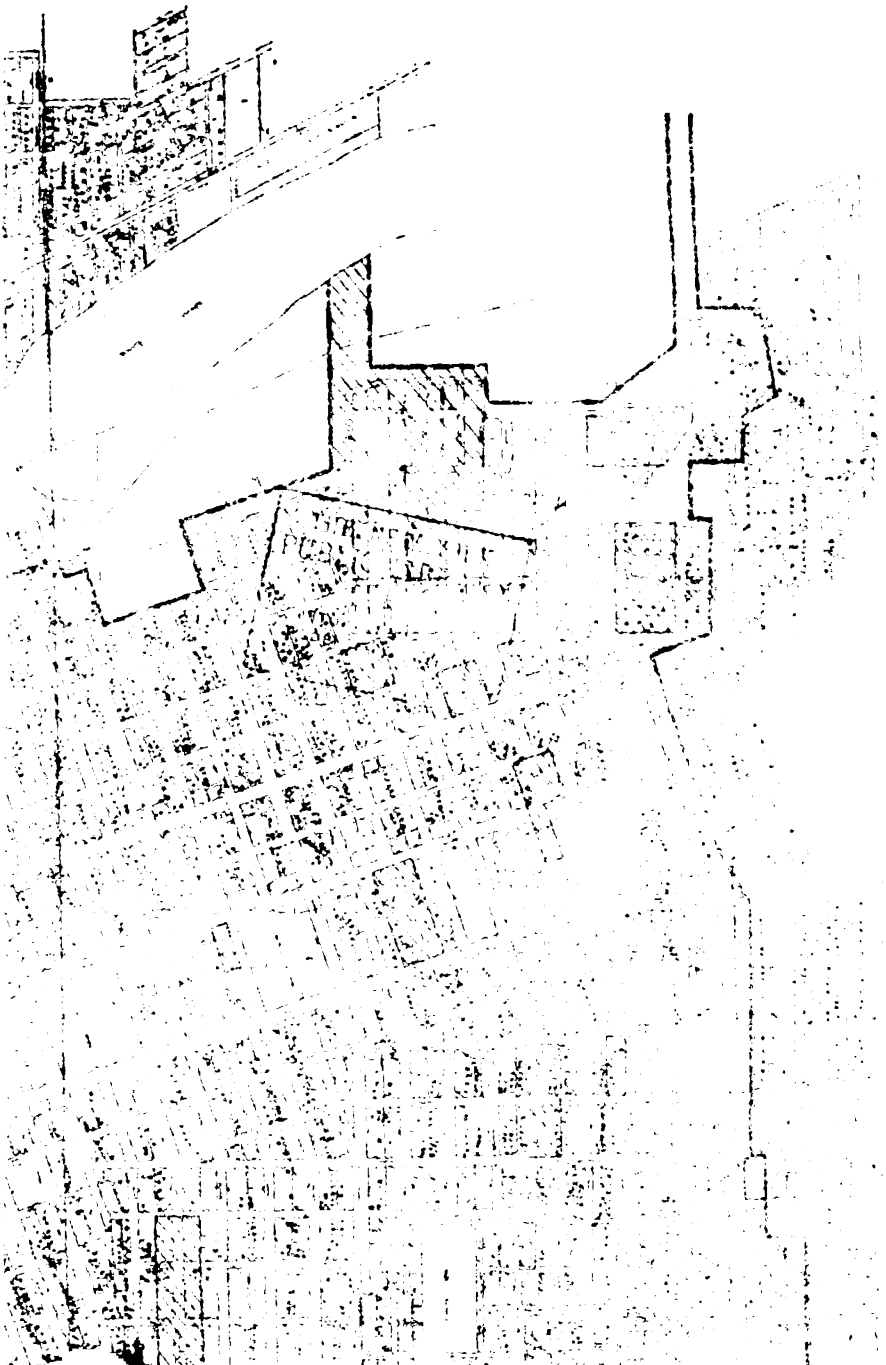


FIG. 9. TOPEKA SEWER SYSTEMS, 1913.

Heavy lines outline sewer districts.
Dot and dash line city limits.
Fine lines indicate sewers; the circles manholes.

sity, the inspection counting as thesis work towards their degrees in sanitary engineering.

The plan throughout was to do whatever work undertaken as thoroughly as possible, rather than to try to cover the en-



tire territory in a superficial manner. All of the large sewers were entered and explored, a large number of man-holes, flush tanks, and the like were inspected, and a number of places specially complained of were thoroughly investigated. The principal points covered were the dimensions, type of material and construction, and the general condition of the various parts of the systems. Leakage of ground water, unevenness of grades, formation of deposits, the condition of joints and examples of improper design were also noted. The total mileage of Topeka sewers is approximately 73; of these 23 miles were inspected; as well as 306 manholes and flush tanks out of a total of 950.

Many objectionable conditions were found; as, for instance, in the big City Park sewer where, a short distance from the outfall, the bottom is badly worn and an inch and a half crack extends in the top for about 200 feet. In addition, the properly-constructed house connections, originally built into the sewer at each 25 feet, have, in the majority of instances, been disregarded. The sewer has been broken into in the most convenient manner, little attention being given to making the connection tight or to protecting the brick work. Similarly, out of six flush tanks inspected, three were found in good condition, another was found standing full with no flow in or out, while the water was flowing from the other two in a steady stream—all flushing action being thereby lost. The detailed field notes of the inspection may be found in Appendix "D"; the following discussion being quoted directly from Professor Jones' report:

Discussion of the Topeka Sewer Systems
By Prof. Granville R. Jones

Combined Versus Separate Sewers.

"The first criticism that should be made against the Topeka sewers is that they carry both sewage and storm water. The chief argument in favor of 'combined' sewers is their low first cost. As a rule, this is much lower than for separate sewers, but it is very doubtful whether it should be given much consideration in the building of a public utility of such vital importance to the convenience and welfare of the community. At present fewer combined systems and more separate systems are being built, and in some states, of which Kansas is one, the

combined systems are prohibited by law or by regulations of the State Board of Health.

"The arguments against combined sewers as applied to Topeka conditions are many. For example, they were built to carry surface drainage as well as house sewage. The amount of surface drainage during heavy storms, therefore, has controlled their design; as a consequence, during dry weather, when only house sewage is flowing, the depth of the flow is in many places far less than the allowable minimum. In some places there is barely a trickle; in others no flow at all. These low velocities and shallow depths have resulted in heavy deposits of sand, mud, and house sewage sludge. The result is foul and ill-smelling sewers, which are an inexcusable nuisance.[1]

Ventilation.

"The ventilation of the Topeka sewers is bad. This is in part a penalty exacted by the combined system, as the change of air can be accomplished much more rapidly in small than in large sewers. The fault, however, does not lie entirely with the system. In Topeka, manholes are largely used for ventilation, very few manholes with tight covers being found. It would be much more convenient, and much more pleasant for the community immediately adjacent to the ill-smelling sewer line, to close the manholes tight and have the sewer air discharged through house stacks above the roofs. This is the more modern and approved method of sewer ventilation.

Design.

"It is not practicable with the data at hand to go very deeply into the question of the adequacy of the existing Topeka sewers. It may be said, however, that with some exceptions, the sewers are of sufficient size. The one very great exception is in the Potwin sewer. At the corner of Sixth and Morris avenues, two 30-inch brick sewers join and discharge into one 15-inch pipe. The grades of these sewers were not

[1]As examples of such conditions see paragraphs in the field notes (Appendix "D") referring to some of the places where either deposits or bad odors were found, as follows: City Park district—paragraphs 14, 16, 33, 34, 35, 36, 37, 39, 41, 42, 43, 45, 47 and 69; North Topeka district—paragraphs 1, 3, 5, 7, 8, 10, 11 and 12. Places especially complained of—paragraphs 2, 4, 5, 9, 17, 19, 20; Jefferson street district—paragraphs 2, 4, 7, 8, 9, 11, 12, 15, 16, 17, 18, 23, 24, 26, 27, 28, 30, 31, 34, 38, 39, 41, 42, 43, 44, 46, 47, 49, 50, 51, 52, 54; all paragraphs under flush-tanks.

available from the office records and were not determined, but the discharge of two 30-inch sewers flowing full with a velocity of flow equal to the minimum, could not possibly be carried by one 15-inch sewer laid on a reasonable grade, or with an allowable velocity. The arrangement found here was constructed before the present Kansas Water and Sewage law was passed, or would never have been allowed: it represents a foolish and shameful waste of funds. The results justify the characterization of this work even as criminal. Sewage stands in the manholes in this neighborhood far above the crown of the sewers: foul odors are present continually; and with every rain, even with moderate rains, sewage overflows into the streets. These conditions are disgraceful.

"An opportunity to remedy this condition is now presented. A new sewer district immediately to the west of that above mentioned is now being advocated, and the plans which have been drawn call for an outfall line to follow closely the much overloaded 15-inch line. The project has even progressed so far that the City Commissioners have allowed the petition for its construction; but the matter has not yet come before the State Board of Health, and there is a probability that some relief on the Potwin situation will be required before approval of the new work is given. Certainly the city should at this time take advantage of its opportunity and either replace the present 15-inch line with one capable of carrying all the sewage from the combined district, or construct a relief sewer beside the present one.

"Another matter requiring attention relates to the grades or slopes of the sewers. In several places the grades are so low that the velocities are much less than is allowable. In other places, the depth of flow is much below the minimum, due to grades which are too flat. These places are referred to in the discussion of Combined vs. Separate Sewers (page 23).

"Inlet manholes are quite generally used in Topeka, such being very poor practice. All inlets should be equipped with catch basins, which, if properly designed and maintained, would keep out a great deal of the sand and mud found in the sewers during the inspection. Most of the catch basins in use are very well designed: some, however, are not, and should be reconstructed. These are the ones into which it is difficult to enter, and which it is almost impossible to clean.

"Drop manholes are a thing unknown in Topeka. When two sewers join at different levels, the practice has been simply to allow the upper one to project through the wall of the manhole. This has caused wear on the sides, deposits on the benches, churning in the invert, and obstructed flow. Exam-

ples of poorly designed manholes, inlets, catch-basins, etc., may be found in Appendix "D," City Park District, paragraphs 23, 39 and 64; Places particularly complained of, paragraph 2; and Jefferson Street district, paragraph 34.

Records.

"The records of existing construction in the City Engineer's Office are very meager and unreliable. Plans for all work seem to exist, but there is no assurance that they correspond to the work as constructed. In practically half the cases grades are not available, and those that can be had, are entirely untrustworthy. The practical value of complete and reliable records, and the evil results of their absence, is illustrated very aptly by the condition found in the City Park outfall sewer. In making house connections to this sewer, the properly designed and placed inlets have been entirely disregarded, the wall of the sewer, as has been mentioned already, having been broken through and the house drains allowed to project into the sewer without any attempt to make the connections tight. The lack of records of house connection inlets on this sewer has very probably been the cause of the condition described.

"In the matter of engineering service Topeka has been sadly swindled in the past, as the records of the office and the work in the field will testify. At present, affairs are conducted quite differently, and all the work now being done is carefully recorded.

Maintenance.

"The maintenance of Topeka's sewers has been in the past, and is at present, extremely poor. It might be said that there is no maintenance. The many, many places where the sewers are nearly filled with deposits, the absence of even one clean catch basin, the flush-tanks out of order, or using ten times the amount of water necessary, all prove this statement. The department having charge of this work should certainly, at least in this regard, be entirely reorganized; or preferably, the work should be placed in the hands of the City Engineer and an efficient corps organized to carry it on. The sewers should be kept clean. Catch basins should be cleaned after every storm, whereas at present all of them, or most of them, are so filled up that they act merely as inlets of poor design. The flush-tanks should be cared for and operated economically.

Future Extensions.

"There is a most imperative need of sewer extensions in one

portion of the city—the section east of Shunganunga creek. Here, within the limits of the third city in Kansas, is the largest community in the state that remains unsewered. Its population is in the neighborhood of 7,000—to be compared with the fact that there are in the state but two towns with a population of over 3,000 without sewers, and with this exception in Topeka, none larger than 5,000.

"It is stated that the residents of this district do not want sewers. Present conditions are, nevertheless, a menace, not only to residents of the district, but to other citizens of Topeka as well. The city commissioners are empowered to frame, pass and enforce such ordinances, governing the construction and maintenance of privies, cesspools and other 'sanitary makeshifts,' as will eliminate all danger. These regulations, if they are as they should be, will become burdensome enough to make sewers a necessity.

Flood Protection.

"Topeka has recently spent many thousands of dollars for flood protection. Some discussion has arisen as to whether the works constructed are adequate, and varying opinions have been expressed. For the purposes of this discussion it will be assumed that the desired result other than that in which the sewer outlets are a factor, has been accomplished and that the works will perform their function. As long, however, as the existing outlets pass through the dike without means for closing them during floods, and without means of disposing of the city's sewage when they are closed, they annul, in a very large measure, the advantage of flood protection and the money spent for the work is wasted. Nothing whatever will, under the present conditions, prevent the river from rising through the sewers and flooding the lower district of the city to the same heights as formerly. Every outfall should be equipped with a flap-valve or other means of preventing back flow from the river at high stages, and also with means for lifting the sewage over the dike and into the risen stream. The sewage might be more economically collected at one place and pumped entirely through one station, or it might possibly be carried down the river by a long outfall sewer and discharged without pumping. These, however, are details which would be worked out in designing of the project. That some decided improvements along this line are imperative is very evident.

"It may sometime become necessary for Topeka to purify its sewage before discharging it into the river. The disadvantage of a combined system will then become even more evident. Treatment works for combined sewage are necessarily much larger and more expensive than for house sewage alone.

Summary and Recommendations.

"As a whole, Topeka has a poorly designed, a poorly constructed, and a poorly maintained sewer system. Many of the things that have been done can not be changed, but there are a large number of betterments that should be undertaken at once. These will be enumerated, but not in the exact order of their importance, because some are equally necessary; but the first ones should be started at once.

1. A complete survey of the sewers—to supply missing records, and verify the available records of the City Engineer's Office. This probably can not be done by any force in the present city department; but a special corps of men should be employed at once.

2. All the sewers and appurtenances should be thoroughly cleaned. They should be kept in this condition by a properly organized department of maintenance.

3. All needed repairs [1] to manholes, flush tanks, sewer inverts, etc., should be attended to at once.

4. The relief of the Potwin sewer district should not longer be neglected.

5. A sewer system for East Topeka should be started without unnecessary delay.

6. All outfalls should be equipped with the means for their closing during flood periods of the Kansas river, and should be equipped with pumping stations. Or the alternative plan of collecting all of the sewage at one point and installing one pumping station should be adopted."

MILK SUPPLY.

Topeka's milk supply is produced entirely by farmers living within a radius of a few miles, or at least within such distance that the milk is brought in by wagons. Some milk enters the city by railroad from Meriden and Nortonville, but according to the statement of the purchasing company, it is all skimmed and used for the manufacture of butter. Production rests, according to figures furnished by the city milk inspector, in the hands of some 177 farmers, who may be conveniently classified with reference to the manner in which they dispose of their milk—whether wholesale or retail—in bulk or in bottles. The detailed information is as on the following page.

[1] Places needing repairs are described in Appendix "D" as follows: City Park District, paragraphs 1, 2, 4, 28, 53 and 59; places particularly complained of, paragraphs 6, 7, 24, 27, 41, 42 and 55.

MILK PRODUCTION, TOPEKA, 1913.[1]
(Figures furnished by City Milk Inspector)

Producers selling—	Number	Number of cows	Average daily quarts produced
Wholesale and retail in bottles	25	342	2,173
Wholesale in bottles	17	218	1,615
Wholesale in bulk	135	962*	5,310
Totals	177	1,522	9,098

*Number of cows not stated for 31 producers.

Most of the milk (58.4 per cent) is sold in bulk to middlemen, something less than a fourth being sold directly by the producer to the consumer. The actual retailing is carried out about as follows, the amount handled by depots and companies being greater than would appear, as they furnish a good proportion of the store milk:

RETAILING OF MILK, TOPEKA, 1913.
(Figures furnished by City Milk Inspector)

By producers	2,371	quarts per day
By depots and companies	3,406	quarts per day
By stores	2,055	quarts per day
Total	7,832	quarts per day

While a marked discrepancy, 1,266 quarts per day, exists in the milk inspector's estimates of production and sales, the figures give, no doubt, a fair approximation of the situation. They are sufficient to indicate that Topeka's milk problem centers in the inspection of some 177 dairy farms, some seven depots (which handle about two-thirds of the supply), and a large number of grocery stores. The railroad shipment problem is absent; and, with a proper inspection service, there is no reason why Topeka should not have its milk supply in excellent condition.

EXISTING CITY MILK INSPECTION.

To protect the supply the city has passed a milk ordinance (1910) and provided a milk inspector. The requirements are, in brief, to the effect that all dairymen must be registered

[1] For further details see Appendix "E".

with the city milk inspector and pay a license fee varying with the size of their business; they are forbidden to produce milk in unsanitary places or from unclean cows; the milk shall be, one hour after drawn and at all times thereafter, at temperatures below 60 degrees Fahrenheit; all milk must be retailed in closed containers—thus practically requiring bottles; and all cows must be healthy and shall have passed the tuberculin test. Chemical standards are also set up, preservatives are forbidden, and it is specified that the city milk inspector shall score dairies and take and analyze samples of milk.

The provisions of this ordinance, which was passed in October, 1910, have not been observed in any adequate way. Reg-

A TOPEKA DAIRY.

Within the city limits, but unregistered and unknown to the milk inspector. Cows kept in small coal shed (door open); milk sold to nearby store.

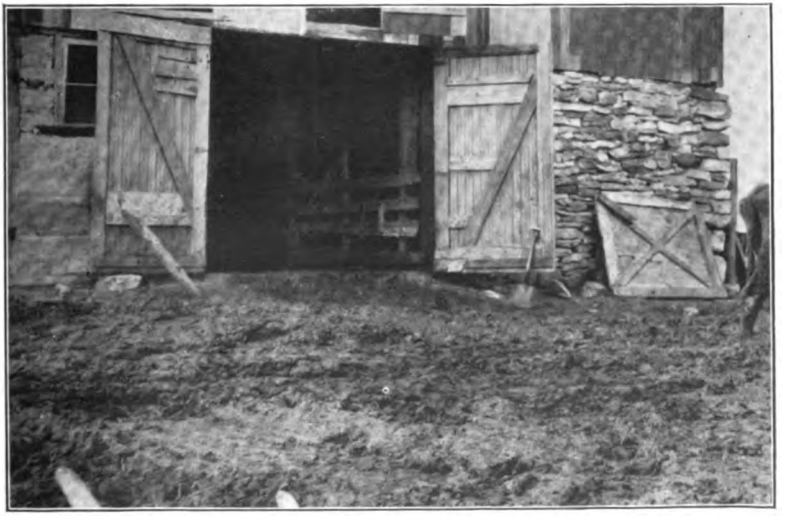
istration of producers and dealers has not been carried out, nor has the requirement of tuberculin testing of cows been enforced. No dairy score cards are on file as is required by ordinance, the inspector stating that he has made inspections, but has thrown the cards away; nor have the required annual reports been filed.

The actual milk tests employed are, furthermore, not such as to adequately determine the sanitary character of the city's milk, having been limited to fat determinations to detect watering, and simple straining through cotton filters to detect visible dirt. Such tests are quite inadequate from a sanitary

ANOTHER TOPEKA DAIRY.

Thirty-two cows kept in this barn, which is of wretched construction, allowing practically no light or ventilation. Milk from this dairy goes to some of the best parts of the city.

standpoint. Producers quickly realize that it is necessary merely to use cotton filters themselves, whereupon their milk, which originally may have been very dirty, is quite safe from detection. The best indication of the sanitary character of milk can be obtained only by utilizing the bacteriological examination, an operation calling for some laboratory equipment



BARNYARD OF DAIRY ABOVE.

Cows and barn in filthy condition.

and some skill on the part of the inspector. It is the test employed, however, by all up-to-date milk inspection systems, and its use in Topeka is strongly advocated.

The Survey Milk Inspections.

A survey of the Topeka milk situation, including an inspection of a fair number of dairy farms and the examination of a considerable number of samples of milk, was made possible through the co-operation of the State Dairy Commissioner, George S. Hine, and the State Board of Health, as represented by Dr. Crumbine. Eighteen farms, selected to represent good and bad conditions, were visited in company with Dr. Babb, city milk inspector, and were scored by Mr. Hine. In interpreting the following results it should be borne in mind that a perfect score for equipment is 40, and for methods 60—making a possible perfect total of 100.

Dairy Scores, Topeka Improvement Survey, December, 1913.
(Scores by G. S. Hine, State Dairy Commissioner)

Producer	No. cows	Score for equipment	Score for methods	Total score
"A"	23	27.00	54.00	81.00
"B"	27	31.00	45.00	76.00
"C"	25	31.25	42.50	73.75
"D"	42	25.75	45.50	71.25
"E"	42	22.75	48.00	70.75
"F"	10	19.00	41.75	60.75
"G"	16	17.25	37.50	54.75
"H"	9	16.50	37.75	54.25
"I"	7	17.75	36.00	53.75
"J"	32	10.75	34.00	44.75
"K"	23	14.00	24.00	38.00
"L"	4	9.50	26.00	35.50
"M"	6	9.25	25.50	34.75
"N"	2	11.50	21.75	33.25
"O"	5	6.50	24.00	30.50
"P"	20	6.50	23.50	30.00
"Q"	4	9.25	19.00	28.25
"R"	14	8.50	18.00	26.50
Totals...	311	294.00	603.75	897.75
Average..	17	16.32	33.54	49.88

Even allowing for the fact that the United States Department of Agriculture score card (used in these inspections and required by the Topeka ordinance) is rather hard on the small producer, these scores are hardly flattering to the city. The

INCIDENTALLY A MILK DEPOT

The occupant of this house kept five cows himself and bought milk from ten other dairymen. Bottling and all other milk-handling operations carried out on back porch. Surroundings, equipment and methods objectionable.

showing for methods is somewhat better than that for equipment; but it is unnecessary to point out that very poor places were found, such as the Topeka ordinance — and decency, forbids.

Samples of milk were taken from stores and delivery wagons by state food inspectors, and were subjected to chemical and bacteriological analysis. Most of the bacteriological samples were analyzed in Topeka by Prof. L. D. Bushnell of the State Agricultural College, although some were taken in sterile tubes, properly iced, and sent to him at Manhattan. The chemical samples, 27 in number, were all analyzed at the Agricultural College, and, with the exception of one sample that indicated added water, proved satisfactory.[1] The bacteriological results are indicated on the next page.

These figures represent a shocking situation—15 per cent of the samples containing over 10,000,000 bacteria to the cubic centimeter, with nearly half over 1,000,000; and this in the cool

[1] For details see Appendix "E".

Bacteriological Counts of Topeka Milk, November and December, 1913.

(Samples taken by State Food Inspectors and examined by Prof. L. D. Bushnell.)

Bacteria per c. c. (37° C.—24 hours.)	WAGON SAMPLES			STORE SAMPLES			TOTAL		
	No. of Samples	Per cent	Average count	No. of Samples	Per cent	Average count	No. of Samples	Per cent	Average count
10,000,000 and over..	2	9.5	14,500,000	9	17.0	37,500,000	11	14.9	33,000,000
1,000,000 to 10,000,000	5	23.8	3,340,000	19	35.8	3,770,000	24	32.4	3,680,000
500,000 to 1,000,000.	5	23.8	598,000	7	13.2	857,000	12	16.2	750,000
100,000 to 500,000...	9	42.9	253,000	10	18.9	374,000	19	25.7	316,000
Less than 100,000...	0	00.0	0	8	15.1	51,000	8	10.8	51,000
Totals.....	21	100.00	2,430,000	53	100.0	7,910,000	74	100.0	6,352,000

DAIRY SCORING 26½ PER CENT.
Unregistered and uninspected.

months of November and December. In Boston nearly two-thirds of all these samples would have been illegal, and Boston's maximum — 500,000 per cubic centimeter — is liberal as compared with other existing municipal standards, such as 300,000 and 100,000. The plain indication is that Topeka is getting dirty milk—some remarkably dirty milk; the visible dirt may be removed, but the milk has evidently been very carelessly handled, or is very old, or both.

Middlemen's milk, i. e., milk purchased in bulk and bottled at depots and creameries, made a poorer showing than that sold

WITHIN THE CITY LIMITS.
Unregistered and uninspected dairy. Also typical of the "family cow" problem. Some 300 of such cows being kept in the city. Incidentally this picture represents a survival of rural conditions in the city—as witness the cows, hens, well and privy.

A CLEAN MILK HOUSE.
A proper place for straining and bottling.

direct by the producers. Comparison of the figures below with those on page 34 brings out this point.

Here we have an average of 11,200,000 to compare with one of 6,352,000 for all samples taken. The proportion is the more remarkable in that 17 out of the 26 samples of mid-

BACTERIOLOGICAL COUNTS OF MIDDLEMEN'S MILK, TOPEKA IMPROVEMENT SURVEY, NOVEMBER AND DECEMBER, 1913.

Individual or firm	Number of Samples	Average count	Remarks
"S"	12	1,130,000	pasteurized
"T"	5	18,500,000	pasteurized
"U"	4	34,100,000	.....
"V"	3	6,770,000	.....
"W"	1	18,000,000	.....
"X"	1	11,000,000	.....
Totals....	26	11,200,000	.....

dlemen's milk had been pasteurized. Restricting the comparison to strictly store samples the average figures are 5,250,000 for farmers' samples as against 11,900,000 for those from middlemen. An inspection of the three largest depots in town discovered one in a cleanly condition, one fairly so, and one to be very dirty.

Altogether, these low scores and high counts indicate that Topeka has a very real milk problem; and that a proper be-

ginning towards its solution remains to be made. Under the existing inspection many of the producers (and some actually within the city limits) are unregistered and unknown to the inspector. Others probably receive a superficial examination, although there is no record on file to show that they receive any. In fact, if the only available records, those printed from month to month in the newspapers, are to be taken as an index, the inspection has consisted chiefly in taking samples from peddlers for fat and visible dirt determinations. It is only fair to say, however, that the salary paid the milk inspector, $100 a month, is inadequate compensation for a trained and experienced man, and that the inspector has been made to furnish his own equipage. The idea of monthly

A SLOVENLY MILK HOUSE.
Contrast this with the one opposite.

newspaper publicity of inspection results is also good, and its continuance is urged. Such considerations cannot, however, blind us to the fundamental inadequacy of the inspection system.

In considering improvements, certain changes in the milk ordinance are to be advocated; as for example, the removal of the clause specifying that the inspector shall be a veterinarian, a provision which is no guarantee whatever of famili-

arity with modern methods of milk inspection, and which is very likely to be an embarrassment in securing a suitable man. This provision is especially worthless if, as has been the case, it is not intended to enforce the requirement of tuberculin testing. For the rest it is sufficient to point out the necessity for more complete registration of producers and dealers; for the systematic inspection and scoring of dairy farms; for the institution of bacteriological examination, with the provision of more laboratory facilities; for the continuance of the present publicity idea; and for the encouragement of proper pasteurization. The fault with present conditions is not so much with the plan as laid down in the milk ordinance; but consists rather in lack of its application. The inspector[1] should be a properly trained and experienced man, and should be more liberally treated as regards salary, equipage, and assistance. With such a man installed, and with a campaign of education under way, Topeka should be able to make great strides in the improvement of its milk supply.

Ice Cream.

The quality and inspection of the city's ice cream are, of course, matters closely related to its milk problem. Dirty or stale cream is just as objectionable as dirty or stale milk, and the causes and prevention of both conditions are much the same. Manufacture of ice cream in Topeka is largely in the hands of three concerns, two of which are also large milk depots. Inspection of these places, and of a smaller manufactory, by Prof. E. M. Twiss and students from Washburn College, showed that both equipment and methods left much to be desired. One of the large places was found in a satisfactory condition, in another the equipment was poor and the methods only fair, while in the third both equipmnet and methods were extremely crude. These conditions are reflected in the results of the bacteriological examinations, which are listed in the table opposite.

The samples in question were all taken from drug stores, candy stores, hotels and restaurants; and were taken directly to the college laboratories and examined. The aim was to

[1]The city milk inspector in office during the Survey resigned during the preparation of this report.

Bacteriological Counts of Topeka Ice Cream, November and December, 1913.

(Examinations by Prof. E. M. Twiss and students at Washburn College.)

Bacteria per c. c. 37° C. 24 hours	MANUFACTURER "A"			MANUFACTURER "B"			MANUFACTURER "C"		
	No. of samples	Per cent	Average count	No. of samples	Per cent	Average count	No. of samples	Per cent	Average count
1,000,000,000 and over..	4	44.5	2,330,000,000	0	0	0	0	0	0
100,000,000 to 1,000,000,000.	2	22.2	309,000,000	0	0	0	1	16.7	973,000,000
1,000,000 to 100,000,000.	3	33.3	76,200,000	2	100.0	21,300,000	5	83.3	60,400,000
Totals.....	9	100.0	1,130,000,000	2	100.0	21,300,000	6	100.0	213,000,000

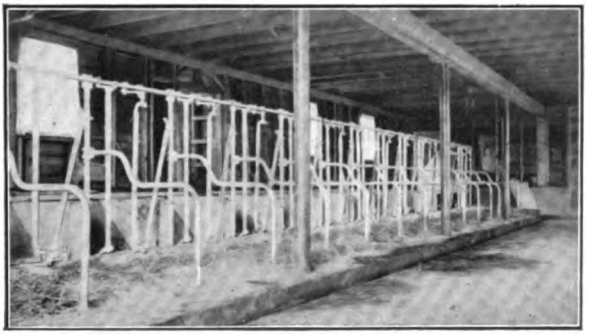
Bacteria per c. c. 37° C. 24 hours	MANUFACTURER "D".			ALL SAMPLES.		
	No of samples	Per cent	Average count	No. of samples	Per cent	Average count
1,000,000,000 and over..	3	7.9	2,140,000,000	7	12.7	2,250,000,000
100,000,000 to 1,000,000,000.	6	15.8	431,000,000	9	16.3	464,000,000
1,000,000 to 100,000,000.	29	76.3	14,500,000	39	71.0	25,500,000
Totals.....	38	100.0	248,000,000	55	100.0	380,000,000

Meat Inspection, Topeka, Year Ending March 31st, 1913.

Source	Place of inspection	APPROVED				Condemned	Fees
		Cattle, lbs.	Hogs, lbs.	Sheep, lbs.	Calves, lbs.		
Shipped in dressed—							
Armour & Co.	U. P. tracks.	127,541	11,957	5,150	1,352	0	$ 218.96
Fowler Packing Co.	U. P. tracks.	57,671	1,871	476	57	0	90.09
Morris & Co.	U. P. tracks.	135,648	37,085	3,942	30	0	265.04
Sulzberger Sons Co.	U. P. tracks.	111,084	1,335	1,930	96	0	170.65
Swift & Co.	U. P. and C., R. I. & P.	193,923	15,610	30,775	4,441	0	395.69
Cudahy Packing Co.	111 East Second street	408,815	79,045	35,260	1,400	0	771.95
Totals.		1,034,682	146,903	77,533	7,376	0	1,912.38
Locally slaughtered—		head	head	head	head		
Charles Wolff Packing Co.	Foot Quincy street...	3,162	5,895	689	395	0	525.57
Jack Hammel.	215 Adams street.	37	.....	1	185	0	9.28
Leo Shapiro.	215 Adams street.	79	.....	...	305	0	17.05
William Dietzow	1719 Van Buren street	24	.....	...	242	0	9.93
L. O. Dana.	323 Quincy street.	3	.....	...	40	0	1.50
John Hentzler.	R-2 So. Kansas ave.	32	.....	...	60	0	5.18
Frank Manse.	On street.	.....	.....	...	1	0	.03
W. L. Flickenger.	Seabrook. . .	17	.....	...	98	0	4.64
Buechner Bros.	933 No. Kansas avenue	.....	.....	...	31	0	.93
Ed. Wells.	Golden avenue.	2	.....	...	3	0	.29
H. M. Bush.	North Central avenue.	6	6	...	17	0	1.29
R. F. Hodgins.	First and Jackson sts.	1½	.....	...	..	0	.15
Totals. . .		3,363½	5,901	690	1,377	0	$ 575.84
Grand total.							$2,488.22

secure samples of ice cream just as it was being eaten by consumers. No comment is needed to emphasize the fact that the counts are relatively gigantic, especially as presumably sweet cream is used in every case. In the nature of things cream always has a higher bacteria count than milk; but the normal differences are nothing like those exhibited above; nor is the content of fresh, carefully-handled cream anywhere near as great.

The remedy for the situation is the same as that for the milk problem: inspection and analysis by the city, with publicity for the results. Such a program, properly carried out, will quickly produce results of a surprising character. Pro-



IN ONE OF TOPEKA'S GOOD DAIRIES.
Contrast these conditions with those shown on page 31. The dairy has been built up with very little capital and is a financial success.

ducers and handlers readily become more careful and cleanly when they realize that the public wants these things. Here, evidently, is more work for the milk inspector.

FOOD SUPPLY.

The city's food supply, from a sanitary standpoint, involves the inspection of the various foods consumed and the places in which it is handled and sold. The problem is to see that the food is intrinsically sound and that it is handled in a sanitary way. The chief points which call for attention are the inspection of meats and groceries, and of markets, bakeries, restaurants, commission houses, and the like. Certain

well-recognized potential dangers to health exist in the food supply, to meet which definite municipal inspection systems have been devised. In Topeka, as in most cities, food inspection is under the city health department.

A brief survey of the local food situation shows that the city annually consumes well over a million pounds of meat; and that this, and other food commodities, is disposed of in some 160 groceries and markets. There are besides some five commission houses and about 24 restaurants. The particulars as to the source and amount of Topeka's meat supply are given in the table on page 41, based on the city food inspector's monthly reports.

The very large part of the city's meat is evidently slaughtered at Kansas City and other points, and shipped into the city dressed. This meat is all inspected by the federal government. Ninety-five per cent of the local meat is slaughtered by the Wolff Packing Company and also receives government inspection.

The Survey Inspection.

A very careful and complete inspection of groceries and markets was made during the Survey, again through the generous co-operation of the State Board of Health. Five state food and drug inspectors were called in from out over the state; and went over the situation in very considerable detail. Regular state score cards were used, the inspectors being instructed to give special attention to toilets and washing facilities. Altogether some 219 places were visited, and inspections were made covering 2,905 separate items. Of the latter 1,976 were found in satisfactory condition, while in 929 instances (32 per cent of the total) orders were issued for improvement. Ninety items (3 per cent of the total) received the lowest mark on the score card. The detailed findings are shown on the opposite page.

Examples of filthy floors and walls were found, as were considerable amounts of old and spoiled goods. The findings most serious from the sanitary standpoint are, however, the great prevalence of inadequate toilet facilities, especially

Food Inspection, Topeka Improvement Survey, Nov., 1913.

(Inspection made by State Board of Health.)

	Groceries and markets	Bakeries	Wholesale fruit and produce	Confectionary stores	Drug stores
No. of places	147	17	5	6	44
No. of employes	574	106	86	41	136
Items found in—					
"Good" condition	1456	132	31	24	333
"Fair" condition	586	77	24	11	141
"Poor" condition	53	22	2	2	11
Refrigerators found in—					
"Good" condition	66	...	..	..	9
"Fair" condition	23	1	..	..	4
"Poor" condition	11	1	..	..	4
Exposed goods—					
None	50	1	..	..	...
Some	36	3	..	..	...
Bad	4	...	..	..	...
Screening—					
Satisfactory	21	1	..	..	...
Fair	5	...	..	..	...
Poor	1	...	..	..	...
Down	25	...	..	..	...
Flies present—					
"Many"	10	3	..	..	...
"Some"	9	1	..	..	...
Few	10	4	..	..	...
None	4		..	..	...
Privy used	83	9	..	2	8
Connected with sewer	20	1	..	..	1
Vault	29	4	..	..	1
Not stated	34	4	..	..	6
Average distance from store	62 ft.	47 ft.	..	..	53 ft.
Least distance	10 ft.	30 ft.	..	..	30 ft.
Greatest distance	200 ft.	75 ft.		..	100 ft.
Water closet used	39	7	5	3	18
In cellar	9	2	..	1	4
Upstairs	8	...	..	..	...
Ventilates into store	6	2	4	1	3
In residence	4	1	..	..	...
In back room	3	...	..	..	...
In barn	1	..	..	..	...
Washing facilities—					
"Good"	17	5	3	3	11
"Fair"	46	7	2	..	3
"Poor"	42	4	..	..	1
"Bad"	3	1	..	..	...
None	11	...	3	..	...
Refrigerator drip	8	...	..	..	...
Residence	7	...	..	..	...

when taken with reference to lack of proper provision for washing the hands. In two-thirds of these food-handling places the only toilet convenience is the privy and in less than one-seventh of the places are the washing facilities such as would give a reasonable guarantee of clean hands. The practice of hurriedly washing the hands in the accumulated refrigerator drip water, and wiping them on the ubiquitous apron, cannot but be condemned.

While the lateness of the year did not allow a fair test of screening against flies, it is noteworthy that flies were found in a very considerable number of instances. Here again the nearby privy assumes an ominous portent, the inevitable inference being that the combination must give rise, during the summer fly season, to a real problem in food sanitation. The advisability of setting up and enforcing certain standards of toilet and washing facilities is obvious, and surely worthy of serious consideration.

The City's Food Inspection.

For the supervision of these various food problems the city provides one food inspector. A mere recital of his theoretical duties—including the inspection of all meats shipped into the city, the supervision of all local slaughtering, and the inspection of all markets, groceries, commission houses, hucksters, and eating places, quickly shows that the work is of impressive amount to be handled by one man. In the present instances, however, the inspector must also act as sealer of weights and measures. The result is what might be expected. The inspector does not give any systematic attention to stores and other food handling places, being content with the supervision of dressed meat as it enters the city.

And even this meat inspection is to a large extent a vain effort. We have seen from the table on page 40 that the very large proportion of Topeka's meat is shipped in by rail, and that over 90 per cent of the local meat is slaughtered by the Wolff Packing Company. The imported meat and that from Wolff's, making up over 95 per cent of the city's supply, has all undergone government inspection, which is much more

rigid and thorough than anything practicable for the city to attempt. It is with a re-inspection of this meat that the city inspector occupies practically his entire time.

Meat slaughtered by small local parties, and which has no government inspection, is sometimes seen by the local inspector on the hoof, and presumably always after dressing. The inspector cannot, however, be present at the time of killing—the most important as far as detecting diseased meat is concerned; so that at the very point where local meat inspection would be considered most desirable, the service is inadequate.

A very considerable revenue accrues to the city on account of its meat inspection activities, in the year taken as the basis of the table on page 40, $2,488.22. At the same time no meat was found which merited condemnation. Three-fourths of this income is derived from the outside packers, approximately another fifth from the Wolff Packing Company. The fees charged at present are 15 cents per 100 pounds on outside meat, and from 5 to 25 cents a head on various animals slaughtered locally. It would seem that these rates discriminate against outside meat, and are, furthermore, an unfair burden on packers who are already paying for government inspection. In addition, the city obviously makes a substantial profit on the enterprise, obtaining some $2,500 a year in fees as against outlays of $900 for the inspector's salary and an additional $50 for incidental expenses. Under the circumstances, the small salary paid the inspector (he must furnish his own equipage) and the inadequate food protective service rendered are particularly inexcusable.

Summary.

To sum up the situation, Topeka's food inspection system is entirely inadequate to the problem in hand, and may be characterized as chiefly a money-making proposition. Attention is limited to the inspection of meat, an operation which at present consists principally in distributing tags and collecting the fees therefor on meat which has already had rigorous federal inspection. A slight possibility exists of course that meat shipped from Kansas City might spoil in transit; but the pos-

sibility is remote, and a better place to look for such trouble would be at the market, where other conditions may be observed.

The situation can be met in part by shifting the inspector's attention from the refrigerator cars and the Wolff Packing Company to stores and markets. Very possibly, however, there is more work than can be handled adequately by one man alone. The inspector should be given more liberal financial treatment, and should share in the added clerical and administrative assistance offered by a more liberally financed and more closely organized city health department.

WELLS AND PRIVIES

A careful census of privies and wells within the city limits was made possible by the co-operation of Commissioner W. L. Porter and the city sanitary office. Three inspectors made a house-to-house canvas, listing both the number of and particulars as to the character of these appurtenances. The results of this inspection are tabulated in Tables 5 and 6, and are shown graphically in the figures opposite pages 22 and 44.

The Privies.

Four types of privy and three types of well exist in Topeka. The wells are readily classified in accordance as they are driven, drilled, or dug; but the matter is somewhat more complicated with the privies, there being besides the simple unconnected vault, a few "drawer" closets (which are in principle similar to the pail closet), a considerable number of vaults which are connected with the sewer, and many "tile" or "hopper" closets, which are also connected. The "tile" closets occur in back yards, being placed over the main house drain, and as is the case with connected vaults, have no water flush. In both cases the sanitary advantage gained by connection is but partial. Pollution of the soil is avoided, but, there being no water flush, the danger from fly-born infection is much the same as with the ordinary form of privy.

From an inspection of Table 5 it is evident that Topeka has a surprising, even startling, number of privies. Estimating roughly some 9,000 homes in the city it appears that over

TABLE 5. NUMBER AND DISTRIBUTION OF PRIVIES, TOPEKA, 1913.

(Enumerated by city sanitary inspectors.)

Ward	UNSEWERED AREAS			SEWERED AREAS			SEWERED AREAS WITH CITY WATER			TOTALS FOR WARD		
	Unconnected vaults	Connected vaults	Hoppers	Unconnected vaults	Connected vaults	Hoppers	Unconnected vaults	Connected vaults	Hoppers	Unconnected vaults	Connected vaults	Hoppers
1	646	9	4	271	401	35	136	306	29	917	410	39
2	1754	1	0	141	196	174	79	137	129	1895	197	174
3	7	0	1	278	362	121	274	344	121	285	362	122
4	14	4	2	108	432	345	110	410	336	122	436	347
5	641	18	0	202	372	62	161	327	61	843	390	62
6	357	2	0	131	68	98	106	60	88	488	70	98
Entire city...	3419	34	7	1131	1831	835	866	1584	764	4550	1865	842
All kinds of privies	3,460			3,797			3,214			7,257		

three-fourths of the people are privy users, and this despite the fact that the major portion of the city, that south of the river and west of Shunganunga creek, including over 70 per cent of the population, is equipped with a fairly complete sewer system.

The east side, with a population of about 7,000, which we have seen to be the largest without sewers in the state of Kansas, accounts naturally, for a large number of necessary privies. Still, taken as a whole, unsewered districts account for less

THE COMMON PRIVY AT ITS WORST.
Contents entirely unprotected, with every opportunity for access of flies or other animals.

than half the privies: while 44 per cent of the total are in places where both sewers and city water are already in the street. Of the plain unconnected vaults one-fourth (1131) occur in sewered districts, and nearly one-fifth (866) occur where both sewers and city water are available.

Such a state of affairs is certainly inexcusable. The privy is manifestly a makeshift devised for country life and is in the nature of things not suitable for the more crowded city conditions. In these days when so much is heard regarding the

danger from flies, and necessity for swatting them, it must be remembered that the privy is probably the greatest source of potential fly danger. Flies of themselves would be of little harm; it is their ability to transport parts of the discharges of a sick person to some one else that makes them a sanitary menace; and their principal opportunity to come in contact with these infected discharges is in the open privy.

OTHER TYPES OF PRIVY

Above a "tile" or "hopper" closet; below a "drawer" closet. As far as fly dangers are concerned the "tile" closet presents little advantage over the common privy.

Topeka has in its privies one of the primary essentials for fly danger; it has, as well, that complimentary essential—ample opportunity for fly breeding. The number of animals kept within the city limits is, according to the County Clerk's books, as follows:

Horses	2,293
Cattle	330
Mules	127
Dogs	1,392
Hogs	35
Sheep	1
Goats	3

Horse manure is the pre-eminent fly breeding material,

and considering Topeka's lack of provision for its protection from flies and its sanitary removal, the ample opportunity for fly production is evident. The state and city health departments have both carried on vigorous and commendable educational campaigns against the fly, and it would seem that the time is now ripe for an organized city attempt to eliminate or control the great fly-breeding places. Such a step, coupled with one to eliminate its unnecessary privies, should surely yield the city a real hygienic reward.

The Wells.

Having seen the great number of privies in Topeka it is not surprising to find that the city also has a remarkable number of wells. More than half the homes have wells; and more than half the wells are at places where city water is in the street. These facts are brought out in Table 6 and map opposite page 44. North Topeka and the east side, with the southern

THE PRIVY-WELL COMBINATION.

A sample of very close connection; separation about 10 feet. Opportunity for well pollution increases with the number of privies and the shallowness of wells. Examinations in some districts of the city showed nine-tenths of the wells polluted.

ALONG SHUNGANUNGA CREEK.
Note row of privies which ensure pollution of the water. Children frequently play along the creek. An opportunity to turn a menace into a civic asset.

edge of the city, are obviously responsible for the mass of the wells.

TABLE 6. NUMBER AND DISTRIBUTION OF WELLS, TOPEKA, 1913.

Ward	City water not available	City water available	Total
1	708	527	1235
2	924	863	1787
3	50	237	287
4	14	274	288
5	222	687	909
6	162	264	426
Totals...	2080	2852	4932

As in the case of the privy, the well is pre-eminently a rural institution. In the city, with habitations so much closer together, the chances for pollution are enormously increased. Fortunately, a very large number of the Topeka wells are driven and drilled, the type not so easily polluted. If such wells tap good strata, which bring their water a long distance

from the city, the water will probably be good; even so, in a city of Topeka's size, and one which has, furthemore, a commendable municipal water supply already pretty widely distributed, the continued use of wells is to be deprecated.

Whatever the general theory regarding the undesirability of wells in an urban community, we have, in the present instance, considerable specific information. Through the co-operation of the State Board of Health, the University, and Prof. C. C. Young, Director of the State Water Survey, it was found possible to analyze an unusually large number of samples of Topeka well water. All samples were taken in sterilized bottles, refrigerated[1], and shipped to Lawrence to undergo bacteriological examination. Tests[2] were made for the presence of the colon bacillus (the typical intestinal bacterium), as well as a determination of the number of organisms developing at blood heat. Altogether samples were taken from some 1,673 wells, a most unusual enterprise, and one that reflects much credit on the energy of Prof. Young and his associates at the University, and should secure for them the city's gratitude. The results are tabulated in the table below, and are shown graphically in the map opposite page 44.

RESULTS OF BACTERIOLOGICAL EXAMINATION OF WELL WATER, TOPEKA, 1913.

(Examinations by State Water Survey.)

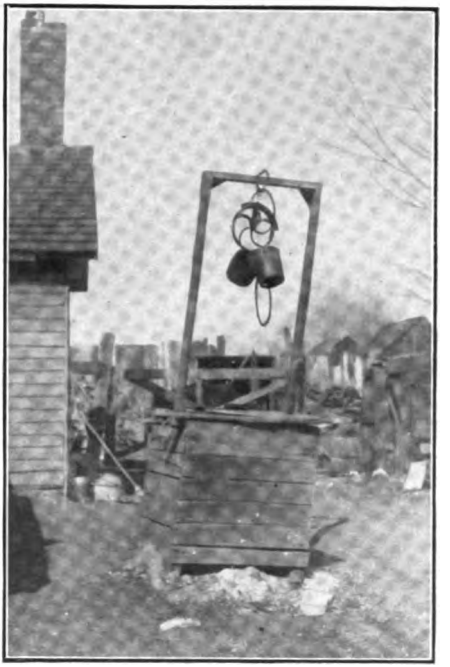
Ward.	City Water not available		City Water available		TOTAL		
	Unpolluted	Polluted	Uupolluted	Polluted	Uupolluted	Polluted	Per cent polluted
1	141	33	164	27	305	60	16.4
2	88	276	128	362	216	638	74.7
3	6	21	7	74	13	95	88.0
4	...	...	...	...	...	...	....
5	6	31	38	69	44	100	69.5
6	7	69	17	109	24	178	88.0
Totals	248	430	354	641	602	1071	64.0

Of all wells examined it is apparent that 64 per cent showed unmistakable signs of pollution of intestinal origin; and this is a percentage which holds in districts where city water is readily available. The showing of different parts of the city, as represented by the figures indicating the per cent

[1] Through the courtesy of the Seymour Packing Co.

[2] Presumptive test in peptone lactose bile.

of polluted wells in the several wards, is of considerable interest. The marked relative superiority of the wells in North Topeka is doubtless due in large measure to the fact that these wells are practically all driven, and are said to penetrate impervious strata, taking their water from good sandy material beneath. The wells examined in Ward 2 are said to be in inferior soils, such as gumbo and dark clay, and to be, furthermore, mostly of the dug variety, so that their poor showing is in no way surprising.



A DUG WELL.
Note opportunity for pollution at surface of the ground. For city use probably the most insanitary type of well.

The existence of such a large number of wells in the city and the objectionable character of many of them, as indicated by the analyses, represent a serious sanitary problem and one which is not easy of practical solution. While the danger is not as great as might be at first thought, it is nevertheless real. A person hearing for the first time that there are some 5,000 wells within the city limits and that probably two-thirds of these are polluted, would wonder that serious sickness is not more prevalent. The answer to such an inquiry is that ordinary pollution from persons in good health (or from other warm-blooded animals), while aesthetically objectionable, is probably not dangerous. Only when pollution from persons suffering from intestinal diseases gets into a well does trouble start. Such infected persons are, fortunately, relatively rare, and the opportunities for their discharges to enter a well are statistically somewhat small. The

PART OF THE LARGEST UNSEWERED COMMUNITY IN KANSAS.
In East Topeka, looking across toward the Capitol.

opportunity exists, however; and, realizing that there are always a certain number of persons in the community harboring the germs of intestinal disturbances, some of whom may show no signs of disease, we know that in accordance with the law of chance a few wells will be dangerously polluted from time to time. The chance for dangerous pollution (infection) varies directly, of course, with the number of wells. These infections give rise to new outbreaks of the disease in question, and so form the basis of the accepted view that wells are not a desirable city institution.

If further evidence be desired of the undesirability of the privy-well combinaton, it may be had by looking back at the figures for the distribution of typhoid fever and diarrhoea and enteritis on page 11. Exact correspondence cannot be expected, as the figures for typhoid are somewhat incomplete, and the character of the wells and privies vary of themselves; it is clear, however, that there has been a good general correspondence between the number of wells and privies and the presence of these intestinal diseases.

To solve this combined well and privy problem, the city will probably find it best to set up restrictions against the construction of new privies and wells; to provide for the peri-

odic examination of existing wells, and to adopt a policy of gradual condemnation, at the same time extending the city water system; and to force connection with the city sewer system. Such a program is the more easily recommended because of the good character of the city water supply and the already fairly extensive and too-little used sewer system.

OTHER SANITARY PROBLEMS

Tuberculosis.

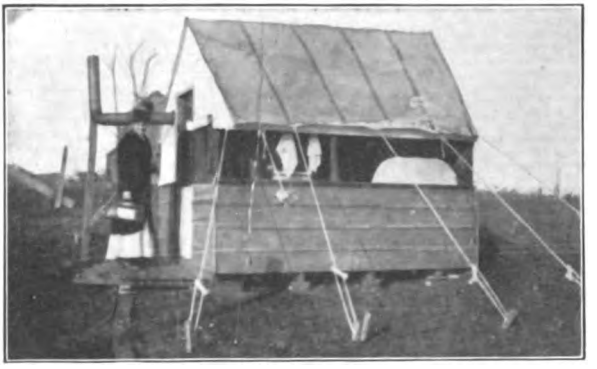
Compared with those of other cities, Topeka's tuberculosis problem is not of the first magnitude; at the same time it is of the first magnitude for Topeka. Resident deaths from this cause gave the city, in 1912, a death rate of 101 per 100,000 population; a figure which compares favorably with that of most large cities—the general lack of crowding and the char-

AT THE TUBERCULOSIS DISPENSARY.

A part of the work of the Anti-Tuberculosis Association. Persons may come to the Dispensary for treatment and instruction, while a nurse visits more serious cases in their homes. Such work is legitimate activity for the city health department. The Dispensary is located in the Provident Association Building.

THE HOME OF A CASE OF TUBERCULOSIS.
A tuberculous man, his wife, and two children slept in the same bed, in the room marked X. The Anti-Tuberculosis Association built the tent shown below, and now the man lives alone.

acter of the city's population both tending to minimize the ravages of this ever-present enemy of the human race. At the same time 47 deaths occurred from the disease in the year mentioned, a mortality which, according to the usual estimates, represents a body of three or four hundred cases. The truth is that tuberculosis is one of the most important of all the causes of death, and is, as we have seen in our discussion of vital statistics (page 9), perhaps the most important of the communicable diseases, and is of especial importance in certain parts of the city and among certain people.



AFTER THE ANTI-TUBERCULOSIS ASSOCIATION HELPED.
The tent built by the Association. More healthful accommodation for the man, and greatly increased safety for the children. An example of constructive work.

At present the city makes no effort to control the disease. Cases are reported, in accordance with the state law, to the health authorities: a record is made, and the report is transcribed and transmitted to the State Board of Health. No investigation is made of the case, no steps are taken to see that the spread of infection is limited, and no provision is made to care for sufferers from the disease. Without in any way minimizing the importance of proper disinfection after tuberculosis, such as by washing and srubbing with disinfecting fluids of

THE LOST TUBERCULOSIS CAMP.

Opened in March, 1910, in North Topeka, by the Anti-Tuberculosis Association; closed in July, 1913, as a result of protests by persons in adjoining districts. In the absence of a sanatorium, as in Topeka, such a camp can do much useful work. Properly maintained it is of no danger to the neighborhood.

known strength, it is fair to say that the one thing which the health department does do, i. e., fumigation after death or removal, is probably of slight value.

In contrast to this aspect of the situation, it is gratifying to see that private philanthropy has taken the initiative and is illustrating the course of action which the city in all probability will eventually adopt. The Topeka Association For the Study and Prevention of Tuberculosis now maintains a free clinic to which sufferers may come for examination and treatment, and

provides a visiting nurse to go about among the homes and advise and assist in the care of the patient and of other members of the family. This is good, solid, preventive work, similar to that carried on by our best city health departments. Such a program of investigation and education protects other members of the family, and especially children, from infection, and prevents suffering and death. The work of the anti-tuberculosis association has the support and co-operation of the State Board of Health, and desrves every encouragement.

The lack of sanatorium facilities for the treatment of tuberculosis should be noted before finishing our discussion of this disease. At present absolutely no such facilities exist—a relatively primative condition. Some relief will probably be obtained from the projected state sanatorium, but Topeka's allowance in this will almost surely be inadequate as compared with her proper needs, and she will do well to consider other means of meeting the situation. The estimate of the New York State Commission on Public Health allowed one bed for each yearly death; on this basis Topeka would need about fifty beds.

FREE DENTAL DISPENSARY.
Maintained at the Provident Association building by Shawnee Dental Association.

INFANT MORTALITY.

A baby brought to the Free Baby Hospital suffering from malnutrition, but too late to save. Active city health departments, through nurses and baby welfare stations, are preventing much of this kind of sickness and death.

One helpful method of attacking this phase of the problem is through a suitable day or night camp in the outskirts of the city. Such a camp was provided and maintained by the anti-tuberculosis association, with the support of the city, for a time in North Topeka. Objections on the part of residents of the neighborhood finally closed the camp. We may simply state, in this connection, that a properly maintained camp, sanatorium, or hospital need be no danger whatever to even its quite immediate neighborhood, and that it is unfortunate if groundless fear of such an institution be allowed to prevent such much-needed work.

Infant Mortality.

The city's infant death rate, 96 per 1,000 births in 1912, is not a high one; but we have seen that it shows marked variations in different parts of the city, being nearly twice as high in North Topeka and the east side as in the Third and Fourth wards. This means simply that for a given number of babies born, nearly twice as many died before reaching the age of one in the First and Second wards as in the Third and Fourth. The incidence of diarrhoea and enteritis among infants we have also seen to be relatively much greater in the first districts as compared with the last two.

This variation of infant mortality in accordance with living conditions is generally recognized, and has generally

yielded to simple administrative procedures. The more particular causes of this mortality and the age at death are indicated in the table on the opposite page.

The heaviest mortality evidently occurs in the earliest age periods—18.6 per cent of it on the first day; another 15 per cent in the rest of the first week, and a total of 53.5 per cent in the first month. Of the causes listed, the first four, whooping cough, tuberculosis, broncho-pneumonia, diarrhoea and enteritis, causing 33 deaths (43.5 per cent of the total), are regarded as largely preventable, with a portion of the "diseases of

A CORNER OF THE FREE BABY HOSPITAL.
At the Provident Association. Another constructive work by private philanthropy. Sick infants are cared for during the hot summer months.

early infancy" to be contested for. Substantial reductions in this kind of infant mortality have been achieved in a number of cities by establishing infant welfare stations to which babies may be brought, and by sending, in the centers of the trouble, educational nurses among the homes. Unhygienic living by mothers before the birth, excessive summer temperatures, and improper care and feeding of the infants are important factors in causing the mortality; and are ones with which the properly trained public health nurse is best qualified to cope. Topeka may be confident that for a few hundred dollars a year ex-

Infant Deaths, Topeka, 1912.

(Figures by W. J. V. Deacon, State Registrar of Vital Statistics.)

Cause of death	Total	Less than 1 day	2 day	3 day	4 day	5 day	6 day	7 day	2 wk.	3 wk.	4 wk.	2 mo.	3 mo.	4 mo.	5 mo	6 mo.	7 mo.	8 mo.	9 mo.	10 mo.	11 mo.	12 mo.
Whooping cough	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
Tuberculosis	2	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..
Broncho-pneumonia	14	1	..	..	..	..	..	..	..	1	1	1	1	1	2	2	..	..	3	1	..	..
Diarrhoea and enteritis	16	..	..	..	..	..	..	..	..	1	3	2	1	3	..	1	..	1	..	..	2	2
Diseases of early infancy	41	14	3	4	1	3	1	..	2	3	3	3	..	1	..	..	1	..	..	1	..	..
External violence	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Other diseases	9	..	..	..	..	..	..	..	1	..	..	..	..	1	1	1	1	1	..	1	1	1
Totals	86	16	3	4	1	3	1	..	3	6	8	6	3	6	3	4	2	2	3	4	3	4

pended in these ways, a number of babies could be saved, and the health of other infants much improved.

Here again private philanthropy has been quicker to respond to a need than the city authorities. The Provident Association has, during the past summer, maintained a free dispensary and, on a small scale, a baby hospital. The illustrations indicate the general character of the work. Much good has undoubtedly been accomplished in this way, and further advantage would be gained with a nursing service extended into the babies' homes.

Venereal Diseases.

The venereal diseases—chancroid, syphilis and gonorrhoea, are infectious, communicable, and preventable. Caused by specific micro-organisms, the are responsible for much suffering, loss of efficiency, and premature death in middle age. In most cities they are relatively widespread—in all probability the most prevalent of all serious communicable diseases. At the same time marked progress has been made in the last few years in their treatment and prophylatis.

Reasonably accurate information as to the prevalence of these diseases in Topeka is, as in most cities, very difficult to obtain. Reports of the diseases are not required by the health authorities and the only dispensary records which would shed light on the subject, those of the discontinued Washburn Dispensary, are confessedly inaccurate. No reason exists, however, to doubt that Topeka has its normal share of the diseases, responsible persons being found who believed even that the city has an excess. One well informed man stated that in his particular trade he had never had a helper who did not have one of the diseases at some time or other.

At all events, organized activity against these diseases would undoubtedly be an exceedingly valuable service to the community. In the largest cities the health authorities are coming to require the reporting of these diseases in the same manner as the other dangerous communicable diseases (by number instead of name, if desired), by offering free laboratory diagnostic facilities, and by offering free treatment to indigent sufferers—at the same time making the service such as will attract and secure confidence. These rational measures are rec-

ommended to Topeka, and it is doubtful if her health department can perform a more valuable service than to put our modern knowledge of these diseases into practical use.

Housing.

In the time available it was found impossible to make any detailed survey of housing conditions in the city. Through the co-operation of State Hotel Commissioner Mulroy, however, it was possible to have considerable work done on the condition of rooming houses, apartments, hotels, and restaurants. Altogether some sixty places were visited, and numerous orders were given for improvement. The data as to the conditions found are summarized below:

Inspection of Hotels, Rooming Houses, Apartments and Restaurants, Topeka, 1913.[1]

(Figures furnished by State Hotel Commissioner.)

	Hotels	Rooming houses	Apartment houses	Restaurants	Totals
No. places visited...	17	14	5	24	60
Insanitary yards....	4	4	2	3	13
Insanitary toilets...	2	4	1	3	10
Insufficient toilets..	1	3	0	8	12
Insanitary bedding..	2	4	0	0	6
Insanitary kitchens.	1	0	0	4	5
Insanitary cellars...	1	0	1	2	4
Insufficient fire extinguishers.	3	2	3	0	8
Insufficient fire escapes.	2	2	1	0	5
Insufficient lighting.	2	3	0	0	5
Inside rooms.....	1	2	0	0	3
Insanitary wash rooms.	2	2	0	4	8
Total unsatisfactory items.....	21	26	8	24	79

The rooming houses have manifestly come off worst in this inspection; of the defects found the most prominent are insanitary yards and insufficient and insanitary toilets. Overcrowding and grossly insanitary conditions were easily found in apartment houses where the rents extracted would seem to

[1] This does not include all of the places in Topeka but only the ones visited up to this time, which is probably three-fourths of such places.

warrant a much larger portion of decency. The photographs will give an idea of these and some of the other existing housing conditions.

Altogether it is evident that there is need in Topeka for a housing law. Certainly in planning for the bigger Topeka it will be prudent to give careful investigation to existing housing conditions, and to create such regulations as will remedy existing evils and prevent the development of new ones.

Refuse Disposal.

Collection and disposal of garbage is a matter whose sanitary importance is very commonly exaggerated. As far as fly

ROOM OVERCROWDING IN TOPEKA.
This room, with two small windows which would not open, served as bedroom and living room for a family of four.

breeding is concerned, manure is probably of much greater importance; while the possibility of danger from any infectious material in garbage is undoubtedly very slight. The matter of refuse disposal is at the same time intimately related to civic cleanliness and decency, attributes which have a reflex effect upon health. While therefore an extended investigation of refuse disposal in Topeka has not seemed justified under the

RUDIMENTARY HOUSING IN TOPEKA.

This house is set in a dug-out foundation and replaces an abode made of window blinds which are now used for a shed in the rear.

A DIRTY BACK YARD.

Showing opportunities for pollution of well by surface water.

RUNWAY IN REAR OF TENEMENT HOUSE.
The only uncovered area on a lot occupied by a three-story building.

time limitations of the present survey, a brief review of the question may be permitted.

The city refuse collection is under the general direction of the Commissioner of Parks and Public Property, the equipment consisting of three garbage wagons, two manure wagons, and a garbage crematory. Garbage is collected twice a week, and trash as required. Tin cans and ashes are collected once a year, when the Street Commissioner has a "Tin Can Week," and removes such material to low places about town. Two city dumps, one west of the crematory and one on South Kansas avenue, are maintained, as well as a few private ones.

While Topeka has thus a garbage collection system and a pretentious crematory, the service is entirely optional, the scale of charges being 40 cents for one 10 gallon can and 60 cents for one 20 gallon can per month. Altogether about 600 persons avail themselves of the garbage service, while 275 patronize that for manure. In North Topeka there are only something like a dozen customers. Many keep chickens and other animals, while others dispose of their garbage to private slop-haulers. The latter are under city supervision and pay a small fee. Even the

most cursory inquiry makes it wholly apparent that the city garbage collection system is very partial, and that but small use is being made of the capacity of the crematory.

Physical Examination of School Children.

A thorough investigation of school hygiene in Topeka was not included in the Public Health Survey because of the limitations as to time and assistance. It was found possible, however, through the generous co-operation of Drs. W. M. Mills, M. G. Sloo, M. B. Miller, F. L. Loveland, and Supt. of Schools H. B. Wilson, to make physical examinations of 216 children. It should be noted, of course, that a careful survey of the sanitary condition of the school plant is highly desirable, and that such an undertaking, which the school board now has under consideration, is to be heartily endorsed.

In the examination, as carried out, four schools were selected in representative parts of the city, the children being taken mostly from the third and fourth grades, a few from the fifth grade. Prior to the examinations a notice was sent to parents, outlining the plan, and asking permission to examine their children. No difficulty was encountered in obtaining per-

PRIMITIVE SANITATION—"EPIDEMIC ROW."
An alley lined with privy vaults and private wells. Note the piles of fly-breeding manure.

PHYSICAL EXAMINATION OF SCHOOL CHILDREN, TOPEKA IMPROVEMENT SURVEY, DECEMBER, 1913.

(Examinations by Drs. W. M. Mills, M. G. Sloo, M. B. Miller, and F. L. Loveland.)

School	Children examined	DEFECTS FOUND.							Defects per child
		Vision	Hearing	Breathing	Glands	Teeth	Other	Total	
Central Park—									
Number	55	5	2	44	24	50	5	130	2.4
Per cent having defect		9.1	3.6	80.0	43.6	90.9	9.1		
Garfield—									
Number	62	4	2	41	25	33	10	115	1.9
Per cent having defect		6.4	3.2	66.1	40.3	53.2	16.1		
Quincy—									
Number	44	8	3	36	15	20	8	90	2.0
Per cent having defect		18.2	6.8	81.6	34.1	45.4	18.2		
Branner—									
Number	55	7	2	44	30	54	6	143	2.6
Per cent having defect		12.7	3.6	80.0	54.5	98.2	10.9		
Totals	216	24	9	165	94	157	29	478	2.2
Per cent having defect		11.1	4.2	76.4	43.5	72.7	13.4		

mission, and no attempt was made to select defective children. The results of the work are indicated on the opposite page.

These findings accord in general with those obtained in other parts of the country. The commonest defects are obviously those of the teeth, including irregularities and decay, and those of the breathing passages—usually enlarged tonsils and adenoids. The relative showings of the four schools are not exactly what might have been expected. The large number of defects among children in the Central Park School, which is situated in a district where excellent living conditions and good medical service would be expected to prevail, is rather surprising. The matter is evidently not one concerning only the poor.

The more particular nature of the defects found is as follows:

NATURE OF DEFECTS FOUND.

Vision—		Teeth—	
Disease	4	Decay	99
Near sight	18	Irregularities	58
Astigmatism	2	Cardiac disease	4
Hearing—		Malformations—	
Disease of ear	6	Congenital	1
Discharge from ear	6	From abnormal positions	2
Breathing passages—		Acute or chronic inflammation	1
Adenoids	35	Malnutrition	13
Enlarged tonsils	116	Other	5
Elongation of uvula	14		
Enlarged glands	94	Total	478

The lesson of this test examination is, of course, the very considerable number of children found with easily correctable defects, which in the large majority of instances were previously unrecognized and were undergoing no treatment. It has been shown that these defects have very real effects on the activity and future welfare of the child, and are a severe handicap to its progress.

Realization of the seriousness of such a situation has induced practically all the large cities to institute careful and systematic examinations of all school children. Parents are notified of the defects found and are advised to have the conditions remedied; while nurses are employed to follow up cases in the poorer homes to help obtain proper treatment for the

child. Here surely is a situation where an ounce of prevention in childhood is worth its pound of cure to the adult, a fact which is now pretty universally recognized, and one which Topeka cannot afford longer to ignore. To deprive its future citizens of what is a fundamental necessity is unfair and unwise. By hiring a school nurse the school authorities have made a start; it is a step in the right direction, but cannot of course take the place of careful physical examinations by competent physicians.

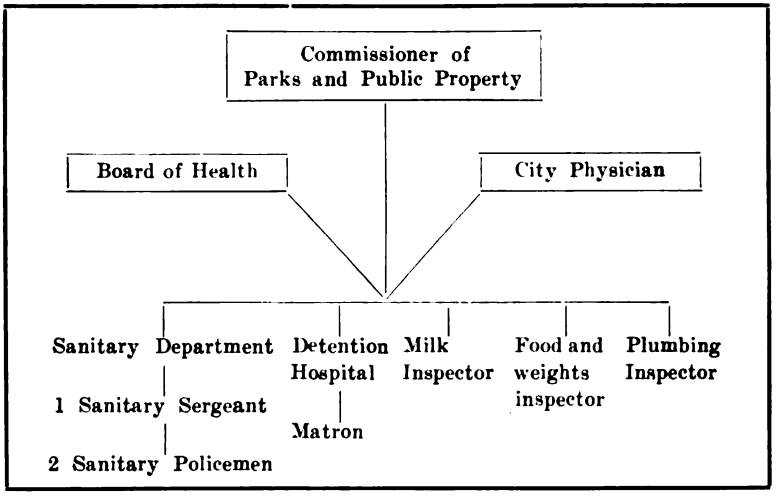
Such a systematic examination system is, at the same time, an added protection against contagious diseases; in the control of which early recognition and isolation of incipient cases is of prime importance. In the test examination described above, two cases of trachoma, a serious contagious disease of the eye, were found in the Quincy School. This disease is difficult to cure and dangerous to the eyesight, often resulting in complete blindness; it is communicated by personal contact, and the use of common towels and the like. The symptoms in the early stages are simple reddening of the eye or inflammation of the eye lids. The undetected presence of such a disease among school children is a matter the seriousness of which is obvious; as is the argument such a condition makes for a regular and systematic examination of all the children.

III. THE LOCAL HEALTH DEPARTMENT

Organization.

While the exact form of the city's public health work is somewhat vague, its general form is as outlined below:

Present Organization of Topeka's Public Health Work.



A kind of triple-headed directorate exists, the board being expected to direct the sanitary sergeant and the city physician in a general way and to regulate quarantine, while the city physician is responsible for the detention hospital and the general supervision of communicable diseases. The actual management of the work rests, however, with the Commissioner of Parks and the Sanitary Sergeant. The Board of Health consists of five members, including the Commissioner of Parks, Commissioner of Streets and the city physician; it meets at the call of the secretary (the city physician) and passes such resolutions as may seem necessary. At the time of the Survey it had met once in the last six months.

The city physician is engaged chiefly with treating prisoners at the city jail, emergency cases, and the poor in cases of contagious disease. Members of the city fire and police departments are entitled to his services free, and the detention hospital for smallpox is also placed in his care; jail and police de-

partment work, however, account for three-fourths of his city service, requiring daily visits to the jail. The city physician is appointed by the Commissioner of Parks for two years, and receives a salary of $60 a month.

The Commissioner of Parks under the Topeka Commission Form of government is, of course, an elective officer; and in addition to the sanitary department, is responsible for the city refuse collection and the crematory, the city parks, and all city property—such as the Auditorium.

The deficiencies in the present organization are readily discoverable. The most glaring defect is the utter lack of any trained and experienced health officer—a fact of which the Commissioner of Parks is keenly appreciative. The city employs no person who is competent, and whose duty it is, to review the work of the milk inspector, or of the food inspector, or to lay out the new work which is needed in other directions. The sanitary sergeant is undoubtedly an excellent administrative officer as far as his department is concerned, and the present Commissioner of Parks an active and progressive man: but neither would lay claim to the qualifications of the modern health officer. Present day health departments are no longer mere nuisance abatement offices, and their efficient operation calls for the specially qualified man.

Financial Treatment.

Other defects in the city's health organization relate to omissions from its program, such as the already-discussed work against tuberculosis and infant mortality. These, as well as the defects in organization above noted, are in a large measure due to the city's false economy in the matter of health work, as will be evident from a brief inspection of the department's financial resources, which are indicated on the opposite page.

The total expenditure on behalf of the Sanitary Department—$10,131.77—represents a yearly expenditure of 21.1 cents for each inhabitant. Limiting our figure to more strictly preventive work by disregarding expenditures for weed cutting and plumbing inspection, it falls to 17.5 cents. If further allowance is made for the fact that the city physician's work is almost entirely (say two-thirds) poor relief, and for the fact that the city obtains a revenue of over $2,400 a year from food

EXPENDITURES OF CITY SANITARY DEPARTMENT, TOPEKA, 1913.

Salaries—		
City physician	$ 720.00	
Sanitary sergeant	780.00	
Three sanitary policemen	2,160.00	
Fumigator	840.00	
Matron Detention Hospital	600.00	
Milk inspector	1,200.00	
Food inspector	900.00	
Plumbing inspector	1,200.00	
Other	28.03	$ 8,428.03
Expenses of Detention Hospital	231.52	
Expenses of milk inspector	102.00	
Expenses of plumbing inspector	125.00	
Expenses of food inspector	53.12	511.64
Expenses of Sanitary Department—		
Cutting weeds	421.59	
Labor	19.00	
Printing	8.00	
Board of Health meeting	5.00	
Merchandise	3.47	
Fumigating and other materials	610.58	
Miscellaneous	124.46	1,192.10
Total		$10,131.77

inspection fees, the figure drops to 11.5 cents per inhabitant per year. That such an expenditure is inadequate for a modern health department, one equipped to take advantage of demonstrated opportunities, is well known. In the table on the next page comparable expenditures are given for cities with populations of between 50,000 and 100,000.

Topeka ranks eighteenth in this list of thirty cities of similar size and it must be remembered that the expenditures of the other cities are by no means ideal. Most of them are in fact wholly inadequate, persons who have given the subject special study having recommended that a well-rounded health department be allowed a minimum per capita expenditure ranging from 50 cents to $1.00.

The plain fact is that Topeka cannot do its public health duty to its citizens without liberally increasing the health department's financial allowance. Even so, the increase and total

MUNICIPAL HEALTH DEPARTMENT EXPENDITURES.[1]

City	Population	Amount per year	Per capita
1. Yonkers	79,000	$45,099	$.570
2. Springfield, Mass	88,000	39,985	.454
3. Tacoma	83,000	28,045	.337
4. Lynchburg	89,000	29,637	.333
5. Elizabeth	73,000	23,068	.316
6. Covington	53,000	16,000	.301
7. Hartford	98,000	25,500	.260
8. Duluth	78,000	20,000	.256
9. New Bedford	96,000	22,500	.234
10. Wichita	52,000	10,920	.210
11. Portland, Me	58,000	12,100	.208
12. Peoria	66,000	13,500	.204
13. Brockton	56,000	10,763	.192
14. Evansville	69,000	13,200	.191
15. Somerville	77,000	14,300	.185
16. Mobile	51,000	9,000	.176
17. East St. Louis	58,000	10,000	.172
18. TOPEKA	47,980	7,905	.165
19. Springfield, Ill	51,000	8,335	.163
20. Erie	66,000	10,365	.157
21. Waterbury	73,000	11,000	.150
22. Harrisburg	64,000	9,118	.142
23. Kansas City, Kan	82,000	10,000	.121
24. Trenton	96,000	11,575	.120
25. Reading	96,000	9,500	.098
26. Camden	94,000	8,965	.095
27. Altoona	52,000	4,330	.083
28. Bayonne	55,000	3,100	.056
29. Hoboken	70,000	2,600	.037
30. South Bend	53,000	2,000	.037

expenditure advocated are in reality very small. If the present expenditure be trebled, it will only represent an outlay of 50 cents for each inhabitant each year, and will still be only 1.9 per cent of the total municipal expenditure and 7.3 per cent of the money now allowed for police and fire protection.

Inspection Service.

The sanitary inspectors, three in number, placard contagious diseases, investigate complaints, and inspect privies, manure pits, and nuisances. For this purpose the city is divided into three districts: the first including wards 1 and 2 (east and north); the second wards 4 and 6 (west); and the third wards 3 and 5 (south). Each inspector keeps to his own district and is made responsible for conditions in it. In the time

[1] For directly preventive work; expenditures for general hospitals, refuse disposal, street cleaning and plumbing inspection not included.

available no attempt could be made at a thorough investigation of the efficiency of this service; but it is evidently carried out under careful and conscientious direction. A commendable campaign against flies during the last year may also be mentioned to the credit of the sanitary sergeant.

The inspection given milk and other foods having been already discussed at length in other parts of this report, it is necessary at this point only to re-emphasize the very serious shortcomings which exist in these two important services.

Control of Communicable Diseases.

The control of communicable diseases is theoretically under the supervision of the city physician; actually the work is carried out by the sanitary sergeant. Reports from physicians are required of a satisfactory list of diseases, including tuberculosis, typhoid fever, scarlet fever, diphtheria, measles, whooping cough, chicken pox, smallpox, cerebrospinal meningitis and mumps. Smallpox, scarlet fever, diphtheria and tuberculosis would seem to be fairly well reported, an exact idea being difficult to obtain because the death registration was incomplete until the fall of 1911 and no records of cases were kept until August, 1913. The other diseases, with the possible exception of typhoid fever, are probably reported with very little completeness. The reporting of cases is of prime importance in the control of contagious diseases, and it is hoped that vigorous efforts will be put forth to make the reports as full as possible. For a physician to refrain from reporting a case of contagious disease is a very mistaken kindness, both to the family in which the case occurs and to neighbors.

The quarantine regulations are laid down by the Board of Health and confirmed by the city commissioners. In scarlet fever, diphtheria, measles and chicken pox the house is placarded by a sanitary policeman, and printed instructions are left as to the care of the case. Further inspection is made only in the case of diphtheria and scarlet fever, in which diseases the city physician makes a final visit to lift the quarantine. In these two diseases wage earners must live outside the premises. Notice of all contagious diseases is telephoned to the school department but no individual notification is given milk men or the public library.

In cases of typhoid fever and tuberculosis, at the time of the Survey, no steps were taken, which is unfortunate. Typhoid is considerably more contagious than is generally understood, and proper instruction in bedside disinfection is of much value in preventing secondary infection of those associated with the patient. In tuberculosis, as we have seen, the lack of follow up work by the city authorities is also unfortunate, although the situation is somewhat relieved by the work of the anti-tuberculosis association. Here are opportunities to protect the public health, much more definite and valuable than those represented by weed-cutting and nuisance abatement; yet they are passed over, and probably will continue to be passed over until the city secures a full-time health officer.

Another serious handicap to Topeka's efforts to control contagious diseases is the lack of any facilities for their hospital care. While at first doubtful of the need for a contagious hospital, feeling that it might be difficult to get people to use it, the city physician stated that he had seen cases needing hospital care that none of the existing hospitals would probably take. After some consideration he suggested that it might be practicable if the county would co-operate, and expressed the opinion that it would probably prevent a good deal of contagion and would make things easier for doctors.

Very few cities find they can do without hospital facilities for these diseases. Cases are bound to occur in crowded homes where proper isolation cannot be maintained, and where contagion will inevitably spread. There are also cases in which the sickness is so serious that proper hospital treatment decides the issue as between life and death. For these reasons the advisability of making some provision is earnestly suggested. The facilities should be made attractive, that they may be used willingly, and modern, that they may allow every advantage in treatment. The report of the New York State Commission on Public Health recommended that the allowance of such beds in a community be not less than one to each 2,000 of population; on this basis Topeka's quota would be about twenty-five.

Regarding laboratory diagnosis and free anti-toxin, Topeka is fortunately situated, being the capitol city and so the seat of the State Board of Health laboratory. Prompt examination of specimens for tuberculosis, diphtheria and the like, is

thus secured, as is the possibility for prompt administration of anti-toxin.

Records.

The records of the sanitary department are few and simple, as corresponds with the nature of its endeavors. Too much simplicity, to the point of utter neglect, as we have seen in the case of records of contagious diseases and milk inspection, has characterized them in the past. The present sanitary sergeant has taken steps to improve these conditions and now keeps the following permanent books:

Tuberculosis cases
Contagious disease cases
Fumigations
Vault cleaning permits

The records now kept are satisfactory to the work in hand, but with the enlargements in the service advocated in this report, considerable enlargements and refinements in the record keeping system will be necessary.

Summary of Deficiencies in the City's Health Service.

We have now seen that the city's food inspection service misses the essentials in food protection; that the city's milk inspection does not in any way adequately meet its problem; that its communicable disease service can be measurably improved; and that important opportunities in infant hygiene and tuberculosis work are being neglected. Contributary to these deficiencies and principally responsible for them are lack of funds and a full-time health officer. The bars in the way of immediate improvement are probably inertia, and the desire to keep expenses at a minimum; the first should not count for much in a progressive Kansas community, while the second is surely false economy. Paint for a house is a wise investment, because it prevents decay; similarly with the health department for a community—the protection is as real, and the relative cost as trifling.

The first step in the improvement of the department should be the appointment of a full-time, trained, and experienced health officer. With the great advances which have occurred in sanitary science such a person is essential, and his

value is coming more and more to general recognition. A city represents, from a hygienic standpoint, a great complex machine, made up of a multitude of little living parts, intricately interrelated. Disease always exists in some of its parts, threatening both to spread to other parts and to decrease the efficiency of the whole machine. Modern science has pointed out the nature of these defects and the ways the inefficiencies may be kept to a minimum. Surely here is a matter calling for special knowledge. In industry or commerce no one would think of entrusting the supervision of such a complex organization to any but a trained superintendent or manager. Topeka, in fact, recognizes this principle in the employment of an expert school superintendent, at a salary of $4,500 a year. The field of public health is certainly as wide and intricate as that of the schools; and calls for the attention of a man of equal caliber.

Recommendations for the Improvement of the City Health Department.

With the above points in mind we may recommend Topeka a modern health department in the following terms:

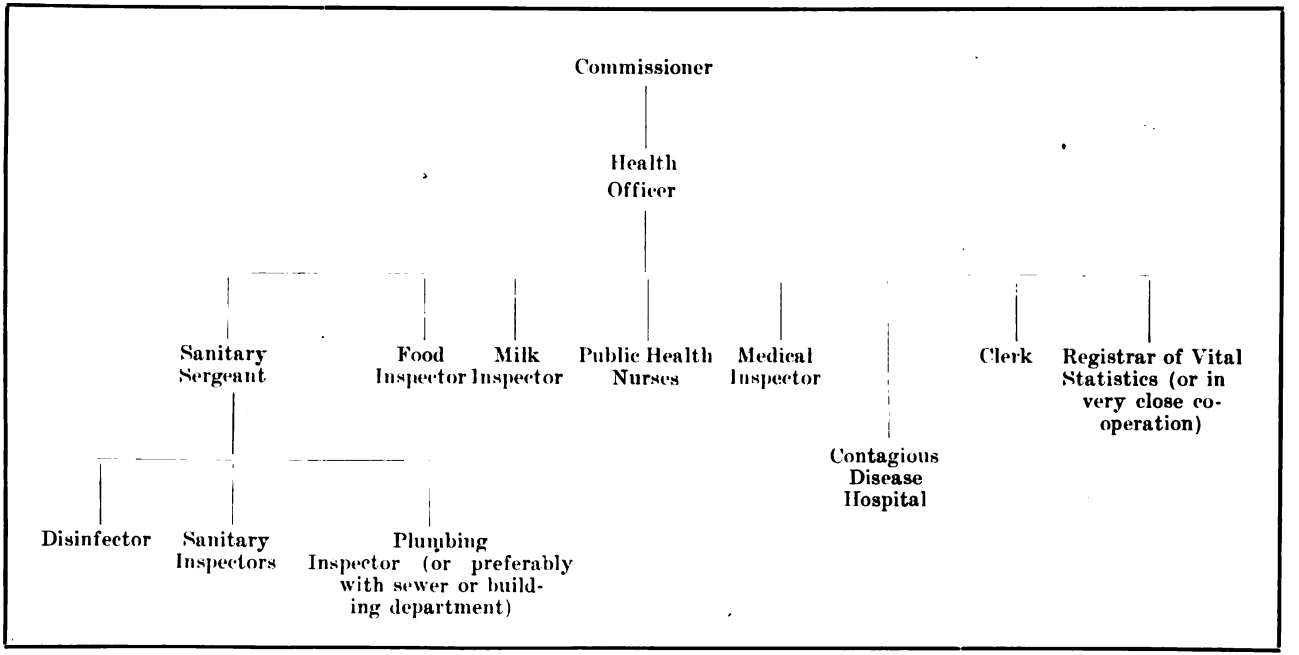
1. The appointment of a properly qualified, full-time health officer. His appointment should be for a term of years and his salary should compare favorably with that of the Superintendent of Schools. He should have supervision over the milk and food inspectors, and over all persons and work hereafter mentioned. The possibility of a co-operation arrangement with Shawnee county for the employment of such an official is suggested.

2. Radical improvement of the present milk inspection; including revision of some parts of the existing milk ordinance, the systematic inspection of all dairy farms and milk-handling places, and the introduction of the bacteriological examination of milk. The inspector should be supplied with proper laboratory and transportation facilities, and the results of tests should be given newspaer publicity.

3. A radical reorganization of the present system of food inspection, shifting the emphasis from the reinspection of government inspected meats to the inspection of markets and groceries, and of small local slaughter houses.

4. Extension of the present work against communicable

Suggested Reorgaization of Topeka Health Department.



diseases to include reinspection of quarantine, the visitation of typhoid fever and tuberculosis, the establishment of more definite periods of quarantine, and the release of diphtheria only after cultural diagnosis.

5. The institution of a comprehensive campaign against tuberculosis.

6. The institution of work against infant mortality.

7. The institution of work against venereal diseases, including reporting of cases to the health department (by number if so desired), and the provision of free laboratory diagnosis, and of free treatment in indigent cases.

8. The institution of organized work for health education and publicity.

9. Consideration of the advisability of a free dispensary service under the health department; such as would extend and reinforce the department's work against infant mortality and the communicable diseases, including tuberculosis and the venereal diseases.

10. The employment of two or more public health nurses, to be utilized in the inspection of quarantine and infant hygiene and tuberculosis work.

A reorganization of the city's public health work along these lines is indicated graphically in the diagram on page 79.

IV. SUMMARY AND CONCLUSIONS

Vital Statistics.

We have now seen that Topeka's death rate, while comparing favorably with that of the country as a whole, shows a considerable excess over that of the State of Kansas—and this after making the more important corrections. At the same time her birth rate is also under that of the rest of the state. Furthermore, not only does the death rate show marked variations in the several wards, but similar variations are found in the rates from the various preventable causes of death. The conclusion is justified that an amount of preventable death exists in the city which, while not alarming, is considerable, and very much worth fighting against. A public health problem exists which should yield to treatment.

Sanitary Conditions.

Survey examinations show that the city has a good water supply; but that its sewer system is poorly designed, poorly constructed, and poorly maintained. Both these systems need extending. The city's milk supply is in a markedly unsatisfactory condition, with the inspection system quite inadequate; while its food supply is in general good, but with a foolishly arranged inspection. Perhaps one of the most serious problems is represented by the presence of over 7,000 privies and over 5,000 wells. Two-thirds of the wells examined showed evidence of pollution, and many of them are unnecessary, as are a large number of the privies. Other conditions such a housing, should receive attention. There is also need for regular and systematic physical examination of school children.

The City Health Department.

The organization of the city health department leaves much to be desired. Not only are its food and milk inspection services pronouncedly inadequate, but some of the most important opportunities to protect the public health are neglected. The number of persons employed and the amount of money appropriated are both too small for a reasonably complete pro-

gram; and there is a lack of centralized and properly qualified authority. The latter is probably the most serious defect. A full-time, trained health officer, to be supplied with more liberal funds, is needed.

Conclusions.

Topeka has, accordingly, the combination of a considerable amount (15 or 30 per cent of the total) of preventable deaths and a number of objectionable sanitary conditions. In considering a practical program to meet the situation, consideration must be given to the relative importance of the several hygienic opportunities with regard to their relative cost. On this basis the city's most profitable investment will probably be one made in its health department. Important repairs and extensions of the sewer system are, for example, desirable, and undoubtedly would show good results; but the cost of such work is relatively large, and a perhaps larger and more immediate saving of life could be accomplished by the expenditure of a few thousand dollars for a few public health nurses and an expert health officer. The larger expenditures for comprehensive sanitary improvements are not to be deprecated; they certainly should be instituted; but if all cannot be attempted at once and if expense be a limiting factor, it should be remembered that the health department reorganization will probably give the largest return for the money expended. This need should therefor be given precedence. At the same time steps should be taken to solve the serious well and privy problem by a policy of restriction, condemnation and publicity.

The public health situation in Topeka is one of good natural resources, fair development of material sanitary improvements, and neglect of the modern methods of administrative control. The city's organized health work is relatively primitive, there being here a rich field for development. The necessary expense is, fortunately, not great, and the rewards, as expressed in increased welfare and prosperity, are substantial and considerable.

APPENDIX "A".

Part of a report on Topeka's vital statistics prepared by Mr. W. J. V. Deacon, State Registrar of Vital Statistics. Other parts of this report appear in the text of the Survey. For much of the detailed work of transcription and tabulation thanks are due Miss Veda Hodgson, Mr. Herbert A. Blinn, and Mr. Morris Sanders, students in Washburn College.

An Intensive Study of Vital Statistics for the Topeka Improvement Survey.

By W. J. V. Deacon, State Registrar of Vital Statistics.

Population April 15, 1910 (U. S. Census), 43,684.
Population April 15, 1900 (U. S. Census), 33,608.
Increase 30% for decade or 3% for year.
Correction (Arithmetical Method) = 46,578, population July 1, 1912.

Total number deaths in 1912, 835.

$$\frac{835}{46578} = 17.9 \text{ per thousand, Crude Death Rate.}$$

Number of deaths of non-residents, 171.

$835 - 171 = 664$, total resident deaths.

$= 14.2$ per thousand. Corrected death rate to residents.

White population, 41,734, deaths 553, rate 13.2.
Negro population, 4,844, deaths 111, rate 22.9

SPECIFIC DEATH RATES, TOPEKA.

AGE.	No. Deaths.	Population.	Death Rate.
Under 5 years.....	134	3,985	33.6
5-14.	25	7,162	3.4
15-24.	49	9,748	5.1
25-44.	103	14,680	7.0
45-64.	155	8,202	17.6
65 and over.....	198	2,745	72.1

TOPEKA DEATH RATE CORRECTED TO STATE OF KANSAS.

AGE.	Population.	Specific Death Rate, Kansas.	Calculated No. of Deaths.
Under 5 years.....	3,985	20.49	82
5-14.	7,162	1.74	12
15-24.	9,748	3.23	31
25-44.	14,680	5.15	76
45-64.	8,202	13.83	134
65 and over.....	2,745	63.81	175
			510

$\frac{510}{46578} = 10.94$, standard death rate.

10.16, crude death rate of Kansas.

$\frac{10.16}{10.94} = .9287$, factor of correction.

14.2, crude death rate Topeka, × .9287 = 13.19, Corrected to Kansas.

CORRECTED DEATH RATE OF TOPEKA TO STANDARD POPULATION OF SWEDEN.

AGE.	Population.	No. of Deaths.	Specific Death Rate.	Standard Age Distribution.	Index of Mortality.
0-1	815	85	104.29	25.5	2.6
1-19.	14,629	94	6.42	39.8	2.5
20-39.	17,765	110	6.14	269.6	1.6
40-59.	10,019	121	12.07	192.3	2.3
60 and over..	3,350	254	75.82	114.6	8.6
					17.85

CORRECTION BY AGE AND SEX TO UNITED STATES REGISTRATION AREA.

	POPULATION.		SPECIFIC DEATH RATE.		CALCULATED DEATHS.	
Age.	Male.	Female.	Male.	Female.	Male.	Female.
Under 5	2,775	2,712	56.26	47.39	156	129
5-14.	5,405	5,313	4.23	4.09	23	22
15-24.	4,821	4,624	6.51	6.06	31	28
25-44.	6,403	5,736	10.55	9.36	68	54
45-64.	3,774	3,024	25.02	21.09	95	64
65 and over.....	1,169	823	71.90	66.43	8	55

Total calculated deaths—Males, 381
Females, 352

733

$\frac{733}{46578} = 15.75$, standard death rate.

18.05, death rate for registration area.

$\frac{18.05}{15.75} = 1.146$, factor of correction.

14.2, crude death rate × 1.146 = 16.27, Corrected rate.

CAUSES OF DEATH AND RATES PER 100,000.

Diseases.	No. Deaths.	Rate.	Diseases.	No. Deaths.	Rate.
Typhoid Fever	9	19.3	Diarrhoea and Enteritis, under 2 years.	25	54.4
Small Pox	1	2.2	Diarrhoea and Enteritis, over 2 years..	7	16.2
Scarlet Fever	1	2.2	Appendicitis.	7	16.2
Whooping Cough	2	4.3	Diseases of Liver and Adnexa	7	16.2
Diphtheria.	16	34.8	Peritonitis.	4	8.7
Dysentery.	3	6.5	Other diseases of Digestive system	14	30.5
Tuberculosis (all forms).	47	102.2	Acute Nephritis	5	10.8
Cancer (all forms...	40	87.0	Bright's Disease	54	117.3
Rheumatism (all forms)	5	10.8	Other diseases, Genito-Urinary system.	5	10.8
Diabetes.	9	19.3	Puerperal state	10	21.7
Other general diseases.	13	28.3	Diseases of skin, etc.	2	4.3
Meningitis.	5	10.8	Diseases of bones, etc.	1	2.2
Cerebral Hemorrhage	31	67.4	Malformations.	5	10.8
Paralysis.	18	39.2	Diseases of early infancy	35	76.2
Other diseases of nervous system ...	22	47.8	Old age	36	78.4
Organic Heart Disease.	59	128.2	Suicides.	9	19.3
Other diseases of circulatory system.	31	67.4	Accidents.	26	56.5
Broncho-pneumonia .	23	50.0	Homicides.	7	16.2
Pneumonia.	34	73.8	Ill-defined diseases ..	19	41.3
Other diseases of respiratory system.	12	26.1			

APPENDIX "B".

Ward Vital Statistics.

(Residents alone are considered.)

BIRTH AND DEATH RATES PER 1,000.

Wards.	Death Rates 1912	Birth* Rates 1912	Birth* Rates 1913	Birth* Rates Avg. 1912-13	Rates of Increase 1912	Infant Death Rate per 1,000 Births†	
						1912	1910-13
I....	16.2	18.8	17.5	18.2	2.6	108	98
II....	16.1	21.0	20.3	20.7	4.9	108	97
III....	19.1	10.7	11.7	11.2	— 8.4	66	46
IV....	12.0	17.8	14.9	16.4	5.8	38	66
V....	7.6	26.4	19.1	22.8	18.8	100	84
VI....	11.6	18.5	18.3	18.4	7.1	161	71
Totals.	14.2	19.8	17.4	18.6	5.6	96	74

*Excluding hospital births except in totals.

†Registration incomplete.

TABLE SHOWING NUMBER OF BIRTHS, AND DEATHS FROM CERTAIN CAUSES.

Wards	Births 1912	Births 1913	Infant Deaths 1912	Infant* Deaths 1910-13	Diarrh'a and Enteritis Under 2 Years 1912-13	Diph-theria* 1908-13	Scarlet Fever* 1908-13	Measles* 1908-13	Whoop'g Cough* 1908-13	Typh'd* 1908-13	Sm'lp'x* 1908-12	Tubercu-losis* 1908-13	Pneumo-nia* 1910-13
I.....	120	115	13	46	12	14	0	3	5	8	0	33	36
II.....	260	258	28	100	29	27	0	4	5	22	11	42	75
III.....	91	103	6	18	5	5	2	0	2	3	0	31	22
IV.....	130	112	5	32	5	0	0	0	1	9	1	26	26
V.....	201	149	20	42	2	2	0	2	3	6	7	36	32
VI.....	81	82	13	23	10	3	0	1	2	9	0	37	23
Totals .	883	819	85	261	63	51	2	10	18	57	19	205	214
Hospitals .	40	12											
	923	831											

*Registration incomplete.

DEATH RATES FROM CERTAIN COMMUNICABLE DISEASES, PER 100,000.

Wards	Tuber-culosis 1908-13*	Pneumonia 1910-13*	Total*	Smallpox 1908-13*	Typhoid 1908-13*	Diarrhoea and Enteritis under 2 yrs. 1912-1913	Diarrhoea and Enteritis under 2 yrs. per 1,000 Births. 1912-1913
I....	90.4	143.4	233.8	0.	21.9	92.6	51.1
II....	59.4	154.3	213.7	15.5	30.7	115.6	56.0
III....	63.6	65.6	129.2	0.	6.2	28.9	25.8
IV....	61.3	90.4	151.7	2.3	21.2	33.7	20.7
V....	82.8	107.0	189.8	16.1	13.8	13.0	5.7
VI....	146.6	134.0	280.6	0.	35.6	112.8	61.3
City	76.6	117.0	193.6	7.1	21.3	66.6	35.9

* Registration incomplete.

DEATH RATES FROM CERTAIN COMMUNICABLE DISEASES OF CHILDREN, PER 100,000.

Wards.	Diphtheria* 1908-13	Scarlet Fever* 1908-13	Measles* 1908-13	Whooping Cough* 1908-13	Total* 1908-13
I.....	38.3	0	8.2	13.7	60.2
II.....	38.2	0	5.7	7.1	51.0
III.....	10.3	4.1	0	4.1	18.5
IV.....	0	0	0	2.3	2.3
V.....	4.6	0	4.6	6.9	16.1
VI.....	11.9	0	4.0	7.9	23.8
City....	19.1	0.8	3.7	6.7	30.3

*Registration incomplete.

NET DENSITY OF POPULATION, TOPEKA WARDS, 1910.

(Persons per acre of platted area.)

Ward I.....	13.8	Ward IV.....	21.8
Ward II.....	24.5	Ward V.....	12.7
Ward III.....	24.2	Ward VI.....	8.9
City.....			17.0

APPENDIX "C".

ANALYSIS OF TOPEKA CITY WATER, OCT. 15, 1913.

By State Water Survey.

Laboratory No.	6148-24
Source.	C. S.
Collected by	J. Shaw
Date of Collection	10-15-13
Analysis Completed	10-20-13

CHEMICAL ANALYSIS.

Results in parts per million.

Color.	None
Odor.	None
Turbidity.	None
Oxygen consumed	1.5
Nitrogen as Free Ammonia	.102
Nitrogen as Alb. Ammonia	.082
Nitrogen as Nitrites	0.0
Nitrogen as Nitrates	0.0
Solids Total	619.
Soap Titration (CaCo)	250.

MINERAL ANALYSIS.

CL.	143.
SO_4.	6.58
HCO_3.	256.

BACTERIAL EXAMINATION.

Bacteria per cc. on Agar, at 37°—24 hrs.	16
Presumptive Tests for B. coli.	Negative
No. of Positive Fermentations:	
In one 10 cc. tube.	1—
In five 1 cc. tubes.	5—
In five .1 cc. tubes.	5—

APPENDIX "D".

FIELD NOTES OF PROF. G. R. JONES' INVESTIGATION OF TOPEKA SEWERS.

Inspection of City Park Outfall and Branches.

November 17, 1913.

1. Beginning at the river bank, a six-by-five-foot, egg-shaped combined sewer. Material of which constructed, soft brick laid in lime mortar. The flow at the outfall is about one foot in depth, and the velocity is very high. This sewer has been in use something like twenty-five years. The invert is badly worn; advancing into the sewer, a wide crack was found in the top. This crack was an inch and a half wide and extended for two hundred feet back from the entrance. Also, at the springing line, many bricks were missing.

2. One hundred feet south of the outfall, a three-foot V. C. P. enters. This branch has six inches of flow in it. Two hundred feet from the outfall, a large closet in the City Park is connected with the sewer by means of two 18-inch V. C. P. These pipes enter the main sewer at an angle of sixty degrees with the vertical. The connection is poorly made, no care having been taken to replace loosened bricks or to cement around the pipes

3. In many places, the walls of the sewer were wet, due to ground water seeping into the sewer. Three hundred feet from the outfall, two catch-basins drain into the sewer by means of 8-inch pipes. These catch-basins were in filthy condition.

4. From this point on, properly designed V. C. P. inlets for house connections were found in the walls of the sewer. These inlets occurred every twenty-five feet, but in the majority of the connections, no use has been made of them. It seemed to have been the practice, in making house connections, to enter the main sewer in the most convenient manner, no attention being given to replacing loosened brick, or making the sewer tight around connections.

5. At Van Buren and Crane Sts., the manhole cover was buried under the street. Inspected from below. The brick was in good condition. The manhole was circular and of good design.

6. One hundred feet south of the intersection of Van Buren and Crane Sts., a place was found where the invert was badly worn.

7. Manhole at First and Van Buren Sts. The cover is under the street. Inspected from below. The masonry was in good condition and clean. No perceptible odor was noticed.

8. The sewer here turns west on First Street. At the alley between Van Buren and Harrison, a 15-inch V. C. P. enters from the south. Manhole on alley between Harrison and Topeka Avenue in good condition. The Harrison Street sewer enters four feet above the invert of the main sewer.

9. Manhole at Topeka Avenue and First Street, 12-inch pipe enters in good condition.

10. Manhole at Tyler and First is circular brick, 12 feet deep. No connections enter here. There is considerable ground water at this point. The sewer here turns south. House connections occur every twenty-five feet, but many are unused.

11. Manhole one hundred feet south of First and Tyler Sts. Brick in fair condition; three inches of flow in sewer; current very rapid. The sewer turns west up and east-and-west alley. Three inches of flow. Sewage is hot and considerable steam is present.

13. On Second Street, between Polk and Tyler, a creamery discharges into the sewer a large quantity of boiling hot water, and fills the sewer with steam.

14. Line turns west on Second Street. At Polk Street, there are two inlet catch-basins on each side of the street. These are in good condition. Line turns south on Polk Street. Steam and considerable odor issues from the manhole and inlets at Second and Polk.

15. Sewer reduces to a 50 x 66-inch at Second Street and Polk. At Third and Polk Sts., there are four curb inlets draining into sewer.

16. Manhole at Fourth and Polk Sts., 14 feet deep. The bottom in bad condition. Three street inlets enter here.

17. Manhole at Fifth and Polk Sts., 13.2 feet deep. Three street inlets enter at this point. Sewer branches at this point, a 24 x 36-inch egg-shaped brick sewer going south, and the main sewer—a 48-inch egg-shaped—turns west. Did not pass through these sewers. Remainder of inspection on this system was from manholes. Following the 48-inch on west, there is a crack in the top running west on Polk, evidently due to the settlement.

18. Manhole at Fifth Street. A 16-inch pipe enters from the west, a 12-inch from the north. This manhole is built to one side of the main sewer, and there is no manhole in the main sewer. There is an inlet on both sides of the street. The main sewer turns south and follows Western Avenue.

19. Manhole between Fifth and Sixth on Western Avenue. Size of main sewer, 42 inches. 10-inch laterals enter from the east and west. 4 inches of flow in the main sewer, with a good velocity. Two street inlets at Sixth and Western enter the sewer.

20. Manhole on Western between Sixth and Seventh. One 10-inch lateral from the east and one from the west enter here. The size of the main sewer is 42 inches.

21. Manhole at Seventh and Western Avenue. There are four inlets that enter sewer at this point, also a 15-inch pipe from the east. The main is a 42-inch on the lower side, reducing to a 34 x 26 on the upper.

22. Manhole on Seventh, 150 feet west of Western Avenue. Three inches of flow at a good rate. A 24-inch pipe enters from the west, an 18-inch pipe from the south. This is the end of the brick sewer on this branch.

23. Going back to the manhole on Fifth and Polk, where the main line branches, and following the 36 x 27-inch line that goes south on Polk Street at this point.

Manhole inlet built in curb at Sixth and Western Avenues. No laterals enter at this manhole. The manhole is in bad condition. Design and construction are very poor. Impossible for one to enter.

24. Manhole 150 feet west of Sixth and Western Avenues. Size of main 27 x 36-inch, egg-shaped brick.

25. Manhole on Tyler and Sixth Street. This is the end of the brick sewer. A 24-inch V. C. P. comes in from the south. Rapid rate of flow.

26. Following south on the 24-inch pipe, manhole 100 feet south of Sixth on Tyler Street. A 24-inch pipe, an 8-inch lateral coming in from the east. Two and one-half inches of flow at a slow rate. No manhole on Seventh. There are two inlets at Seventh and Tyler.

27. Manhole 100 feet north of Eighth and Tyler. Two 8-inch laterals enter, one from the east and one from the west. Slow rate. 2-inch flow.

28. Manhole between Eighth and Ninth on Tyler. Depth, 12 feet. A 12-inch pipe enters from the south, a 15-inch from the west, and a 9-inch from the east. This manhole is in bad condition. The seepage from the ground water is bad, and the mortar is falling from between the bricks. There is a good rate of flow in the line from the west.

29. Following the 12-inch line on the south. Manhole on Tyler and Ninth. Fair rate of flow. One inch in depth

30. Manhole at Tenth and Tyler was not opened. Inlet manhole on alley 200 feet north of Eleventh, between Tyler and Topeka. Little flow and slow rate.

31. Manhole on alley at Eleventh was not opened.

32. Manhole on alley between Topeka and Tyler at Twelfth. No flow here, as it is the end of the line. The grade falls away to both the north and south.

33. Beginning at manhole on Seventh Street, 150 feet west of Western Avenue, at the end of the brick sewer, and following the line south on the 18-inch pipe:

Manhole 100 feet north of Eighth was not opened, but a bad odor was noticeable at a considerable distance.

34. Manhole 100 feet south of Eighth was not opened. Some odor noticeable here.

35. Manhole on alley 100 feet north of Tenth. Bad odor and slow rate of flow. Depth of flow, 3 inches. The main is a 15-inch pipe. No laterals enter here. Four inches of sludge in the bottom in a septic condition.

36. Manhole 100 feet south of Tenth was not opened. Noticeable odor. Sewer turns east here.

37. Manhole on Western 100 feet south of Tenth. One inch of flow. Septic action noticeable, and a bad odor. 12-inch main and a 12-inch lateral from the north. The line crosses Western Avenue, goes through to the alley east and turns south. There is supposed to be a manhole at this point, but unable to find it, nor the one on Eleventh. Evidently, both are under the pavement.

38. Manhole at Twelfth and Western Avenue. A 12-inch main. Two inlets from the street. Line turns west.

39. Manhole at alley on Twelfth, 150 feet west of Western; a 12-inch main sewer, benches flat, and septic action in evidence. Fair rate of flow. Surface drainage from the street enters the manhole through the grating. The result is that the manhole is in a filthy condition.

40. Manhole at alley on Huntoon, between Western and Fillmore. A 12-inch main, a 9-inch pipe from the southeast, an 8-inch from the south. The pipe from the south is filled with dirt, little or no flow. We were able to see through to the next manhole by means of a lantern, so the alignment is good.

41. Beginning at the manhole on the alley at Seventh, 150 feet west of Fillmore, and going south; septic action is evident. An 18-inch V. C. P. enters from the south. A 21-inch east and west main. A light could be seen for two blocks south through an 18-inch V. C. P. The alignment is good, rate of flow good; septic action due to deposits on the benches.

42. Manhole 100 feet north of Eighth Street was not opened. Some odor.

43. Manhole inlet at 100 feet south of Eighth. Bad odor, septic action, slow rate of flow. An 18-inch main with 9-inch pipes entering from the east and west. One inch of flow. Sewage rather heavy.

44. Manhole on ninth was not opened.

45. Manhole on Tenth. 12-inch main flowing in, and a 15-inch flowing out. Some odor. Car tracks interfere with the entrance to the manhole. The rate of flow was very slow.

46. No manhole found on either Eleventh or King Streets.

47. Manhole 150 feet south of King Street. A 12-inch main. No laterals enter here. Small depth of flow, but good rate. Very little odor. It was possible to see a light through for one and a half blocks.

48. Manhole at Huntoon. A 12-inch pipe out. This is a dead end. A 6-inch pipe from the southwest. No odor. Little or no flow.

49. The 36-inch Brick Sewer at City Park outfall going south past the State House. This sewer flows into the 72 x 54-inch sewer 200 feet from its outfall.

Manhole in City Park. The cover is 18 inches under the surface of the ground. Eight inches of flow. Rapid rate of flow.

50. Catch-basin 100 feet south is filled up. Catch-basin stopped up at Rock Island right-of-way.

51. Manhole on Second Street, north side of the street. No laterals. A 36-inch brick sewer with seven inches of flow. Good rate and good conditions.

52. Manhole on Third Street. Two connections, each an 8-inch pipe, enter here. Depth of flow 5 inches. Bottom in good condition. 36-inch sewer with high velocity. Alignment is good.

53. Manhole halfway between Third and Fourth. Casting is broken.

54. Manhole north side of Fifth Street, a 12-inch lateral from the southwest and a 12-inch lateral from the southeast entering the above-mentioned main. The masonry is in good condition. Depth of flow is 4 inches. Good alignment and high velocity.

55. Open inlet halfway between Fifth and Sixth Streets. 10-inch laterals from the southeast and the southwest.

56. Manhole on Sixth. 8-inch V. C. P. from the west. Main sewer 24 x 36 inches.

57. Manhole on alley between Sixth and Seventh: brickwork in bad shape. Six inches of flow. 15-inch pipe from the west and a 12-inch from east.

58. Manhole at Seventh Street. 24-inch main. Two 12-inch V. C. P. One from southeast and one from the southwest.

59. Manhole between Seventh and Eighth Streets, at alley. Depth 11.6 feet. Ladder brokeen and two 4-inch and a 10-inch heating pipe passing through the manhole and obstructing same.

60. No manhole found on Eighth Street. The sewer angles off to the southeast here, 100 feet south of intersection of Jackson and Eighth.

61. Manhole 150 feet east of Jackson Street. 11.5 feet deep. One and a half inches of flow. Masonry in good condition. Sewer turns south on alley.

62. Manhole at alley on Ninth Street. One and one-half inches of flow. A 12-inch V. C. P. main, 9-inch branch. In good condition.

63. Manhole 200 feet south at bend in alley. A 12-inch V. C .P. main. 12.9 feet deep. Very little flow.

64. Manhole 75 feet north of Tenth. A 9-inch V. C. P. main. Is 12.4 feet deep. Also has very little flow. Manhole very small. Hard to enter.

65. Starting at alley on Fifth Street, between Jackson and Van Buren, going west from the 36-inch sewer along the 15-inch V. C. P.

66. No manhole found at Van Buren and Fifth. Three street inlets.

67. Manhole south of Court House had a 4-inch flow. Conditions good.

68. Manhole on alley west of Harrison and Fifth Sts., covered by pavement. Sewer turns south here.

69. Manhole in alley 200 feet south of Fifth Street. Practically no flow. 18-inch V. C. P. enters, and a 15-inch pipe going out. Six inches of flow and three inches of sediment in the bottom, showing either an obstruction or else too flat a grade. The manhole construction is good.

70. No manhole found on Sixth and Seventh Sts.

71. Manhole 200 feet south of Seventh. A 12-inch main. Rate of flow very slow. Two and one-half inches of flow.

72. Manhole 100 feet south of Eighth Street. 2-inch flow, 12-inch main, very slow rate of flow.

73. No manhole found on Ninth or Tenth Sts.

74. Manhole at 100 feet south of Tenth. A 12-inch V. C. P. main. Sewer turns east here. Also a branch going south.

75. Lamphole, dead end at Eleventh on alley between Harrison and Van Buren.

Jackson Street Main

76. Beginning at Sixth and Jackson Sts. No manhole. Three curb inlets.

77. Manhole at Fifth and Jackson Sts., has been covered by the asphalt pavement.

78. No manhole at Fourth and Jackson Sts. Two street inlets here.

79. Manhole at Third and Jackson. 8-inch V. C. P. enters, and a 12-inch leaves. Three inches of even flow. Manhole in fair condition. Two inlets here. Grade is less going out than coming in.

80. Manhole cover at Second and Jackson Sts. cemented shut.

81. Manhole 100 feet south of Rock Island tracks. Lateral coming in from the east. Main is 15 inches V. C. P. One inlet and one catch-basin here.

82. Open drain on east and west sides of Jackson Street from First to Park. This drain is 2 x 3 feet and carries storm water only.

83. Manhole at Jackson and Crane Sts. A 21-inch V.-C. P. main. A 10-inch lateral enters from the east. Rapid rate of flow. Four inches of flow. 8.5 feet deep. There is a 60-inch brick storm sewer built from here to the river. This connects with the two open drains that run down the sides of Jackson Street. The Jackson Street sewer empties into the 36-inch brick sewer.

Inspection of North Topeka Sewer.

November 22, 1913.

1. Inlet-manhole at alley west of Kansas Avenue on Kious Avenue. The sewage here is in bad condition, giving off bad odor.

2. Manhole at alley west of Kansas Avenue on Kistler Avenue. The sewage has a fair velocity.

3. Manhole 100 feet east of Central Avenue has considerable sludge in the bottom. The odor is bad.

4. Manhole at Park and Central. Sewer is in good condition and the flow is good.

5. Manhole on Gordon Avenue one half block west of Jackson Street. This manhole was not entered, but the odor was very noticeable.

6. Manhole on Park Avenue, one-half block west of Central. There is 13 inches of flow and a very slow rate. A 42 x 28-inch sewer flows east, and a 24-inch V. C. P. comes in from the west. There is a 12-inch V. C. P. from the north, and a 10-inch V. C. P. from the south, both being submerged.

7. Manhole on Fairchild Avenue, one-half block east of Quincy. There is a bad odor here. 12-inch V. C. P. enters from the south, also a 15-inch enters from the south. The manhole was full of mosquitoes which is good evidence of stagnant water. The 46 x 30-inch sewer goes east, with six inches of flow.

8. At Fairchilds and Monroe there are four curb inlets that need cleaning badly. There is no manhole at this corner.

9. Manhole on Fairchild one-half block east of Monroe. A 12-inch V. C. P. enters from the north. A 12-inch V. C. P. enters from the south The flow is very rapid.

10. Manhole on Fairchild Street one-half block east of Madison. A 12-inch V. C. P. enters from the north. A 12-inch V. C. P. enters from the south. The size of the main sewer is 34 x 54 inches. There are nine inches of flow in the main. The rate is very slow, and the odor is very bad.

11. Inlet manhole on Fairchild 50 feet east of Santa Fe and Rock Island tracks. The flow is rapid. It is 9.8 feet to water line. There is considerable sludge in the bottom, and the odor is bad.

12. Outlet into the Kansas River.

The outfall of this line is 100 feet west of the present stream channel. There is a flood gate four feet in from the outfall. There is nine inches of flow, and considerable mud in the bottom of the sewer.

At this point is located the only sewage pumping station in the city. This pumping station is on the land side of the concrete dike, and is used to pump the sewage when the water surface is above the outfall.

Inspection of Places Reported as Being in Bad Condition.

1. Eleventh and Lane Streets. The catch-basins here are in bad condition, and there is a bad odor coming from the same.

2. Manhole north of Eleventh Street on Lane Street. The benches are flat and covered with refuse. The main sewer is a 24-inch V. C. P., the depth of flow is one inch. An 8-inch tile pipe enters from the west. The odor here is extremely bad.

3. Alley between Lincoln and Lane Sts., between Tenth and Eleventh Sts. The main is 21-inch V. C. P. with a one-inch flow. A 6-inch V. C. P. enters from the east two feet above the invert of the main sewer The benches in this manhole are flat and covered with deposit. The sewage is quite heavy, and the odor is bad.

4. Manhole at alley west of Lincoln and on the north side of Eleventh Street. There is an 18-inch V. C. P. from the east, and a 21-inch going north, and a 15-inch V. C. P. from the south. There is one-half inch of flow, and considerable mud in the bottom. There is a bad odor here, and practically no flow from the south. This may be accounted for by the flush tank further south being out of working order. This flush tank is on the north side of Huntoon, between Lincoln and Lane Sts.

5. Manhole on alley north of Sixth and west of Western Avenue. The manhole is in bad repair, the alley is in filthy condition, and the sewage is septic.

6. Manhole on alley north of Sixth and west of Horne Street. Sewage is in fairly good condition, but the velocity small.

7. This line was followed to Willow Park and north on an alley to Park Avenue, and a little way beyond. A lateral was then picked up on the Drive, and followed up on Hawthorne to where it joins in on the 12-inch from the Circle Street, and then continues to the 15-inch iron pipe across the creek, and thence to the river. In time of heavy rains, the water backs up and throws the manhole covers on this line. The outlet at the Kansas River was not under water, as shown by an old blue-print; but was well above the water line. In nearly every manhole on this line, the flow was very slow.

8. Inlet-manhole at Morris and Eighth Sts. A 24-inch V. C. P. enters from the south and a 36 x 22-inch goes on to the north. A 12-inch V. C. P. enters from the east, with a good flow. There is three inches of flow in the 24-inch and in the 36-inch sewers, and the alignment is good.

9. Inlet-manhole between Seventh and Sixth in the alley, and west of Morris in the jog. The 36-inch turns and goes east here for half a block. The alignment is O. K. A 12-inch V. C. P. enters from the north. There is two inches of flow, and four inches of mud in the 36-inch sewer. The depth to the water line is 6.4 feet. The masonry is in good condition.

10. Manhole at Morris and Sixth Sts. At this manhole a 36 x 22-inch brick enters from the south, and a 30-inch V. C. P. enters from the east, while all of this flow is carried away by a 15-inch V. C. P. to the north. The sewage was backed up into the manhole above the top of the 15-inch pipe.

11. Inlet-manhole at Fifth and Morris Sts. The 15-inch pipe enters and leaves this manhole. The flow stands above the benches, and with storm water must rise much higher.

12. Manhole at Elmwood and Willow Park. Here the 15-inch line picks up a 10-inch line from the east. The flow is very rapid, and the depth of flow is four inches.

13. Inlet-manhole at Cherokee and alley west of Elmwood Sts. The 15-inch turns here and goes north on the alley. Velocity is high, with four inches of flow.

14. Manhole at Park Street and alley west of Elmwood Street. This is the same 15-inch main. Velocity is high with six inches of flow.

15. Manhole at Park Street and the Drive. The 15-inch pipe turns here and goes in a northwest direction on the Drive. Flow is very fast.

16. Manhole at Laurel and Knox Sts. The 15-inch line goes through here, the velocity is good, and the flow is four inches. A 10-inch V. C. P. enters from the east.

17. Manhole 250 feet east of the junction of Hawthorne and the Circle. The 15-inch line enters from the south three-fourths full, and with a good velocity. A 12-inch pipe enters from the west. There is very little flow in this pipe, and it is three-fourths full of mud and gives off a bad odor. This manhole is just south of the creek, and there is a 15-inch overflow into the creek. A 15-inch iron pipe crossed the creek and continues in a V. C. P. to the river. This line has been described elsewhere. The line entering from the west is in a very bad condition.

18. Manhole at Circle and Hawthorne Sts. Following the 12-inch line back to the west. This line is in very bad condition. The manhole bottoms are full of mud to the middle of the pipes. The line branches here, a 12-inch line going west, and another of the same size to south.

19. Manhole on Circle Avenue. There is no flow here. The sludge covers the pipes and is in a stagnant condition. Odor is very bad.

20. Manhole on Circle Avenue. A 6-inch V. C. P. enters from the south, and a 12-inch leaves to the north. The flow is in a stagnant condition, and the odor is very bad. Depth to water surface is 7.4 feet. This line ends with a lamp hole on Circle and the Drive Sts.

Inspection of Jefferson Street Outfall Sewer.

November 19, 1913.

1. This sewer empties into the Kansas River directly north of Jefferson Street. The sewer is a 44 x 56-inch egg-shaped brick. A concrete apron carries the effluent down to the water line of the river.

2. Manhole one block north of Crane Street. The masonry is in good condition. The depth of the flow is one foot. A 16-inch pipe enters from the Santa Fe shops. The rate of flow is very rapid. There are house connections every twenty-five feet on each side. Below Crane Street, the bottom is badly silted, but above Crane, the bottom is clear.

3. The manhole at Crane Street is covered up and was not opened.

4. Manhole one-half block south of Crane Street. The masonry is in good condition, the rate of flow is very rapid, and there is considerable odor. The depth of flow is 8 inches.

5. Manhole at First Street is covered up and was not opened.

6. Manhole one-half block south of first Street. Two 12-inch laterals enter here, one from the east and one from the west. There is 8 inches of flow in the main sewer. The rate of flow is very rapid, and there is considerable odor. The crown of the sewer is cracked and settled. Also, there is indication of natural gas being present.

7. Manhole at Third Street. The rate of flow is very rapid, the depth of flow is seven inches. Two 12-inch laterals enter, one from the east and one from the west. The crack in the crown is still present, and the odor is bad. There is considerable seepage of ground water, and the bottom is quite badly silted. Masonry is in good condition.

8. Manhole at Fourth Street. A 10-inch pipe enters here. The odor is bad. The flow is very rapid and ten inches deep. The sewage is very heavy. Sewer turns east.

9. Manhole at Fourth and Adams Sts. Depth of flow is six inches. The rate of flow is very rapid. Masonry is in good condition, and the odor is not so bad as it was a short distance back.

10. Manhole 100 feet south of Fourth Street. The depth of flow is six and the odor is bad. 12-inch laterals enter from the east and west. The effluent is rather heavy, and the velocity is good.

11. Manhole at Fifth and Adams Sts. The masonry is in good condition, the rate of flow is rapid, but the odor is bad. 12-inch lateral enters here some 15 feet south of the manhole. A reverse curve is in line here, with a manhole in each end of the curve. Depth of flow is 9 inches. The size of the sewer reduces. Reduction is of good construction. The size after the reduction is 54 x 40 inches. 100 feet south of this, a 12-inch line from the east enters. The flow in this line is good.

12. Manhole between Fifth and Sixth Sts. Depth of flow is nine inches, three inches of sludge in the bottom. No laterals enter here. Rate of flow is rapid, and there is considerable odor. Size, 54 x 40 inches.

13. No manhole on Sixth Street.

14. Manhole between Sixth and Seventh. Depth of flow, ten inches. Rate of flow fairly rapid. An 18-inch lateral enters from the west.

15. Manhole on Seventh and Adams Sts. Depth of flow, 8 inches. Rapid rate of flow and little odor. A 15-inch line enters from the west. There is a large amount of gravel in the bottom and for a hundred feet south.

16. Manhole between Seventh and Eighth. Bad odor, depth of flow eleven inches, rate of flow very rapid. There is four inches of gravel in the bottom. A 15-inch line enters from the west. One-half block south of this the sewer reduces to a 42 x 30-inch.

17. Manhole one-half block south of Eighth. There is seven inches of flow, and twelve inches of mud below this. Rate of flow rapid. A 12-inch line enters from the east, and a 16-inch line from west.

18. Manhole between Ninth and Tenth. A 15-inch line enters from the west. Depth of flow six inches. Rapid rate. Six inches of sand in the bottom. The main sewer is 42 x 30 inches.

19. Outfall of overflow into the creek at foot of Eleventh Street. This sewer is 6 x 4½ feet, egg-shaped in design, and in good condition. Forty feet in from the outfall is the overflow dam from the 40-inch sanitary sewer. This dam is 32 inches high. The condition of the creek at this outfall is bad—in fact, filthy.

20. Manhole at Thirteenth Street, between Monroe and Quincy Sts. A 40-inch brick sewer in good condition. Rate of flow is very rapid and no odor is apparent.

21. Manhole on Fifteenth Street, on the alley beyond Quincy Street. A 15-inch lateral enters from the north, a 21-inch V. C. P. going east. There is one-half inch of flow in the main sewer. Conditions in general very good.

22. Manhole at Monroe and Fifteenth Street. The masonry needs attention. The alignment is good. A 15-inch pipe enters from the north, a 21-inch from the west, and the main line east is 24-inch.

23. Manhole at Fifteenth Street, just beyond the Santa Fe tracks. A 40 x 45-inch egg-shaped sewer. The odor is very bad. The depth of flow is three inches on top of three inches of sludge. Masonry is in good condition. No laterals enter here.

24. Manhole beyond Euclid on line with Monroe. Manhole cracked on top. The bottom is badly silted, and the sewage is heavy. Alignment is good. There is a bad crack along the top to Eighteenth. Four inches of flow and three inches of silt. An 8-inch lateral enters below the water line. The size of the sewer is 45 x 40, egg-shaped brick.

25. Manhole at Quincy and Eighteenth Sts., at turn. Four inches of flow. Masonry is O. K.

26. Manhole on Eighteenth Street, alley one-half block east of Kansas. Flow of three inches. Four inches of silt. A 12-inch V. C. P. from the northwest. Alignment is good, but the sewage is very heavy.

27. Manhole at Eighteenth and Kansas Avenue. A 15-inch V. C. P. from the side. A bad crack in the crown of the sewer, and six inches of sludge in the bottom.

28. Manhole west of alley on Kansas Avenue, a 20-inch line from the north, and a 20-inch line to the south. Odor is bad, but the velocity is good. Depth of flow is three inches. Seven inches of sludge in the bottom.

29. Two manholes on Eighteenth Street and Van Buren Street. Masonry is in good condition, and street drains enter here. No reduction in size, still 45-inch.

30. Manhole at Eighteenth at alley beyond Van Buren Street. A 52 x 40-inch egg-shaped brick. A 21-inch V. C. P. enters from the south side; a 12-inch V. C. P. enters from the north. These lines are badly stopped up—in fact, the flow is less than two inches, while there is 12 inches of silt in the bottom. The alignment here is good, but odor is very bad.

31. Manhole inlet Harrison and Eighteenth Sts. Size 45 x 31 inches. Twelve inches of mud; two inches of flow. A 12-inch V. C. P. enters from the south, and there are four surface drains.

32. Manhole east of Topeka Avenue. A 12-inch V. C. P. from the west, a 30 x 24 from the north, with water backing up in it. Eighteen inches of water in this. A 12-inch pipe enters from the west. The pipe from the south is under the water line. Bad condition in general.

33. Manhole at alley south of Eighteenth Street. A 27-inch V. C. P. with three inches of flow. No noticeable odor.

34. Manhole west of Nineteenth and east of Topeka Avenue. No slope on the benches. A 12-inch V. C. P. from the west, with four inches of flow and two inches of mud. No odor and good masonry.

35. Manhole west of Twentieth and on the alley. A curve in the 27-inch line. The sewage is clear, with five inches of flow. An 18-inch V. C. P. enters from the south. Flow and alignment are good.

36. Manhole at Topeka Avenue and Twentieth Sts. and Fair Grounds. A 24-inch enters, and a 27-inch goes out. Three inches of flow. A 15-inch overflow to ditch, and a 12-inch drain from the northwest. The rate of flow is good.

37. Outfall of 60 x 36-inch concrete-lined storm sewer. This outfall is into Shunganunga Creek. There is very little flow. Outfall is nine feet above water. Good alignment.

38. Manhole at Fillmore and Twentieth Sts. Made of concrete, 36 x 60-inch. An 18-inch dam to the overflow. There is three inches of flow and two inches of mud. Concrete line is 36 x 30 to the north, and 32 x 18 to the south. This manhole has been repaired quite recently, and in good shape.

39. Manhole at Third Street and alley, between Monroe and Madison. The manhole is in poor condition, and odor is very bad. 15-inch V. C. P. 10-inch V. C. P. from the southeast. Depth of flow is one inch.

40. Manhole on Second Street, between Monroe and Madison. Odor very bad.

41. Manhole between Second and First Sts. The odor is bad, sludge and mud in the bottom, slow rate of flow. A bad place in the invert here, as the bottom is entirely covered with water. Ladder rusted away, and the masonry in bad shape.

42. Manhole between First and Crane on the alley. Sludge in the bottom. The odor is bad; the ladder is gone.

43. Manhole on Crane Street, between Monroe and Madison. A 15-inch V. C. P. The odor is bad and the velocity is slow. A 15-inch V. C. P. from the west. Water and raw sewage stand in the bottom. Rotten condition.

44. An 18-inch line going north. Depth of flow is seven inches. Outlet of sewer between Monroe and Madison. A 20-inch V. C. P. Odor is bad and the rate of flow is slow.

45. Outlet on a 16-inch V. C. P. with one inch of flow. High velocity.

46. Outfall number 2 a 22-inch V. C. P., carrying slaughter-house refuse. Depth of flow is two inches. Effluent stands along the bank in a stagnant condition. This evidently a private sewer of Packing Company.

47. Manhole on Crane between Monroe and Quincy Sts. A 15-inch V. C. P. There is two inches of sludge and water. An 18-inch V. C. P. from the northwest. Masonry is in bad condition. The odor is bad.

48. Manhole on Second Street, between Monroe and Quincy Sts. Could not open. No flow and the odor is bad.

49. Inlet manhole on north side of Third, between Monroe Street and Quincy Street. Very little flow. Septic action in evidence.

50. Manhole on the south side of Third, between Monroe and Quincy Sts. No flow and septic action in evidence.

51. Inlet manhole Third and Fourth. No flow and septic action in evidence.

52. Manhole between Fourth and Fifth. Rotten condition. No flow and septic action in evidence.

53. Manhole on Crane Street, between Quincy and Kansas Avenue. A 12-inch V. C. P. comes in from the northwest, with a good flow. The top of the manhole is skewed over to allow for the street-car tracks. Sewage is in good condition.

54. Lamphole on Fourth Street, between Quincy and Kansas Avenue. There is a bad odor here, and a rapid rate of flow.

55. Manhole Fourth Street, between Quincy and Kansas. 18-inch V. C. P. going out north, and a 15-inch V. C. P. coming in from the south. Depth of flow is one inch. 8-inch drain from the west. Manhole is in fair condition, but needs a new cover.

56. Manhole at jog between Sixth and Seventh and between Quincy and Kansas. 12-inch V. C. P. Depth of flow is 2-inches. Good rate of flow.

57. Manhole Eighth Street, between Quincy and Kansas. 12-inch V. C. P. There is one inch of flow here, and five inches of mud. Flow has good velocity.

58. Manhole at jog between Eighth and Ninth Sts. There is a good flow here. There is a steam pipe intercepting the manhole.

59. Manhole at Ninth Street, between Quincy and Kansas. There is a good rate of flow here. 1.5 inches of flow.

60. Manhole at jog between Ninth and Tenth, between Kansas and Quincy. There is a slow velocity here. There is 1.5 inches flow.

61. Lamphole near Tenth Street in the alley between Quincy and Kansas.

Inspection of Flush Tanks.

1. On the north side of Huntoon, between Buchanan and Lincoln Sts., the water was running freely, but not filling the tank. This was probably due to a leak in the siphon.

2. On the north side of Huntoon between Lincoln and Lane, the valves broken and bell of siphon gone. The water flowing directly into the sewer in a steady stream.

3. On the south side of Euclid Avenue, in the alley between Lane and West Sts., tank is in good condition. Diameter of the tank 44 inches. Depth at which it flushes, 24 inches. Flushes at intervals of 36 minutes.

4. On the south side of Euclid Avenue, between Clay and Buchanan, tank is in good condition. Same size as No. 3. Flushes at intervals of 30 minutes.

North Topeka Flush-Tanks.

1. On Saywell Avenue, and alley west of Kansas Avenue, tank stands full of water. No flow in or out.

2. North of the Union Pacific Station and one-half block east of Kansas Avenue, tank is in good order. The dimensions: 4 feet square; depth of flush, 21 inches. Flushes at 20 minute intervals.

(These are all the flush-tanks found and inspected.)

APPENDIX "E".

MILK PRODUCERS ACCORDING TO AMOUNT PRODUCED, TOPEKA, 1913.

(Figures furnished by City Milk Inspector.)

Producing Average qts. per day	Number of producers	Per cent	Average daily qts. produced	Per cent
0— 25	63	35.6	931	10.3
26— 50	57	32.2	2152	23.6
51—100	37	20.9	2584	28.4
101—150	13	7.3	1631	17.9
151—200	1	0.6	160	1.8
201 and over	6	3.4	1640	18.0
Totals	177	100.0	9098	100.0

CHEMICAL EXAMINATIONS OF TOPEKA MILK, NOV., 1913.

(Examinations at State Agricultural College.)

Dairy	Butter Fat	Total solids	Dairy	Butter Fat	Total solids
1	3.50	12.27	15	4.10	13.16
2	4.10	12.28	16	4.20	12.80
3	4.20	13.36	17	4.05	12.83
4	3.50	12.58	18	3.40	11.91
5	4.10	13.20	19	4.05	13.20
6	3.90	12.56	20	4.20	12.90
7	4.05	13.21	21	4.10	13.10
8	3.40	12.50	22	4.30	13.40
9	4.10	13.18	23	4.05	12.28
10	3.80	12.60	24	4.15	12.80
11	4.00	13.18	25	4.00	12.18
12	4.30	13.20	26	4.05	12.60
13	3.80	12.51	27	3.40	11.16
14	4.40	13.73			

MAIL PRINTING HOUSE, TOPEKA, KS.

DELINQUENCY AND CORRECTIONS IN TOPEKA

BY

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CONTENTS

PAGES

INTRODUCTION 3
POLICE DEPARTMENT 4
COURT PENALTIES 23
CITY AND COUNTY JAILS 27
PROBATION AND PAROLE FOR ADULTS 52
JUVENILE DELINQUENCY 54
PREVENTIVE WORK 58
GENERAL CONCLUSIONS 61

DELINQUENCY AND CORRECTIONS IN TOPEKA

More than sixteen hundred persons were arrested in Topeka in the year ending October, 1913. Had all been arrested the same day this appalling fact would be more easily realized. The number represents more than the whole population of Baldwin, Kansas, or Baxter Springs, or Stockton, or Burlingame, or Altoona; and is a fair indication of the size of the annual quota with which the city's correctional agencies must deal. Quite aside from any question as to whether the proportion of arrests in Topeka as compared with her total population (about 47,000 in 1913) is larger or smaller than proportions in other cities, the fact stands out boldly that in Topeka a very large number of people each year come in contact with these agencies. What her police department, her courts, her jails and her probation officer are doing with these offenders and how far they have kept abreast of developments aimed at more effective study, care and treatment is, therefore, a matter of great public concern. To gather and analyze the facts of the Topeka situation and, upon the basis of these, where it is needed, to outline plans for improvement in accordance with the best modern practices, has been the purpose of this investigation.

Before presenting the details of local conditions, it may be said that in general the essential idea of re-forming prisoners—of fitting them to return to society as self-supporting and law abiding citizens—has not been applied to most of the correctional work of the city of Topeka, or of Shawnee County, in which the city is located. By this it is not implied that the local system is wholly without its credits, for much good service has been rendered. The evidence to be submitted, however, tends to show the city a good way behind what is being done in many other places.

The greatest need of the correctional system in Topeka is a change in point of view concerning the offender and his relation to society. The old idea that punishment should be the chief method of dealing with offenders should give way to the broader idea of protecting society by transforming law breakers into law observers. Experience in nations, states and cities has proved that punishment by confinement has not succeeded in greatly reducing crime. On the other hand, conditions in jails and prisons have tended to make hardened criminals out of prisoners who could, under the influence of intelligent reformatory and educational measures, have been made honest and self supporting. Hardened and hopeless criminals should be confined permanently in prisons and kept at work. Offenders who have not the mental calibre to control their actions should be kept permanently in custodial institutions. But men who are merely beginners in crime or men who break the law through thoughtlessness or lack of education should not be confined with real criminals, and should be given education and training that will develop their self-control and fit them to take care of themselves. Penologists are recognizing more and more the inadequacy of vindictive punishment and are laying increased emphasis upon the development of a system which will, first, prevent crime as far as that is humanly possible, and second, throw every influence after arrest on the preparation of the prisoner for an honest self-supporting life after release. It is from this point of view that the inquiry into Topeka's correctional system is made.

THE POLICE DEPARTMENT.

Through the police law breakers first feel the strong arm of government authority. In the city of Topeka during the year ending October 31, 1913, as indicated above, some 1605 persons were arrested. Of these 42 were children under 16 years of age; 143 females, and 1420 males 16 or over. Seventy-five per cent of all arrested persons, according to best estimates, were permanent residents of the city. During the

same year the maintenance of the police department and the city prison run in connection with it, cost the tax payers $38,584.06. It is important from the economic as well as the humanitarian standpoint that the greatest possible efficiency be achieved in this expenditure. First of all the city must have adequate service, but obviously it should be obtained at the lowest possible cost.

Adequacy of the Force.

A chief, two sergeants, two detectives, eighteen patrolmen, two policewomen, a matron, two jailers and one driver —29 members in all—make up Topeka's police force. The present number of patrolmen, on account of economies in bringing expenditures within the budget appropriation, is six short of the number employed for the previous year. In comparison with the number on the police forces of other cities of the same size, Topeka's force seems inadequate, as is suggested by the following table:

NUMBER OF PERSONS ON POLICE FORCE

Cities Approximately the Size of Topeka.

(Information obtained from Chiefs of Police in the various cities.)

City.	Population.*	Number.	Number of inhabitants to one policeman.
Augusta, Ga.	48,660	101	482
Tampa, Fla.	44,587	70	637
Chattanooga, Tenn.	47,339	73	648
Little Rock, Ark.	48,710	62	785
McKeesport, Pa.	44,413	52	853
Salem, Mass.	45,427	52	862
Davenport, Ia.	44,766	46	973
Springfield, O.	48,568	48	1012
Haverhill, Mass.	45,665	42	1088
Malden, Mass.	46,805	43	1087
Lancaster, Pa.	48,517	43	1130
El Paso, Tex.	44,645	39	1147
Pueblo, Colo.	47,975	41	1170
Bay City, Mich.	46,153	35	1320
York, Pa.	47,206	35	1350
New Britain, Conn.	47,430	35	1353
Berkeley, Cal.	46,558	34	1370
TOPEKA	46,385	29	1600
Flint, Mich.	44,322	27	1639
Lincoln, Neb.	44.873	17	2637

* 1912 census esitmate.

Local facts also bear out the indication that the present force is too small. Only Kansas Avenue, one of the main business streets, and the "Bottoms" (the area where law breaking is most prevalent) are patrolled in the day time. There are no emergency men at headquarters, and when emergency calls come in men often need to be picked up from regular duty by the patrol wagon with a resulting delay which is sometimes very unfortunate. Moreover, hours of work of patrolmen are excessively long—11 to 13 per day—and cannot well be reduced without additions to the force.

It is probable that Topeka with her prohibition and relatively good moral conditions does not need as large a police force as some other cities—particularly cities farther south. It is also probable that the effectiveness of the present men may be somewhat increased by methods to be pointed out. On the other hand, the population in Topeka is comparatively scattered, and the large areas to be covered argue for increased numbers.

The only reason an urgent recommendation for a larger force is not made is that other matters, especially the employment of an adult probation officer, seem deserving of first consideration.

Selection of the Force.

The mayor is ex-officio head of the police department and determines its policy. The chief, who acts as the mayor's first deputy, is appointed by the City Commission upon the mayor's recommendation. He is removable by the mayor at will, so that the responsibility for law enforcement rests squarely upon the mayor.

The chief need not be appointed from the police force, and usually has been an outsider. The present chief, however, has a record of long service in the department. The policy of selecting the chief from the force, whenever a capable candidate representing the right point of view can be found within it, is to be commended; for recognition of service by promotion usually makes for a higher standard of work.

Aside from the chief, members of the force are appointed

by the mayor from a civil service list, upon the chief's recommendation, and are confirmed by the City Commission. Examinations consist of tests in arithmetic, writing, spelling and reading. Physical standards require that men must be at least five feet nine inches in height and weigh not less than 150 pounds. They must also be over 21 and under 46 years of age. No investigation of character is made. Although in a city of Topeka's size a man's general reputation is usually known, it is nevertheless very important that a careful inquiry regarding his character and capacity be made—particularly in view of the qualifications laid down in the Topeka book of police rules—to be quoted later. Candidates for appointment as detectives and sergeants need not be members of the regular force, but must pass special examinations.

The city charter and ordinances do not require a trial period, but the mayor has established the custom of giving men 30 days trial before seeking their confirmation. This is good practice as far as it goes, but the period should be lengthened at least to three months, and the procedure should be backed by city ordinance.

Salaries.

Topeka pays smaller salaries to policemen than most cities of the same size. The beginning salary for patrolmen is the lowest of any city of Topeka's proportions in the country, for which information is available (20 in all) and the highest salary in Topeka is below that of 11, equal to that of four, and greater than that of only four cities. In earnings of patrolmen during the first five years of service the city ranks fourteenth among twenty cities having from 44,000 to 49,000 population. Details of earnings are given on the next page.

Very low beginning salaries are unfortunate, for a patrolman in his first month must purchase his uniform and necessary accompaniments. It was claimed in the recent New York City police investigations, and seems altogether reasonable, that low starting salaries and expense for equipment at that time greatly increased the temptation to accept loans from unscrupulous parties and to begin careers of corruption.

YEARLY SALARIES OF PATROLMEN

City	Beginning salary	Advances	Highest salary	First five years earnings.	Five year rank.
El Paso	$1020	none	$1020	$5100	3
Haverhill*	1003	none	1003	5015	4
McKeesport	1003	none	1003	5015	4
Salem*	1003	none	1003	5015	4
Berkeley	960 1st yr.	1080 2d yr.	1200 after 2 yrs.	5640	1
Pueblo	960	none	960	4800	10
Little Rock	924 1st yr.	990 2d yr.	990	4884	8
New Britain*	912 1st & 2nd yr.	1003 next 3 yrs.	1095 after 5 yrs.	4833	9
Malden, Mass.	912 1st yr.	1003 next 3 yrs.	1200 after 3 yrs.	5318	2
Augusta	900	none	900	4500	12
Davenport	900	none	900	4500	12
Tampa, Fla.	900 1st yr.	960 2d yr.	1080 after 4 yrs.†	4980	7
Bay City	840	none	840	4200	17
Lincoln, Neb.	840	none	840	4200	17
Springfield, O.	840 1st 6 mos.	960 thereafter	960	4740	11
Chatanooga	810 1st yr.	840 2d year	900 after 2 yrs.	4350	15
Flint, Mich.	780 1st yr.	840 2d year	900 after 2 yrs.	4320	16
Lancaster, Pa.	780	none	780	3900	19
York, Pa.	720	none	720	3600	20
TOPEKA	660 1st 3 mos.	780 2d 3 mos.	900 after 6 mos.	4410	14

*Paid by the day. Actual salaries somewhat less because of time off duty.
†$1020 in third and fourth years.

It is desirable, moreover, that all salaries in the police department be reasonably high enough to attract the right men. A finer conception of the duties of the police force, or of the type of men needed on it, than that outlined in Topeka's book of police rules, would be hard to find:

> "It is a life saving force of courageous, high minded, self respecting men, whose business is not the punishing of crime so much as its prevention; and whose greatest duties are those performed as the friends and teachers and helpers of the people. This definition takes for granted the character of men who are fitted to be police officers. In the nature of the case they should be men of the highest physical, mental, and moral standing—men who are clean in body and heart-life."

But the city cannot start men on 15½c per hour—a rate lower than unskilled labor gets in Topeka—ask them to work 11 to 13 hours a day seven days a week, and expect a rush of such candidates as can fill these requirements. If the people want such men in the police department—and it would be well if they did—they will have to pay salaries and provide hours of labor more attractive.

Hours of Labor.

The police force in Topeka is on the two-platoon system. The 18 patrolmen are divided so that six are on day duty, and twelve are on at night. The day men come on duty at 7 in the morning and work till 6 P. M.; the night men come on duty at 6 in the evening and work till 7 A. M.. Every other morning half of the night men get off at 5 A. M. so that alternate days they work 11 and 13 hours. One of the two detectives comes on duty at 11:30 A. M. and is off at 11:30 at night; while the other comes on at 6 P. M. and goes off at 7 in the morning. One sergeant goes on duty at 7 A. M. and is relieved at 6 P. M. by the second who works until 7 A. M. the following morning. The policewomen divide the 24 hours, one going on duty at 8 A. M. and off at 6 P. M., the other going on at 6 P. M. and off at 8 A. M.. The policewomen, of course, do not patrol regular beats. Few other cities of her size work patrolmen as long hours as Topeka.

Detailed comparisons are shown in the table:

PATROLMEN'S HOURS OF DUTY

Cities approximately the size of Topeka.*

City	All patrolmen	Patrolmen on day shift	Patrolmen on night shift
Bay City	8 hrs.	.....	.....
Chatanooga	8 hrs.	.....	.....
El Paso	8 hrs.	.....	.....
Pueblo	8 hrs.	.....	.....
Salem	8 hrs.	.....	.....
Tampa	8 hrs.	.....	.....
Haverhill	.....	9 hrs.	8 hrs.
Augusta	.....	7 hrs.	10 hrs.
New Britain	9 hrs.	.....	.....
Flint	10 hrs.	.....	.....
York	10 hrs.	.....	.....
McKeesport	.....	10 hrs.	11 hrs.
Davenport	12 hrs.	.....	.....
Springfield, O.	12 hrs.	.....	.....
TOPEKA	.....	11 hrs.	11 and 13 hrs. alternating.
Little Rock	.....	13 hrs.	11 hrs.

* Information is not available for four of the 20 cities used in previous table.

It is often argued that patrolling a beat is much less taxing than manual labor or factory work; and the answer is often made that policemen are frequently exposed to bad weather conditions for long hours at a time, and that, however light the work may be, the time is not theirs while on duty. But whatever the merits of these views, it is certainly true that the 12 hour day and seven day week does not permit a normal life. Such hours are being severely criticised in industry; they deserve even greater condemnation when the employer is the public.

The three-platoon system for patrolmen with eight hour shifts, and perhaps two hours of duty at headquarters, may not be immediately possible, but should be included in Topeka's civic program of next-steps for the police department. This method of reducing hours for the sake of efficiency is at the same time another reason for enlarging the force.

In addition to active duty on the beat for the hours indicated, night patrolmen must appear during the day in court cases in which they are involved. This often necessitates their being present when court is called at 3:30 in the afternoon,

or in appealed liquor cases, at 9 o'clock in the morning. The effect of this is to further cut down the patrolman's leisure time, to penalize him when by making necessary arrests he does his duty, and to put a premium on inefficiency. It is hardly to be wondered that the men sometimes fail to appear in court when their cases are called. The condition further emphasizes the need for a larger force so that night patrolmen may be relieved of their regular work in proportion to their time in court attendance. With a three-platoon basis, time for court attendance may be subtracted from each man's time on headquarters duty.

It was stated above that the efficiency of the police department could probably be increased without adding to its numbers. Already two methods have been seen by which this might be accomplished: first, by paying salaries and establishing work hours which will attract the best possible candidates; second, by arranging work assignment so that patrolmen will not be penalized for making arrests. Important among other measures for increasing efficiency are the methods used for fitting men for their work.

Fitting Patrolmen for Their Work.

Practically nothing in this line has been done in Topeka. When a man has passed the civil service examination and has received his appointment he is given a police book of rules and placed on an outlying beat. It is assumed that he is fully qualified for his duties, or in this or some other way will soon become so. By referring to the excellent book of police rules before mentioned he reads:

> "It shall be the duty of the officer to report unsanitary or disease breeding conditions in dwellings or in open spaces and, as far as possible, assist by intelligent information such families as through ignorance or through intent are living in unsanitary surroundings."—Rule VI.
>
> "For this purpose the officers are urged to acquaint themselves with the fundamental sanitary laws of health so as to be of service whenever their knowledge can thus be given to those who need instruction."—Rule VII.
>
> "It shall also be considered a high duty and privilege for every member of this police force to rescue boys and young men from evil ways * * * *."—Rule VIII.

To fit themselves to carry out this last instruction the rule book requires:

> "It shall be the duty of the officers to acquaint themselves intelligently with a knowledge of sex instruction so that they can give instruction to boys and young men who in many cases are known by the police to be in danger of immoral practices * * *."—Rule XIV.

The point here is that the pamphlet, good as it is, is not enough. Something more is needed to help the men equip themselves for work. For instance, to acquaint men with "the fundamental sanitary laws of health" some one from the city or state boards of health might be invited to explain the laws—if necessary in a few minutes between shifts. So, too, some physician might be invited to present the sex hygiene question in clear and simple terms; and some social worker might outline ways of co-operation between the police and charitable agencies. The juvenile court judge might also be secured to set forth modern principles of handling children. Instruction in first aid to the injured could doubtless be secured from a competent nurse or doctor, and, again the city attorney might instruct the men as to what is legal evidence, and how to present a case in court. Many cases are now lost because of failure to present proper evidence. These are not suggestions based on mere theory. In the large cities where a number of men are added to the force at one time, regular schools of instruction are organized; and in the smaller cities such a plan as here suggested would work toward the same end. Moreover, when new men are appointed to the force they might be sent around for this kind of information from such individuals as above mentioned. Finally, summaries of these matters might be provided in a new book of police rules.

Control Over Patrolling.

One of the important duties of the police is the patrol of the city to preserve order and prevent law violations. With only six patrolmen at present available for day duty it is impossible to cover more than the business section and the "Bottoms."

At night, however, twelve patrolmen are on duty; but

even then the service is inadequate. Two are placed in the "Bottoms", and the others cover the remainder of the city.

Aside from dealing with special cases through the work of detectives, much of the effectiveness of the department in detection of law violations depends upon the patrolmen. Every precaution needs to be taken to insure that they perform their work with the greatest possible efficiency. In the first place assurance needs to be had that they cover their beats. To obtain this some cities employ roundsmen to make tours of inspection. In Topeka sergeants do this work, making rounds twice each shift. Patrolmen are required also to call headquarters on the telephone every hour, but this does not insure that they cover their beats, for not long ago one man was found to have called headquarters from his own home when supposed to be on duty. About five or six years ago a "call back" system was established whereby headquarters rang up the patrolmen, after he hung up the telephone receiver, to insure that he called from the right place. Stores and other places in different parts of the city were designated by the chief as places to call from; but the "call back" system was abandoned four years ago, and the designation of places for calling headquarters was abandoned in April, 1912. Aside from the sergeant's tour every six hours, there is, therefore, at present no real assurance that men cover their beats. Even this much control is considerably nullified by the long time between tours and the difficulty in locating men on their extensive beats.

If the city is to get the greatest efficiency from its police force a signal system will need to be established, just as has been done in the following cities of Topeka's size: Pueblo, Colo., Flint and Bay City, Mich., New Britain, Conn., Lincoln, Neb., Springfield, Ohio, York, McKeesport and Lancaster, Pa., Haverhill, Salem and Malden, Mass., Berkeley, Cal., Chatanooga, Tenn., Davenport, Iowa, Augusta, Ga., and Tampa, Fla. With the location of call boxes in different parts of each beat, and the requirement that men ring in from them, in order, there would be real assurance that the city is effectively patrolled. The installation of call boxes, moreover, will eliminate much of the necessity for sergeants acting as roundsmen, and leave them freer to serve as emerg-

ency men in headquarters. Thus the need for additions to the force will be somewhat lessened, and a saving will be made to partly offset the expense of installation and operation. Before definite plans for such a system are made, however, the city should investigate carefully the possibility of combining the police and fire signal systems. Other cities have found it advantageous to combine them. Until such a system is established the former practice of having the chief designate patrolmen's call places and having headquarters call them back, should be reverted to.

In the light of the opportunities for favoritism and corruption, and the unfortunate experience of some other cities, it is desirable, even though a signal system insures proper covering of beats, to look into conditions of law enforcement in each man's territory. Though making the rounds twice every 12 hours will then be no longer necessary, it will still be desirable that sergeants, as well as the chief, cover the city periodically to learn how patrolmen are performing their duties.

To make this check as effective as possible patrolmen should be required to make daily written reports of violation of law or suspicious conditions observed on their beats. It should also be the duty of sergeants to make written reports of all similar conditions which they observe on their rounds. Only through such reports can the head of the department single out the less efficient men. He may know that certain men are negligent, but without the record he cannot prove it or forcefully reprimand for inefficiency.

Appearance.

The appearance of the force is important. It not only affects the self-respect of the men, but makes for or against their standing with the public, whose good opinion they need for the best work. The city does nothing at present to help toward neat appearance. Formerly confiscated goods were sold and part of the money used for a shoe polishing stand at headquarters. That, however, has been discontinued. Such a stand, and equipment for pressing uniforms, should be maintained for the men. Requirement of uniform collars,

ties and gloves would also add to the neat appearance of the force.

Discipline and Honors.

For the further promotion of effective work it is vital that disciplining for poor service be certain and just, and that good service be rewarded. A basis for judging the service is laid down in the police rules. We have already commended the splendid conception of police department duties outlined in the book. An important omission must be noted however. A stringent enactment should be made and enforced requiring that members be present whenever cases in which they are involved are called in court. Laxness as to men being on hand to prosecute their cases has opened opportunity for corruption in some cities, and needs to be guarded against. Moreover, general experience has taught that rules against members of the force accepting money, loans, or other favors, should be enacted and enforced.

Discipline in Topeka is administered by the chief with, of course, the general consent of the mayor. The only penalties for violation of police rules have been suspension without pay for ten days, or dismissal. More elastic forms of discipline are desirable so that minor violations may receive more than a reprimand, and penalties may fit the specific cases. An effective penalty which might be used is deduction from a man's recorded time of service so that his date for increase in pay will be postponed and he will be made to suffer without the department having to lose his much needed service. This plan would not be effective, however, until salary schedules are revised, for a patrolman now gets maximum pay after six months of service.

For the reward of meritorious service no honor system has been developed. Arm bands, stars or other insignia are granted in some cities for each year of meritorious service or for special acts of bravery. For breach of discipline these honors are suspended or withdrawn.

To promote the uses of a merit system a "merit book" should be kept for entering the record of each man's work, cases of violation of the rules, and all honors or special awards. When examinations for promotion are held this book

should be turned over to the Civil Service Commission so that credit may be given for good service.

Retirement.

Finally, in the interest of the best service, a police pension system is desirable. Experience indicates that police pensions tend to promote permanency and faithfulness of service, and they permit retirement without injustice to persons who have long served the city, but have passed their period of usefulness. Topeka is more fortunate than many cities in not having her present force encumbered with men worn out in the service. Now is the time, however, to provide against such a future contingency.

When the city establishes a pension system two matters will need careful attention. First, great care should be exercised to provide a fund adequate to meet the probable demands upon it; it is a job calling for the services of a skilled actuary. Many existing pension schemes unless reorganized are almost certain to fail because established upon a wrong basis. Second, the conditions for retirement should be set forth so clearly and fully that no man may be retired who is still fit for service. It has recently been shown in New York City that several pensioned policemen are drawing good salaries in other departments of the city government. With these dangers properly guarded against, however, a pension system will make for efficiency of service. If the city pays adequate salaries and tenure of office is contingent only upon good service, the men might be required to make reasonable contributions from their earnings.

Complaints.

Many conditions demanding attention come to the department through complaints of citizens. These are of two kinds: first, complaints regarding violations of the law; second, complaints against patrolmen. In Topeka those of the first sort are usually investigated by plain clothes men, but no record is kept. Such a record giving the person or condition complained of, nature of the complaint, the complainant, and the action taken would, we believe, better insure that all complaints receive proper attention.

When complaints of the second sort are received in Topeka they are investigated if the name of the complainant is given. If anonymous, the matter is "put up" to the patrolman against whom charges are made and then dropped. For some time before the recent police investigations in New York City anonymous complaints had come in alleging misconduct, and these were referred, as in Topeka, to the men complained of. The only result was to warn them to be more careful in concealing their actions. Complaints against policemen, (even the anonymous when they bear any ear marks of being significant), deserve the most careful investigation.

Records.

Adequate records in a police department, as in all undertakings, are the basis for the installation of efficiency methods, and for improving the service. The only records kept in Topeka at present are in a "bum book," containing a list of lodgers, and a police docket, which gives the name, age, sex, nationality, marital condition, occupation and charge against each arrested person. In this book are listed, also, date received, fine collected, and, in part of the cases, the disposition made of arrested persons.

The form of the docket is not altogether adapted for the information now recorded. When a new docket is procured it would be advisable to have it worked out exactly to suit the needs. The desirability, furthermore, in addition to the information now procured, of recording the name and address of the complainant and the address of the arrested party is urged. We would recommend also that all records be kept in ink instead of pencil, and that greater care be used in recording data, including the disposition of arrested persons in all cases.

In addition, a complaint book, and a book containing a record of merits and demerits are, as already indicated, desirable. Besides these Topeka needs an identification system. The city formerly had a rogues gallery, but it was abandoned. Until the time when criminal identification is organized on a national scale, which in spite of its desirability may be many years hence, an adequate identification system should be a part of every well managed police department.

Notices of men wanted by other governmental agencies, many of which are received by the Topeka department, are kept at present in the chief's office. They might be posted on a bulletin board and the members of the force required to examine them from time to time. The need of some such action was indicated during the short period of our investigation when a man wanted by the United States Government whose picture and identification record were in the chief's office was released.

Annual Report.

Experts on city methods rightly lay much emphasis upon the publication of annual reports by all city departments. These serve three purposes: first, to show citizens work accomplished during the year together with the cost; second, to show improvements in service and increases or decreases in cost from year to year; third, to permit comparisons between cities so that each may profit by experiences of the others.

No report of the work of Topeka's police department has ever been published, and none even in manuscript is on file in the city clerk's office. The publication of an annual report to contain the following information is recommended:

1. Organization of the force.
2. Itemized receipts and expenditures for the year.
3. Total expenditures over ten year period.
4. Arrests during year classified as offenses against (a) chastity, (b) public policy, (c) the person, (d) property, (in figures and percentages); also whether the complaint was for violation of state law or city ordinance.
5. Age, sex, color, nationality, etc., of arrested persons.
6. Arrests per 1000 population past ten years.
7. Disposition of cases past ten years.
8. Number of repeaters together with number of times arrested (in figures and percentages).
9. Complaints against members of department with disposition of same.
10. Amount of property reported stolen and amount recovered.

11. Opportunities for crime prevention in the city.
12. Needs of the department.

Law Enforcement Policy.

Theoretically there is no latitude for variations in police policy, for the officers are supposed to enforce the law which appears on the statute books regardless of personal opinions or attitude toward the law-breaker. Practically police policy varies from city to city, and from administration to administration in the same city. The most important points of difference relate: first, to the attitude of the department toward bawdy houses, gambling places and the like; second, to their attitude in making arrests for minor and technical offenses.

Suppression versus toleration, as applied to gambling places and bawdy houses, has been the subject of many a heated discussion of public policy, and the prime issue of many a municipal campaign. Prohibition, in Kansas, puts places where liquor is sold in the same category.

The present administration in Topeka has rightly, we believe, taken the stand that these places should be suppressed. John Doe warrants are issued for all suspected boot-legging establishments, gambling joints and bawdy houses so that policemen may enter and search at any time. There can be no real justification under any conditions for a police department failing to use its best endeavors to secure compliance with the law. To do so is to fall into the same category with the prisoner in jail who is arrested for obeying his personal inclination rather than the established rules of society.

This is not to say, however, that the police should not discriminate in making arrests. To secure compliance with the law, not to make arrests, is the prime purpose of the department; and if compliance can be obtained without such action the welfare of society and the individual is the better served. In crimes clearly involving moral turpitude, as it is commonly understood, the welfare of neither society nor the individual is served by letting law breakers go free. For their own good, and for society's, persons guilty of such offenses indicating degeneracy need care and treatment until

reformed. But for minor and technical offenses the situation is reversed. Usually arrest in such cases serves neither the interest of society nor the individual. On the contrary it has two bad effects; first, it brings upon persons guilty of minor offenses, often young persons, the stigma of arrest; second, it groups together those guilty of "lesser" and those guilty of serious offenses, and so confuses the real justice of society's action in refusing certain persons their liberty. This does not mean that the police should not insist at all times that the law be obeyed. But usually persistent vigi-

CONFISCATED "BOOZE" IN BASEMENT CITY PRISON.
An incidental evidence of the law enforcement policy in Topeka.

lance on their part, and friendly warning will in these cases secure compliance. If the offender persists in his violation arrest will of course be necessary. Of the 1605 persons arrested in Topeka in the year ending October 31st, 1913, 392 were arrested for acts indicating no fundamental degeneracy. Most of them were minor or technical violations, such as burning garbage unprotected, riding a bicycle on the sidewalk, minor in a pool room, leaving horse unhitched, etc. The details of these cases are not available, but in such instances arrest should ordinarily be made only as a last resort. In

other words, police policy in these matters offers an opportunity for crime prevention upon which the police rules rightly lay emphasis.

Such a policy, if not safeguarded, also offers opportunity for abuse, even for corruption. Right discrimination here is vitally important. If, however, daily written reports are filed by patrolmen showing all violations of law which they observe, misuse of freedom in making arrests can be checked.

The Policewomen.

In regard to crime prevention, the work of Topeka's two policewomen and the police matron should be noted. During the six months prior to November 1st these three handled approximately 300 girls and women outside of court, many of whom were homeless, friendless or mistreated, and treading on dangerous ground. It can never be known, of course, just how many of these women and girls were saved from lives of immorality; but it is on this preventive side that emphasis is needed, not only in work among women and girls, but among men and boys as well. The city in her provision of policewomen, has established a policy fast gaining acceptance in other cities.

Conclusions.

The present police department of Topeka has some good features. We commend, for instance, its book of police rules, its provision of policewomen, and its policy of suppression against liquor, gambling and vice. But it is in a class with the departments of most cities under 75,000 population where modern methods for thorough efficiency are seldom found. We believe that the following recommendations (arranged in the order discussed in the report) if adopted, would greatly improve Topeka's police service.

1. Sufficient increase in the force to meet present demands.
2. Enactment of an ordinance giving new men a three months trial before confirming appointment.
3. Establishment for patrolmen of a minimum salary of $75 a month with graduated increase for meritorious service.

4. Establishment of a three platoon system with 8 hour shifts, and, perhaps, a requirement of one or two hours of headquarter service.

5. Abolition of the system whereby night men are penalized for making arrests.

6. Better provision for fitting men for their work.

7. Installation of a signal system.

8. Requirement that men file daily written reports of conditions observed on their beats.

9. Better provisions for securing neat appearance of men.

10. Establishment of a more elastic system of penalties for violation of police rules.

11. Installation of an honor system for the reward of merit.

12. Enactment and strict enforcement of a rule requiring men to be in court when cases in which they are involved are called.

13. Establishment of a pension system to permit the retirement of men who have passed their period of usefulness.

14. Keeping a book of complaints.

15. Careful investigation of complaints against members of the force.

16. Improvement in form and method of keeping police docket.

17. Installation of an adequate system for the identification of criminals.

18. Publication of an annual report.

19. Adoption of policy of discrimination in making arrests and increased emphasis upon crime prevention.

In this report an attempt has been made to point out not only what is immediately possible in the reorganization of the police department; but to outline a program reaching further into the future, which, if adopted, would give the city as good service as possible for the least money. Obviously some of the suggested changes are too far-reaching and call for too great an expenditure to be immediately possible. Others, however, especially those numbered 2, 6, 8, 9, 10, 11, 12, 14, 15, 16, 18, and 19 do not present such difficulties. The fact that the program calls for radical changes is not

a criticism of those now at the head of the department, for they have inherited the present system from past administrations, and have been in office but a short time. The recommendations, with their immediate and future features, are commended to the careful consideration of the department and of the citizens whose support must be had if the measures are to be carried out.

COURT PENALTIES.

The present generation is accustomed to congratulate itself that the unjust day is past when a man may be thrown into jail because he is unable to pay his debts. Yet every prisoner confined on sentence in the Topeka city jail is held because he is in debt to the city for the amount of the fine assessed against him. Except in rare cases where persons able to pay a fine go to jail by preference, poverty is the sole cause for imprisonment. This results from the fact that fines are the only penalties meted out for violation of city ordinances.

The poor man, compared with the rich man, does not get justice before Topeka's law. Take, for instance, two men, one with money and one without, each guilty of the same offense—drunkenness. The man with money furnishes bail —usually ten dollars. If he chooses not to appear when his case is called, bail is forfeited, and the matter is dropped. This practice is vicious. Bail should be forfeited and the defaulter prosecuted. Otherwise his bail is returned when he presents himself in court. The poor man, not being able to furnish bail, is thrown into jail to await trial. The man with money, if he chooses to stand trial, is represented by a skilled attorney —which increases his chance for going free. The poor man with no attorney, is much more likely to be convicted. If the rich man is found guilty he is fined ten dollars, which he pays and gains his freedom. The poor man is also fined ten dollars. Not being able to pay he is thrown into jail to work his fine off on the rock pile at the rate of one dollar a day. In the meantime his family, if he has one, suffers, and he more than likely loses his job. The violation of the law is the same in both cases, the fine is the same; but the

penalty is not the same. The poor man pays the rich man's penalty a hundred times over.

The poor man is at a disadvantage in three particulars: first, he cannot gain his freedom before trial by furnishing bail; second, he cannot employ an attorney; third, he cannot gain his freedom after conviction by paying his fine. It is almost axiomatic that if a law is to gain respect it must deserve it, and it is clear that these inequalities should, as far as possible, be eliminated. They will be taken up in order.

Detention Before Trial.

Theoretically no man's freedom should be taken from him until he is proved guilty of offense. The bail system, which permits the release of those who furnish guarantee of their appearance for trial, is, therefore, essentially just. Some persons, however, with no funds or friends, cannot furnish such surety, and for practical purposes must be held for trial. This results in different treatment for those with and those without money, which, however, seems unavoidable. Greater justice would not be served by the abolition of the bail system. The city should see, however, that these persons are brought to trial as speedily as possible. Their cases should be given preference over all others.

The holding of police court twice daily in Topeka promotes quick action. The city should also provide clean, comfortable detention quarters apart from convicted prisoners, and this has not been done. Persons awaiting trial at present are thrown in with other prisoners under conditions, especially in the men's wards, which are a menace to both health and morals. A remedy for this condition will be suggested when we come to the jail system.

Free Legal Aid.

In her small debtor's court, where no attorneys are allowed, Topeka has guaranteed the poor man something like equal chances with the rich man in civil procedures where small amounts are involved. Like chances in criminal procedures should be granted. This has been done in some cities

—Los Angeles among others—through the establishment of the office of public defender. The State of Oklahoma has such an officer working in connection with the Department of Charities and rendering valuable service. Chairtable societies in some cities support such work. The need in Topeka is apparent.

Fines vs. Imprisonment.

To remedy the last inequality fines, as the sole punishment for violations of city ordinances, should be abandoned. As a means for inflicting just penalty upon law-breakers, which has supposedly been the aim of court decisions, they cannot be defended for they bear very unequally on different individuals. As a means to the protection of society through offenders' reformation, which should be the aim of court decisions, they likewise fail.* To those well able to pay them, fines mean nothing. To those who pay them, and miss the money, they probably have a slight but rather ineffective deterrent influence. To those unable to pay, they lead to detention, which holds possibilities for reformation. These possibilities are, however, hindered by the prisoner's knowledge that he is really confined for poverty, and that persons with more money but guilty of the same offense, have gone free, with little real discomfort. Most prisoners, of course, have not the mental ability to see the facts exactly in their right relations; but they are, nevertheless, inarticulately aware of the real injustice which exists, and may become embittered against society and discouraged from attempting improvement.

Imprisonment should be allowed for all violations of law; but imprisonment for poverty should cease. A fine may sometimes be of service in placing a man on probation to work it off, and in some cases where the offense does not indicate degeneracy, but it should be inflicted only when it will aid in making the law-breaker a law-abiding citizen.

* Fines for prostitution, violation of the liquor law and similar offenses sometimes tend to increase rather than diminish violators' activities, for they must earn money to repay those who have advanced money for their fines.

Prisoners' Reformation the Basis for Court Decisions.

Reformation should, in fact, be the basis for court judgment in practically all cases. When the reformation of an offender will be best promoted by giving him his freedom (under the supervision of a probation officer when one is provided) the offender whether rich or poor should be given his freedom. When such reformation will be promoted best by his imprisonment, he should be imprisoned, whatever his financial standing. Of course society's, not the prisoner's interest, is the ultimate end to be served; but seldom can a court better serve that end than by such action as will help to fit the prisoner to return as a safe citizen.

If we accept this viewpoint that offenders' sentences should be fixed not for the purpose of punishing them, but with the idea of transforming them into law observers, then the folly of putting a confirmed alcoholic behind the bars for ten days becomes apparent. His regeneration cannot be wrought in that time. In fact the folly of all sentences of less than 30 days is clear. The day seems almost at hand when we are to witness a complete overthrow of the time honored practice of having the courts fix the period for confining prisoners. No court can tell ahead of time how long an offender will need to be held under restraint in order to fit him for society, and no offender should be turned loose until he is fit. When the readjustment has been made the court will determine whether an offender is in need of care and training by the state, but the time of detention will be left to the board of parole of the jail, who from intimate knowledge of the prisoner's progress can best determine when he should be set free.

A partial indeterminate sentence is already in use in many cities and institutions. The city of Topeka and State of Kansas would take a place in the forefront of penal reform by the enactment of a law fixing an entirely indeterminate sentence. If this is not immediately possible, however, a law should be secured permitting the parole of prisoners when half of their time is served, in case their conduct warrants the belief that they are likely to become law abiding members of society.

Our recommendations are:

1. That trial of persons unable to furnish bail be given preference over all others; and be pressed as speedily as possible.

2. That persons awaiting trial be detained in clean comfortable quarters apart from convicted persons.

3. That free legal aid in criminal cases be furnished, either by the city or by some other organization.

4. That imprisonment be permitted for violation of all city ordinances.

5. That whenever feasible offenders be placed on probation and given a chance to work out their rehabilitation with the friendly assistance of a trained probation officer.

6. That court decisions be framed in each particular case, as an answer to the question—What will best promote the offender's conversion into a law abiding citizen?

7. That an effort be made to secure legislation providing for at least partial indeterminate sentences.

THE CITY AND COUNTY JAILS.

A court which aimed to follow a policy of sending to jail only persons who, by such sentences, would be helped toward becoming law abiding citizens, would make very restricted use of either the city or county jail in Topeka. There can be no doubt that fear of punishment in these institutions has some deterrent effect upon the commission of crime; but it is also quite certain that most of the prisoners confined in the jails are weakened physically and morally by the experience.

Throughout the country there is urgent need for the application of modern ideas in prison management to city and county jails, and Topeka is one of the cities where the need is most clearly evident. Both of these institutions in Topeka in location, construction and management are relics of a by-gone penology which made punishment the purpose of jail sentence. According to the modern conception of jail sentences, the jail management should aim:

(1) to surround prisoners with influences which will renew their self respect and promote self improvement;

(2) to instruct them, as far as possible, in some kind of work they may do when released;

(3) to build them up physically.

A few cities have already begun such programs. One of them, Kansas City, Mo., is so near Topeka that her successful methods may easily be profitted by. Incidentally it

"BULL PEN" TOPEKA CITY PRISON.

In this room are placed male persons over 16 years of age awaiting trial, held on suspicion, convicted of crime, and in need of lodging. Bunks are provided for 22 persons, although as many as 52 have been held at one time. Pail in center serves as bath tub.

is interesting to note that the superintendent of the Kansas City Board of Public Welfare, under whose supervision this work has been done, is a former resident of Topeka, and a graduate of Washburn College.

Prisoners are confined in the Topeka city jail from one to 250 days, and in the county jail from one day to 14 months. The maximum sentences, however, are unusual; and most offenders are not long enough in jail to permit the thorough operation of forces for their mental training or moral regeneration. A change in this condition by the abolition of very short sentences is, as already indicated, desirable. But even the fact that many sentences are short does not alter

the wisdom of making all possible efforts for the improvement of prisoners and of removing conditions which have a downward pull. For building up prisoners' physical condition quicker results are possible and much may be accomplished even in short periods.

Treatment Before Imprisonment.

If the aim of imprisonment is to help the prisoner, he should enter jail feeling that the authorities are friendly and ready to act in his interests. It is important, therefore, as heretofore pointed out, that his treatment by the police and the court serve to establish in the prisoner this attitude of mind.

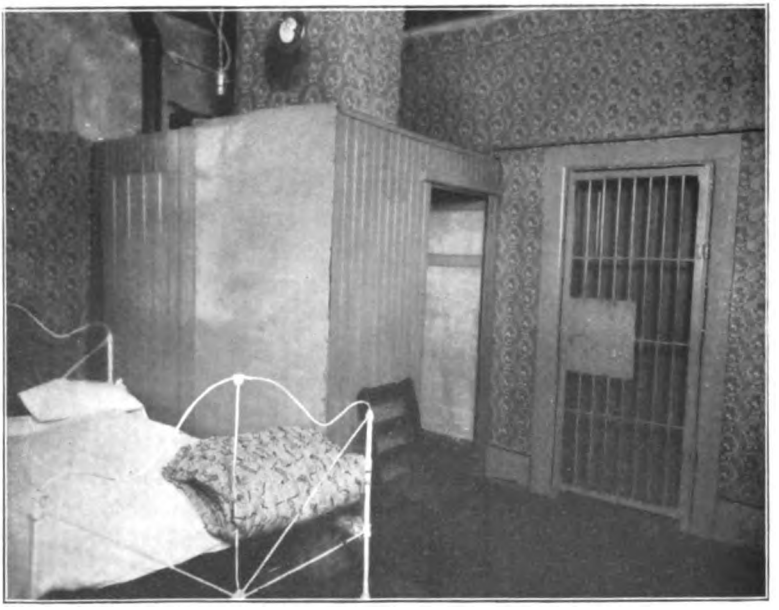
Classification of Prisoners.

Inside the prison it is extremely important that young persons and first offenders be confined apart from those confirmed in crime.

The Kansas law makes provision for the separation of persons under from those over 16 years of age by prohibiting the imprisonment of children in jails. Unfortunately, however, no juvenile detention home has been provided in Topeka and compliance with the law has not always been possible. It has been the policy of the authorities to send children home and hold their parents or guardians responsible for their appearance for trial. Occasionally, however, delinquent children have no homes to which they may be sent and in such cases they have been confined in either the city or county jail. The Young Women's Christian Association has offered to keep girls who are dependent, but homeless boys are kept, like delinquent boys, in one of the jails. In the city jail girls are kept by the matron in her room, and for boys a room in the women's ward with a window looking out on the jail yard, where the men break rock, is provided. In the county jail the cell for children is apart from the main cell room, but near the padded cell where insane persons and prisoners with delirium tremens are kept. Not only is such confinement of children against the state law, it is also against sound public policy, and as soon as a detention home can be provided, should be abandoned.

In the meantime if dependent children must be held the court might well follow the plan which has worked successfully in Boston, by which an assignment is made with a few families of good character who will board the children, pending permanent disposition.

Aside from the separation of children from other delinquents the only classification of prisoners in either the city or county jail is the separation of males from females. Both institutions provide separate quarters for men and women, and in each a matron is in charge of the women's ward. But within the wards there is no classification. Those held for trial and those held upon suspicion—as yet presumed to be innocent—are thrown in with convicted prisoners. Young girls, little over 16 years of age, are confined with hardened prostitutes; and lads of like years with old rounders. Whites, blacks, Mexicans, Indians—all are herded together. Under these conditions possibilities for the spread of disease and for debauchery are very great.



BOYS' ROOM IN CITY PRISON.

Located in women's ward; the one window looks out on rock pile.

PRISONERS WORKING IN STONE QUARRY.
Kansas City Municipal Farm.

The following description by Judge James A. Collins of the City Court of Indianapolis might aptly be applied to conditions in either of the Topeka jails:

> "To the first offender a term of imprisonment in jail is not a term in a house of correction, but is a term in a house of corruption. Once the barred doors of the jail are closed upon the unhappy prisoner his lot is the common lot of all. He becomes the forced associate of hardened criminals. His self-respect is gone, his will is weakened, and his mind is made ready to receive instructions in crime proffered to him on every hand."

The importance of a proper classification of prisoners cannot be over-emphasized, and any solution of Topeka's jail situation must consider it as a fundamental proposition. The bull-pen must go; and separate cells, one for each prisoner, must be arranged if even a beginning is to be made in decent jail management.

Moral Training.

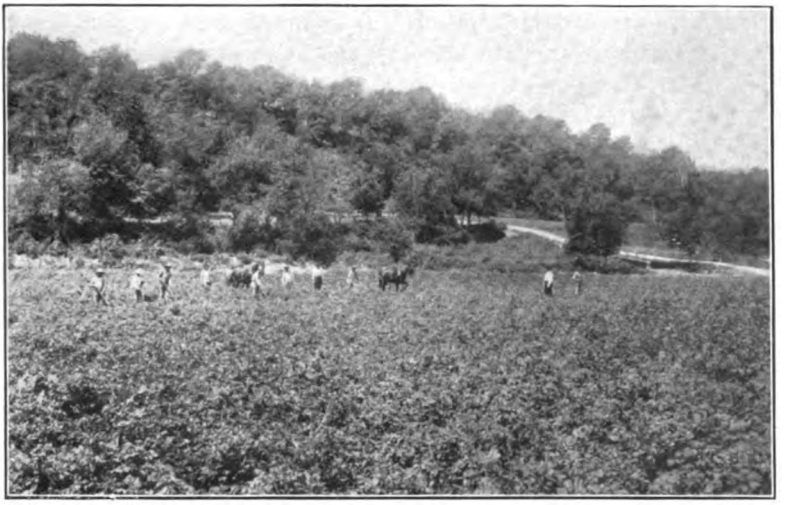
On the positive side religion is a potent influence for moral reformation, particularly when brought by some one who understands the life conditions of the average prisoner. At the present time groups of young men from the Young Men's Christian Association and churches hold Sunday services in both jails. This is good as far as it goes though the jailers report that the prisoners "take little stock in it." When the system is reorganized some one who can take more than a passing interest in the men should be included for

promoting their moral training. This need not be his sole occupation but he should be selected with this end in view.

Work for Prisoners.

Sentences of most prisoners, at present, are too short to offer much opportunity for mental training. At the same time it needs to be recognized that lack of mental training, resulting in industrial inefficiency, and, carried a step further, in idleness, is a factor in criminality. Of the 1605 prisoners arrested in the year ending October 31, 54 were without occupations; 428, or over one-fourth, were unskilled laborers; and, with few exceptions, the occupations represented required but little skill. It is probable, moreover, that most of those claiming to follow skilled occupations had little proficiency. Training for work obviously should be provided long before the prison door clangs behind its victim; but it is also true that if the object of a jail sentence is to convert law-breakers into law-observers, everything possible should be done to train prisoners to proficiency in occupations they may follow upon their release. Work should be provided

ROCK PILE TOPEKA CITY PRISON.
Contrast with scene on opposite page.



FARM WORK FOR PRISONERS.
Kansas City Municipal Farm.

with this and the prisoner's physical and moral upbuilding in view. A secondary purpose should be to put the jail, as far as possible, on a self-supporting basis.

In the men's ward of the county jail no work is provided and, except for four trusties who care for the building, the prisoners idle away their time. The jailer reported that the men like the institution; and it is more than probable that a number, not inclined to work and having dropped to a point where they feel no humiliation in a jail sentence, annually plan to winter there. In jail they find food, warmth, and a bed, with no work, and time to play cards or shoot craps; the latter a privilege the law denies them outside—for which, in fact, they may be thrown into jail. Clean, warm, light, well-ventilated quarters, and good food for prisoners are essential; so too is provision for wholesome recreation: but these things, without work, make the jail a resting-place for loafers. Work of the right kind is clearly desirable.

In the women's wards of both jails no regular work is provided, but the matrons have encouraged the women to do fancy work, at which some have become quite proficient.

In the men's department of the city jail prisoners break

rock. No record is kept of the quantity broken each year, but in money return to the city the amount is negligible. It probably costs more to haul the rock to and from the jail than it would to buy it crushed in the market. From the standpoint of its effect on the men however the work is almost certainly beneficial. Men are less likely to seek winter quarters in the city than in the county jail; and if they do, they cannot spend their time in idleness. At the same time it must be recognized that breaking rock, though commonly used as jail labor, is very unsuitable work as far as upbuilding the prisoner physically or raising his earning power after release is concerned.

What work then, may be provided which will aid in the prisoner's physical and moral upbuilding, teach him skill in some occupation he may follow upon release, and, as far as possible, place the jail upon a self-supporting basis? For the prisoner's health outdoor work requiring all-around exercise is good. For his moral reformation it is advisable to get him away from the city. Kansas offers an extensive field for agricultural workers; and many things point to the desirability of providing farm work for prisoners. Moreover, no other kind of work seems to offer a better opportunity to put the jail on a self-supporting basis; for food products for their own consumption and for other city and county institutions may be raised by the prisoners. The regenerative influence of farm labor for women, as well as for men, has been demonstrated in New York State, in Massachusetts and in Canada.

Jail Library.

Obviously training through manual work involves a measure of mental training also. At the same time the mental and also the moral benefit to be derived from good books should not be overlooked. A carefully selected library should be in every jail. It is especially important when prisoners are confined in idleness, as is the case for the most part in Topeka, and yet aside from a few badly worn volumes in the women's ward of the city institution there is no library in either the city or the county jail in Topeka.

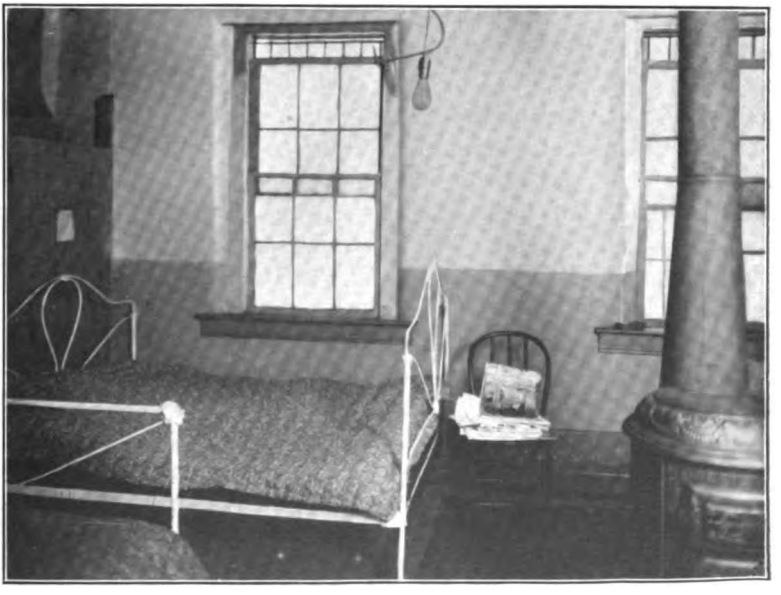
Physical Care of Prisoners.

But the greatest opportunity for the improvement of prisoners during short term sentences lies along physical lines. A large percent enter jail physically broken. Through hardship or dissipation their health has been undermined, and largely as a result of this their self-control weakened and ambition destroyed. If they are to be placed on their feet again, attention must be given to their physical rejuvenation.

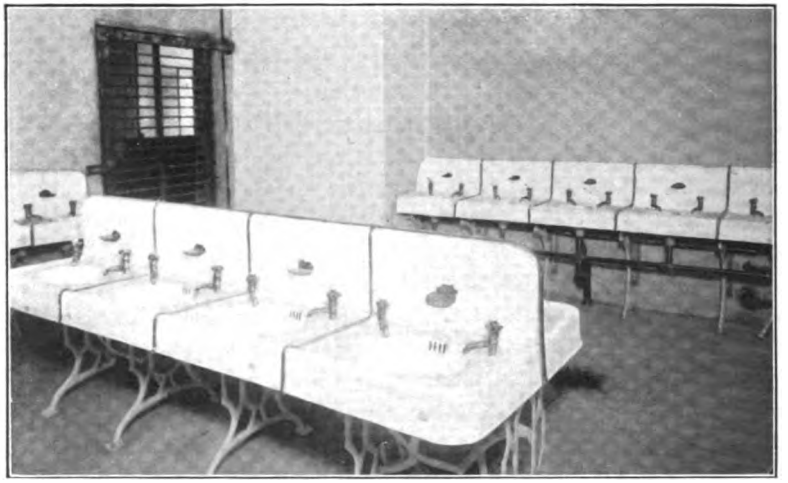
To accomplish this several things are important: Prisoners should be confined under thoroughly wholesome conditions; good food should be supplied; outdoor work should be provided, as has been pointed out; and each prisoner should receive individual examination and treatment.

Sanitary Conditions in Topeka's Jails.

While the women's ward of the county jail is not attractive in appearance, sanitary conditions are good. Prisoners are confined in a very large room with adequate light and ventilation. Emphasis on cleanliness is everywhere ap-



ROOM IN WOMEN'S WARD CITY PRISON TOPEKA.
Toilet broken; heating inadequate.



PRISONERS' WASH ROOM KANSAS CITY MUNICIPAL FARM.

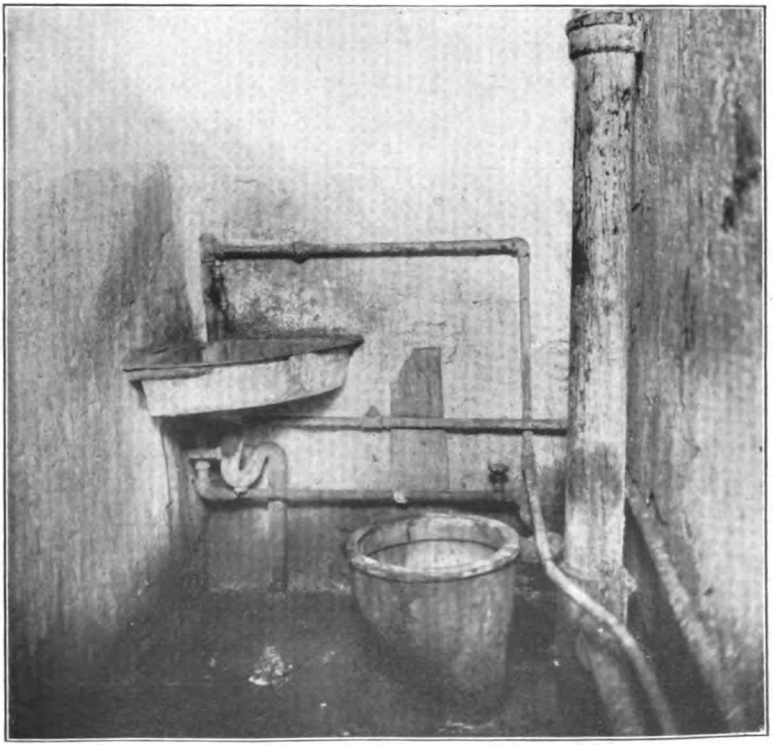
parent. Each woman has a separate cot with bedding, and a toilet room is provided with new fixtures and an enamel bath-tub.

Conditions in the women's ward of the city jail are not as good. Light and ventilation are excellent, and emphasis on cleanliness is apparent; but heating facilities are inadequate. In the part where prisoners are confined there is but one stove and heat is supplied by gas, which in cold weather is so low that the women have trouble keeping warm. Beds are provided, but bedding is too scant for times when the thermometer drops low. The toilet in one of the two women's rooms is broken and unusable; that in the other can be flushed only by pouring water into it. A bath tub is provided; but there is no warm water, and from appearances it is seldom used. A rare bit of barbarism in the absence of soap and towels for washing or bathing is found. The ward is clean, but bare and unattractive—not the kind of a place to make a girl in trouble feel that the city is her friend. The windows front on the street thus permitting prisoners to converse with outsiders, and in spite of the vigilance of the matron, to receive liquor or other articles from their friends.

The men's ward in the county jail is divided into two

sections of eight cells each, one on the first floor, one in the basement. The cells are arranged in the center of the room with a corridor around the outside, but the men have the freedom of the corridor at all times. Ventilation comes from windows which are out of the prisoners' reach, and is not satisfactory. Cell construction is of the lattice type, condemned by penologists because of its resistence to light and air; and it is so dark within the cell structure that artificial lights are kept burning constantly. A toilet room with a bathtub is on each floor and men are required to bathe every Saturday. Four bunks are in each cell, and, as the number of prisoners average about forty, ordinarily two men occupy a cell. A tick, a pillow and two blankets are furnished each man. The blankets are washed monthly.

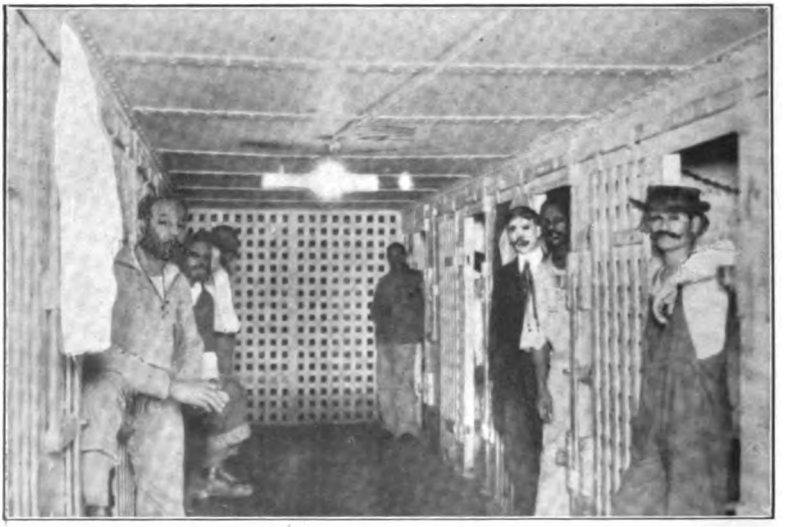
Conditions in the men's ward of the city prison are even



TOILET FACILITIES CITY PRISON, TOPEKA.

worse. As high as 52 men have been confined in this room which has only 22 bunks and a few pieces of dirty bedding to accommodate them. Heat is from a coal stove and may be regulated by the prisoners to suit themselves. Light and ventilation come from two windows of average size, and, considering the number of inhabitants, are totally inadequate. The result is that the room is hot and close at night, particularly in winter. The toilet, broken and foul, and a wash basin, with no soap or towels, are located in a corner. Except for the toilet the ward is outwardly clean, but the place is infested with vermin. If the men wish to bathe they must use an iron bucket, which serves for all. Opportunities for the spread of communicable diseases—especially venereal diseases which are prevalent among prisoners—are great both here and in the other wards of both institutions, for there are no hospital wards. The only bathing facilities which should be permitted in jails are shower baths, and these should always be provided.

Obviously, if prisoners should be placed in conditions which will promote their physical and moral redemption, both



INSIDE CAGE CORRIDOR AT COUNTY JAIL.

Cell construction of antiquated type, and corridor so dark that lights are turned on at noon.

PRISONERS AT WORK ROAD MAKING.
Kansas City Municipal Farm.

jails in Topeka leave very much to be wished. Tendencies in the opposite direction would be expected from conditions found.

Food for Prisoners.

Meals for the prisoners are furnished in the city jail by a contractor; in the county jail by the sheriff. In the city jail there are three, in the county jail two meals a day. Normally most prisoners prior to their detention have been accustomed to three meals a day, and if the jail is to build men up physically, so great a change in their dieting as a reduction to two meals, can hardly be considered wise. Three meals should be served.

Following are the regular menus in Topeka:

City Jail.

Breakfast: two sausages, fried potatoes, three pieces of bread and coffee.

Lunch: boiled meat or beans, three pieces of bread, coffee.

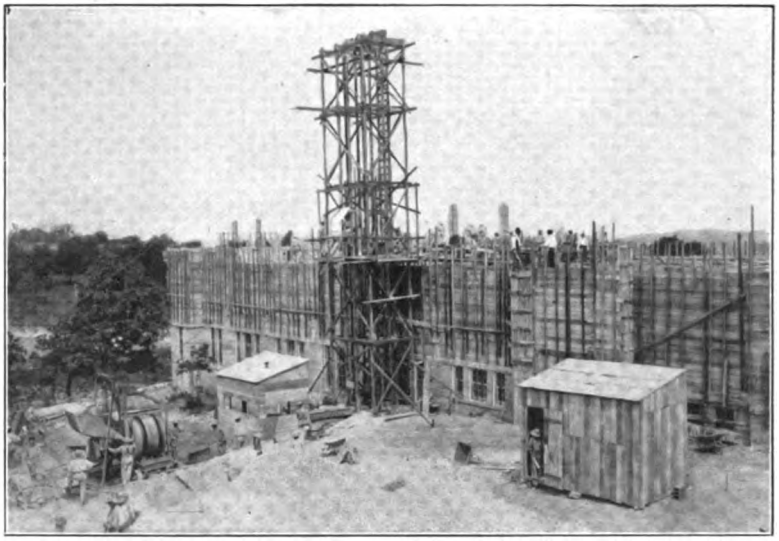
Supper: same as lunch.

County Jail.

Breakfast: none.

Lunch: fried liver, half cup gravy, half loaf bread, coffee.

Supper: boiled meat, half loaf bread.



GENERAL ADMINISTRATION BUILDING UNDER CONSTRUCTION BY PRISONERS.

Kansas City Municipal Farm.

The city pays the contractor 11 cents a meal, or 33 cents a day per person for this service. The county allows the sheriff 50 cents per person per day. In the latter case the food is prepared on the jail premises, the county furnishing the fuel.*

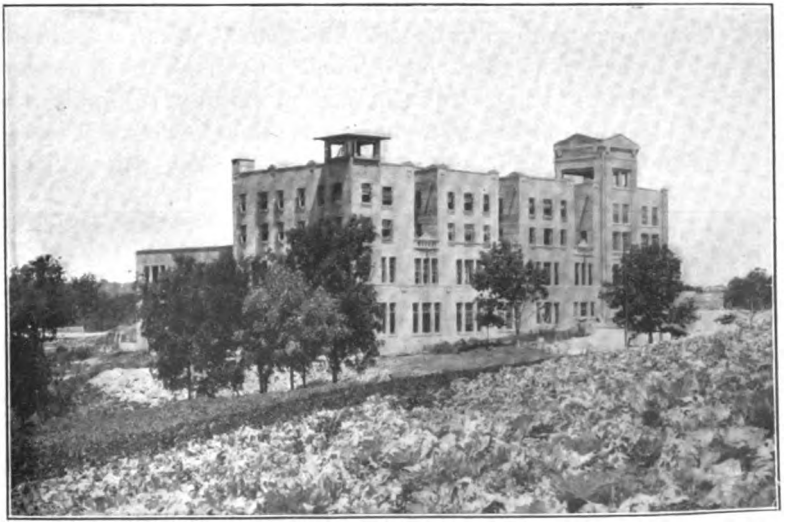
The plan of allowing the sheriff so much per person per day for feeding prisoners is inadvisable. While the present incumbent may feed them satisfactorily, such a plan always makes it to the sheriff's financial advantage to furnish as little and as cheap food as possible. That also is the temptation put before the contractor under the contract system used by the city. Sooner or later either system is almost certain to lead to abuse. If conditions permit, as they do at the county jail, it is advisable to have all food prepared on the jail premises, the city or county standing the exact expense.

* Food is served in both Topeka jails in tin pans and cups. The New York Prison Commission is insistent in recommending crockery dishes for local jails in that state.

The present county allowance of 50 cents per man per day for feeding prisoners is altogether excessive. Judging by expenditures in many other institutions the actual cost to the sheriff per person per day is about half of the 50 cents he receives, and he makes $2724.50 a year net profit from the transaction. Even if the cost to the sheriff were equal to the 33 cents per man per day, which the city pays, his profit (and the county's loss) would be $1852.66 a year. In the interest of economy, and the good feeding of prisoners, the present system should be abandoned.

Individual Examination and Treatment.

Thus far, in considering the physical welfare of prisoners, we have reviewed: first, the work provided for them; second, quarters for confinement; and third, their food. Equally as important as any of these is individual examination and treatment. Healthful outdoor work, wholesome food and sanitary quarters are necessary, but it is also essential to know and to provide for the exact needs of each individual. These may be discovered only by individual phys-



GENERAL ADMINISTRATION BUILDING.
Kansas City Municipal Farm—Constructed by prisoners. Includes dormitory, dining and assembly room, library, locker room, shops and hospital ward.

ical examinations. No such examinations are made in either the city or county jail in Topeka. Prisoners who complain of sickness are treated by the city or county physician, but no attempt is made to discover other ailments or to put prisoners in good physical condition, nor is a hospital ward provided. If a man is an alcoholic, or has a drug habit, no attempt is made toward a cure. Obviously great opportunities to set in motion forces for the prisoners' physical rejuvenation are being overlooked.

What Should Be Done.

Our whole treatment of the jail situation in Topeka is based upon the promise that the purpose of these institutions should be to re-form, not to punish. If this premise is wrong —if punishment should be the aim—then the two jails are not half bad enough, and the pillory, rack and dungeon should be brought back to make punishment more effective. But if our premise is sound, then radical changes are a necessity, and the community should be ready to make them as rapidly as conditions permit.

The important question then becomes: What should be done? Kansas City, Mo., has a good answer to the question; for, as already suggested, she has attempted to apply the newer ideas in penology to her correctional work. The application is not yet completed, for the county jail still be-

TAILOR SHOP.
Kansas City Municipal Farm.

IN THE CARPENTER SHOP.
Kansas City Municipal Farm.

longs to an age that has passed, and citizens still apologize for the fact that the women's reformatory is near the heart of the city; but Kansas City in her municipal farm for male offenders has pointed the way which Topeka and other cities would do well to follow.

Farm work, we have seen, approaches the ideal occupation for prisoners; and Kansas City has located her jail for men on a farm. There, ten miles south of the city, she has built up an institution, largely through the work of prisoners, which comes near to being a model of its kind.

The prisoner is received there, as in Topeka, physically or morally sick, or both. But the treatment is not the same. In Kansas City he is sent at once to the wash room, where he takes a shower bath and puts on clean, fresh garments—not stripes. His own clothes are cleaned, sterilized and sent to the tailoring department to be patched and pressed so that he may put up a respectable appearance upon release.

From the bath he passes to his physical examination. The doctor goes over him thoroughly, determines what treatment he needs, and classifies him according to the kind and amount of work he should do. If the man is an alcoholic, or if he has a drug habit, and evinces a desire to reform, he is given the cure. So successful has been the work along this line that the courts have begun to give men guilty of drunkenness the maximum sentence so that treatment may be completely effective. In some cases, too, well known families

have brought wayward members into court and asked that they be sentenced to the farm to take the cure under restraint.

If prisoners upon examination are found to be in a serious condition they are confined in a neat white hospital ward, which, in cleanliness, will rival a ward in any private hos-

BLACKSMITHING FOR PRISONERS.
Kansas City Municipal Farm.

pital. A clinic, too, is provided, and an operating table for the performing of simple operations.

Quarters for the men are scrupulously clean and the institution has been designed with the latest ideas of penology in mind, though plans for complete classification will not be possible until the buildings are completed.

Several different kinds of employment are furnished according to the individual prisoner's needs and the necessities in operating the institution. The buildings have been constructed almost entirely by the prisoners and this, besides saving the city money, has furnished excellent work for the men. Prisoners have, moreover, built their own roads, laid over three miles of water mains, extended railroad switches and broken in the farm land. The acreage of tillable land is, unfortunately, as yet too small; but farm work is one of the chief fields for labor. In addition to this, however, and work in the improvement and repair of buildings, there are several other departments using varying amounts of labor. These are the lodging house department, which cares for the dormitories; the restaurant and comissary department; the livery department; blacksmith shop; tailoring shop;

shoe shop and the quarry and grading department. By the use of prisoners for these varying kinds of work the expense of operating the institution is greatly reduced, and the men often learn trades they may follow after release. Moreover the fact that they are kept busy at outdoor work when they need it has a wholesome effect.

Religious services are held Sundays and classes for moral instruction during the week. A library of well selected books is being built up. Everything thought to add to a man's self respect is arranged for. The warden is not called warden but "superintendent." The guards are not called guards but "foremen." The prisoners are not called prisoners but "men." The foremen are mainly tradesmen selected because of their ability to direct the men's work and act as their teachers. The number of foremen or guards has been gradually decreased since the institution was established, and many prisoners are allowed the freedom of the farm unguarded; yet the number of escapes has steadily decreased. From April 1912 to April 1913, there were but 51 escapes as against 28 escapes, from November 1912 to November 1913, in the Topeka city jail, where there are only about two-fifths as many prisoners.

One of the strong influences for promoting good conduct in the institution and the permanent reformation of prisoners is the partial indeterminate sentence. By city ordinance it is provided that if the prisoner has a perfect record, he may be released when two-thirds of his time is up. Not only does this make for good conduct in the institution, but since most of the men earn their release on parole before their full time is up, it provides also for control over them through the parole officer for some time after release; and this is highly desirable.

When a man has earned his release he receives back his own clothes pressed and in good condition. He goes forth neat in appearance, a fit applicant for a job. If he has no money to tide over the days while he is getting his bearings he is permitted to stay at the farm for a week and is paid 50 cents a day for his labor.

The Two Systems in Review.

Contrast the two systems.

In Topeka the prisoner, if poor, receives no legal aid.

Fined and thrown into jail, he receives no physical examination and is held under conditions which are, if anything, detrimental to his health.

He is either idle or spends his day breaking rock.

He receives no mental stimulation and has no chance to acquire skill in an occupation he may follow upon his release.

Practically no forces are set at work for his moral reformation, but he becomes a forced associate and companion in trouble with hardened criminals.

He leaves the jail penniless and with clothes shabbier than when he entered, to go back without a guiding hand, to the same environment which got him into trouble.

Can the city wonder if he returns in a day, a week, or a month guilty of the same or some more serious offense?

In Kansas City an agent of the parole department is present in court to record the facts in the prisoner's case and lend assistance.

If convicted he is sent to the municipal farm.

Here every influence is uplifting.

He gets a bath and clean clothes.

He is given a physical examination, and effort is made to put him in first class physical condition.

If he is an alcoholic or drug "fiend", and wants it, he is given the cure.

Wholesome work is provided, and if his sentence is extended, he may learn skill in some occupation which will serve him in good stead upon his release.

Partial indeterminate sentence puts him on his good behavior. Every influence from the moral standpoint is for his upbuilding.

He leaves the institution neat in appearance, with money to tide over the first few days, and under the guiding hand of a parole officer paid to help him get employment and to serve as his friend.

Here is a concrete and convenient example of what should be done—one for Topeka to profit by.

Nor is Kansas City the only example. Cleveland,

Toronto, Minneapolis, Washington, and several other cities are conducting successful farm institutions. San Diego, Cal., a city of approximately Topeka's size, in 1912 began the organization of a 7,000 acre farm for delinquents. Many cities and penal institutions moreover are successfully carrying on adult parole work.

IN THE SHOEMAKERS' SHOP.
Prisoners at work, Kansas City Municipal Farm.

For the general reorganization of the Topeka jail system we recommend, therefore:

1. That the present jails be abandoned for use in holding prisoners after conviction and a farm institution be developed instead. No amount of reconstruction can make either satisfactory as a reformatory institution.

2. That the present city prison be remodeled for use as a temporary lock-up for persons awaiting trial and for use as a municipal lodging house.

3. That the present county jail be remodeled for use in holding prisoners pending trial.

4. That the new farm institutional provide at least an acre of tillable land for each prisoner likely to be sent there, and if possible, a site be selected which will permit the development of a stone quarry, and the manufacture of bricks for paving purposes.

5. That plans for buildings be decided upon only after a careful study of needs, and an examination of the best similar institutions in the country.

6. That the superintendent's salary be made large enough to attract a thoroughly capable man. Whether the

institution is to run at a big expense, or is to become self-supporting; and whether it becomes a real reformatory or merely another place of detention will depend largely upon his abilities.

It will be noted that the proposal is to establish a single farm in place of the present jails. There is no sound reason for maintaining two institutions serving the same purpose in essentially the same territory, and to do so incurs continuous needless expense. If legal and other difficulties can be overcome, as they probably can, it is our belief that the city and county should unite in the new undertakings, either through some plan for joint management, or by one agency establishing the institution and the other using it and paying some reasonable sum for the keep of its prisoners, as as done in the State of Illinois and elsewhere.

If, however, there is no immediate chance for agreement on a plan for joint management, neither the city nor county should, if other conditions permit their being carried out, delay plans looking to the establishment of a farm institution.

There is quite a strong conviction among leading penologists in favor of complete abolition of local jails for persons sentenced for 30 days or more, and the establishment of State Farms for misdemeanants, along the lines of the plan in use in Indiana. While there are many advantages in such a method for handling this work, for practical purposes and the improvement, as soon as possible, of the very unwholesome conditions which now exist, the issue should not be confused: with the city and county must lie the task of making the necessary improvements.

For the management of the new farm institution, we recommend:

a. That the superintendent and all employes be selected, not as mere jailers or guards, but for their ability to promote the reformative aims of the institution.

b. That prisoners be classified so as to separate for purposes of confinement males and females, and within the sexes, those over and those under 21 years of age.

c. That some one be connected with the institution to promote the moral regeneration of the prisoners by individual

work among them, and through the holding of religious services and classes for moral instruction.

d. That besides farm work other industries be established, to provide prisoners with occupations when farm work is lax, and to help put the institution on a self supporting basis.

e. That, as far as possible, the products of the institution be used in supplying the needs of other departments of the city or county governments. A law compelling use of such goods by city and county departments would be desirable.

f. That a library of carefully selected books be built up, or that some arrangement be made by which the city library will furnish prisoners with wholesome reading matter.

g. That the necessary legal changes be secured so that all prisoners will be committed on at least partially indeterminate sentences.

h. That an unpaid parole board be named, perhaps by some division of appointive power between the county and city court judges, and be empowered to parole prisoners when such action will promote their conversion into law-abiding citizens. The board should consist of a lawyer, a physician, and a social worker, clergyman or business man, and should be empowered to appoint a parole officer, who would also act as secretary of the board, at a salary of not less than $1200 a year.

i. That provision be made for the physical and mental examination of all prisoners upon their entrance to the institution, and for their treatment—including treatment for alcoholism and the drug habit—according to their needs.

j. That food for the prisoners be prepared at the institution, the cost being paid directly by the management.

k. That plain garments be provided, and that the prisoners' own clothes be patched, pressed and returned to them in good condition upon their release.

l. That prisoners be allowed to stay a few days after the completion of their sentences to earn a small amount by their labor, so that they will not need to go forth penniless.

m. That the finances of the institution be placed strictly on a cost accounting basis.

n. That overhead charges for rent, supervision, food, etc., be assessed against each prisoner and that the surplus earnings of each man, when there are any, be devoted to the support of his family or, if he has none, be given to him upon his release.

Immediate Improvement of Present Jails.

In outlining this rather comprehensive program for the improvement of Topeka's jail system the present jails, as places for detention of convicted prisoners, have been disregarded. This is because neither of these institutions, due to location and construction, can ever be made by any stretch of the imagination a real reformative institution. This does not mean, however, that some make-shift improvements cannot be made before a farm institution can be obtained. We do not believe that the expenditure of any great sum of money to remodel the old jails is advisable, for their abandonment should be hastened as much as possible. They are fundamentally bad. The adoption of the following suggestions would, however, without the expenditure of much money immediately improve conditions somewhat:

1. Suggestions Applying to Both Jails.

a. Appropriate action should be taken to secure the release of prisoners from both institutions, if their conduct has been perfect, when half of their time is up. A completely indeterminate sentence would be even more desirable.

b. In both jails provision should be made for the physical examination of all prisoners, and efforts made, by individual treatment, to put them in first class physical condition. In the city jail this will necessitate better equipment and heating in the hospital room; in the county jail the provision of a hospital room.

c. Efforts should be made to secure for the prisoners a well selected supply of books, either by obtaining the co-operation of the public library, or by building up separate libraries to be owned by the jails. These should not be cast-off books but books of real worth.

2. Suggestions Applying to the County Jail only.

a. The two sections on different floors of the men's ward should be used for the purpose of separating first offenders and young prisoners from those confirmed in crime.

b. The plan of paying the sheriff 50 cents per person per day for feeding prisoners should be abandoned in the interest of economy and good management. The actual cost of the feeding should be charged against the county.

c. If prospects for the abandonment of the present jail in the near future are not good, the women's ward should be divided into two sections to permit some classification of prisoners.

3. Suggestions Applying to the City Jail Only.

a. Toilets in the women's ward should be repaired and a new enclosed toilet of a non-breakable model should be installed in the men's ward.

b. Prisoners should not be given the freedom of the women's ward, but the two rooms should be used for the separation of first offenders and younger girls from those confirmed in crime. To make this possible adequate heating of both rooms will be needed.

c. The front room of the basement should be supplied with cots, bedding, and heating facilities for male prisoners, so that first offenders, youths under 18, persons not yet convicted (unless old offenders), and lodgers could be kept there. This will supply some though a very inadequate classification of prisoners, and relieve congestion.

d. An adequate supply of new bedding should be provided in both wards and provision should be made for keeping it clean. In this and in other work the labor of prisoners should be utilized.

e. Hot water should be provided in the women's ward; and if the prospect for the abandonment in the near future of the present city jail is not good, a shower bath should be installed in the men's ward.

f. Liquid soap and paper towels should be supplied in both wards. Each prisoner should also have a bath towel and be required to take a bath once a week.

Obviously while these changes may to some extent improve conditions, they cannot make them satisfactory. This cannot be too thoroughly emphasized. The main trouble is not with the jail management, but with the jails themselves, and no amount of renovating and remodeling can ever make them adequate as reformatory institutions.

PROBATION AND PAROLE FOR ADULTS.

No reformatory system can be complete without probation and parole work for adults. In fact if the purpose of correctional work is to build people up and help them to become law-abiding citizens nothing is more important. The fact that Topeka has no real work of this sort for adults is a pretty severe commentary upon her correctional system.

There exists here so-called probation work. The police court in the year ending October 31, 1913 suspended sentence on 101 persons found guilty of some offense and let them go in the hope that they would not return. They went, however, back to the same environment where they had got into trouble with no supervision or assistance. How much more effective the treatment would have been, if, instead of being allowed to go uncontrolled, they had been placed under the supervision of a probation officer to whom they were required to report once a week or oftener, and whose business it was to visit them in their homes, advise with them and help them get employment!

In non-support cases probation is particularly effective and often it is made a condition of probation that the head of a family pay his earnings weekly to the probation officer, who sees that they go to the support of wife and children. This means justifiable public economy as well as effective treatment. The appointment of a probation officer, moreover, resulting in the placing of a larger number of persons on probation, means that jail expenses are reduced and many who would otherwise be community burdens become producers. In Kansas City last year the wages of those on probation and parole amounted to $280,499.00. The social and financial loss to Topeka and Shawnee County because of their failure to employ an efficient adult probation officer is difficult to estimate; but it is certain that one of the best opportunities for crime prevention open to the community has been neglected. There should be at least one probation officer for adults, working in connection with the city and county courts. A state law, perhaps along the line of the Illinois statute, should be secured, permitting the city and county courts to unite in appointing such an officer, the two governmental divisions dividing the expense. In the meantime

an informal agreement could probably be made, each employing the same officer and paying half the expense.

Much authority over many people is vested in this officer and obviously only those of the highest character are fitted for the work. We cannot afford to employ persons who themselves have not succeeded, to help those who have thus far made failures. The suggestion is made that the greatest care should be taken in the selection of this officer and the salary be fixed at not less than $1200 a year.

Probation service among women is much needed and can best be performed by a woman. Many of the duties now performed by the policewomen are very nearly akin to probation work. We suggest that one of the policewomen, if this plan is adopted, be assigned to take charge, under the direction of the probation officer, of such work for women.

Parole work is hardly less important than probation. The most critical moment in a prisoner's progress toward complete self control is when he leaves jail and goes back to every day life. His old associates and environment were more than likely partly responsible for his getting into court. If he returns to those associations, with no other influences at work, the chances are favorable for a repetition of his offense. If he has lost his job and is without funds, as is often the case, repetition is even more likely. It is to tide over this critical period and to help the prisoner reestablish himself that a parole officer is employed.

No such work is being done in connection with either the city or county jail in Topeka. Weakened through comparative idleness and bad associates in jail, prisoners go back to the conditions where they got into trouble with no supervision whatever. It is hardly to be wondered that many return once, twice, and even five and six times during a single year—repetitions that alone should stir the community to action.

In discussing the management of the new farm institution, it was recommended that an unpaid parole board of three members be organized. Such a board should be appointed whether the farm institution is obtained immediately or not. It should, moreover, be supplied with a paid parole officer at a salary of not less than $1200 a year. A state law

should be secured permitting the city and county to unite in the appointment of such a board and in dividing the expense. The establishment of probation and parole work for adults is extremely important, and should be undertaken before anything else recommended in this report is taken up.

JUVENILE DELINQUENCY.

A basic principle in correctional work is that delinquent children be dealt with entirely apart from adults. For the most part a recognition of that principle is evident in Topeka. In keeping with it is the establishment of a separate juvenile court and the employment of a juvenile probation officer. Also in keeping with it is the state law prohibiting the confinement of children in jails.

Detention Home.

The only place where Topeka fails to recognize this principle is in neglecting to provide a juvenile detention home. As already noted, it is the policy of the authorities to send delinquent children home and to hold parents responsible for their appearance in court. But not infrequently such children have no home to which they may safely be sent, and in such cases they have been confined temporarily in one of the two jails.

The state law gives the county commissioners authority to provide a detention home for children. Save for expense, there can be no argument against its establishment. Lincoln, Nebraska, and many other cities of approximately Topeka's size, have believed the investment well worth while. The importance of establishing a detention home in Topeka needs no further discussion.

Following are suggestions which may prove helpful in the acquisition and management of such a home:

1. The home should be entirely apart from either jail, and as far as possible, give no appearance of being a place for forced detention.

2. Fire protection and sanitary provisions should be adequate and up-to-date.

3. The superintendent (a woman) should be selected for her ability to exert an intelligently wholesome influence over the children.

4. Boys and girls, and dependent and delinquent children should be kept apart, at least in their sleeping and play quarters.

5. Provision should be made for play grounds, and play equipment should be provided.

6. Arrangement should be made for securing good children's books from the public library, or, if this is not possible, for securing a good children's library.

7. There should be shower baths for bathing, and soap and individual or paper towels for washing.

8. Food should be prepared on the premises, and should be thoroughly wholesome.

9. Provision should be made for the physical and mental examination and treatment of every child. Duplication between these and examinations for the court of course would be eliminated.

10. Records should be kept of the ages, names, addresses, causes and dates of detention and disposition of all children.

The Juvenile Court.

In juvenile court and juvenile probation work Topeka ranks among progressive cities. The results obtained in this field of work depend almost entirely on the interest and devotion of the persons who serve as juvenile judge and probation officer. It is a pleasure to record that the men who at present hold these positions seem to have caught the spirit of the newer correctional work, and are steadily improving the quality of their service.

The Kansas State law makes the probate judge also the judge of the juvenile court, so that the latter court, in keeping with present tendencies elsewhere, is organized on county lines and children outside the city enjoy its benefit. The court has jurisdiction in two classes of cases: first, those against children under 16 years of age; second, those against parents or guardians for neglect of children under that age. Recent tendencies have been in favor of extending the jurisdiction of the juvenile court to all persons under 18 years of age; and we recommend action for such a change in the state law of Kansas.

No regular court sessions are held, but the judge hears cases whenever occasion arises. Proceedings are properly very informal. The presence of lawyers is discouraged and it is the usual practice to hold hearings in a small room where a real heart-to-heart talk with those concerned is possible. Children are never put under oath and the general public is rightly excluded when cases of delinquent children are being heard.

In the past accounts of juvenile cases giving names and addresses have frequently appeared in the newspapers. Recently, however, the court has adopted a policy of giving out a monthly report of its work and keeping the names of children out of the papers. We believe the press will be willing to co-operate to the fullest extent in such a policy.

The probation officer always makes investigation of cases before they come up in court, and is usually present at hearings to assist the judge in arriving at wise decisions. If not present he always relates the facts he gathers beforehand orally to the judge. In courts where the volume of business is large it is desirable that probation officers submit written statements of their investigations in all cases, but in Topeka the present arrangement is satisfactory. Besides getting facts from the probation officer, the court, of course, hears the child and other witnesses before arriving at a decision.

Recently, Dr. Milton B. Miller, a public spirited physician of the city, volunteered his services for the physical examination of delinquent children. The work is still in an experimental stage in Topeka, but elsewhere its value has been repeatedly demonstrated. In many cases, for instance, a tendency to truancy has been shown to be due to defective eyesight or hearing, or to adenoids. When medical inspection in the schools becomes a fact it should be provided, in order that this work may be permanently established, that school doctors, besides examining school children, shall also examine delinquent children at the request of the juvenile court.

The Binet test for mental development has recently been proved serviceable in locating one of the important causes of crime. Delinquency, both in adults and children, is due frequently to mental deficiency. Persons with such defi-

ciencies clearly defined will always be a danger to society, both because of criminal tendencies, and because of the likelihood that they will bear defective offspring. For the protection of society they need early in life to be segregated in institutions and kept there. The Binet test is comparatively simple and, if provided for, would, with supplementary data gathered by the probation officer, assist the court in making wiser disposition of its cases.

The judge in Topeka has assumed the policy of keeping as many children as possible out of court, and frequently has placed them on probation without their being proved guilty of an offense. No permanent record of these children has been kept in the past, but the present probation officer has been perfecting a card catalogue system of all probationers, which will serve the purpose.

A study of the records, going back two years, indicates two tendencies on the part of the court; first, to dismiss very few cases entirely—but five in the two years; second, to make extensive use of probation. One hundred and eight delinquent children were placed on probation, while but 17 were sent to an institution, two of them after probation had been tried and failed. Both of these tendencies are commendable. Most children brought into juvenile court are in need of better supervision than they have received, and even though they have not been guilty of a specific offense, will more than likely be benefitted by the paternal interest of the court and probation officer. Informal probation, in such cases, can seldom be a mistake. Wide use of probation, when an efficient officer is employed, is highly advisable. It gives the children a chance, and saves needless expenditures for institutional support.

In the past, juvenile probation work in Topeka has not been thoroughly efficient. Cases have not been properly followed up, and no adequate records have been kept. The present officer has made many improvements, following cases up vigorously, and perfecting a record system. The county allowance of $900 a year for the probation officer, however, is insufficient ordinarily to attract persons with the equipment and judgment the work demands. The guidance of thirty to fifty boys and girls who are falling into downward paths

is no unimportant matter. Their minds are plastic and unusually susceptible to good or bad influence. Nowhere is preventive work in criminology so certain to bring results. Even from a financial point of view, probation work which saves children from criminal careers is a good investment. If the work in Shawnee County is to continue to be effectively performed, a larger salary should be offered.

The policewomen are at present handling a considerable number of young girls in work very nearly akin to informal probation. It is essential to have all girls supervised by women. We believe, therefore, that better results would be accomplished if the policewomen and the juvenile probation officer would co-operate more fully, the former reporting and recording in the juvenile court records, all cases of girls under 16 years of age, the latter turning all girl probationers over to the policewomen for their supervision.

It would also be for the good of the work if the Foster Humane Society were brought into closer co-operation with the juvenile court and the policewomen. The welfare of the delinquent, neglected and mistreated children of the city is so important as to deserve the fullest co-operation of all agencies working for their welfare. Conferences between such agencies, to talk over misunderstandings, and to outline plans for co-operation, would, we believe, be productive of much good.

PREVENTIVE WORK.

Besides leading to a better understanding among social agencies of many kinds in the city and promoting more united action, such conferences as above suggested might very well lead to a program for the prevention of juvenile delinquency. Considerable is being done in Topeka to deal with persons who have broken the law, both children and adults; but little is done to change conditions which make for lawlessness.

Analysis of juvenile court cases in many cities shows that about three quarters of the children get into court through perversion of the play instinct. Halloween pranks and the like, for which many children are brought into court, are of this nature. So, too, boys often times steal property,

either through a desire for adventure, or to buy or otherwise gain recreation through the use of stolen articles. Classifying the 43 children on probation in Topeka the early part of December according to the motives behind their specific acts of delinquency, we get the following results:

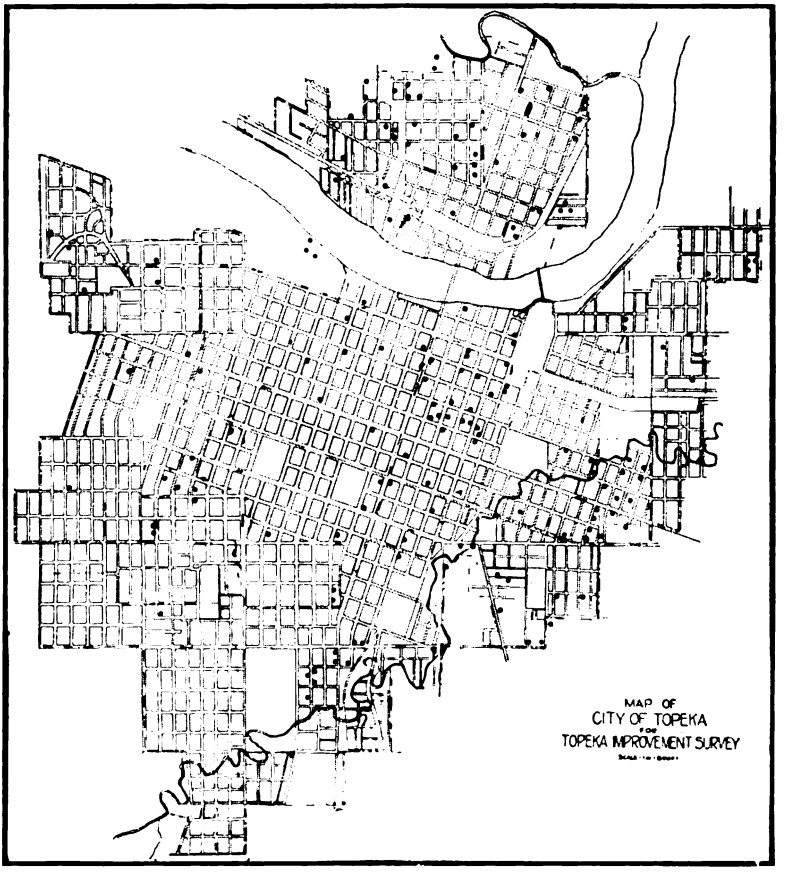
Desire to play	26
Desire for necessities arising from family poverty	4
Desire for revenge	4
Miscellaneous	9

Of the nine miscellaneous cases four were clearly cases of children of abnormal mentality.

It will be seen that 26, or over 60 per cent of these children, got into court for some act arising out of a desire for recreation. For any body of persons wishing to institute work for the prevention of juvenile delinquency this fact holds vital significance. By seeking out the sections of the city where such delinquency is most prevalent, and providing for the intelligent direction of children's play through the establishment of playgrounds and school social centers, prevention of the development of criminal tendencies in many children is almost certain. The map of the city on the next page showing a black dot for each delinpuent child brought into the juvenile court during the past three years, indicates the neighborhoods where playgrounds and social centers are most needed.

We join Dr. E. W. Burgess of the University of Kansas, who co-operated in the Topeka Improvement Survey by investigating the local problems of recreation, and who, in his report recommends provisions for play in the distinctive juvenile delinquency areas of the city. Further we commend for the favorable consideration of the people of the city the development of a general recreation program as a means of preventing both adult and juvenile delinquency.

In preventive work among adults the State law prohibiting the sale of liquor in Kansas should be noted. While few impartial and scientific studies have ever been made of the results of prohibition, there is general agreement that the use of intoxicating liquors is a contributory factor in a very large amount of criminality. This is to be expected for the universally recognized effect of drinking is that it befuddles the mind and weakens the powers of self-control.



JUVENILE DELINQUENCY IN TOPEKA.

Each dot indicates place of residence of one delinquent child; 1911, 1912, and 1913.

Prohibition has not entirely prohibited the use of liquor in Topeka, or even its excessive use. There were in the year ending October 31st, 1913, 676 arrests in which drunkenness was charged. These constituted 33 per cent of all arrests made. It is more than probable, were the facts known, that more than half of all arrests could be traced partially to the use of liquor—in spite of the prohibition law. Vigorous enforcement of this statute should be continued in the city's preventive program.

GENERAL CONCLUSIONS.

The recommendations growing out of this investigation are both immediate and far reaching; and have been set forth in detail at the ends of the main divisions of the report. It remains to sum up the general conclusions. They may be put as follows,—that the delinquency and correctional situation in Topeka calls for:

1. Plans for increasing the effectiveness of the police force.

2. Changes in court procedures and penalties.

3. Abandonment of the present jails for confinement of prisoners after conviction, and the development of a farm institution.

4. Establishment of probation and parole work for adults.

5. Provision of a juvenile detention home.

6. Increased emphasis upon the work of crime prevention.

The adoption of these suggestions will necessitate many readjustments, the most important of which—and here we end as we started—is a change in point of view toward the offender. Once the idea is established that the purpose of correctional work is not to punish law breakers, but to build them up into law abiding citizens, other changes will more easily follow. Aside from a failure to grasp this new point of view, two objections may be brought against the acceptance of the main recommendations of this report.

First, it may be protested that the proposed changes require a greater expenditure of money than the community can afford; and

Second, it may be said that things are getting along quite satisfactorily as they are.

As to the first contention, it is clear of course that all of the changes cannot come at once. Each needs to be planned carefully, and launched as soon as its success can be assured. But beyond that, the poor economy of a system which degrades instead of uplifting law breakers—particularly when the modern reformative type of work can be made almost if not wholly self-supporting, as will be shown in a

moment—needs hardly to be argued. Every person who sinks into criminal ways, or having sunk, continues therein, is year after year a financial burden on the community, while every person saved from such a life, is a permanent community asset.

An example in point showing the folly of economy which saves money at the expense of efficient correctional work is given in a paper recently read before the state probate judges by Judge Hugh McFarland, of the Topeka Juvenile Court. Four years ago a boy 15 years of age came before the juvenile court and was placed on probation. At that time supervision of juvenile probationers was not efficient. A year later the boy assaulted a man with a deadly weapon and was committed to the reform school for violating his probation. On the way to the school he escaped from the probation officer. "It would probably have cost the county," says Judge McFarland, "$50 to have recaptured this boy." Had he been caught he would have remained in the reform school until 21 years of age, or until placed on parole because of long continued good conduct. But it was not the policy of the County Commissioners to spend money recapturing escaped juveniles, and to-day, at 19 years of age, the boy is held on the charge of murder. One trial has resulted in a hung jury and he is to be tried again. "It is fair to estimate," says Judge McFarland, "that these two trials will cost the tax payers of Shawnee County $1,000." If the boy should be convicted and given a life sentence, it will cost more than that, for he will be a financial burden to the State of Kansas for many years to come.

Still more direct evidence may be summoned. In Kansas City last year extensive use was made of probation and parole and efficient supervision was given all offenders who obtained their liberty under these conditions. Over $9,651.00 was collected by the parole department from delinquent fathers, and paid to the support of wives and children. The community savings in a system which will support deserted families from the incomes of deserting husbands, instead of from charity, and which will turn prisoners into producers, instead of jailing them at the expense of the taxpayers, is certainly evident. Approximately $280,000.00 was earned in

wages by those on parole, most of them, under Topeka's methods, would have been in jail, financial burdens on the community.

Again, in Kansas City last year, counting the value of the labor of prisoners put into improvements, the municipal farm paid a net profit to the city of $2,630.36. Moreover, the superintendent estimates that, with a sufficient acreage of tillable land, the institution can be put permanently on a self-supporting basis. In Topeka, prisoners, except for a small amount of rock broken at the city jail, are in no way self-supporting. While it will take a considerable sum to establish a farm institution, even if prisoners' labor is utilized to the fullest extent, there can be little doubt that once established it could be operated at a much smaller expense than the present jails. With a sufficient acreage it might even achieve a self-supporting basis.

On the second point it may be said that as long as 2029 arrests are made in a single year—one to every 22 persons, or one to every five families—by no means can conditions be considered satisfactory. Thirty-three per cent were of persons arrested more than once during the year. One hundred fifty-five were arrested twice, 48 three times, 24 four times, 6 five times, 6 six times, 5 seven times, 1 nine times and 1 ten times. Allow for the fact that a fourth of all arrests are of non-residents, not likely to be arrested more than once, and it becomes evident that over 44 per cent—nearly one-half—of all arrests of Topeka residents are of repeaters. If one considers that these figures are for a single year, and that many follow the same course year after year, it is seen that in Topeka is a large group of persons who pass in and out of her jails with almost precise regularity.

Many of these are intemperate drinkers. The liquor habit has its grip upon them, and usually their environment has played toward their downfall. They are arrested and thrown into jail. No effort is made to free them from their habit, or to strengthen them physically. They are confined under conditions which tend to pull down instead of up. At the end of their terms they are turned out not better but, if anything, less able to meet the problems of life than when they went in. In this condition they are sent back to the

environment where they got into trouble, with no hand to help them. As may be expected they fall again and again, and repeat the old cycle of jail experience. The average citizen, and certainly those with convictions on public matters, will hardly view as satisfactory such a condition when other cities—nearby cities, have caught the spirit of the new penology and have abandoned the old methods as unsuited to modern needs and out of step with scientific advance.

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CONTENTS

		PAGE
I.	LEGAL LIMITATIONS IN TOPEKA PUBLIC WORK	3
II.	GENERAL ADMINISTRATIVE AND FINANCIAL PROCEDURES	5
1.	City Methods and Business Methods	5
2.	Sale of Bonds	8
3.	Bank Balances	8
4.	Fundamentals of Organization	9
5.	The Principle of Sinking Funds	13
6.	Bndget	14
7.	Adit and Payment of Claims	17
8.	Cost Accounting	19
9.	Taxes	20
10.	Licenses	21
III.	DEPARTMENT ADMINISTRATION	23
1.	Street Department	23
2.	Parks	31
3.	Collection and Disposal of Garbage	33
4.	Water Works	34
5.	Fire Department	36
6.	Milk Inspection	38
7.	School Finance	39
9.	General Office System	40
8.	Weights and Measures	40
IV.	SUMMARY OF LEGISLATIVE NEXT STEPS	41

FOREWORD

Topeka by inviting an investigation of her municipal administration, evinced a willingness to have faults discussed that progress might ensue. Criticism made will not hurt Topeka — unless perchance the faults remain unremedied. Better administration each year is the slogan suggested, the best administration the ideal; for no city can attain the ideal at one step.

Every portion of this investigation pointed to the fact that Topeka has been and is progressing. Had this report been aimed to explain the residential and commercial advantages of Topeka, must stress would have been laid on Topeka's evident public spirit, her wide and well-ordered streets, exceptional "White Way" district, her shade trees, park areas, large mileage of paved streets, successful bond sales and comparatively low tax rates. Besides that, the evident desire of present public officials to make each department efficient and economical should not be passed without comment, for much was found to commend in every department examined.

The report is solely for the purpose of making constructive suggestions relating to Topeka's administration and arousing citizen interest to the point of continuous co-operation. The suggestions are of several classes. Some, if adopted, will immediately produce better results at lower expenditures. Some will not particularly affect Topeka to-day, but will steer away from serious future dangers. Others are of such a nature that until they are adopted the best in Topeka does not seem possible. For example, it may be difficult to prove that a change of accounting methods will definitely accomplish this or that specific or tangible thing; but the best cannot be attained without such reorganization. The suggestions which follow are not solely personal opinions: they are based upon the experience of other cities where their success has proved them sound.

The writer wishes to thank particularly the city officials who in every instance co-operated with the Survey, and without whose generous assistance it would have been impossible to make the investigation within the limited time.

MUNICIPAL ADMINISTRATION IN TOPEKA

When Topeka adopted commission government, it went on record for better city adminstration, and as one of the first cities to adopt this form of government, its municipal administration has been watched from many parts of the country. In view of the advanced ground taken, citizens will be interested not so much in comparisons between Topeka and the average city as in seeing how the city measures up with the best to be found in other American municipalities.

There are those who believe that commission government in Topeka has not been a success. Others point out definite progress in the city's administration since the adoption of the new form of government, and therefore claim that the commission plan has proved itself in Topeka and has come to stay. It is the opinion of the writer that few of the present defects in Topeka's administration are due to commission government. Some excellent results have followed the adoption of commission rule; but it must be thoroughly understood that good administration comes by development and not by legislation alone.

When Topeka adopted this new form the most distinctive changes which took place were a reduction in the number of elective officers, a change in the method of their election and the creation of five separate departments. Matters of equal, if not of more, importance evidently remain about the same — such for example as, the accounting system, general administrative methods, limitations in taxation, etc. Commission government of itself furnished only better tools for the public work.

I. LEGAL LIMITATIONS TO EFFICIENT PUBLIC WORK

The Topeka charter disregards many of the principles of proper organization and administration. It completely ignores certain elements of business administration. It shows the earmarks of compilation, rather than constructive study and planning. By it the commissioners are not made "responsible" be-

cause they are too limited in powers, and proper publicity is not insured. Their division of duties is in some instances unscientific, and little emphasis is placed on that functional organization which competition has developed to the highest efficiency in private business. Yet despite the legislative changes which still clearly need to be made, much may be accomplished under the present laws by the adoption of better methods. A few suggested changes in the law are summarized at the end of this report. One of the first changes to be considered is the repeal of mandatory tax limits for special purposes, and the substitution of one general limit.

In theory commission government is expected closely to follow out the analogy to a board of directors in private business. In Topeka the resemblance is slight. At every step the commissioners are limited and hindered by existing laws, which as a scheme of government are not consistent with the advanced legislative programs usually being backed in the state of Kansas. For example, the purpose for which the commissioners may levy taxes and the limit which may be raised for each purpose are absolutely fixed in a large number of cases. The tabulation below shows details of these limitations:

Not to exceed a $.00400 tax for general fund
Not to exceed a $.00100 tax for water fund
Nto to exceed a $.00025 tax for judgment fund
Not to exceed a $.00050 tax for park fund
Not to exceed a $.00025 tax for library fund
Not to exceed a $.00060 tax for lighting fund
Not to exceed a $.00050 tax for bridge fund
Not to exceed a $.000125 tax for music fund
Not to exceed a $.00033⅓ tax for special lighting

Mandatory Legislation: The State Fixes the City Budget

Mandatory state legislation for city expenditures has bad effects. An extreme case of such legislation was found in Hoboken, N. J., where the budget of the Health Department was based, not on a fixed sum, but on a very small appropriation plus the dog licenses of the year. The health work of Hoboken thus depended very largely upon the number of dogs licensed annually.

Nothing can be more fundamental in business administra-

tion than the proposition that the annual expenditures for each city purpose should be determined by the community needs for the year. Nothing is more illogical than to have it determined by the guess of the legislature, particularly when this guess is made several years in advance. Added to the administrative difficulties of the commissioners, they are now unable to adjust their funds to meet circumstances and necessities, but must keep each fund separate, not only for the year, but every balance must be turned over to the same fund the next year. Until 1913 the "general fund" of four mills was subdivided into two funds of two mills each, the "general fund" and "the general improvement fund." This limitation was so onerous that a special appeal was made to the legislature, and the city may now levy a full four mill tax for these joint purposes. Why not continue this beneficial reform? It is unbelievable that the community needs of Topeka will make necessary raising just this particular amount this year and all other years. It is nearer the truth that the program of the city is being framed arbitrarily by the legislature, rather than by the commissioners. The proper theory is to trust the commissioners with discretion and to hold them responsible for results.

II. GENERAL ADMINISTRATIVE AND FINANCIAL PROCEDURES

City Methods and Business Methods

Topeka is still handicapped by the idea and to some extent by the fact that tax-payers do not expect strictly business methods in the public offices. About the most unanswerable argument advanced to prove that a city cannot administer its affairs by the same business principles adopted by private corporations is expressed in the one word "because." This argument, moreover, is brief, and sanctioned by custom, but it is not altogether convincing. There *is*, however, a point of difference between city and private business. The city has more "stockholders," and its stock is *not* "non-assessable." Therefore it should give greater publicity to its work, its plans and its results. Topeka gives much less of this than the average private concern.

Commission government substituted centralization of responsibility for the old time system of checks and balances. But in Topeka sufficient emphasis is not laid upon the only

means of making centralization of responsibility effective, that is, upon the publication of sufficient facts on city matters that a correct judgment of administration can be drawn. With adequate publicity, discretionary powers may safely be granted public officials, where otherwise it might be unsafe.

The city to-day does not publish departmental or general reports, either financial or explanatory. The only report required by the charter is one showing cash balances, which only checks up the treasurer and shows the conditions of cash for the one quarter. Nothing at all is published giving a view of the financial operations for the year. This quarterly report could well be omitted since it relates only to the treasurer's cash and since personal auditing of the treasurer's accounts is the only test for the accuracy and honesty of his stewardship.

Many essential facts cannot now be ascertained from the city books without analysis. For example, the books do not show the totals of uncollected taxes, the assets of the sinking funds or the total value of city properties. On the other hand, successful business corporations give certain balance sheets and operation accounts from which the officers, directors and stockholders can ascertain how their property has been administered for the past year or years.

If one wishes to ascertain his own financial condition he would not limit himself solely to his bank balance; he is equally interested to know what he owes and what is owed him. But the accounts of Topeka in general may be said to be solely upon this cash basis. This is not enough. The accounts should also include revenues and liabilities, and thus show what is due the city, and what the city is obligated to pay. For example, unpaid bills are as properly an expense of the year as bills that are paid; and receivable taxes, allowing a per cent for loss, are as much a revenue as taxes collected. Moreover, the city should have an inventory of its property, stores, etc., brought up to date annually; and these valuations should be used in the annual balance sheets showing assets and liabilities. A comparison of balance sheets for the various years will then show whether the general financial condition of the city is tending toward better or worse.

Of equal importance are yearly operation and maintenance accounts of the "general fund," i. e., of funds other than spe-

A Current Operation and Maintenance Account Shown in Simple Terms

(This statement relates only to matters of current or regular administration — such as salaries, fire department, interest on city bonds, etc. It excludes everything which is due or chargeable to any other year.)

(For the Whole Fiscal Year)

EXPENSES		REVENUES		
Expenditures. . . .	.. . . .	Cash received—		.....
Bills — audited but unpaid.	.....	Taxes [2].	.....	
Accounts outstanding—not audited [3]	. . .	Interest and penalties on taxes.	.....	
		Licenses.	.....	
		Misc. revenues..	.....	
		Accrued—but unpaid.		.....
		Taxes [2].	. . . .	
		Less reserve for loss....	. . . .	
		Misc. revenues	. . . .	
Surplus for year [1].	.....	Deficit for year [1].		.....
Total.....	$.....	Total....		$.....

[1] If there is a surplus, of course there is no deficit, and vice-versa. One of these entries should be eliminated in an actual balance sheet.

[2] The sum of the taxes collected and uncollected, should equal the total tax levy.

[3] No book record is at present kept of outstanding accounts in Topeka, hence this kind of a report cannot now be given.

cial or assessment funds. This account eliminates receipts from sale of bonds, special assessments, etc., and the cost of permanent improvement work, such as pavements; but it shows whether the general administration of the year ended in a surplus or deficit. If a deficit for the year is found to exist plans should be laid that it can be met the next year, so the city will not become permanently in debt. Taxes, license fees and general revenues due during the year, whether pair or unpaid, as long as they are due, would be on the revenue side; expenses for salaries, purchases, etc., whether paid or not, would be on the expense side of this account. In general, everything which is an annual charge and is raised by taxation or current revenue, would be shown in the balance sheets of the "General Ac-

count." Improvements of a permanent nature, and which are usually paid for by bonds, would be separately shown in balance sheets of "Capital" or "Permanent Improvement Accounts," because they have nothing to do with the regular expense of the year's administration. Details of these accounts are suggested in the table on page 7.

Sale of Bonds

The Commissioner of Finance is greatly to be commended for the recent successful sale locally of city bonds. By selling direct to the ultimate purchasers, better rates of interest have been obtained and it has also been possible to sell the bonds as the public work for which they were issued progressed, rather than in advance, which necessitates a temporary deposit in the banks at a low rate of interest. The present system requiring all petitions for public improvement to be presented before December 15th, has made it possible to include the first installment for benefit assessments in the succeeding tax levy, and this also is a source of economy to the city.

Bank Balances

While most cities carry on their financial operations by borrowing money until the time of the tax levy, Topeka is to be congratulated on levying its taxes in advance. But this results in having practically always on hand a bank balance of $240,000 to $350,000. At the time of this investigation interest was received at the rate of 2 per cent on all daily balances and the funds were rather evenly distributed among all the banks of the city. The cash balances shown in the quarterly reports in 1913 were:

January 1, 1913	$273,262.88
April 1, 1913	415,184.68
July 1, 1913	410,967.39
October 1, 1913	305,977.89
Average	$351,348.21

The rate of interest is entirely too low, when it is taken into consideration that there is always a large balance on hand. The Commissioner of Finance, however, is working out a plan[1] for materially increasing the rate of interest.

[1] The plan went into effect January 1, 1914, whereby the city is to receive 3 per cent interest on $200,000 of these deposits.

The fact remains that a continuous balance of this size is not essential in Topeka, and it is obvious that it will be difficult, if not impossible, to obtain for the city the same rate of interest on these deposits as is paid by the city on its bonds. It would be advisable for Topeka to plan some means of greatly reducing this balance; for example, by temporarily using the funds for other purposes, such as funding special improvement work. It is probable that before such a plan could be put into operation it would be necessary to abolish some present statutory limitations, and to authorize the city under certain circumstances to borrow money temporarily in small sums. Such legislation and financial changes will, of course, need further study and perhaps would not be possible until the public decide that proper publicity is more effective than statutory limitations. This, incidentally, forms a good illustration of what may be saved if the commissioners are given more discretionary power. Of course there are times of the year when balances must be placed on deposit, but no private organization doing an equal amount of business, say of $1,000,000 per year, would keep such a large daily balance on hand.

Fundamentals of Organization

Topeka does not follow accepted principles of efficiency organization in its administration. This is partly due to charter defects.

If commission government, as it usually exists, is to be criticised from a theoretical standpoint, the criticism would seem to be that it follows the military form of organization, rather than the commercial. The first is a relic of medieval times, the second a product of modern efficiency. In military organizations one officer is supreme over all. His orders are executed by sub-ordinates, who are in turn supreme over the men under them, regardless of the functions they carry out. But in commercial organizations each officer is supreme over his *function* only. Commercial experience has shown the tremendous advantage of the latter form. Applying it to the city, it means that one official would have entire control, say, over all accounts, forms and methods of cost computation, and so on — a power which, for example, is exercised by the Comp-

troller's office of the City of New York, and by the auditing and accounting department of railroad corporations. Matters relating to engineering would be referred exclusively to an engineering department, purchasing to a purchasing department, and so on. There is a tendency in Topeka and in many commission ruled cities to overlook this principle and by creating a number of small monarchies, to lose benefits that might come through specialized knowledge and co-operation. Such an arrangement need not interfere with the control of each commissioner over his own department. Rather it would relieve him of duties which obviously take much time if he would specialize in them, and by consolidation it would reduce the number of highly paid employes otherwise necessary. Applying this to Topeka it would mean:

1. That the commissioner of finance or the city auditor exercise more control over the accounting forms and reports of all departments. These departmental records would be placed in the same control as the general books of the main office.

2. That all work in which the advice or services of an engineer are useful, would pass through the engineer's office. (This is more nearly provided for in charter theory than is taken advantage of in actual practice in Topeka. For example, the engineer had apparently never been called upon to advise in street cleaning or dirt road improvement.)

3. That all city purchasing should be done by some designated officer who in addition to his other duties would act as a purchasing agent. This includes the school system in such supplies as are used in common. To make this practicable, co-operation between the various departments and officers is necessary. They could aid him in his purchases, particularly until he is thoroughly familiar with the work. Petty cash funds might be established permitting of cash purchases in case of necessity by the various departments without going through the routine of standard purchases: for the system must be practical. Central purchasing will permit of uniform specifications, a city storehouse and annual contracts, according to the custom in business corporations. The plan will break down without co-operation, but would prove a most satisfactory ad-

junct and a source of economy if adopted in the right spirit and with proper flexibility.

Does Topeka "Pay as You Go?"

The answer is no. If Topeka had followed this plan there would not now be outstanding $300,600 in "refunding" bonds. Bonds, like other debts, should be paid when due. If not paid then, they are thrown upon future generations who have not shared in the benefits for which they were contracted. A complete statement of outstanding general bonds of the city is shown on the next page.

These refunding bonds annually call for $13,446.80 in interest. Three issues of these bonds are due before 1916, and it would be impracticable to arrange to pay them at maturity and at the same time annually to provide sinking funds for all other issues. Assuming that these three issues are again refunded and sinking funds provided on a 20-year basis (which will call for an annual sinking fund in round numbers of $1,600), then this failure in the past to "pay as you go" will cost annually, as follows:

$13,446.80	Interest on all "refunding" bonds (see page 12).
1,600.00	Sinking Fund for the three issues due before 1916.
17,517.29	Sinking Fund for other issues (first sub-total in table on next page).
$32,564.09	Total.

With a tax rate of seven mills, this would tie up $4,652,000 of assessable valuation each year to pay debts which should have been paid from past tax levies.

In failing to provide an adequate sinking fund for all bonds, Topeka is doing the same thing to-day. The table shows that an annual sinking fund appropriation of over $36,000 is now needed to retire outstanding bonds as they fall due, not taking into account the three issues falling due before 1916, which should materially increase this sum. In 1913 only $25,000 was set aside for this purpose, and even that sum was much more than has formerly been set aside for sinking fund purposes.

Just how much should be paid by the city every year to retire the bonded debts is an important question which should be solved by adopting a fixed program to be adhered to by suc-

General Bonds of the City.

Purpose	Issued	Due	Rate of interest	Amount of issue	Annual interest payable	Annual sinking fund requirement (3½% int.)
	REFUNDING BONDS DUE AFTER 1916					
(Issued to pay bonds which should have been paid from a sinking fund when they fell due, but no sinking fund was provided.)	1899	1919	3¾%	$ 13,000.00	$ 487.50	$ 2,424.34
	1904	1924	4½%	79,100.00	3,559.30	6,743.27
	1904	1924	4½%	18,000.00	810.00	1,534.50
	1906	1926	4½%	20,000.00	900.00	1,369.66
	1910	1930	4½%	50,000.00	2,250.00	2,384.25
	1912	1932	4½%	75,000.00	3,375.00	3,061.27
First sub-total				$255,100.00	$11,381.80	$17,517.39
	REFUNDING BONDS DUE BEFORE 1916					
(Same as above)		1914	4½%	$21,000.00	$945.00	(Sinking fund now impractical should have been begun earlier)
		1915	4½%	21,000.00	945.00	
		1915	5 %	3,500.00	175.00	
Second sub-total				$300,600.00	$13,446.80	
	MISCELLANEOUS BONDS					
City Hall	1900	1920	4 %	$ 60,000.00	$ 2,400.00	$ 9,160.09
Bridge	1905	1925	4½%	24,200.00	1,089.00	1,841.38
Bridge	1905	1925	4½%	9,866.00	443.97	750.63
Electric Light	1909	1929	4½%	40,000.00	1,800.00	2,073.00
Bridge	1910	1930	4½%	4,101.00	184.55	195.57
Bridge	1910	1930	4½%	39,411.41	1,773.51	1,879.31
Crematory	1910	1930	4½%	17,700.00	796.50	843.81
A. T. & S. F.	1901	1931	4 %	59,000.00	2,360.00	2,598.36
Third sub-total				$554,878.47	$24,294.33	$36,859.44
	WATER BONDS					
	1904	1924	4 %	$ 350,000.00	$14,000.00	(Supposed to be provided for from water revenues)
	1896	1926	5 %	270,000.00	10,800.00	
Total—Water Bonds				$ 620,000.00	$24,800.00	
GRAND TOTAL				$1,174,878.41	$49,094.33	

ceeding administrations. It is, moreover, a subject of vital importance and can only be satisfactorily worked out by a close study of local conditions. It is certain that the present appropriation is too small; somewhere near $40,000 would probably be found to be the sum actually needed.

In the future the issuance of serial bonds only is recommended. These issues are arranged so a certain number of bonds fall due each year. They are then paid from the tax levy of the year. The method insures the retirement of bonds when due, and is being generally adopted. When bonds are issued so that the entire issue falls due on one date, it is obviously impossible to raise sufficient money to retire the issue in one tax levy. So it becomes necessary to set aside a little each year, accumulating it until the sum is large enough at the maturity of the bonds to retire them.

The Principle of Sinking Funds

We usually think that a most unfair advantage was taken of the Indians who sold the site of the City of New York for 24 dollars. But 24 dollars set aside at six per cent compound interest for the 300 years since would amount to about $943,296,000. Rather a tidy sum; and it illustrates the danger of deferred payments and failure to pay debts promptly.

When a bond issue of $20,000 is refunded by 20-year bonds, that is, not retired at maturity but paid by issuing new bonds, the annual interest at 4½ per cent on these bonds, if invested and accumulated at 4½ per cent compound interest, would amount in 20 years to over $28,000, which is more than the original bond issue. Beside that the original $20,000 must be paid.

But it is not necessary to set aside $1,000 each year for 20 years to retire a $20,000 issue of bonds, for each $1,000 when invested accumulates because of the interest it earns. Money so set aside make up what is called the "Sinking Fund," and assuming it earns an average of 3½ per cent annually, $707.22 set aside annually and interest upon it compounded annually for 20 years will amount to $20,000. This is the principle on which sinking fund requirements are computed. As already noted, Topeka has neglected to make any such provisions.

Sinking funds are usually not desirable because they are

often neglected, misappropriated, or lost through failure of investment. Besides, they are an economic loss because of brokerage commissions, low interest, and lack of continuous investment. For that reason, serial bonds, which need no sinking fund, are recommended. But when bonds are not of the serial type, some sinking fund provisions are absolutely essential.

Budget

A few years ago the average visitor at a "Budget Exhibit" went with the expectation of seeing a new and strange kind of animal. To-day even housewives (supposedly a most non-mathematical class) are thinking out annual budgets for the home. The usefulness of budgets has become more and more apparent.

A city budget should express financially the program planned for the year. But no budget can express any program unless it is sufficiently detailed and itemized to make it certain that some program was in mind when it was framed and that such a program must be carried out if the budget is followed. The first weakness in the Topeka budget is that it is not sufficiently itemized to insure this. Its second fault is that it is not made according to standard forms and classifications which would admit of comparisons with other cities. Kansas City, Kansas, this past year has corrected such a fault through a special act of the legislature. Present laws would probably prevent an ideal local budget, but the laws undoubtedly could be amended without serious difficulty.

Another point in favor of a proper budget is that the books of account and conditions of funds will be kept and shown in terms of the budget, making it always possible to compare the program, costs and results of one year with that of preceding years. This is of value particularly to new officials and to a public interested in efficiency.

By law, all local balances remaining in funds at the end of the year are added to that fund for the next year. This is not the best practice. The amount of appropriation for a particular purpose for the year should be based on community needs, and be as nearly as possible the right amount. If it is more than enough, it encourages extravagance: if less, it usually means that something remains undone which should have

been done. It is therefore most important that each administrator should have given him just what is needed.

The budget is fixed in July, and any scheme whereby the official is dependent upon an uncertain balance from this year to carry him through next year does not tend toward the best results. A better and more customary practice is to require that all unused balances be turned over to the general fund to reduce taxation for the next year; or if it is known in time that a surplus will be available in any appropriation, it might be re-appropriated during the year to some other purpose which has unexpectedly called for more than its appropriation.

SUGGESTED FUNCTIONAL ARRANGEMENT OF A BUDGET

Functional classification	Total	Salaries and services	Supplies and material	Other items*
General government....	$.	$.....	$.....	$. .....
Protection to person and property.....	.....	.....	.....	.....
Conservation of health.	.....	.....	.....	.....
Sanitation, or promotion of cleanliness...	.....	.....	.....	.....
Highways.	.....	.....	.....	.....
Charities and corrections	.....	.....	.....	.....
Recreation.	.....	.....	.....	.....
Public utilities.....	.....	.....	.....	.....
Total.....	$.....	$.....	$.....	$.....

*An ideal arrangement is to further sub-divide this group into (a) transportation and communication, (b) contractual service, as lighting, repairs, by contract, etc., (c) replacement of structures and equipment, (d) purchase and betterment to land, structures and equipment, (e) fixed charges, as debt service, rent, insurance, judgments, etc.

DISTRIBUTION OF FUNDS WITHIN ONE OF THE GENERAL DIVISIONS SHOWN ABOVE

Protection to Person and Property	Total	Salaries and services	Supplies and materials	Other items
Police Department.....	$.	$.....	$.....	$. .....
Fire Department.....	.....	.....	.....	.....
Building Inspection.....	.....	.....	.....	.....
Plumbing Inspection...	.....	.....	.....	.....
Inspector of Weights and Measures.....	.....	.....	.....	.....
Public Pound, etc.....	.....	.....	.....	.....
Total.....	$.....	$.....	$.....	$.....

At the bottom of the previous page two tabular outlines are shown. The first sets forth what is suggested as a proper budget for the city, and the second gives a detailed arrangement of one of the main divisions included in the first table.

The detailed arrangement of appropriations in each department is the next step, and is suggested in some such form as below:

PARKS

Salaries and services—		$.....
Clerical service.....	$.....	
Foreman at $.....	$.....	
Laborers ..... days at $..... ...	$.....	
Team hire ..... days at $..... ..	$.....	
Miscellaneous.....	$.....	
Supplies and materials—		$.....
Stationery.....	$.....	
Trees, shrubs and plants.....	$.....	
Seeds, bulbs and flowers.....	$.....	
Fertilizer.....	$.....	
Forage.....	$.....	
Lumber.....	$.....	
Sand, stone, lime and cement.....	$.....	
Other items—		$.....
Park benches.....	$.....	
Insurance.....	$.....	
Printing and advertising.....	$.....	
Purchase of land for park.....	$.....	
Total for parks.....		$.....

This classification follows the standard classification now in use. It is not intended to commit the administration absolutely to the details of the budget. The details would be subject to change for good cause, but only by resolution of the commissioners.

Finally as to budgets, it is believed that more attention should be given to forming the budget, and the following procedure is suggested:

1. That departmental heads carefully prepare itemized requests for the year stating the number of employes, rates of wages, and specific reasons for the various items requested.

2. That these requests be prepared in tentative budget

form showing in parallel columns the amounts appropriated the prior year for similar purposes, and publicity given them.

3. That budget hearings be held in which the public are invited to participate.

4. That after these hearings the budget be adopted and no appropriation changed except by regular action of the council.

Audit and Payment of Claims

If there is one thing more than another for which commission government stands, it is centralization of responsibility. To what extent does it now exist in the audit of claims? They are audited by the "O K" of the various officers — a procedure in accord with the best methods in vogue fifty years ago. These methods provide needless "red tape" and lack in emphasis upon essentials. It may be that the present practice causes no positive loss to the city, but this may be questioned. At any rate, as the city grows a change in the present methods will certainly be advisable.

It is interesting to note what different people mean when they "O K" a bill. As a rule they never intend to guarantee its correctness any further than their personal knowledge goes, and quite often they do not guarantee it that far. A prominent official in an eastern city recently "O K'd" an excessive claim, and when questioned later said: "What right have I to question the price another man puts on his work?" His "O K" covered the fact that the work was done, but not the price charged. Other officials have been found willing to audit a bill solely because sworn to. Swearing to bills is conceded generally to be a great nuisance; experience proves it ineffective and points toward the greater advantage of certification.

The best way to prepare a bill for auditing is to have each person certify only to the facts of which he has personal knowledge. The person receiving the goods certifies to that fact and as to their condition at the time. The person charged with fixing the original price, certifies as to whether the charges are correct. The auditor certifies on the bill and also on the order or contract (a precaution which should also precede entering into any contract making a charge against the city) that there

are unencumbered budget balances available sufficient to meet the expected charge. This latter provision is more effective in preventing "government by deficit" than all the mandatory laws ever enacted. As soon as a bill is presented, the auditor should then make it a charge against the appropriation on his fund ledger, as it then represents a prospective payment. Claims audited in this manner fix responsibility on the right person.

What would be said if the Standard Oil Company, for instance, required every local person who had a bill against them to come to their office and sign his name in a book before his check were given him? Yet this is exactly what the City of Topeka is requiring. It is doubtful whether any one would suggest that any of the very large business concerns are derelect in guarding their payments. Why then should the city require this? The custom in Topeka is to require the man with a bill against the city to sign a warrant register, if he lives in the city. He is then given, not a check, but a warrant; and the useless procedure of having the banks bring their warrants to the City Hall for payment afterwards follows. The custom has no precedent in modern business, and adds nothing to the accuracy or security of the city finance. It also makes unnecessary work, and tends to confuse the books, as the checks, not the warrants, are then entered in the auditor's ledger. A much simpler and better plan is to mail the claimant a voucher check, which when returned receipts for payment by indicating the date, voucher number and amount of each claim paid by this particular check. This gives control not only of local payments, but payments which are sent out of town and which under the present system are never receipted for except by the endorsement on the warrant — the latter not being a receipt in full. Under the system suggested bank balances can be checked back at irregular intervals and their accuracy thus determined. The daily balances under the present system are never absolutely certain, as banks are often paid for their warrants by checks on other banks, a procedure that is not here criticised, but cited to show that the method suggested will be equally or more effective.

It would also be possible to simplify the work of the accounting department by having pay rolls made payable to a

superintendent or foreman, and payments made by him to the men in cash. He would obtain the receipt and signature of each man on the original roll, and thus protect the city. This is no safer plan than the present system of payment by individual checks, but it causes much less detail work and at the same time has proved equally effective when properly installed. It also has the advantage of having the men receive their money direct from their foreman or superintendent, which often is an aid to foremen in getting good team work among their men.

Cost Accounting

Few things would seem more difficult than to radically increase efficiency among men engaged in cleaning sewer catch basins. However, Benjamin Welton of the New York Commissioner of Accounts office was assigned to the problem in New York City and he reduced the unit cost per cubic yard of cleaning a catch basin from $4.00 to $1.15; and it has since been reduced to a still lower amount. The first step was to find what it cost to do the work; the next, to establish standards, and then to improve the standards.

It is impossible intelligently to criticise the efficiency of the day laborers of Topeka, because in but few instances is there any basis except guess work to start from; but there can be little doubt but that the installation of cost accounting systems would produce the same results in Topeka as they have elsewhere, and thereby lower unit costs. This would work out in many ways. When a new pavement is to be laid, besides knowing its cost and durability it is extremely important to know how much it will later cost to clean that kind of pavement. Until tests are made with present pavements, Topeka is without that knowledge, and may lose money by choosing the pavement more costly to maintain. Again if it is found that one man or one gang does the same piece of work in much less time than another man or gang, it stands to reason, other things being equal, that both jobs should be done at somewhere near the lower price. As soon as the efficiency of the better gang is increased by better planning and methods, a new standard is established which, in so far as it does not run counter to the social well-being of the community, should be lived up to. This

does not mean that any man should work to his own injury but does mean that he should work to the best advantage, and by the best methods and to a reasonable and known efficiency.

Taxes

While the levying and collection of taxes is a county, not a city matter, it is so vitally important to the city as to deserve notice here. In general as tax systems go, the Topeka system deserves favorable comment. From what could be observed in a short period the principles of assessment and collection are modern and apparently well administered. Very little complaint is made regarding assessed valuations, and the method used is such that good results may be expected. It is unfortunate, however, that years ago a lot and block system of assessment maps was not adopted. The city has been built by adding new plots, usually laid out by real-estate dealers, and as a consequence the designations of the parcels are somewhat irregular. Some of the land more recently added to the city has not been properly mapped and plotted. It is important that this be looked after as soon as possible.

The field books of the assessors show the valuations of the land without improvements and its improved valuation separately. It has been found in other places that an assessment map showing land valuations in terms of front foot values is useful, not only to the assessors, but when publicly displayed is useful to taxpayers in obtaining a more even and proportionate tax assessment.

In Topeka the value of land and of improvements is entered in one sum on the assessment role, although shown separately on the field books. It is a better procedure also to show the land value separately from the improvement values on the assessment roll. This system is now being adopted quite universally, but is not required by the Kansas law.

Tax receipts are now written with an indelible pencil and a carbon of each receipt is kept. The system in use in Shawnee County is giving good results, but it is suggested that a new method which prepares all tax receipts in advance by means of carbon copies of the roll itself, would require less clerical work and further reduce the possibilities of error. This system is

used in New York City, in Erie County, N. Y., and in several other places, and has proved very satisfactory.

No adjustment with the city seems to have been made from sales of uncollected taxes where the property was not bought in by an outsider. Probably land of this character is of little value; nevertheless it would be well for the city to obtain title at once, as the land might at some time become valuable for city purposes — for example, if boulevards or parks were to be constructed in outlying districts or along creeks where land is now comparatively valueless.

The city clerk gives a list of all assessments for paving, etc., to the county clerk and from this annual list the annual collections are made. Much detail work could be obviated if these lists were originally prepared in duplicate and after being properly authenticated delivered to the county clerk. Possibly some changes in the law would be necessary to make this procedure legal.

Licenses

All licenses should be issued and paid for at the city clerk's office. Dog licenses should be handled by the city clerk in the same way. The police should report those operating without licenses.

The procedure and financial form of licenses in Topeka can be greatly improved upon. Approximately $20,000 is annually collected from licenses, which makes this source of revenue no unimportant one. The usual theory in collecting taxes or licenses is that the taxpayer or licensee should come to the City Hall and there pay his tax or license.

Topeka has drifted toward the rather unusual custom of soliciting its licenses. A considerable portion of the time of the inspector is taken up in notifying parties that a license should be taken out and in collecting the money. In the long run this will prove a poor plan. In the first place the Police Department should and could enforce the license ordinances by promptly warning, and if necessary, arresting all persons operating without license. The issuing of licenses should be entirely a clerical duty and attached to the office of city clerk. To accomplish this it would be necessary to inaugurate a change of policy and penalize persons who do not promptly take out

licenses, possibly varying the penalty according to the condition of the case by making it rather light where there is a reasonable excuse for their not knowing the provisions of the ordinance, although the custom of licensing occupations in Kansas is so well established that it is difficult to conceive that many would be uninformed.

A stub is kept of all licenses issued but the stub is not a duplicate of the original. A better practice would be to have only a few general forms of licenses and keep a pen carbon copy of each as a stub. These would be bound in a book and given consecutive numbers, the original license being attached to the copy by perforation.

Moreover, absolute control over licenses should be insured by having a scale of amounts printed along the lines where the license is torn off, and using a metal guide in detaching the license. This system is followed by the Post Office in issuing money orders. The person receiving the license would naturally note the amount called for as shown by the edge of his license, and the license being printed, the total shown on the edge of the stubs would certify the amount which should be turned over from licenses. The license account should also be kept in such a manner that a distribution of each sum received would be made in columns with the headings showing the different classes of licenses, thus permitting a continuous analysis of rates from the various classes of licenses, which now must be drawn off monthly.

At present the license inspector draws off continuously the names of persons who are to be notified that their license expires, but the system of keeping tabs on the date of expiration is not entirely satisfactory. A card index which would show by visible tabs the date of expiration is suggested. It is the present custom to give a receipt for a license and later have the license issued from the receipt. These receipts are often given on the street corners, and it is not easy to determine what licenses are issued for, or whether they were issued at all. By compelling all persons to pay for and receive their licenses at the City Hall this would be entirely obviated. If it is thought best to have the payment made directly to the treasurer, each license could have a place for the signature of the treasurer, thus proving its receipt and without which it would not be valid.

At present dog licenses are issued by the Sanitary Department. There is no good reason why these should not be handled with all other licenses through the city clerk.

It is important to have all licenses fall due the first of the year and by some modification of the present procedure practically all could be arranged to fall due then. At present quite a proportion of the licenses fall due at irregular intervals, which in a city the size of Topeka seems clearly unnecessary and adds to routine work.

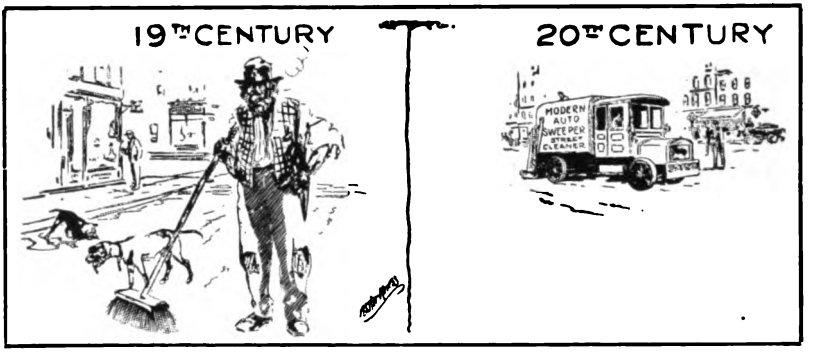
III. DEPARTMENT ADMINISTRATION

Street Department

The charter has a most serious defect in that it places cleaning of the streets under the Commissioner of Parks and Public Property, and their repair and construction under the Commissioner of Streets and Public Improvements. With much common sense, but probably little legal authority, the commissioners have put the cleaning of streets under the Commissioner of Streets and Public Improvements, where it should have been placed by the charter, but they have left the cleaning of the alleys under the Commissioner of Parks and Public Property who neither has, nor should have, adequate facilities for doing this work. This should be remedied.

Too little money is spent for street cleaning and street repair, and that which is spent does not produce the best results obtainable. Perhaps one reason for this is that no particular program is laid out in advance. It has been customary in Topeka to require the men to assemble before working hours to receive their instructions for the day, after which they proceed to the points directed, at a loss of time either to themselves or the city—in either case undesirable. In the one case the city loses service, and in the other the worker suffers unnecessary inconvenience and what seems to be a clear violation of the eight-hour day.

The city has street flushers which are successfully used on Kansas Avenue during the night. During the day they stand idle, although other streets are sorely in need of their use. No attempt has been made to make general use of the street cleaning machinery in Topeka. Years ago private industries passed largely from the use of hand labor to that of machine labor. Street machinery is available which has proved much more eco-



STREET CLEANING METHODS HAVE ADVANCED

nomical than hand labor. Most of this machinery is patented and is advertised with perhaps over-optimistic claims; and not all of it would be suitable for Topeka conditions. Without considerable study, therefore, it would not be practical to suggest *just* the details of what Topeka needs, but additional flushers, squeeges, a road roller, split log or light drags, and additional mechanical sweepers are among the apparatus suggested for investigation.

The franchises of the street car company provide that the companies should remove dirt from the space between their tracks. This is not enforced, except that at irregular intervals the company sweeps snow, and occasionally dirt, on to the adjoining pavement, where it is taken care of at the taxpayers' expense. Moreover, by faulty provisions in the franchises, street car companies are not compelled to pave with the same material or with the same foundation as the adjoining street pavement. It is possible that this might be remedied by the legislature. In any event it can be corrected at the expiration of the franchises.[1]

When this survey was made, Topeka had experienced an unprecedented rainfall, and no doubt the general condition of the paved and unpaved streets was below normal. After making allowances for this, it still must be said that the streets of Topeka are not nearly as clean as they should be. As to dirt roads a fair answer to the following question will cover the

[1] An official of the company later stated that the company several years ago adopted a policy of using the same foundation material as the city and the same class of brick. This does not apply to asphalt.

situation better than any detailed criticism. Here is Mr. Jones, who lives on a farm outside of the city. If you were trying to sell him a Topeka house and lot, could he be honestly told that the dirt road in front of his city home would be as good as the road in front of his home in the country? Any observer knows there is but one answer. Yet, his country road is less used and runs along property of comparatively small value, while the 200 miles of dirt road in Topeka front the residences of the majority of the city's population.

Courtesy of The American City.

A COMMON TYPE OF MODERN STREET CLEANING APPARATUS

At the request of those in charge of the Survey, W. S. Gearhart, State Engineer, made the following report on the dirt roads, after an examination made last December. The report applies to all dirt roads in the city, although made primarily upon roads near the city limits:

REPORT ON THE ROADS AND STREETS AT OR NEAR THE CITY LIMITS OF NORTH TOPEKA

BY W. S. GEARHART, STATE ENGINEER

"The condition of the public highways at or near the limits of most of the cities throughout the whole country is generally deplorable, and it

is to be regertted that the roads are often worst in the city's side of the line. These conditons obtain for a number of reasons, but principally, no doubt, on account of the relatively low value of the adjacent property and the division of authority at or near these points.

Topeka is no exception in this particular, for some of the main roads leading out of the city are exceptionally bad. In many cases these roads and streets are on low, wet ground, which makes them very difficult to maintain as common earth highways.

These roads should be tile drained and will have to be before it will be possible to keep them in even reasonably good condition. A line of 6-inch drain tile should be placed about three feet below the bottom of the side ditches along both sides of the road in the heavy clay and gumbo soils. One line of tile would probably be all that would be required in the lighter soils.

No road or street can be maintained economically or satisfactorily for any length of time where the sub-soil is wet. Tile draining is necessary under such conditions whether the roads are artificially surfaced or not. The cost of 6-inch drain tile placed three feet deep would be approximat ly 10 dollars per 100 feet of tile.

Wide, flat, smooth side ditches with a continuous fall from the highest to the lowest point or outlet should be provided to take care of the surface water. The ouside of the side ditches should have a slope of about 1 foot vertical to 2 feet horizontal. The earth roads should be graded and the loose earth well dragged and then rolled with an eight to ten-ton roller to thoroughly compact and smooth it. The width of these roads between the centers of the side ditches should be from 30 to 40 feet, depending upon the location and the amount of traffic. The center of the road for a width of about 20 feet should be crowned approximately one inch to the foot and the center of the road should be 18 to 30 inches above the bottom of the side ditches. The depth depending upon the character of the soil. Heavy clays and gumbo require deeper side ditches than the light soils or sand.

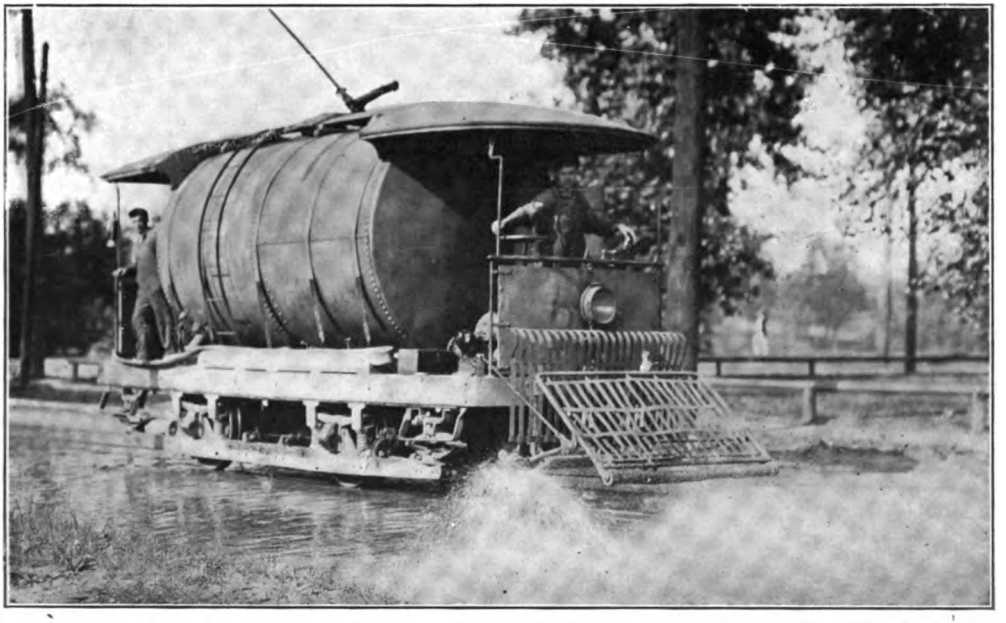
Where the roads run through low, flat, wet country it will probably be necessary to raise the roadway well up above the surrounding country in addition to putting in the tile and providing good surface drainage. This is especially important where the present roads are subject to occasional overflows.

These earth roads, when drained, tiled, graded and rolled as suggested above, and then kept well dragged whenever they need it will be satisfactory for ordinary traffic for from nine to ten months in the year.

Experience with cinder roads in the city carrying only moderately heavy traffic have demonstrated the value and economy of this type of construction. The cinders are plentiful and the only cheap, serviceable material to be had; and with the limited amount of funds available there is more opportunity to make a substantial improvement in these roads by surfacing them with cinders than by anything else.

The roads should first be surface drained, and the subsoil tiled, a road-bed prepared with shoulders at the sides to hold the cinders and then six inches of hard, clean, dustless cinders such as can be obtained at the To-

peka Edison Company plant and other places, put on and thoroughly rolled with a ten-ton roller. On top of this another six inches of the best cinders available should be placed and thoroughly rolled. The surface should then be treated with about one gallon of hot, heavy asphalt oil per square yard. If the cinders are well graded or are soft enough to crush considerably under the roller, it will be necessary to put on the hot oil before the top course is rolled. Cinder roads are especially adapted to places where good drainage cannot be obtained.



Courtesy of The American City.

AN EFFICIENT METHOD OF SPRINKLING
Used in Cleveland, O.

These roads will have to carry a large number of motor vehicles and should be made wide enough to carry rapidly moving double track traffic. This will require that the minimum surfaced width be not less than 18 feet, and better 20 feet, with earth shoulders four feet or more wide.

Where the best gravel in Shawnee County can be obtained at a reasonable price it will, no doubt, give satisfactory results for moderate traffic provided the roads are drained the same as advised above for earth road improvement, and a depth of not less than 12 inches of gravel is carefully placed and thoroughly rolled to compact it and give a uniform, even surface.

Shawnee County has already built a large amount of gravel road and

the best material available in the county is showing up exceptionlly well. The one criticism of these gravel roads is that apparently not enough care has been used in placing and distributing the gravel, for in many places the gravel surfaces are wavy and full of depressions. These uneven surfaces are caused by dumping the gravel from the wagons directly to the roadbed. These defects can be overcome by unloading the wagons on dumping boards and then shoveling the material to the prepared base. In this way the thickness of the gravel surface can be kept uniform and there will be no places where the material is more dense than it is in others, as is the case now. The extra cost of handling the gravel as suggested is small and the improvement in the road surfaces will more than justify the expense. This best Shawnee County gravel compacts well, sheds water, forms a good surface, and does not get especially dusty during prolonged dry spells.

Where the traffic is heavy or the soil conditions bad a concrete roadway will be more economical than a cinder or gravel surface when first cost and the maintenance expense for a period of years is considered. The cost of a 7-inch concrete pavement properly built would probably be from $1.00 to $1.25 per square yard, depending upon the length of haul for materials and the amount of grading necessary.

Concrete pavements are being used extensively in many cities, especially for residence districts, on account of their low first cost, their smooth surface and their durability. The width of the concrete on these main traveled roads should be not less than 18 feet and better 20 feet with four-foot shoulders.

On several of the main roads leading into Topeka the sand is very bad. These sand roads can be materially improved at a low cost by claying them and mixing the sand and clay, as has been done extensively through the sand hills along the Arkansas River.

Better results, however, will be obtained if these sand roads are oiled, provided not less than three gallons of heavy asphalt oil per square yard of road surface is used. This would be sufficient to thoroughly oil a thickness of about six inches of the road surface. The oil used should be carefully selected and the work done under the supervision of a competent engineer.

Surface treatment with light oils is of very little value and oil should not be used on clay soils in residence districts on account of the disagreeable oily dust.

I have conferred with the City Engineer, Mr. A. R. Young, and the County Engineer, Mr. Walter Arnold, concerning the improvement of these roads and acknowledgement is due them for the valuable assistance rendered. On account of the difficulties in financing the work it is impractical at this time to make definite recommendations concerning the improvement of specific roads."

The various points as to street cleaning may be summed up as follows:

1. That all street and alley cleaning be put under the Commissioner of Streets and Public Improvements.

2. That more use of now-owned street cleaning apparatus be made.

3. That more modern labor saving apparatus be purchased.

4. That a larger appropriation and greater efficiency is needed in street cleaning.

5. That dirt roads be given immediate attention.

In addition it goes without argument that rubbish cans should be provided throughout the city; and the police, as already suggested in the survey report on "Delinquency and Corrections" by Zenas L. Potter, should report bad street conditions.

Pavements

The engineering work, the supervision, and the administration of constructing new paveemnts is greatly to be commended. The present uniform specifications are up-to-date, and new pavements are being constructed in a manner which would save the city thousands of dollars had the same intelligence been shown 20 or even ten years ago. But in the past Topeka seems to have been one of the last cities in the country to realize that no pavement is of value unless it rests upon a concrete foundation. The Topeka plan of building a brick pavement with a foundation of brick seconds, has cost hundreds of thousands of dollars. The present paving specifications are made with the interests of the taxpayers in view, rather than of any particular brick or paving company, which could not be said of some former specifications. It is a serious question if it would not pay the city to tear up some of its improperly constructed pavements, although still serviceable, because of the present excessive cost of keeping them properly cleaned.

In constructing new pavements it would be advisable always to bring them to the curb line at crossings, thus avoiding any step between the sidewalk and the pavement. This has been done in some cases, although an iron gutter bridge has usually been used, which is both unsightly, dangerous and likely to clog. It has been customary to construct pavements only upon the request of property owners. What is more advisable is that the commissioners should have the power to con-

struct needed pavements without private initiative, as the population of a large city will sooner or later demand this.

Again, it is customary to permit individuals, under bond, to open the streets and fill the openings, under city inspection. This practice has proved unsatisfactory in practically every city where it has been tried, but is said to have given good results in Topeka, due to the extreme care used in inspection. Whether this care will always be maintained is another question, and at the slightest indications of bad results, Topeka would do well to adopt the modern rule that such openings must be made and closed by a street gang, and the costs charged to the individual.

Little sprinkling is done by the city, although it can and should be done in this way. It seems axiomatic that whatever is for the public good and can best be done by the community at large should always be done in that way.

No regular inspection of repairs to be made is provided for, and it is admitted that the repair gangs are weeks behind in their work. This is not properly meeting community needs, nor is it economy, when it is remembered that "a stitch in time saves nine," particularly in all road work. Little if any cost data is obtainable in this department except where the work is under the supervision of the City Engineer.

More detailed suggestions growing out of this discussion are as follows: That the present failure to repair all pavement defects when they first occur, costing the city thousands of dollars annually, be remedied; that better inspection with police aid, would help to that end; that all repair work be shown on a celluloid map and erased when completed, thus giving office control over all work; that the cost of maintenance on each pavement should be accurately kept; that street car companies should clean the space for which they are responsible; that pavements be brought to curb line at crossings without gutter bridges; that the council order pavements, determine the kind of paving, and assess the benefit, when program demands; that sprinkling at city expense should be considered for all streets; and that street openings be closed by city gangs.

Street Obstructions

Many telepgraph and telephone poles are braced in such a

way that guy wires make an unsightly and often dangerous obstruction. For example, a wire on the sidewalk near the Central Y. M. C. A. Building is particularly dangerous and should be immediately removed. The waiting station of the electric road, while undoubtedly a convenience, is unsightly and in its ultimate analysis simply furnishes the street car company with a valuable piece of ground without compensation. It is understood that this matter will be taken up through other channels.

The space between the sidewalk and curb is often occupied by gasoline tanks, wagons and other encumbrances, and in one case a refuse incinerator was noted. These are little things, but in the aggregate they leave a bad impression with those visiting the city.

Parks

The method of acquiring parks outlined in the charter is to purchase and maintain them from a one-mill fund which now amounts to a little over $50,000 a year. Maintenance of existing parks must first come out of this fund, and that means that no large park can be acquired in this manner. Parks have also been purchased by creating benefit assessment areas, which is usually wise for small parks in fairly well populated districts. It is probable that sooner or later Topeka will have to adopt a third method of acquiring parks, that is, to purchase them by the sale of city bonds. This would be absolutely necessary if a large park located well on the outskirts of the city were now to be purchased, as neither the local assessment plan nor the one-mill tax would be adequate or wise in such a case.

Amusement privileges in the parks have apparently been granted in the past without adequate advertising and competition. Such privileges are now held by the Garfield Park Amusement Company, the Cocoa-Cola Bottling Company and the City Park Amusement Company. The usual terms of these licenses are that ten per cent of the gross receipts should go to the city. No adequate system of check or audit on the part of the city, however, has been established; and this omission deserves immediate attention. Within reasonable limits amusement and refreshment booths are valuable adjuncts to city parks, and at present it is probably better to have them under private control paying for the privilege, than to have them

publicly administered. There seems no reason why similar privilege for popcorn, peanut stands and sandwich booths, etc., should not be let in all parks, but they should be safeguarded as to the price charged and with control as to cleanliness and order. It is understood that such venders will be granted privileges under competition next year. A boat livery has also been suggested for several of the parks.

The pay rolls in use in the Park Department are well arranged and with some slight changes something similar should be adopted throughout the city. These pay rolls could easily show the cost of various items of work — and this is recommended.

Topeka now has many beautiful wide streets and wide stretches of land between the sidewalk and curb. In general these stretches are well planted with trees. It is now necessary that public attention should be given these trees that they may be properly cared for, renewed and thinned out. Elms have been planted so closely that within a few years part of these will need to be cut down and much trimming done. It will be much cheaper for all concerned and decidedly more satisfactory, if this is done under city direction. Plans could be made that certain streets would be devoted entirely to one variety of trees, which would add much to the attractiveness of the city. Constant attention will be necessary to prevent the destruction of the trees by insects, rot occasioned by faulty pruning, and the breaking of branches by wind. An ounce of prevention at this time will save many pounds of cure, and Topeka cannot afford to neglect a feature which is already so valuable to the city as a whole, and which is becoming more and more valuable. Many cities less fortunate than Topeka, would give much to have the shade trees and street plots that Topeka now enjoys.

It is probable that shade trees could best be conserved by a tree warden, who would operate along the lines followed by the shade tree commissions of New Jersey which has proved so successful.

It is recommended that all city laborers be uniformed. This is particularly desirable for employes of the park department where police duties are part of their work. But aside from the authority which goes with the uniform, it creates a

certain *esprit de corps*, and gives a business like air to the administration.

Better co-operation between the city departments should be obtained. An example of this is that while the Fire Department is buying hay, the Park Department is selling hay, but not to the Fire Department.

Collection and Disposal of Garbage

In the collection and disposal of garbage Topeka faces a rather difficult situation. The city has a well-equipped disposal plant, but it is not now operating on a paying basis. At present about one-tenth of the population subscribe to the city collections, it being closely estimated that there are only about a dozen garbage customers in North Topeka. The amount collected at the present rate is not sufficient to allow the city to break even in the collection and disposal. If this cannot be prevented, it would be advisable to discontinue city service until it is all taken over by the city (possibly including refuse also) and paid for from taxation, which ultimately seems advisable.

The present books do not show the amounts due the city and what proportion of them are unpaid; but the bookkeeping system is being revised, and it will soon be possible to ascertain just where the losses occur. Advertising might increase the number of city customers, and it is understood that this is to be tried. At present manure is collected and burned in the incinerator. This results in the loss of a valuable commodity and some means should be taken to keep manure until it is fit for fertilizing purposes on city property, or for sale. It is customary for consumers to discontinue the city service for a month at a time without notice. This should not be permitted. At present the collections are not sufficient to make it possible to obtain much revenue from sorting or by-products.

As an alternative method of handling the garbage and refuse problem a contract for a term of years might be made with a private individual to take all garbage and refuse, the cost to be paid from general taxation. Such a general contract could be made on much better terms than could be obtained by citizens individually and the tax should be less per capita than it now costs any individual.

Water Works

Agitation for municipally owned public utilities is frequent. Theorists have written pages "pro" and "con," and have submitted statistics showing why it is advisable, and statistics equally convincing showing that such a course is not practical. It would seem to the writer that cities can profitably own and manage public utilities just as fast as their adoption of business methods warrants trusting them with these additional activities. Topeka has but one public utility and in general it is managed in a creditable manner, but there are certain features in its administration which do not favorably compare with privately controlled enterprises.

If charter requirements alone were wholly effective in meeting administrative needs, the administration of the water works would have at least one feature it does not now have; that is, a financial report showing assets and liabilities, operation and maintenance. This is substantially required by Section 103 of the charter, where something of the kind is presupposed as a basis for the fixing of the water rates. About three years ago an inventory and valuation of the water plant was made, but no attempt is made to keep up-to-date or keep controlling accounts or show any of the facts which private corporations would require annually — if not quarterly. The books of the Water Department, while neatly kept, have no controlling accounts to indicate the amount of unpaid water rents, valuations, depreciation of property, profit or loss on installation of meters, and the like.

The clerical work of the office should be simplified. At present it is the custom to register each meter in a consumer's ledger according to the date of the tap or connection. Bills are made out from the inspectors' original records showing reading of meters, which of course are arranged by streets and routes. These readings are then entered in the consumer's ledger, but of course they do not follow the order of inspection, which at least doubles the time required in entry. An improvement would be to keep this ledger so as to correspond closely in order with the routes of the inspectors. Cross reference to the date and number of the connection could be kept through a card index. As suggested, there are no controlling accounts indicating the total of outstanding water rents. As bills are

sent out, stubs are filed, and the stubs uncalled for represent bills unpaid. As most of these bills are promptly paid, it may be possible thus to keep in mind the delinquents without any change of system, but it is not the best way. As the deposits of the water consumers were lately returned, it will now be necessary to take strict measures with all delinquents and turn off the water, regardless of whom it may offend, if the rents are not paid.

The index plan followed in this office is very complete and deserves commendation. A certain amount of cost accounting has been done, but little use seems to be made of the results. Nothing definite will be accomplished until controlling records are opened, and the same records kept as would be expected by a private public service corporation. This would show exactly the general trend of the financial condition of the plant.

Comparatively little effort is being made to test meters, although most cities find that the city will lose an average of from 10 to 15 per cent on meters which have been installed any length of time. A campaign of meter testing is recommended.

At present it is impossible to make any test as to whether there is much leakage in the city mains. It appears probable that the leakage is too slight to warrant any large expense for such tests. This is particularly true because the pumping cost in Topeka is not excessive.

It is quite probable that some changes in the pumping plant would be advisable particularly in view of recommendations made in the Survey report on health conditions. There is no storage of the water supply and as a consequence it is necessary to pump directly against the consumption. At night when little water is used, the pumps work at a disadvantage and at an economic loss. A temporary storage at the plant has been suggested which would obviate this, and it should be carefully considered.

When a fire alarm is sounded the water pressure is raised throughout the city. This, of course, is detrimental to the pipes in general, but is now necessary for fire protection. It may be possible to remedy this by establishing pressure zones by means of automatically or electrically operated gates. The zone of the fire would then receive high pressure, while other portions of the city could be operated on normal pressure. An

electrical relay pump located within the city might aid in such a plan, but the entire matter is one which can only be solved by a most thorough study — a thing which the facts in hand would recommend. The rapid flow at the time of a large fire has a tendency to stir up the sediment in the pipes. A system of zones would probably improve this condition, but the pipes could also be flushed often when plenty of water is available.

It was evidently the intention of the legislature to make the water works stand entirely upon its own feet financially, and for that reason water works revenues and receipts have been carefully kept separate from all other funds. While there is no particular objection to this, it seems unnecessary if proper controlling accounts are established, and the reports and records suggested are compiled. The water works being a community function, the city is bound to aid it in times of need, and in times of prosperity it might be able to aid the city. Proper accounting and controlling records will do more to insure results, than any statutory requirement of segregation of funds, and many cities have discontinued the practice of keeping water funds separate, except on the books.

Fire Department

Any one who studies the Fire Department of Topeka must be impressed with its efficiency and economy of management. This department prepares the best report of any department in the city. (It is not published, but should be.) The itemization of its budget requests are greatly to be commended. The department is gradually acquiring modern apparatus and is apparently doing very excellent work in fire prevention inspection. The purchasing of the department seems to be very economical, although in but few cases is it done by competition or bidding.

The principal criticism of the department is that its efficiency depends upon its chief, rather than upon established methods which will survive no matter who heads the department. Naturally this is far from being a reflection upon the present chief, but it is suggested that now is the time to establish certain routine and methods which will bring the same results under any administration. For example, there is no

course of instruction to firemen other than what may be gained from reading the very excellent printed rules of the department and by general observation of the work of more experienced firmen. For permanent results certain drills should be established, and classes for all firemen, particularly beginners. Excellent records as to the loss at fires, apparatus used, time of alarm, etc., are maintained, but more publicity should be given them. In this connection it may be suggested also that greater publicity as to how to prevent fire should be given the general public, possibly enlisting the police also in a fire prevention program.

It is understood that the hose and hydrant couplings of Topeka are not uniform with the couplings of the nearby cities. The unexpected may any time happen, and in case Topeka were called to aid other cities or they were called to aid Topeka, much delay and possibly failure in using the foreign apparatus would ensue.

The storehouse of the Fire Department is operated on a very good system. With a central purchasing agency, a general store department for the city might well be kept on similar lines. A list of all supplies needed for the year is made out, and purchases made accordingly. Supplies are given out only on written requisitions approved by the chief. All purchases are charged to the store department, and supplies given out are charged to the particular function or fire station. Inventories are required by the storekeeper which show what he has received and what is given out, making it possible to check with his previous reports and approve his stewardship. The system lacks but one thing. There are no control accounts kept by which the valuation of the stores can be checked. An examination of the system used by the Santa Fe or any large corporation would indicate methods of controlling this.

Many of the recommendations of the underwriters' report of August, 1911, have since been complied with. The program of this department is an intelligent one; and it should be given more publicity.

The department is not equipped to handle building inspection for other than fire risks. A bureau of buildings, here recommended, would cover this function.

Bureau of Buildings — Housing and Building Codes

Following the lines of approved organization, a Bureau of Buildings would be useful in Topeka. The work of this bureau would embrace the offices of the electrical inspector, plumbing inspector and fire inspectors, and in addition the inspection of buildings as to safety of construction and housing conditions. This would necessitate a building code and housing code, both clearly needed. The division of the city into building zones, is advisable and should be taken up by this bureau.

The chief of the Fire Department should have close connection with this bureau, officially or otherwise, as both fire prevention and fire fighting should be supervised by that officer, as is now done.

Such a bureau would put all construction work under one central control and would enable a builder to get definite information as to all requirements at one place and at one time. It would be a step toward further centralization of responsibility.

Plumbing inspection is not properly a health matter, but one of building construction, and does not belong in the Sanitary Department, where it now is handled. Moreover, there are times when this work and that of electrical inspection will be very light and other times when much is to be done. Among the other advantages of a bureau of buildings would be the possibility of distributing the work so that more uniform routine would be possible.

The plumbing inspector is supposed to make tests of gas and water meters upon request and the payment of a fee, but this privilege is very seldom exercised. Water meters should be tested solely by the Water Dpartment and only a nominal fee charged, if any at all. There seems no substantial reason why the city should not test gas meters upon request without a fee, only limiting the number of free tests within a given period. The city should also periodically test the heating and illuminating power of the illuminating gas sold and should test electrical meters as well as gas meters.

Milk Inspection

The milk inspector is required by ordinance to keep and file records of dairy score cards. This ordinance was not be-

ing followed at the time of this investigation and such score cards were not available. Apparently the inspection is done without any established program, but solely in the discretion of the inspector. No general records are kept which indicate when licenses become due and in some cases stubs were not found for licenses given. The books are not in condition to be audited, and it was understood that the auditor has not attempted it. A proper system of bookkeeping should be established.

The ordinance requires an annual report showing all inspections made. This legal requirement also was not being complied with. Monthly reports of tests for fat and solids are published, but apparently nothing at all has been done as to bacterial count. The general records of this office were not in a condition to permit of any more detailed criticism than to say that there is lack of permanent records and control over licenses. A thorough reorganization is advisable.

School Finance

Most of the criticisms relating to the general accounting system of the city, apply with equal force to the schools. There are no controlling accounts, and matters of the greatest importance can be ascertained only after analysis and careful study. For example, no immediate answer could be given to the question of how much was outstanding in uncollected taxes due the schools.

The system of storekeeping is to be commended, and is comparable with that in the Fire Department, although both, as was suggested in the discussion under Fire Department are lacking in that they are not controlled by a general ledger.

A cost accounting book is kept which shows the expenses of the various schools and the items purchased. It is not kept on a revenue and liability basis, but upon actual sums paid out. The school budget has not been developed and the accounts are not kept in a manner which permits of a ready report along the lines required by the United States government. It would be highly advisable to prepare a modern school budget remedying the faults pointed out and also to open a fund ledger, general ledger, property ledger, store ledger, etc., with necessary journals, and other books, on an expense and liability

basis. Besides giving the information desired by the Government, the arrangement of the accounts and books could easily be such that much interesting school information would be available. The present Superintendent of Schools has in mind the possibilities of such a reorganization in the school accounting, and without doubt it would prove a means of efficiency with little increase of clerical work. His purpose is here strongly supported.

Like the city, the schools have failed to publish regularly either financial or school facts in the form of an annual report. This is surely misapplied economy, for intelligent and sympathetic co-operation of both taxpayers and parents, which is an essential to school progress, can hardly be fully secured without their being given pertinent information on the schools.

Weights and Measures

I wonder do we realize what we lose annually if the weights and measures by which we purchase are 3 per cent or even 2 per cent "fast"? The cost of proper inspection that prevents this condition is about one-thousandeth of the loss.

Admittedly inspection of weights and measures has received little systematic attention in Topeka. An examination was made for the Survey in December by the State Department of Health, the results of which are given below:

Tests were made in 11 stores selected at random. A few scales were found which had never been tested.

Of 19 scales tested, seven were found corrected, three against the merchant; while nine were against the purchaser.

Of 16 balance weights tested, five were correct and the remaining 11 were "light" or working against the purchaser. While in the comparatively few cases examined there were no indications of willful fraud, it is evident that Topeka is in need of better inspection. It is impractical for the State Board to do this properly with their present small appropriation and force. Better local inspection is recommended. At present it receives little attention.

General Filing and Office System in All City Departments

It was noted that the city clerk had in his possession very

little correspondence relating to the city, most of it being filed with the individual officers. This indicates that each Commissioner has his own filing system and probably each Superintendent under a Commissioner also has his own filing system. Under the present plan there is no certainty that a few years hence any particular paper or record can be easily found. The system of recording communications in the clerk's office, except for some special subjects, is simply a scheme of filing after each meeting of the council all papers received at that time. To find them again it is necessary to ascertain the meeting at which they were received. It is suggested that in the long run a filing system by subjects will prove more practical and that a general letter file should receive all correspondence.

An $1,800 Man Doing $600 Work

Arrangements should be made that each Commissioner and the Superintendent of the more important plants should have available stenographers for their correspondence. Probably it would not be necessary to provide a stenographer for each Commissioner, but one or two more should be employed at the City Hall. This will permit of Commissioners devoting their entire time to more important matters of administration.

Information Bureau

With the additional clerical help suggested above an Information Bureau could be maintained. This has become almost an essential in modern administration. Complaints could be received through this bureau and then referred to the proper department. A card should be made for each complaint and attention given until the matter is satisfactorily disposed of, the complainant meanwhile being courteously informed of the progress of his complaint. This will prove to be an effective method of relieving the officials of annoying details and silencing the criticism often justly made when small matters do not receive proper attention.

IV. CONCLUSION AND LEGISLATIVE NEXT STEPS

Whether this report is to be of value will depend entirely upon what use is made of it. The problems which exist in Topeka in the main can only be solved by united effort. An

administration meeting 100 per cent of the community needs and operating upon a basis of real efficiency, can neither be attained nor maintained without intelligent and systematic public co-operation; and before co-operation is possible, a sympathy of understanding must exist. Public officials occupy a position often misunderstood by the general public, and often not understood by the official himself until he is elected to office. Unintelligent censure or apathy on the part of citizens, is not conducive to any continuous effort on the part of officials to community betterment. Nothing is more discouraging to the official than to find that efforts toward an efficient administration, often made with a loss of personal popularity, are overlooked by the general public, while their censure is prompt on some matter which may be only an incident of the administration, and possibly the only mistake, if mistake at all, chargeable against him. The forces which tend toward corruption and partisan politics are ever on the alert to seize upon the slightest excuse to discredit the official who opposes them. Is the public equally alert to support the multitude of efforts made in its behalf, and distinguish between essentials and non-essentials?

On the other hand public officials sometimes forget that only by taking the public into their confidence and making them feel that they are a part of each movement for betterment, can permanency be insured for the advance ground gained. Moreover, it is important to recollect that permanent prograss can be further promoted by the installation of good methods and proper routine — in which matters it is hoped this report may be found to be useful.

Legislative Changes Suggested

In order to take advantage of the foregoing recommendations the following legal changes are suggested:

1. The Commissioners should be permitted to levy taxes up to a certain percentage of the total assessed valuation, and no restriction whatever should be placed upon the purposes for which particular taxes must be used.

2. All city revenues should be applicable to the general fund, none being applied to specific purposes. Commissioners should be empowered to borrow money temporarily for cur-

rent expenses under proper limitations. This would eliminate the necessity of large bank balances.

3. All legislation designating certain funds should be repealed to permit the tabulation of the standard classification of accounts following the recommendations of the Census Bureau. The water fund might be excepted from this rule.

4. It should be made permissable to place unexpended balances of appropriations in the general fund for the reduction of taxes for the next year, or to transfer them to other appropriations for the current year were appropriations found too small. Provisions requiring the payment of the city bills by warrants should be repealed and the use of voucher checks authorized.

5. Verification of bills should not be required because of the unnecessary difficulty in preparing them.

6. The Commissioner of Streets and Public Improvements should be given entire charge of all street and alley cleaning.

7. The council should be given powers to initiate the paving of streets wthout petition, in proper cases.

8. The purchase of parks and boulevards by the issuance of bonds against the city at large should be permitted where they are no particular benefit to adjacent city property.

9. The office of tree warden should be authorized by the charter.

10. Water charges should be made a lien against the property.

11. A Bureau of Buildings should be established by the charter.

12. Housing and building codes should be enacted either by the legislature, or more preferably, the council should be authorized to promulgate them.

13. It would be advisable to have the state tax law amended to show separately on the tax records and receipts the unimproved and total value of the real estate.

MAIL PRINTING HOUSE, TOPEKA, KS

INDUSTRIAL CONDITIONS IN TOPEKA

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CONTENTS

PAGE

I. THE SANTA FE CAR SHOPS
- The Bonus System 6
- The Fixing of Standard Time 15
- The Apprentice School 18
- Other Working Conditions 22
- Welfare Activities 23
- Old Age and Accident Benefits 23

II. GENERAL LABOR CONDITIONS
- Unskilled Labor 25
- The Street Car Men 30
- The Organized Trades 33

III. LABOR CONDITIONS AND PUBLIC CONTROL
- Women's Labor 37
- Wages of Women 40
- Child Labor 43
- Workingmen's Compensation 48
- Factory Inspection and Industrial Hygiene 51
- Employment Agencies 54

INDUSTRIAL CONDITIONS IN TOPEKA

Topeka is the third city in size in Kansas. It is not preeminently industrial, although within its borders is one of the largest railroad shops in the country, as well as a considerable diversity of manufacturing, including farm implements, clothing, furniture, and bedding. The value of these manufactured products in 1909, the date of the last federal report on manufactures, was almost $18,000,000, of which over $5,500,000 was value added in Topeka.* Perhaps a better idea of the community's activities, however, is reflected in the larger occupation groupings of the people. In 1910, out of a total population of approximately 50,000, the number ten years of age and over was 18,071 males and 18,453 females. Of these, 14,540 male and 4,221 female workers were engaged in gainful occupations,† in round numbers the largest groups being:

Manufacturing and mechanical industries	6,600
Trade	2,900
Clerical occupations	2,600
Transportation	2,300
Domestic and personal service	2,100
Professional service	1,500
Public service	300

Subdividing further, the occupations in each of which 500 or more men were engaged included: carpenters; building and unspecified hand trades; machinists, millwrights and tool makers; railroad laborers; clerks (not including clerks in stores); and retail dealers; while between 300 and 500 male workers were engaged in each of the three trades—painters and glaziers, draymen and teamsters, and salesmen. The remaining 8,800 male workers were found in 183 different trades.

Among women workers other than wives, one group, that of domestic servants, numbered slightly above 500; five groups, stenographers and typewriters, clerks (except clerks in stores), dressmakers and seamstresses (not in factories), laundresses (not in laundries), and teachers, numbered between 300 and

* Census of Manufacturers, 1909. Vol. IX, p. 385.

† Thirteenth Census of the United States, 1910. Vol. IV, pp. 280-284.

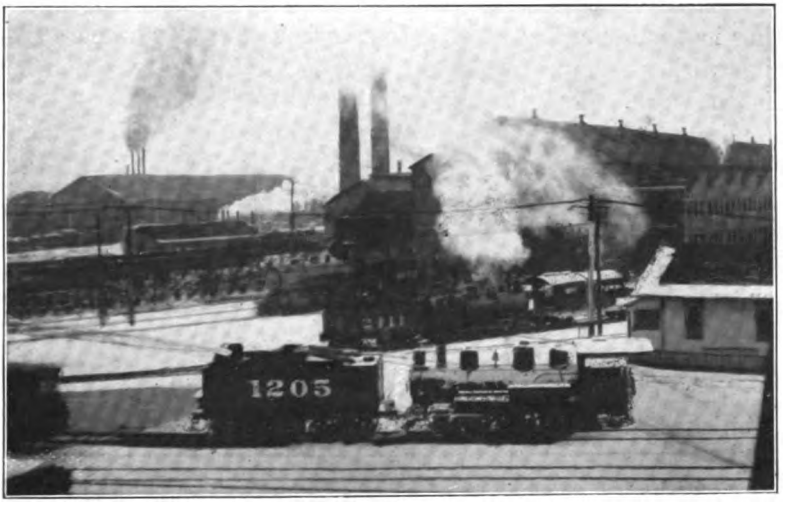
500 workers; while between 100 and 300 persons were engaged in each of the five groups—bookkeepers and cashiers, saleswomen not otherwise specified, clerks in stores, housekeepers and stewards, and musicians and teachers of music. Laundry operatives included 99; telephone operators, 87; and milliners and millinery dealers, 86. The remaining 1,000 are scattered through 76 occupations.

Printing and publishing is one of the large industries of the city, and work at the state capitol furnishes employment for a large number. The city, moreover, is a considerable distributing point to and collecting point from the thrifty agricultural region round-about. As a part of this process there are eight flour and grist mills, two large creameries, two canning and pickling factories, a large slaughtering and meat packing plant, and two establishments packing eggs and poultry.

"But without the Santa Fe Shops," said one of her citizens, "Topeka would be nothing but a railroad siding." While the statement of course is an exaggeration, it is nevertheless true that one of the biggest factors in Topeka's growth is the location in the city of the Santa Fe shops and general offices. Not only do the Santa Fe shops give Topeka its industrial standing, but the elimination of unionism from these shops, and the establishment of a bonus system there have brought about industrial relations of a type that are fairly in the center of dispute and controversy throughout the country.

I. THE SANTA FE CAR SHOPS

In the early days of Kansas, what is now the Santa Fe Railroad was a stub line running from Atchison to Topeka. As the country developed the lines were extended, absorbing others, and they now stretch over the great Southwest, the strands reaching from Chicago to San Francisco. The company early established general offices in Topeka, where they still continue. Out of the second story of a small frame building at the start, they have grown to fill a great ten-story structure and another large building besides. Hundreds of clerks and stenographers are employed—as many, probably, as find work in all the other offices in the city combined;



A SECTION OF SANTA FE YARDS AND SHOPS.

while the local car shops, the largest of the Santa Fe system, employ an average of 2,500 men, 40 per cent of all the men engaged in manufacturing enterprises in the city. During October, 1913, a month before this investigation, the exact number on the payroll was 2,540. Of these 233 were apprentices, 305 unskilled laborers, 75 foremen, 88 were clerks, time-keepers, fire marshals, and apprentice instructors; the remaining 1,839 were skilled artisans and their helpers, machinists, boiler makers, carpenters, painters, and a few others.

Formerly the shops were partly unionized, something above 20 per cent of the employes, including the more skilled men, being members of trade organizations. Now they are unorganized, the non-union plan going back to 1904. The management has been willing to hear complaints from individual workers, but refuses to meet committees or representatives of the men. Employes discovered to be actively affiliated with union organizations are frankly not wanted. All dealings in fixing wages and hours of work must be between the company and the individual worker, the company thus setting itself against collective bargaining either through the union or through a less formal medium.

It hardly needs to be pointed out that collective bargaining is a measure for putting the worker on a more even footing with his employers in settling the terms under which he is to work. The idea is partially based upon experience tending to show that in dealings between the employer and the individual worker the worker is usually in much the weaker position. Back of the idea also is the belief that the worker should in fairness have some real voice in determining the conditions under which he labors. He, as well as the employer, and community, has much at stake. Upon the terms of his labor bargain depend not only the question of a wage sufficient to meet the most of necessities but, among other things, the guarantee of healthful and safe work surroundings, the possibility of reaching and maintaining an economic status in which wholesome home conditions for himself and his family are within his reach, and the guarantee of a margin of time and income for self improvement and advancement. Of course, if he cannot convince the company of the justice of his claims, he always may quit work; but this alternative is often so serious as to be merely the greater of two misfortunes confronting him, and does not strengthen his bargaining power. The company, on the other hand, even where no union exists, in order to hold its men must pay wages and establish other conditions of work which will approximate those in nearby shops. This, however, does not necessarily guarantee the adequacy of the wage, for the rate in the nearby shop may be inadequate. In the absence, therefore, of any channels through which the workers may act either in large or small groups, control over wages, hours, and working conditions is in the hands of the company; and it is stating merely the obvious to say that responsibility for conditions, whether favorable or unfavorable, rests where control is lodged. The question of labor organization thus affects practically all features of the work situation.

The Bonus System

The great majority of the employes in the Santa Fe shops work under the bonus system. Of a total payroll of $157,664.97 in October, 1913, $118,701.30, or about three-fourths, went to persons working on bonus. One-fourth, or $38,963.67,

which includes salaries of foremen, went to those not working on that basis. The system was installed with a number of improvements in view. Instead of a tendency to dead level efficiency and limitation of output thought to exist under the old regime, it was believed that the new plan would increase individual and shop output; (1) by giving each worker an opportunity to add to his earnings by increasing his product, (2) by discovering through continuous time studies of different tasks, the best methods of performing them, and (3) by building up a force of workers each best adapted to the particular work he has to do.

The bonus system has been applied, where seemingly feasible, to every task in the shops; there are a few kinds of work however, to which the company believes it is not adaptable. Pattern makers, for instance, are continually changing to entirely new operations: so the scheduling of their work is pointed out as impossible. So, too, about half of the common laborers work at irregular tasks which it is stated cannot be scheduled. The other half can be scheduled, however; and in October, 1913, these unskilled laborers working on bonus earned 11 per cent over and above their regular wage rates. Foremen and clerks in the shop offices at one time were paid under the bonus system, but experience convinced the company that the system was not applicable to their case.

Under the Santa Fe bonus plan, definite time periods are fixed for the completion of each specific task. These periods are called "standard time." "The standard time for each individual operation of a job," says the company's explanatory booklet, "is that which a good man can attain by reasonable attention to his work."* A man who completes his task in "standard time" is said to be 100 per cent efficient.

At all stages of efficiency men receive regular hourly rates of pay; but when their efficiency is only 66.7 per cent or less, they receive no bonuses. At 66.7 per cent the company "acknowledges having obtained value received," to quote from its statement, for regular wages. Beyond that point it offers bonus for greater output. At 100 per cent efficiency the men receive regular wages plus 20 per cent bonus on their

* Methods of fixing this "standard time" are discussed later.

established rates of pay. Those between 66.7 and 100 per cent efficient receive regular wages plus a bonus graded in proportion to their output. When, according to their schedule, men attain over 100 per cent efficiency the bonus percentage is increased one per cent with each per cent of increase in efficiency. Throwing aside confusing percentages, the essentials of the system are these:

(a) All men receive a fixed wage whatever their output.

(b) Those who turn out more than the set task fixed by the "standard time" allotment receive additional compensation graded according to the amount of their extra product.

The factors, therefore, which determine the total earnings of the men are:

(a) The rates set as their fixed wages.

(b) The size of the tasks which they must perform before they can begin to earn bonuses.

(c) The rates at which bonuses are paid.

Let us see how these factors have been determined both in 1904, when the plan was started, and in the period to date when wages and cost of living have been rising all over the country. Has the Santa Fe advanced its regular hourly rates to keep pace with wage increases in other nearby car shops where the system is not in vogue? If it has, then the men benefit as much by the bonus system today as when it was adopted. If, however, the company has used the fact that many of the men earn bonuses to let regular hourly rates fall behind increases which have been made in other nearby car shops, and which presumably would have been made in the Santa Fe shops had the bonus system never been adopted, then the bonus system does not offer the same benefits as it did at first; and if the rates have lagged so far behind that regular and bonus earnings in the Santa Fe shops equal only regular earnings of similar workers in other car shops, then the bonus system cannot be considered as beneficial to the average Santa Fe worker.

Moreover, similar comparison of rates in the Santa Fe shops and in nearby plants where labor is organized should indicate something as to whether the workers lost anything when their unions were given up.

On the first point, in 1904, when the system was established, bonus earnings were paid in addition to wage rates then prevailing. Thus none of the men earned less than formerly, and all, through extra effort, had opportunity to earn more. It is obvious without further discussion that the system was then beneficial to the men.

As throwing light upon the question whether increases in regular hourly rates in the Santa Fe shops have kept pace with wage increases in nearby shops of other railway companies, table 1 which appears on the following page is presented.

Before considering the table attention should be called to the fact that comparisons there made are between wage rates in the Topeka shops of the Santa Fe and the established wage rates of the Missouri Pacific and the Rock Island railroads in their car shops in the general vicinity of Topeka. Rates in cities other than Topeka are presented because the car-shop work in Topeka of the Missouri Pacific and the Rock Island railroads is very limited, only one or two occupations being represented.

Another qualification in the comparisons should be noted. In the machinist, boiler maker, blacksmith, and tinner trades, which appear first in the table, the Santa Fe divides the workers into three groups—journeymen, handymen, and helpers—while in other shops they are divided into two groups—journeymen and helpers. The Santa Fe shop manager informs us that in other shops Santa Fe handymen would be classed as journeymen. In making our comparisons, therefore, this should be borne in mind.

Considering first these four trades, we see that even the rates of those the Santa Fe classifies as journeymen are in two trades, machinist and boiler maker, lower than rates of similar journeymen in the other shops. If handymen in these trades are classified as journeymen, as the Topeka shop manager says they should be, the Santa Fe groups get much less per hour than journeymen elsewhere.

Taking all trades into account the wage groupings in the Santa Fe shops in Topeka may be divided as shown in table 2 at the top of page 11.

Table 1. Wage Rates in Railway Shops in the Topeka District

Occupation	Average number of men employed in Santa Fe shops in October, 1913 [a]	Hourly rates of pay (cents per hour) in					
		Santa Fe shops [b]		Rock Island shops [c]		Missouri Pacific shops [d]	
		Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
Machinist							
Journeyman	99	32.5[e]	42.0[e]	41.0	41.0	41.5	42.5
Handyman	99	26.5	32.5	.... [f]	.... [f]	.... [f]	.... [f]
Helper	120	18.5	26.5	.... [g]	.... [g]	20.0	23.0
Boiler maker							
Journeyman	28	32.5[e]	42.0[e]	41.0	42.0	41.5	42.5
Handyman	18	26.5	32.5	.... [f]	.... [f]	.... [f]	.... [f]
Helper	115	18.5	26.5	23.0	30.0	24.0	25.0
Blacksmith							
Journeyman	18	32.5[e]	42.0[e]	32.0	43.0	36.0	45.0
Handyman	17	26.5	32.5	.... [f]	.... [f]	.... [f]	.... [f]
Helper	66	18.5	26.5	24.0	27.0	24.5	26.5
Tinner							
Journeyman	18	30.0	36.0	28.0	36.0	37.0	38.0
Handyman	11	25.0	30.0	.... [f]	.... [f]	.... [f]	.... [f]
Helper	6	17.5	25.0	.... [h]	.... [h]	20.0	23.0
Car carpenter	291	26.0	26.0	27.5	28.5	24.0	27.0
Car repairer	192	20.5	20.5	24.0	24.0	.... [h]	.... [h]
Coach carpenter	75	29.0	34.0	30.5	33.0	.... [h]	.... [h]
Painter							
Journeyman	38	25.0	32.5	22.5	33.0	26.0	34.0
Helper	29	17.5	25.0	18.0	21.5	.... [h]	.... [h]
Planing mill		.... [h]	.... [h]				
Mechanic	54	....	....	22.5	33.0	26.0	32.0
Cabinet maker	24	25.0	30.0	30.5	33.0	.... [h]	.... [h]
Upholsterer	11	24.0	30.0	28.0	32.0	.... [h]	.... [h]
Pattern maker	8	.... [h]	.... [h]	37.0	37.0	.... [h]	.... [h]
Total	1,337						

[a] Apprentices not included. Figures show only those working under the bonus system.

[b] The rates given under this heading are the regular hourly rates not including bonuses.

[c] The figures given under this heading are from an agreement between unions and the Rock Island Railway Company which became effective March 1, 1913. The points represented are Kansas City and St. Joseph, Missouri, Horton, Topeka, McFarland, Phillipsburg, Herington, Caldwell, Pratt and Liberal, Kansas, and Cedar Rapids, Iowa.

[d] The figures given under this heading are from an agreement between unions and the Missouri Pacific Railway Company which became effective April 1, 1913. The points represented are Kansas City, Missouri, Atchison, Downs, Ossawatomie, Council Grove, Hoisington, Fort Scott, Wichita, Coffeyville and Conway Springs, Kansas. It will be noted that figures are not given for all occupations in the Missouri Pacific shops.

[e] The standard rate is 38 cents.

[f] No distinction is made between journeyman and handyman.

[g] The intermediate rate is 25 cents.

[h] Rates for this occupation are not available.

TABLE 2. RELATIVE WAGE RATES IN SANTA FE RAILWAY SHOPS AND IN OTHER RAILWAY SHOPS IN THE TOPEKA DISTRICT

Occupation	Men employed in Santa Fe shops in the occupation specified
Occupations in which wage rates are higher in the Santa Fe shops than in other shops	..
Occupations in which wage rates are lower in the Santa Fe shops than in other shops	
Machinist: journeyman	99
Machinist: handyman	99
Boiler maker: journeyman	28
Boiler maker: handyman	18
Car repairer	192
Cabinet maker	24
Total	460
Occupations for which relative wage rates can not be determined.	
Machinist: helper	120
Boiler maker: helper	115
Blacksmith: journeyman	18
Blacksmith: handyman	17
Blacksmith: helper	66
Tinner: journeyman	18
Tinner: handyman	11
Tinner: helper	6
Car carpenter	291
Coach carpenter	75
Painter: journeyman	38
Painter: helper	29
Planing mill mechanic	54
Upholsterer	11
Pattern maker	8
Total	877
Grand total	1,337

Thus it is seen that no group of workers in the Santa Fe shops received rates higher than in those of the other railroads, but that 34 per cent were found in trades where rates were lower. These deductions are drawn after eliminating all occupations for which relative wage rates cannot be determined, because information is not available as to the average wages of the workers in given trades in the other shops where there is considerable range between maximum and minimum rates. It would seem to be a fair conclusion, therefore, that increases in

Santa Fe hourly rates * have in a large measure fallen behind increases which have taken place in nearby car shops and which presumably would have taken place in the Santa Fe shops had similar methods of payment been used. The Santa Fe workers still earn bonuses in addition to regular hourly rates, but the point here is that in many of the more important trades their regular hourly wages are not today what they presumably would have been had no bonus system been adopted. Apparently, then, the bonus system does not work as advantageously to the men today as it did at the start.

If, however, by bonus earnings the Santa Fe workers are able to overcome the handicap of lower hourly rates in those trades where such rates obtain, and if the average individual earnings of all workers outstrip the earnings of men in the same trades in other nearby car shops, then the bonus system must still be considered as beneficial to the Santa Fe employes. They may work with greater rapidity than they would without the bonus system but they receive larger rewards.

As bearing upon this situation table 3 on page 13 is presented.

Considering first, once more, the first four trades, machinists, boiler makers, blacksmiths, and tinners, it appears that the average earnings, regular and bonus, of those the Santa Fe classifies as journeymen are greater in the Santa Fe shops in the machinist and tinner trades than the earning of similar journeymen in other shops. As to the boiler maker and blacksmith journeymen, the figures indicate earnings in the Santa Fe shops and elsewhere to be approximately the same.

If, however, handymen are classed with journeymen, as the Santa Fe shop manager says they should be, the comparable Santa Fe hourly earnings for machinist and boiler maker journeymen are clearly below the hourly earnings of men in the same trades in other shops. It is impossible to make definite comparisons from the figures for blacksmiths and tinners, though the Santa Fe tinner journeymen seem to earn better wages than Rock Island tinners, but slightly poorer wages than tinners in the employ of the Missouri Pacific.

Going beyond the first four occupations and taking all groups into consideration the classification shown in table 4 on page 14 may be made.

* According to the shop manager, regular and bonus earnings in the Topeka shops have increased about 15 per cent in the past five years.

TABLE 3. EARNINGS INCLUDING BONUSES IN THE SANTA FE RAILWAY SHOPS AND WAGE RATES IN OTHER RAILWAY SHOPS IN THE TOPEKA DISTRICT

Occupation	Average number of men employed in Santa Fe shops in October, 1913[a]	Average hourly earnings, including bonus, (cents per hour) in Santa Fe shops		Hourly rates of pay (cents per hour) in			
		With journeyman and handyman classified separately	With handyman classified as journeyman	Rock Island shops [b]		Missouri Pacific shops [c]	
				Minimum	Maximum	Minimum	Maximum
Machinist							
Journeyman	99	42.8	37.7	41.0	41.0	41.5	42.5
Handyman	99	32.6		.... [d]	.... [d]	.... [d]	.... [d]
Helper	120	22.6	22.6	.... [e]	.... [e]	20.0	23.0
Boiler maker							
Journeyman	28	41.5	38.0	41.0	42.0	41.5	42.5
Handyman	18	32.5		.... [d]	.... [d]	.... [d]	.... [d]
Helper	115	23.5	23.5	23.0	30.0	24.0	25.0
Blacksmith							
Journeyman	18	42.6	38.5	32.0	43.0	36.0	45.0
Handyman	17	34.2		.... [d]	.... [d]	.... [d]	.... [d]
Helper	66	24.7	24.7	24.0	27.0	24.5	26.5
Tinner							
Journeyman	18	38.6	37.1	28.0	36.0	37.0	38.0
Handyman	11	34.7		.... [d]	.... [d]	.... [d]	.... [d]
Helper	6	22.5	22.5	.... [f]	.... [f]	20.0	23.0
Car carpenter	291	27.2	27.2	27.5	28.5	24.0	27.0
Car repairer	192	23.0	23.0	24.0	24.0	.... [f]	.... [f]
Coach carpenter	75	39.2	39.2	30.5	33.0	.... [f]	.... [f]
Painter							
Journeyman	38	45.9	45.9	22.5	33.0	26.0	34.0
Helper	29	26.5	26.5	18.0	21.5	.... [f]	.... [f]
Planing mill							
Mechanic	54	25.9	25.9	23.5	33.0	26.0	32.0
Cabinet maker	24	42.6	42.6	30.5	33.0	.... [f]	.... [f]
Upholsterer	11	31.2	31.2	28.0	32.0	.... [f]	.... [f]
Pattern maker	8	29.2	29.2	37.0	37.0	.... [f]	.... [f]
Total	1,337						

[a] Apprentices not included. Figures show only those working under the bonus system.

[b] The figures given under this heading are from an agreement between unions and the Rock Island Railway Company which became effective March 1, 1913. The points represented are Kansas City and St. Joseph, Missouri, Horton, Topeka, McFarland, Phillipsburg, Herington, Caldwell, Pratt and Liberal, Kansas, and Cedar Rapids, Iowa.

[c] The figures given under this heading are from an agreement between unions and the Missouri Pacific Railway Company which became effective April 1, 1913. The points represented are Kansas City, Missouri, Atchison, Downs, Ossawatomie, Council Grove, Hoisington, Fort Scott, Wichita, Coffeyville and Conway Springs, Kansas. It will be noted that figures are not given for all occupations in the Missouri Pacific shops.

[d] No distinction is made between journeyman and handyman.

[e] The intermediate rate is 25 cents.

[f] Rates for this occupation are not available.

TABLE 4. EARNINGS INCLUDING BONUSES IN THE SANTA FE RAILWAY SHOPS COMPARED WITH WAGE RATES IN OTHER RAILWAY SHOPS IN THE TOPEKA DISTRICT

Occupation	Men employed in Santa Fe shops in the occupation specified
Occupations in which earnings in the Santa Fe shops are higher than wage rates in other shops.	
Machinist: journeyman	99
Coach carpenter	75
Painter: journeyman	38
Painter: helper	29
Cabinet maker	24
Total	265
Occupations in which earnings in the Santa Fe shops are lower than wage rates in other shops.	
Machinist: handyman	99
Boiler maker: handyman	18
Car repairer	192
Pattern maker	8
Total	317
Occupations for which the relation between earnings in the Santa Fe shops and wage rates in other shops cannot be determined.	
Machinist: helper	120
Boiler maker: journeyman	28
Boiler maker: helper	115
Blacksmith: journeyman	18
Blacksmith: handyman	17
Blacksmith: helper	66
Tinner: journeyman	18
Tinner: handyman	11
Tinner: helper	6
Car carpenter	291
Planing-mill mechanic	54
Upholsterer	11
Total	755
Grand total	1,377

From this grouping it is seen that while the average earnings, including bonuses, of about 20 per cent of the skilled tradesmen working on bonus are greater in the Santa Fe shops than in the same trades in other nearby car shops, the average earnings of 24 per cent, even counting their bonus earnings, are less. The conclusion is that for at least the workers included in this 24 per cent the bonus system has not been a benefit but quite the reverse.

This does not mean that no Santa Fe machinists, boiler makers, car repairers, or pattern makers earn more than men in other shops where uniform rates prevail. Many of them make much more. In some individual cases machinists have doubled their wages through bonus earnings. The statements apply, however, to the average earnings of men in these trades. The fact, indeed, that some men—the more capable workers and, therefore, probably the more capable leaders—earn much more than the wages which prevail in other car shops will probably always be a hindrance to Topeka shop employes taking a united stand in wage questions. Moreover, from the standpoint of the community's welfare, the important thing is not a few highly paid men, but a large group of competent, fairly-paid breadwinners. Kansas could not get anywhere if it produced only a few prize acres of wheat and corn. It thrives by the general high standard of its crops.

To sum up on this point, it has been seen that bonus earnings in many cases are not paid in addition to prevailing wage rates in other shops in the district, a fact which indicates that the bonus system of the Santa Fe is not based upon generally accepted principles of efficiency engineering. One of the first principles of a scientific system is that the employer share with the employe all of the increased product which the latter's increased efficiency produces. Bonuses are paid in addition to the market rate of wages. The data so far examined seems to show that the Santa Fe has not followed such a policy but has permitted the regular wages of many important groups of workers to fall below the rates existing in the vicinity of Topeka. In its foundations, therefore, to answer the first of our three questions on page 8, the Santa Fe bonus system appears to be unsound.

Is the superstructure, then, unstable also? Is the fixing of "standard time" scientific?

The Fixing of Standard Time

The bonus system was first established in one department of the Santa Fe shops in 1904 by Harrington Emerson, a well known efficiency engineer. At the beginning an effort was made to establish a really scientific system. Each operation

was carefully observed and timed with stop watches and standard tasks were so set.

"In the latter part of the year 1906," says the company's booklet explaining its bonus system, "it was decided by the management from experience thus far gained, that better results would be obtained by adopting the simplified Santa Fe Efficiency Plan, developed by its own officers, in place of the original bonus plan first introduced."

This simplified plan among other things involved the abandonment of timing operations with stop watches and the installation of a system for fixing rates by a staff of bonus supervisors said to "know the work thoroughly." To quote one of the officials of the company, "our supervisors have become so proficient that they know by looking at a process the time it should be done in, and they can set the rates more accurately than by using stop watches."

Few reputable efficiency engineers would accept such a statement without much questioning. In fact it seems self-evident that no method of fixing standard time by observation —no matter how skilled the observer—can be as accurate as one in which every movement in the performance of each task is carefully and repeatedly timed under varying conditions. Changes in locomotives and in methods of manufacture are continually producing new jobs which may in part be resolved into certain elements that are common to old operations, and so can be easily adjusted. But especially in repair work, new tasks differing from old ones are constantly coming up, which make necessary new schedules for payment. In the Santa Fe these schedules are made by one party who determines what shall be paid. Under these conditions therefore there is all the more reason for working out a system for fixing rates that will be precisely fair and just to the men dealt with.

Moreover, under the present plan, which has eliminated the timing of separate parts of each operation, there is not the same opportunity which existed under the earlier plan for each worker to determine the fairness and accuracy of the company's standard by means of testing for himself the time fixed for each part of his task. This is especially important in a shop like the Santa Fe where there is no method for

collective representation of employe's interests when the process of "standard time" setting is going on.

That the fixing of standard time in the Santa Fe shops is inaccurate and unscientific is further indicated by table 5 on page 18. Before observing the table it will be remembered that men doing their tasks in standard time are said to be 100 per cent efficient and that workers achieving over 66.7 per cent efficiency earn bonuses according to their output. "At 66.7 per cent efficiency," the company's explanatory booklet states, "the company acknowledges having obtained value received for the hourly wages paid." The presumption is—and this is in accord with the principles of a scientific bonus system—that those below 66.7 per cent efficiency do not return "value received" for their regular wages. In other words, save for a few who may be exactly 66.7 per cent efficient, those who are unable to earn bonuses must be a direct loss to the company. In a scientific system those failing to earn bonuses become for this reason subjects for special investigation, and if their failings continue, for discharge. In the light of this fact table 5 at the top of page 18 is presented.

It will be noted that while 60 per cent of the workers earned bonuses, 40 per cent did not. If, as the company says, the point where bonus earnings begin marks the point where the company receives value for regular wages, then the great majority of the 541 workers, making up 40 per cent (except for a few who may have been exactly 66.7 per cent efficient), must have been a direct loss to the company. It is not likely, however, that men whose product is of lower value than their wages would be continued at work, and the presumption must be that 66.7 per cent efficiency does not mark the point at which the company gets "value received" for regular wages. Thus it appears, in answer to the second point raised earlier in the report, that the methods of fixing the task which the workers must perform before beginning to earn bonuses is neither accurate nor scientific.

Another fact comes out in the table. The percentages of men able to earn bonuses varies greatly from trade to trade. Only 50 per cent of the boiler makers, for instance, 45 per cent of the pipefitters, and 37 per cent of the car

TABLE 5. PROPORTION OF MEN WORKING UNDER THE BONUS SYSTEM IN SANTA FE RAILWAY SHOPS WHO EARN BONUSES, OCTOBER, 1913 [a]

Occupation	All workers	Workers earning bonuses	
		Number	Per cent of all workers
Tinner: handyman	11	11	100
Tinner: helper	6	6	100
Plaining-mill mechanic	54	54	100
Cabinet maker	24	24	100
Upholsterer	11	11	100
Coach carpenter	75	74	99
Painter: journeyman	38	37	97
Blacksmith: handyman	17	16	94
Blacksmith: helper	66	62	94
Tinner: journeyman	18	17	94
Painter: helper	29	26	90
Blacksmith: journeyman	18	16	89
Boiler maker: handyman	18	15	83
Engine carpenter [b]	11	9	82
Machinist: journeyman	99	64	65
Boiler maker: helper	115	65	57
Machinist: helper	126	65	52
Boiler maker: journeyman	28	14	50
Machinist: handyman	99	48	48
Pipefitter [b]	17	8	47
Car carpenter	291	109	37
Car repairer	192	71	37
Total	1,363	822	60

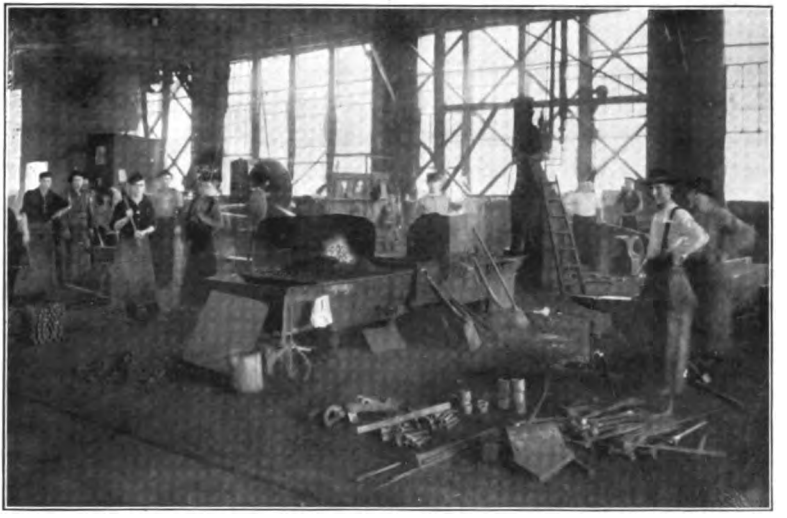
[a] Information supplied by the Santa Fe Railway Company. As the figures are for a single month, October, and relate to all workers (exclusive of apprentices) employed during that month, the total differs from the totals of preceding tables.

[b] Data for these tables not available for tables 1 and 3. Data for upholsterers not obtained for this table.

repairers, as against 100 per cent of the cabinet makers, 97 per cent of the painters, and 89 per cent of the blacksmiths were able to make this extra pay. These very wide variations indicate that "standard time" has not been adjusted so as to reward equally relative equality of skill in the different trades and suggests again that methods for fixing standards are far from being accurate or scientific.

THE APPRENTICE SCHOOL

The Topeka Shop Apprentice School of the Santa Fe Railroad was established about six years ago. Among the considerations in its establishment was the seemingly unwarranted restriction by the unions of the number of apprentices,



SANTA FE BLACKSMITH SHOP, APPRENTICES AT WORK.

regardless of trade expansion. In October, 1913, 233 young men and boys were registered. Of these, 127 were learning to be machinists and brass finishers; 37, boiler makers; 27, coach carpenters and cabinet makers; 14, painters; 10, blacksmiths; 9, turners, coppersmiths, and pipefitters; 4, upholsterers; 2, electricians; and 1 was learning to be a pattern maker. Two college graduates were special students. Applicants for admission must be at least six and not over twenty-two years of age. They must have completed at least the seventh grade in the common schools, and be physically fit.

The term covers four years and consists mainly of practical work in the shops. Two hours two days a week, however, are spent in classroom instruction, taking up practical problems in mechanism, mechanical and free hand drawing, arithmetic and such special problems as arise in the everyday work of a mechanic. Besides classroom work the company provides instruction in the shops by employing skilled journeymen having a gift for teaching to act as shop instructors.

From the start, apprentices perform useful work and, as is everywhere the custom, receive pay for it. Daily earnings range, according to trade, from $1.00 to $1.10 at the

start, and increase by degrees during the four-year term until, during the last months, they reach from $1.95 to $2.10. Rates of pay for apprentices are slightly less than in other shops in the vicinity, but their total earnings, if the $150 bonus paid apprentices after graduation is included, are greater than in adjacent shops. Regular rates are paid for time in the class room as well as in the shop. Apprentices come under the bonus schedules like all other employes, but receive 50 per cent in addition to their usual rates for attaining what the company calls 100 per cent efficiency. Though less skilled than journeymen, about one-third of them attain 66.7 per cent efficiency or more, and earn bonuses. To encourage them to finish their four years' course and stay in the company's employ, as already partly stated, they are given $75 upon graduation and another $75 if still in the company's services six months later. Since the establishment of the school, there have been 172 graduates, about two-thirds of whom have remained with the company; and about 12 per cent of whom have been promoted to official positions in its shops.

Apparently the opportunities offered in the apprentice school for boys to learn a trade, and the wages to be earned by those who complete their courses are sufficient to attract a supply of candidates large enough to meet the company's needs for there is always a long waiting list at the Topeka shops.

The school has not entirely met with favor among labor leaders in the city. They look upon it as a plan of the company to keep free of labor unions, and also as a money making scheme for securing a large amount of cheap labor, in that apprentices produce more in proportion to their wages than journeymen and that a disproportionate number is employed.

The company, on the other hand, has never claimed the school to be a losing proposition. It is a business, not an educational venture. A statement specially prepared by the company for this report, shows that the total cost to the company of the apprentice school, including wages, cost of instruction, time lost to company in instructions periods, supplies furnished free, and interest on investment in school equipment, averaged $2.39 per apprentice per day during the last year. But an apprentice is stated by the company to be two-thirds

as efficient as a journeymen who gets regular wages of $3.80 per day. The company thus gets $2.53 worth of service each day from each apprentice, at a cost of $2.39, clearing 14 cents per apprentice per day—over $32 per day on the total payroll.

As to the proportion of apprentices to journeymen, the unions in car shops in the vicinity of Topeka provide, in their agreements with employers, for one apprentice to every five journeymen.

In making comparisons between the number of apprentices and journeymen in the Santa Fe shops, handymen should be classed as journeymen, as was done earlier in the report in obtaining hourly earnings. The results are shown in the following table:

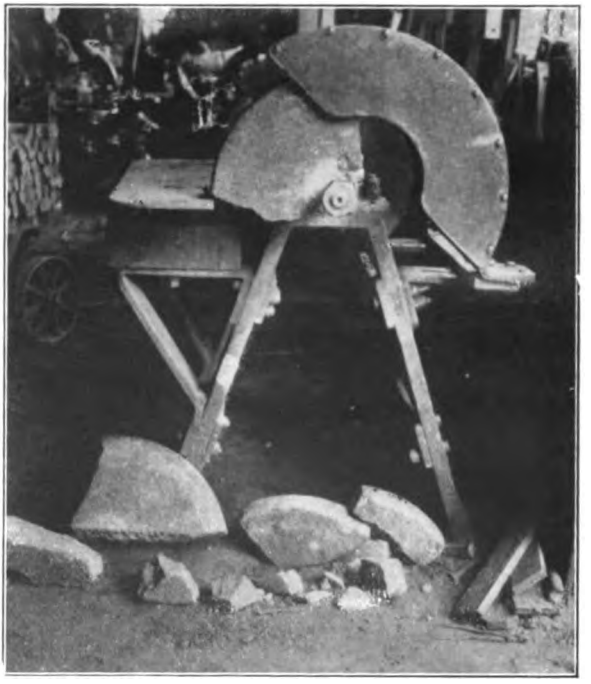
TABLE 6. RATIO OF APPRENTICES TO JOURNEYMEN AND HANDYMEN IN SANTA FE RAILWAY SHOPS, OCTOBER, 1913 [a]

Occupation	Journeymen and handymen employed	Apprentices employed	Ratio of apprentices to journeymen and handymen	Number of apprentices who would be employed at a 1 to 5 ratio
Machinist	234	121	1 to 1.8	47
Boiler maker	71	35	1 to 2.0	14
Blacksmith	44	10	1 to 4.4	9
Cabinet maker, Coach carpenter	140	27	1 to 5.2	28
Upholsterer	16	3	1 to 5.3	3
Tinner	23	8	1 to 2.9	5
Painter	79	13	1 to 6.1	16
Total	607	223	1 to 2.7	122

[a] Figures in this table give the average number working during October, 1913.

From these figures it is apparent that the Santa Fe uses proportionately nearly twice as many apprentices as union establishments. In some occupations there are over half as many apprentices as all the journeymen and handymen combined. It is quite possible in a rapidly expanding industry, that the union ratio of one apprentice to five journeymen restricts the increase in the supply of trained men too much. We have no way of judging this.

On the other hand, however, the company claims that its records for the last twenty years show increases in the number of its shop employes at the rate of 5 per cent per year,



CATCHING THE PIECES.
The guard saved the workman from injury when this power emery wheel burst in the Santa Fe shops.

and that as it is the policy of the company to train all its own skilled men and eventually fill its shop with men of its own making, a large ratio of apprentices to journeymen is necessary. Moreover the official shop positions in the mechanical departments are filled by promotion. These demands for extra workers are believed by company officials to justify the higher proportion of apprentices; and in further support of the contention they claim there never has been a time when they were not able to furnish steady work at prevailing wage rates to all graduates of the school.

Other Working Conditions

For the safety and health of its employes the Santa Fe has done much, and these should be mentioned before summing up the labor policies of the management. At the time of this inquiry most of the shops were operating on an eight and

one-half hour basis, although they usually average about nine hours a day, and sometimes run ten. Sanitary conditions in the shops are good. Being large and open, light and ventilation are plenty. A Safety First campaign was organized in June, 1912, and has been vigorously pushed ever since. Machines have been guarded, dangerous obstructions removed, and safety committees organized among the men; but strange to say the number of accidents has not decreased. This is attributed to two things: First, the accident rate was the lowest in the history of the shops the year before the campaign was organized; second, many minor accidents are now reported, it is thought, which would not have been reported before. But even though the accident rate has not fallen, opportunities for accidents have been greatly reduced, which in the long run will tell. Particular instances can be pointed to, as in the case of the broken emery wheel, shown on the opposite page, where an accident which very certainly would have meant serious injury to at least one worker was rendered harmless by proper guards. The Safety First campaign has been a real benefit both to the company and the employes.

Welfare Activities

In what is commonly known as "welfare work" the Santa Fe has not done a great deal, the management taking the view that since Topeka is a city of homes, not much of this is necessary. The work done has been carried on through a branch of the Railroad Y. M. C. A., about a fifth of the expense being borne by the company. The activities include all those usually carried on by the Y. M. C. A., with special emphasis upon educational work. The association also holds religious services in the shops at noon hours. A dormitory is maintained; a swimming pool and gymnasium are other attractions; and special entertainments are given every Friday night through the winter. Membership costs $3.00 a year, with $2.00 extra for use of the gymnasium. There are 1,065 members. The organization is maintained exclusively for employes of the Santa Fe Railroad.

Old Age and Accident Benefits

Aside from distinctly "welfare work" two other activities

of the Company, distinct from its ordinary business activities, should be noted. A hospital association has been organized for all its employes, whether working in the shops or elsewhere, and a large hospital is maintained. This is a business matter for the most part, however, for the hospital is supported entirely by the employes who pay from 25 cents to $1.00 a month, the amount being regulated according to earnings. In case of injury or accident they get treatment free of other charge. The advantages do not extend to their families.

No sickness, accident, or death benefit system has been organized, and the Company has elected not to come under the provisions of the State Workmen's Compensation Law. The absence of these features, together with the impossibility of the men enjoying any union benefit system on account of the company's attitude toward organized labor, forces the average worker to get his protection through outside agencies if he gets any protection at all.

The company, however, maintains a pension system wholly at its own expense. Persons are eligible for retirement on pensions who are either totally incapacitated or have reached the age of sixty-five and who for fifteen years next preceding retirement have been in the company's service. One of the pension rules provides that no one shall be eligible for pension who shall make or enforce any claim against the company for damages by reason of any injury or accident within three years prior to the date when he shall be retired or leave the service. As a rule no pension is less than $20 or more than $75 a month. In exceptional cases, however, the board of pensions is permitted to allow 25 per cent above the amount authorized by the pension rules. The pension system does not apply to widows or children of deceased employes.

To sum up then, the company is seen to have taken the reins of control into its own hands, setting the metes and bounds of living for many workers in the city and those dependent upon them. Whether for better or worse, therefore, the company will be held responsible by the community. In 1904, at the time this control was taken over, the company established a system of bonus payments which by

adding to prevailing wage rates was an advantage to the workers. Nine years later, in 1913, however, it is found that the rates of wages for skilled men—in many cases even including bonus earnings—have not gone up all along the line in a way comparable with those of similar men in the Missouri Pacific and the Rock Island car shops, union shops, near Topeka. It is found, further, that the method of determining the size of the task which must be done before bonus earnings begin does not seem to be scientific; that the same degree of efficiency in different trades is not rewarded proportionately; that earnings of the men are not as great as in nearby shops where collective bargaining is allowed; that the lack of protection of the men against economic loss in case of accidents, save by the inadequate and precarious method of bringing suit for damages, deepens this impression of insufficient control by the workers of the conditions of their labor. While the safety engineering and sanitary work conditions are highly commended, the community as a whole has a still further interest and responsibility in the adequate safeguarding of the livelihood and welfare of the large group of Topeka people working in the car shops.

II. GENERAL LABOR CONDITIONS

Unskilled Labor

So far the discussion has dealt chiefly with the skilled workers. The unskilled laborers, the men who handle pick and shovel, who pile lumber, lay tracks and do a hundred other kinds of rough, heavy work, are found in large numbers in Topeka also; and neither can their welfare and interests be disassociated from the general welfare of the community. It is here among those on the border line between self-support and dependency that many of our serious social problems have their roots. Undernourishment, lack of sufficient rest, inability to command healthful housing quarters, economic necessity which, by forcing mothers to work for wages or take in boarders, or both, interrupts normal family life; inability to provide for emergencies; early curtailment of the education of children; these are some of the handicaps which come down heavily on the families of the unskilled and at the same time spread their influences out into the whole social fabric.

How far are these conditions evident in the homes of unskilled workers in Topeka? An absolute answer to the question would require a study touching all the local unskilled workers—a task impossible within our time limits. Significant indications of local conditions are to be had, however, from an investigation made for this survey by Mrs. Kate E. Pierson,* the data obtained covering 70 families totaling 295 members plus six boarders—301 persons in all. The families were selected by picking out various blocks in different sections of the city where many of the less skilled workers were known to live.

Contrary to expectation it was found that 19 of the 70 families were those of skilled or semi-skilled workers with earnings ranging from $48 to $135 a month and averaging $63 when steadily employed. It will be sufficient in this connection to say that among these families, especially where children were few or where grown-up children contributed to the family income, living conditions were much more favorable than among the families of the unskilled. While but few had any savings, a considerable number carried insurance. Very few boarders were taken in, and in no cases had mothers been forced to leave the home for industrial labor.

Five other families should be noted before passing to the unskilled groups. In these five, normal family life did not exist because the father was dead or had been permanently incapacitated. In two of the families earnings of grown children put the families in comfortable circumstances; in a third, two boys each brought in $20 monthly as Santa Fe apprentices and kept the family afloat. In one case the man received $20 a month as a Santa Fe pensioner which with $10 a month from rent made ends meet for him and his wife. The fifth family, incidentally, illustrates the extremities to which families are often forced when wages have been too low to permit savings and the husband becomes incapacitated. The father was paralyzed and the family of five lived on the wife's earnings of $7.00 a week in the shirt factory, and the grandmother's wage of $3.00 a week for working half days in a bakery.

* Mrs. Pierson is a graduate of the Chicago School of Civics and Philanthropy. She was formerly a member of the Kansas City Board of Public Welfare and later one of the parole officers of that board.

Eliminating these 24 families, 46 families of unskilled workers with normal family conditions were left. The heads of the families in these cases earned from $28 to $60 a month when working regularly. They averaged $41. More than half were employed by the Santa Fe. Several receiving $50 a month were city laborers, two were street railway employes. Most of the others worked in factories.

For further summing up the data on these 46 families they have been divided into three groups, the groups being determined by the proportions between the number of workers and the number of persons dependent on them in each family. The first group includes 17 families having one or no children per family. While their income averaged only $39 a month, they were not so hard pressed as those whose children numbered two or more per family. Obviously the best if not the only time when the average unskilled worker can save to meet emergencies is when his children are few. In spite of this fact, only one of these 17 families had any savings and in this one case the savings, which were in the form of payments on a house, were only made possible by taking in a boarder. None of these families made any other provision to tide over a period of sickness or unemployment; and but

THE SANTA FE HOSPITAL.

six of the 17 men had made provision for caring for their families in case of death. These six carried insurance.

The second group includes families of the unskilled workers with grown-up children and more than one wage-earner. There were eight in this group. In one instance among the eight, four persons contributed to the family support. Cases in this group could hardly be considered a test as to whether the father's earnings constituted a living wage, for the father's wage could not be separated from the others. The total incomes per family averaged $99 a month. All but one of these families owned or were buying their own homes. In no case did the mother of the family go out to work. No boarders were taken in. The head of every family carried life insurance. These workers and their wives were not suffering from the need of the necessities of life on account of inadequate family income.

The third group represents families with only one wage-earner and two or more children. They were at a period of family life when the strain upon the worker and his family in making ends meet is heaviest. There were 21 of these unskilled workers. The total family incomes in these cases amounted to $40 a month. The average number of persons per family was 5.2. There were five families of six persons, one of eight, and one of nine. Even under favorable conditions as to steady employment these families were living at best on the ragged edge of poverty.

Strange to say, the family of nine, with but $40 a month to live on, had never asked for charity. As the mother put it, however, "rent, and coal and doctors' bills don't leave very much for eatables and clothes." She must have managed well to make ends meet at all. In the family of eight the father had recently lost his job with the Street Railway Company which paid $1.65 a day, and it was almost certain that charitable aid would be required. The other families, with fewer children, were of course better off than these two, and still they were far from prosperous or even comfortable. Three—two of them with four and one with three children—had sacrificed the privacy of their homes by taking in boarders. In another case the mother went out to work.

Only three of these 21 families owned their homes. A

fourth had been making payments on a home when the father was seriously injured by a fall. He carried accident insurance which brought in $150. On this his family of six had lived for almost six months. After that they were forced to appeal for aid. A friend in the meantime rescued the house by assuming payments. Incidentally this case illustrates how narrow, even with the more far-sighted of the unskilled workers, is the margin above dependency. In fact, except for this man who carried accident insurance and the three who owned homes upon which they might place loans, none of the 21 families had anything laid aside for meeting emergencies due to accident, sickness, or unemployment. If such difficulties arose, the families could probably live on credit for a time; when that was exhausted, they would need to resort to charitable aid.

At the time of this investigation, considerable unemployment existed in the city. In presenting figures on family income this condition of affairs was not taken into account. In other words, the facts as to income are made on the basis of continuous employment, a condition not common among the unskilled. The actual situation in some cases therefore was worse than here shown. For instance, the heads of six families out of the 70 were out of work and a seventh was expecting to be laid off soon. In addition, 10 of the younger wage-earners were idle and still others reported slack work. Two families had already been forced to ask for charity. The family of eight mentioned above was without visible means of support. The income of one family of 10 was reduced to $36 a month, while a family of six, hoping for a turn for the better, was spending on credit $15 a month beyond its income.

While these facts are not sufficient to show conditions prevailing generally among Topeka working people, they do show what is taking place in a considerable group of families in the city and illustrate the economic and other problems which workers at the lower end of the labor scale are obliged to face. The same things are seen to be happening in these Topeka families as happen elsewhere when wages do not keep pace with living costs. Boarders are taken into the home; emergency protection through savings or insurance is neglected or impossible; frequent recourse to friends or the public for

charitable aid is found necessary; and other measures in which the community is concerned are resorted to.

The Street Car Men

The Topeka Street Railway Company owns about 40 miles of tracks and operates nine different lines, giving employment to approximately 350 men—a group of workers without technical skill requiring long training. The railway was formerly a local and independent line, and prior to 1903 a loosely organized union including about 40 per cent of the working force existed among the men. In that year the management of the company changed hands; and the new management, being averse to organized labor, the workers were induced to sever their connection with the union and give up their charter. Since then a non-union status has been maintained.

Conductors and motormen who constitute the largest part of all workers have been divided by the company into four different shifts: The day crew, the night crew, the bob-tail crew, and the split crew. The hours of work of the day crew are twelve on week days and ten on Sundays, or eighty-two per week. They go to work at 6 a. m., have an hour off at noon, and quit work at 7 p. m. The night men, Sundays as well as week days, go on duty at 11 a. m., are off for an hour at supper, and finish at midnight, making their total hours eighty-four in the week. The bob-tail and split crews fill in before the night men come on, at meal times, and after the day men go off, working for ten hours week days and about eight hours Sundays. While hours are shorter than on other shifts, the men dislike the split-shift. Their earnings are less than those of the other workers; and although they get a few hours off in the day time, they must be on hand for work early in the morning and are not relieved till late at night. During Fair Week, the Christmas holidays, or similar rush occasions, the men are sometimes called upon to work as much as fifteen hours at a stretch, except for brief meal periods. The company tries to eliminate this by bringing men over from Wichita during Fair Week, but this does not entirely do away with the overtime work. Except for occasional emergencies, the practice of workingmen for such long hours can not be defended nor should it have the sanction of public opinion.

Moreover, no regular or periodic system for providing days of rest is in operation among the street car men, and many work year in and year out with very few days off duty. They may lay off when substitutes are available; but at times of the year when extra men are relatively scarce employes cannot always get off when they wish. When substitutes are plenty, however, the company allows leave of absence up to a month; but only a few can afford extended vacations, for their rates of pay seem to have been fixed with the expectation that they will work very steadily.

The question of periodic rest days, to the extent of one day per month, was submitted to a vote of the men several years ago and the majority were against a change. The management on the other hand states that it favors regular rest days. Obviously the opposition of the workers is not due to the fact that they like to work seven days a week. The probable reason is that wages are such that the workers cannot afford to lose one-seventh of their pay through an elimination of the seven-day schedule. At any rate a plan in which men actually want to work without regular rest days is unusual indeed.

Both motormen and conductors receive the same wages. They start at 20 cents an hour, are increased to 21 cents at the end of six months, and increases continue every six months until at the end of four years they are earning the maximum of 24 cents. After five years of service they are given a suit of clothes every year; and after ten years a suit of clothes and an overcoat, or two suits of clothes.

By working steadily at these rates the men are able to earn fairly good wages; but if their hours were fixed at ten per day, for six days a week—work hours generally acknowledged to be much more reasonable—their earnings would be much less. The best paid men, for instance, would get only $14.40 a week instead of $20.16; the poorest $12 instead of $13.60. It seems clear that there is a real relation between wage rates and hours of work, and that one reason the company has been able to maintain its present wage schedule and get employes of the right character is because, by long hours of work, the men are able to augment what would otherwise be low wages.

The company on the other hand cites figures to show that the rates of pay for street car men in Topeka run a fraction of a cent higher than the average paid in other Middle West cities of from 25 to 50 miles of track. On the basis of these figures, Topeka is seen to be no worse than some of her neighbors; but it must also be acknowledged that these work conditions, whether in Topeka or adjacent cities, are not good. The hours of work are too long; and a fair reduction in hours, if done wholly at the worker's expense, would be so costly to him that, as is evidenced by his opposition to periodic rest days, he could not afford to favor the change.

The superintendent of the company, in speaking of the twelve-hour day and the work scheme which plans for no regular off-days, called attention to the fact that in a city of Topeka's size, with light traffic and broad streets, the strain of an hour's work in operating a street car is much less than in a crowded city. His contention is undoubtedly right, but it is work nevertheless; the worker's time is not his own while on duty; and counting the time for sleep and for going and coming to work, the hours left for home and family duties, to say nothing of recreation and self improvement, are cut to the very minimum.

An attempt was made about a year ago to organize the employes, and several conductors and motormen who were interested in the undertaking were summarily discharged. The attempt ended when the union organizer got into an altercation with some of the company's men and was haled into court and charged with assault. No case was made out against him, but the effort at organization failed.

In 1903, when the men gave up their union, the Topeka Railway Employees' Benefit Association was organized to provide sickness, accident and death benefits for the employes. On the board of directors of the association are representatives of both the men and the company, and all funds are raised by assessments, the men paying half and the company half. These are levied only when the reserve fund falls below $400. Benefits amount to $8.00 a week for a period of fourteen weeks in cases either of sickness or accident, but no benefit is paid unless a man is incapacitated for work for fourteen days or more. In such cases the worker at the end of the third week receives a

check for the first two weeks of his disability as well as for the third. Death benefits amount to $200. Discharged men have no claim upon money they have paid in, but membership in the association is not compulsory upon employes. In addition, however, to the provision made by this association, all men have the benefits offered by the state Workingmen's Compensation Law, which the company has elected to come under, and which will be discussed later.

The company has done some welfare work. On the second floor of the building in which the offices are located pool tables have been installed and a stage constructed. The pool tables are free for the use of employes at any time. To the split-crew men, with idle hours in the middle of the day, the pool tables are a real pleasure and benefit. Their use to any great extent by the day crew, working twelve hours on week days and ten hours Sundays, or by the night crew, working twelve hours a day seven days a week, is hardly possible. Every Christmas an entertainment is held for the men and their families. At this time each married man is given a turkey, celery, and cranberries, while each unmarried man receives a tie or a pair of gloves.

While these workers, an unorganized group without technical skill requiring long training, have lifted themselves somewhat above the lot of the unskilled workers, they nevertheless must work under the strain of long hours as a regular thing with overtime work piled on in emergencies, and with no periodic rest days provided as a part of the work scheme.

The Organized Trades

A close estimate based on returns from secretaries of local unions, indicating the number of union men engaged in manufacturing pursuits in Topeka, shows the proportion to be somewhere between 7 and 10 per cent of all workers. The proportions are higher in a few trades—the building trades for instance, although some of their locals are comparatively weak. The strongest unions are in the printing trades where about 60 per cent of all men, and even a larger per cent of the skilled men, are union members. The railway train men, also, are well organized.

Several of the local unions in the last five years have lost

ground. The cigar-makers membership has fallen from 14 to 11 members, the machinists from 45 to 34, carpenters from 160 to 41, stone cutters from 20 to 14, tailors from 28 to 19, railway conductors from 40 to 30. The boiler makers, who had 16 members in 1908, have gone out of existence. On the other hand, the plumbers, barbers, photo engravers, typographical men, switchmen, bookbinders, bakers, and lathers have made gains in membership. Five new unions have come into existence—among electrical workers, stenographers, theatrical stage employes, flour mill packers, and upholsterers. The last two were organized since the survey was begun. It appears that the total membership of the unions has practically stood still during the past five years, which, considering that the city has been steadily growing, means that they have proportionately lost ground in spite of the recent additions.

A great blow was struck unionism in Topeka by the establishment in 1904 of a non-union shop by the Santa Fe Railroad. Not only did it lose to the unions those employes who had formerly been members, but it put local unions engaged in work similar to that carried on in the Santa Fe shops—especially the carpenters—at a disadvantage. A carpenter, formerly a member of the union, put it this way: "The union can not maintain a rate of 40 cents an hour when a contractor can go to the Santa Fe shops and get all the men he wants by offering 30 or 32 cents." For rougher work, which can be done by car carpenters or car repairers, his point is probably well made and would seem to explain the weakening of this union going on in recent years. The same general cause probably accounts also for the giving up of the boiler makers' union.

The unions of the city are organized into the Topeka Industrial Council. It has 25 affiliated locals, including the following tradesmen: bakers and confectioners, barbers, bookbinders, carpenters, cigar makers, retail clerks, electrical workers, flour packers, garment workers, horse shoers, lathers, machinists, musicians, painters, photo engravers, plumbers, printing press men, printing press feeders and assistants, sheet metal workers, stereotypers and electrotypers, tailors, theatrical stage employes, railway train men, typographical men, and uphol-

sterers, and trimmers. There are also 12 locals not affiliated with the Industrial Council. These cover the following trades: bricklayers and masons, railway car men (two locals), railway conductors, locomotive engineers, firemen and engine men, stenographers, laundry workers, moulders, plasterers, stone cutters, and switchmen.

Topeka labor unions include very few advocates of "direct action" in dealing with industrial issues. By peaceable means, for the most part without strikes, they have worked steadily to improve labor conditions. Several trades, notably the theatrical stage employes, the bookbinders, and the machinists, have reduced their hours of labor during the past five years. In many trades hours have been fixed at eight per day. The tailors, bakers, switchmen and sometimes the railway conductors still work ten hours per day, but no union men except the barbers, whose hours are from 7:30 a. m. to 7 p. m. work more than ten.

In securing better wages, too, the unions claim some share. In the last few years machinists have advanced their earnings from an hourly rate of 35 cents to a scale running from 35 to 40 cents. Typographical men make from $19 to $24.50 a week; five years ago they made from $16 to $21. Tailors in five years have increased their piece rates so they average $3.00 per day, whereas formerly they earned about $2.50. Switchmen's earnings have gone up from a scale of 30 to 35 cents an hour to one of 35 to 40 cents. Bakers now earn $14 to $25 a week; five years ago they earned from $14 to $18. Bookbinders have increased their incomes from a scale of $13 to $17 a week, to one of $16 to $20. Plumbers get $5.00 a day, while five years ago they got but $4.00. Piece work rates for barbers have been increased till they now earn $12.50 to $21 a week, whereas they formerly earned from $12 to $15. Carpenters now get 40 cents an hour; five years ago they got 37½ cents. Stone cutters' hourly rates have gone up from 50 to 56¼ cents. Earnings of theatrical stage men and electrical workers have risen considerably since the organization of their unions.

In spite, however, of the fact that in several trades wage increases apparently have not kept pace with the increased cost of living, which may be safely estimated at 15 per cent in the

past five years,* the wages of union men in Topeka are relatively good. Except for the barbers, who must be on hand for long hours, though their work is not always steady through the hours, the earnings of union men range from 24 to 75 cents per hour. Some of the bakers are at the lower end of the scale getting 24 cents, although others of them earn as much as 41 cents an hour. Except, however, for the barbers and a few of the bakers and theatrical stage men, all union men earn 30 cents an hour or more—most of them considerably more. The bricklayers, earning 75 cents an hour, top the list, with the plumbers at 62½ cents coming next.

In addition to their interest in securing better wages, shorter hours, and more healthful working conditions, most of the unions offer their members advantages through disability, out of work, strike, old age, and death benefits—advantages which, to the workingman who is unable often to save from his relatively limited earnings, are very great. Of the 19 locals of which we have information all except the stenographers, bakers, and stage employes have some sort of benefit system. No local has a complete system embracing all forms of benefits, but the cigar makers, who pay $3.00 a week to men out of work, $5.00 in case of sickness or strike, and from $50 to $550 in case of death, come nearest to it. The plumbers alone, of the 19 locals, provide old age pensions, the amount paid ranging from $200 to $500 a year. Death benefits, paid by every local having a benefit system except the photo engravers, range from $50 to $550. The carpenters' union pays $50 in case of death to the wife. The switchmen have a life insurance system with payments from $375 to $1,500 upon death. Strike benefits ranging from $5.00 to $8.00 a week are paid by three unions, sick benefits ranging from $1.00 to $10 a week by seven. The photo engravers, with no general sick benefit plan, grant benefits to members who contract tuberculosis. The cigar makers alone pay benefits to men out of work. The duration of benefit payments for sickness to strikers and men out of work varies

* The bulletins on food prices of the U. S. Bureau of Labor show that the cost of food products in proportions used by workingmen's families increased 29.8 per cent in the North Central states from 1908 to 1913. Studies by Chapin, Booth, and Rowntree show that food products form about 45 per cent of all expenditures in families of working people. On this basis, increases in food costs alone reduced the purchasing power of the worker's wages over 13 per cent.

from local to local, and is often left to the discretion of the officers of the union.

It is thus seen that among the organized workers questions of wages, hours of work, and emergency protection are not so acute as among scattered groups of unorganized workers.

III. LABOR CONDITIONS AND PUBLIC CONTROL

It remains to consider those labor conditions and tendencies subject to public control, and in which Topeka as a capital city might well lead in reform and advance.

Women's Labor

An examination of the labor laws of Kansas suggests strongly that they were drafted chiefly in the interests of men workers. This in part is undoubtedly due to the belief that since the state is not yet very industrial, legislation for women is less urgent. At any rate, though many of the legal provisions affect women and children as well as men, child labor legislation is weak and faulty, and industrial protection for women is very meager. As somewhat suggestive of the extent to which the laws have considered the interests of men first is the provision in the statutes for an eight-hour day on public work, where men are employed almost exclusively, while permitting women to work any number of hours in factories or in mercantile establishments. If the hours of men should be restricted, there are even greater reasons why the hours of women should be controlled. The United States Supreme Court in upholding the constitutionality of the Oregon Law in the case of Muller vs. Oregon took a strong position on this point, as follows:

> "That woman's physical structure and the performance of maternal functions place her at a disadvantage in the struggle for subsistence is obvious. This is especially true when the burdens of motherhood are upon her. Even when they are not, by abundant testimony of the medical fraternity continuance for a long time on her feet at work, repeating this from day to day, tends to injurious effects upon the body, and as healthy mothers are essential to vigorous offspring, the physical well-being of women becomes an object of public interest and care in order to preserve the strength and vigor of the race."

In spite, however, of this well recognized principle Kansas is without laws protecting women from long hours of labor.

Thirty-nine states and the District of Columbia have enacted such legislation. They are:

Arizona	Massachusetts	Oklahoma
California	Michigan	Oregon
Colorado	Minnesota	Pennsylvania
Connecticut	Mississippi	Rhode Island
Delaware	Missouri	South Carolina
Georgia	Montana	South Dakota
Idaho	Nebraska	Tennessee
Illinois	New Hampshire	Texas
Indiana	New Jersey	Utah
Kentucky	New York	Vermont
Louisiana	North Carolina	Virginia
Maine	North Dakota	Washington
Maryland	Ohio	Wisconsin

In not all of these states are the statutes satisfactory, but the fact remains that Kansas, with its good record for progress, is one of the few states which provides no restriction whatever upon the hours of work of women.

This investigation was made under time limitations which could not allow for thoroughgoing study of working conditions among women. A limited number of inquiries, together with information supplied by some employers, however, indicates that the predominating working day for women is nine hours. In a few cases, in factories, in restaurants, hotels and laundries, and during rush seasons and Saturdays in mercantile establishments, the hours are longer. A few hotel workers were found who were on duty regularly eleven hours a day.

Unfortunately, the Kansas Labor Department reports for past years do not enlighten us upon this point. This serious omission, however, is to be corrected in the future. Miss Linna E. Bressette, an inspector recently appointed, has already started collecting data on the hours and wages of women. These will be shown in the next report of the commisioner of labor. Through the courtesy of Miss Bressette and Commissioner of Labor W. L. O'Brien, we are able to present the information gathered by the department regarding the hours of labor of women workers in Topeka. But, on account of an unfortunate

provision of the labor law,* it is impossible to present the information by firms or corporations. Incidentally, there may be good reasons why all information regarding the financial condition of any firm or corporation, its profits and the like, should be kept secret; but to prevent the facts regarding hours of work, wages, and industrial accidents being given out may often mean the protection at society's expense of those employers who maintain bad conditions. A local example of the force of publicity is an incident in the course of the Labor Department's inspections. One day the inspector copied the payroll of one of the large employers of women in Topeka. A few days later the employer called on the commissioner and asked permission to file an amended schedule, the new schedule increasing pay and fixing a six-dollar minimum weekly wage.

As to hours of work, the data that can be given may be summed up in table 7 on page 40, as follows:

These figures unfortunately do not cover laundries, restaurants, or hotels, where hours of work are sometimes longest. The groupings in the table show the numbers of women who would be affected by legislation fixing hours at 60, at 54, or at 48 per week. If a 54-hour limit were set, as is done in some states, the work period of over half of the 949 women here tabulated would be reduced in some degree. If a 48-hour week were established, as in California, Colorado, and the District of Columbia, a still larger number of workers would be affected.

In view of the foregoing, the need for legislation seems clear, the laws to embody among other things the following provisions.

1. That no woman shall be employed for more than nine hours in any one day, or 54 hours or six days in any one week. A 48-hour law would be even more desirable.

2. That women shall not be employed between 10 p. m. and 6 a. m.

* "In the report of said Bureau no use shall be made of the names of individuals, firms or corporations supplying the information called for by this act, unless by written permission, such information being deemed confidential, and not for the purpose of disclosing personal affairs, and any officer, agent or employe of the Bureau violating this provision shall forfeit a sum not exceeding $500 or be imprisoned not more than one year." Kansas Gen. Stat. 1909, chap. 108, sec. 4.

TABLE 7. HOURS OF WORK PER WEEK FOR 949 WOMEN WORKERS IN TOPEKA, 1913 [a]

Industrial group	Women working					All women
	48 hours or less	More than 48 but not more than 54 hours	More than 54 but not more than 60 hours	More than 60 but not more than 66 hours	More than 66 but not more than 72 hours	
Tent, awning, garment and mattress manufacturing..	98	7	9	..	..	114
Printing, publishing, bookbinding, etc.	187	16	..	..	..	203
Work in creameries, canning and preserving, egg and chicken packing	..	..	419	..	..	419
Work in mercantile establishments	17	13	26	10	2	68
Work in offices, telephone exchanges, etc.	128	..	17	..	..	145
Total	430	36	471	10	2	949

[a] Based on information which is to be presented in the next report of the Kansas Department of Labor.

3. That no woman shall be employed within four weeks after childbirth.

Such legislation is in operation in several of the largest manufacturing states, and in European countries, where it is aimed not only to protect the health and general welfare of women workers, but the welfare of the general public.

WAGES OF WOMEN

The Labor Department has also supplied data on women's wages in Topeka, and its former reports contain statistics covering the whole state. The detailed statement is interesting, particularly in view of the failure of the minimum wage law in the last legislature. According to the 1912 figures, covering 3,192 women employes over sixteen years of age in the state, 1,300, or 41 per cent, received under $6.00 a week; 2,270, or 71 per cent, received less than $8.00. Of the industries employing large numbers of women, soap factories, poultry and egg packing establishments, and bakeries and confectionaries paid the lowest wages; while slaughtering and meat packing plants, printing and publishing concerns, and creameries paid the highest. Although the department figures do not cover mercantile establishments, telephone exchanges, laundries, hotels or restaurants, it is seen from the figures that a large

number of women in the state are receiving such very low wages as $6.00 per week or less.

More recent figures applying only to Topeka women workers show something of the number in the city also who are working at low rates. They are collected in the two tables which follow:

TABLE 8. WEEKLY EARNINGS OF 935 WOMEN WORKERS IN TOPEKA, 1913 [a]

Weekly earnings	Women employed in					All women
	Tent, awning, garment and mattress manufacturing	Printing, publishing, bookbinding, etc.	Creameries, canning and preserving, eggs and chicken packing	Mercantile establishments	Offices, telephone exchanges, etc.	
Less than $4	44	..	14	39	..	97
$4 and less than $6	22	8	19	115	78	242
$6 and less than $8	27	113	22	92	26	280
$8 and less than $10	4	38	9	63	23	137
$10 and less than $12	11	18	4	3	7	43
$12 and less than $15	5	14	..	42	4	65
$15 and less than $20	1	8	..	40	4	53
$20 and less than $25	..	1	..	3	3	7
$25 or more	..	..	..	11	..	11
Total	114	200	68	408	145	935

[a] Based on information which is to be presented in the next annual report of the Kansas Department of Labor.

TABLE 9. WEEKLY EARNINGS OF 935 WOMEN WORKERS IN TOPEKA IN 1913 SHOWN BY CUMULATIVE PERCENTAGES [a]

Limit of weekly earnings	Women earning less than the amount specified	
	Number	Per cent
$4	97	10.4
$6	339	36.3
$8	619	66.2
$10	756	80.9
$12	799	85.5
$15	864	92.4
$20	917	98.1
$25	924	98.8
Total	935	100.0

[a] Based on figures given in Table 8.

From these tables it will be observed that 36 per cent of the women workers get less than $6.00 a week while 66 per cent get less than $8.00. As compared with 42 per cent getting under $6.00 and 69 per cent getting under $8.00 in the state as a whole, it appears that Topeka workers are better paid than those employed in other parts of the state. But this does not change the fact that a large number in the city receive very low pay.

As far as the comparison is concerned, however, it should be noted that we are not comparing exactly similar groups. The figures for the state cover all sorts of manufacturing enterprises, those for Topeka a selected group of manufacturing concerns, offices and telephone exchanges, and mercantile plants. Comparisons may be made between the Topeka manufacturing establishments and those in the state engaged in the same industries as follows:

TABLE 10. WOMEN EARNING LESS THAN $6 AND LESS THAN $8 PER WEEK IN THREE INDUSTRIAL GROUPS, TOPEKA, 1913, ALL KANSAS, 1912

Industrial group	All women employed	Women earning less than $6		Women earning less than $8	
		Number	Per cent of all women employed	Number	Per cent of all women employed
Topeka, 1913					
Tent, awning, garment and mattress manufacturing	114	66	58	93	82
Printing, publishing, bookbinding, etc.	200	8	4	121	61
Work in creameries, canning and preserving, egg and chicken packing, etc.	68	33	49	55	81
Total for 3 groups	382	107	28	269	70
All Kansas, 1912					
Tent, awning, garment and mattress manufacturing	552	265	48	401	73
Printing, publishing, bookbinding, etc.	871	341	39	600	69
Work in creameries, canning and preserving, egg and chicken packing, etc.	246	149	61	214	87
Total for 3 groups	1669	755	45	1215	73

Again, in two of the three groups of industries, it is seen that women's wages in Topeka are slightly higher than in the state as a whole. Up to last year the proportion in printing, publishing, and bookbinding, who were receiving under $6.00 was greater, for at that time the largest employer of women in this kind of work voluntarily fixed a six-dollar minimum in his establishment. One of the largest department stores has recently taken similar action. Whether one believes in the fixing of minimum wages by law or not, the spirit of this action deserves the commendation and support of the public.

Comparing the different occupation groups for Topeka alone, as shown in these Labor Department figures, we get the following:

TABLE 11. WOMEN EARNING LESS THAN $6 AND LESS THAN $8 PER WEEK. TOPEKA, 1913

Industrial group	All women employed	Women earning less than $6		Women earning less than $8	
		Number	Per cent of all women employed	Number	Per cent of all women employed
Manufacturing industries [a]	382	107	28	269	70
Work in mercantile establishments	408	154	38	246	60
Work in offices, telephone exchanges, etc.	145	78	54	104	72
Total	935	339	36	619	66

[a] This group includes the three classes of establishments dealt with in Table 10, p. 42.

When the figures are thus narrowed down to Topeka, it is seen that 36 per cent of the women, regarding whose wages the Labor Department has data, were earning less than $6.00 per week and that 66 per cent were earning less than $8.00. The largest proportion of women receiving these low wages was found in offices and telephone exchanges, although the proportion is also high in both the other groups of occupations, and all show the need for public regulation in some form.

CHILD LABOR

There are no local figures to show the exact size of the

child labor problem in Topeka. The Labor Department statistics for 1912 show only 10 children under sixteen years of age employed in factories, theatres, packing houses or in operating elevators in the city. Facts for all of Kansas recently given out by the United States Census Bureau, however, showed an amount of child labor in the state which would indicate pretty clearly that there are many more than 10 children at work in Topeka, one of three cities in the state with 20,000 or more people. The figures for 1910 are shown in table 12 on the following page.

These facts show that, although Kansas is an agricultural state, the amount of child labor in other than agricultural pursuits is not negligible. They also show that in spite of the child labor law and a labor department to enforce it, many young children in 1910 at least were engaged in occupations not without their hazards for children and in which in many states children may not engage. Some of these children in Kansas were employed in direct violation of the law.

The main provisions of the present Kansas child labor law are as follows:

(a) Work by children under fourteen years of age is prohibited in any factory, workshop (not owned or operated by parent of said child), theatre, packing house, or in operating elevators or in and about any mine.

(b) Work by children under fourteen years is prohibited in "any business or service whatsoever during the hours in which the public school is in session in the district where the child resides."

(c) Work by children under sixteen years of age employed in vocations of section (a) above, or in the distribution of transmission of merchandise or messages is prohibited before 7 a. m. or after 6 p. m. or for more than 8 hours a day or 48 hours a week.

(d) No person under sixteen years may be employed in any occupation or place "dangerous or injurious to life, limb, health or morals."

(e) Employers must prove employes to be over fourteen years of age, by certificate based upon child's age as given in the school census, or, if that is not available, by affidavit of the parent or guardian as to child's age.

TABLE 12. KANSAS CHILDREN AT WORK IN OTHER THAN AGRICULTURAL PURSUITS, 1910 [a]

Occupation	Ages			
	10 to 13 years		14 to 15 years	
	Males	Females	Males	Females
Servants	47	163	78	545
Newsboys	198	..	136	..
Messengers, bundle and office boys	78	..	216	..
General manufacturing and mechanical labor	43	..	213	3
Salesmen and women (stores)	18	5	131	61
Manufacturing and mechanical industries (apprentices)	14	..	185	..
Coal-mine operatives	15	..	153	..
Clerks in stores	..	..	87	39
Delivery men	7	..	110	..
Waiters and waitresses	..	14	13	48
Clerks (except in stores)	1	1	52	17
Laborers (steam railroad)	8	..	58	..
Telegraph operators	..	10	1	55
Draymen, teamsters, expressmen	2	..	58	..
Slaughter and packing house wkrs	1	..	47	..
Laborers, porters, helpers (in stores)	2	..	46	..
Hostlers and stable hands	4	..	34	..
Laundry operatives	..	..	..	31
Porters, except in stores	4	..	23	..
Laundresses (not in laundries)	..	5	..	20
Brick, tile, and terra cotta factory workers	2	..	23	..
Helpers in building and hand trades	2	..	19	..
Musicians and music teachers	1	2	5	11
Janitors and sextons	2	..	17	..
Stenographers and typewriters	..	..	8	11
Bookkeepers, cashiers, accountants	..	1	4	14
Retail dealers	8	1	7	1
Sewers and sewing machine operatives	..	1	..	16
Lime, cement, and gypsum factory workers	1	..	15	..
Printing and publishing	..	..	..	13
Milliners and millinery dealers	..	..	..	13
Laborers (road and street building and repairing)	1	..	10	..
Zinc and lead mine operatives	1	..	9	..
Barbers, hair dressers, manicurists	..	..	8	..
Glass factory workers	1	..	6	..
Quarry operatives	1	..	4	..
Lead and zinc factory workers	..	..	5	..
Showmen	1	..	4	..
Miscellaneous, employing 4 or less per occupation	1	..	31	3
Total	464	203	1816	901

[a] Besides those shown in the table, 5,956 boys and 27 girls ten to thirteen years of age, and 8,761 boys and 162 girls fourteen to fifteen years of age were reported as engaged in gainful labor, including agri-

This law is obviously and seriously weak for several reasons.

First, the prohibition of work by children under fourteen years of age should extend to any quarry, mill, mercantile or mechanical establishment, store, office, office building, restaurant, boarding house, bakery, barber shop, hotel apartment house, bootblack stand or establishment, public stable, garage, laundry, place of amusement, club, or to work as a driver, or in any brick or lumber yard, or in the construction or repair of buildings, or in the distribution, transmission, or sale of merchandise or in the transmission of messages, as well as to work in the places enumerated.

The desirability of this change is shown in the table at the beginning of this section where it is seen that 464 boys and 203 girls between ten and fourteen years of age in 1910 were employed in pursuits other than agricultural. Leaving out servants, who are largely domestic workers, and laundresses not in laundries, there were 417 boys and 35 girls working at these ages. Because the law does not specify quarries, a boy under fourteen in Kansas may work there legally, although work in mines which is very similar is prohibited. Restaurants are not now mentioned in the law as places where children may not work and 14 girls under fourteen years of age were found working as waitresses. Work in laundries by children is not prohibited and five girls under fourteen were doing laundry work, which as a rule is fully as trying as work in factories. And so on down the list.

Again, the words, "not owned or operated by parent of said child," in the workshop prohibition, should be stricken out. If labor is bad for a young child, it is bad even if the shop is owned and operated by the child's parents. Many parents have been fined in New York state for putting their children to work at the hazard of their health and the expense of their education.

The 48-hour week and an eight-hour day, with prohibition of work before 7 a. m. or after 6 p. m. should be made to apply to girls under eighteen years of age.

Again, the occupations "dangerous or injurious to life, limb, health or morals," in which children under sixteen years

of age are not to be employed, should be enumerated.* As it now stands for practical purposes, the provision is too indefinite.

The proof of age requirements is inadequate and offers opportunities for evasion. School census records are often inaccurate as proof of age, and should be accepted only as a last resort. Parents' affidavits are thoroughly unreliable and should never be accepted. Investigation in one city in Pennsylvania, which state formerly accepted parents' affidavits as proof of age, revealed the fact that 11.5 per cent of the 671 children in the city between ten and fourteen years of age were working on affidavits of their parents alleging that they were fourteen years of age or over.

To separate clearly those who are below and those above the age under which children may not be employed, to guarantee their age, and to provide that each child shall get at least an elementary education, working certificates issued by the school authorities should be required for the employment of all children between fourteen and sixteen years of age. To secure an employment certificate a child should be required to furnish the superintendent of schools (a) written promise of employment, (b) school records showing that he has passed through the fifth grade and has attended school not less than 130 days in the year preceding application for the certificate, (c) certificate of sound health and normal physical development, (d) proof of age by presentation of certificate of birth, or, if that is not obtainable, baptism certificate, passport or documentary evidence other than affidavit of parent or guardian. The employment certificate should be filed with the employer, and it should be required that if he fails to produce it within ten days after demand, it shall be prima facie evidence of the illegal employment.

Finally, while Topeka streets, free as they are from saloons, are probably safer for young children than those of many cities, some regulation of the ages and hours of newsboys and other street traders seems very desirable. The re-

* For list of dangerous occupations see Uniform Child Labor Law recommended by the Conference of Commissioners on Uniform State Laws in 1911. Copies may be obtained from the National Child Labor Committee, 105 East 22nd Street, New York City.

lation between street trading and delinquency, and inferior school work by street traders found in some cities, is back of this suggestion for Topeka.

The Uniform Child Labor Law, already referred to, drawn up by the Conference of Commissioners on Uniform State Laws, which law has the endorsement of all bodies interested in securing adequate child labor legislation, and which embodies the best provisions of the laws of different states, will furnish an excellent basis for anyone desirous of drafting an adequate child labor law for the state of Kansas.

Workingmen's Compensation

Within the past decade, as is well known, much advance has been made in methods of compensating workingmen for injuries received in the course of employment. The old defences used by employers against recovery of damages by injured workingmen, the "assumption of risk," "fellow servant," and "contributory negligence" rulings, have in many states been radically altered or laid aside. Moreover, 22 states, Kansas among them, have enacted some kind of workingmen's compensation laws, the aim of which is to eliminate the wastes and injustices involved in the law suit method of settling for damages and substitute one by which compensation shall always be just and certain.

The main provisions of the Kansas statute passed in 1911 and revised in 1913 are as follows:

a. General application to manufacturing, construction and mining work. Agricultural pursuits exempt.

b. Compensation granted for death or injury not due to willful negligence or intoxication of the injured party.

c. Compensation for death ranging from expenses for medical attendance and burial to $3,600, the sum being regulated by the amount of the injured person's earnings for the year preceding the accident, and the extent to which other persons are dependent upon him.

d. Compensation for total incapacity to be made in weekly payments amounting to 50 per cent of average weekly earnings, but not less than $6.00 or more than $15.

e. Compensation for partial incapacity to be made in weekly payments of not less than 25 per cent of average

weekly earnings. In no case may these fall under $3.00 or go over $12. If the injured worker is under twenty-one years of age and makes less than $10 a week, he is to get not less than 75 per cent of average weekly earnings.

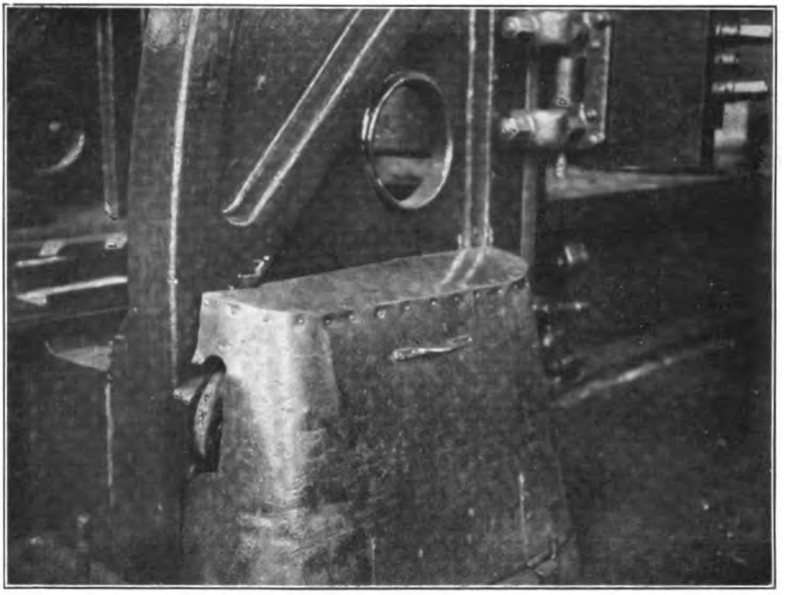
f. No payment for total or partial disability to extend over a maximum period of more than eight years.

g. Unless parties agree on compensation, the amount is to be settled by arbitration, the arbitrator or arbitrators to be agreed upon if possible, but if such agreement cannot be reached, to be appointed by the court.

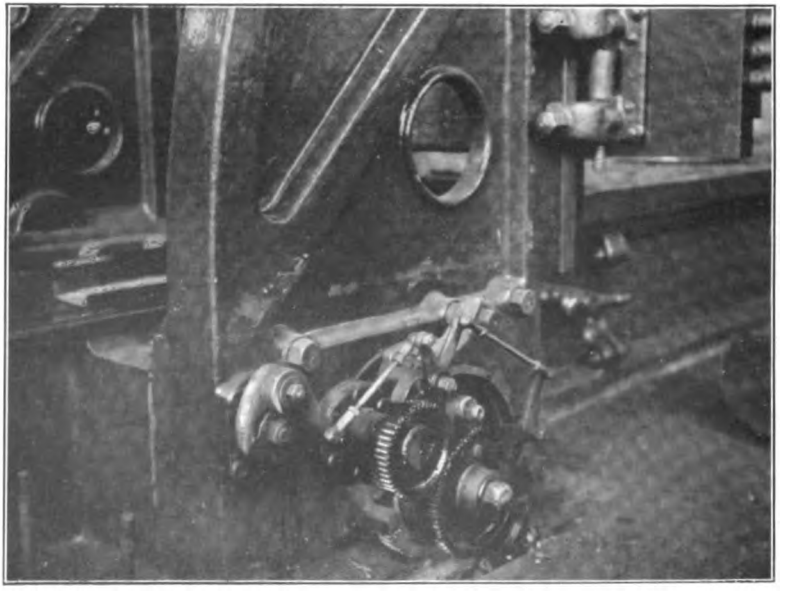
h. Employers and employes come under the law unless they file notice claiming exemption which they are permitted to do at their option. Employers, if they do this, lose the "assumption of risk," "fellow servant," and "contributory negligence" defenses. If employes, on the other hand, claim exemption, these defenses for employers still hold good.

Judging from its results in Topeka, the law has not been an unqualified success. If its object was to abolish the defenses mentioned, which would be worth while, its accomplishments have been creditable; if it aimed to do away with needless and expensive lawsuits and to establish a system of workingmen's compensation, it has achieved only partial results, for many of the largest employers, in Topeka at least, and especially those engaged in the more hazardous occupations, have claimed exemption. This is the case with the Santa Fe Railroad, employing 40 per cent of the men engaged in manufacturing pursuits. It is also true of the Rock Island, the Union Pacific, and six other railways. Thirteen companies engaged in manufacturing iron products, six sand and stone companies, five ice and refrigerator companies, three coal dealers, 28 building trade contractors, three planing mills, the two poultry and egg packing plants, one brick manufacturing company, one paving company, three transfer and storage concerns, two large dairy product manufacturing establishments, two laundries, three of the largest commission merchants, and many other smaller concerns, 132 establishments in all, have filed claims for exemptions.

The Street Railway Company, which already had an accident-benefit system, several flour mills, and the local pack-



SANTA FE SAFETY FIRST.
Above, dangerous cog wheels well guarded.
Below, cog wheels before being guarded.



ing house have not filed exemptions and the law thus applies to them.

There is much doubt whether laws which allow the employer the option either of coming under them or of standing suit can be as successful as those which make the payment of compensation according to the law's provisions compulsory; and there is reason for belief that the latter form will ultimately be most generfally adopted. Such laws have been enacted already in California, New York, and Washington, and the law has been held constitutional in the highest court of the latter state. In New York the constitution was amended to make such a law possible. In all of these states administration is in the hands of special commissions, and in two of them the state has established an insurance fund to protect employers from exorbitant charges by insurance companies.

Until Kansas does more to bring employers in hazardous industries under the provisions of her law, her workingmen's compensation statute cannot be considered satisfactory.

Factory Inspection and Industrial Hygiene

Neither accidents nor occupational diseases represent large problems in Topeka industries so far as official records go; but these are so meager on everything save fatalities from accident that the records are a confession of ignorance rather than an assurance of immunity. Death records of Topeka for 1912 show but four deaths traceable directly to industry. Three of these were deaths of railway train operatives; the fourth resulted from an elevator accident in a livery stable, a place not covered by Labor Department inspections. Probably the most dangerous large industry in the city is the construction and repair work in the Santa Fe car shops, and there, as stated already, a program of safety and guarding of machinery has been inaugurated. Even the most carefully guarded machinery, however, is not proof against the extremely careless, as was demonstrated by the death of one young Santa Fe employe during the past year. In this case death was due to complications arising after he had lost his fingers operating a circular saw. A guard was on the saw, with warning to keep the guard in place when the machine was in use, and another warning was posted that no one was to use the saw without

permission. Both admonitions were disregarded and the young man lost his life.

No official information is available regarding industrial diseases in the city. No deaths were reported in 1912 traceable to occupational causes. This is not surprising, however, for the law does not require physicians to report such cases and many of them do not recognize the relation often existing between sickness and the conditions under which the patient has worked. The fact of such relationship has already been established for many kinds of work. Operations, for instance, requiring the handling of phosphorous, arsenic, brass, wood alcohol, mercury and their compounds, unless preventive precautions are taken, are known to be dangerous. Without any special search, one man was found in Topeka who was suffering from poisoning due to work in a brass foundry.

The Labor Department has given attention to the guarding of dangerous machinery, fire protection, and the provision of better sanitation and ventilation in factories. In 1911, the last year for which statistics have been published, 73 orders were issued for guarding of machinery, two for better fire protection, and five for the improvement of ventilation and sanitary conditions in factories of Shawnee County.

The state law, however, under which the department works is found to be inadequate in several particulars.

1. In providing for the guarding of machinery the law is general, not detailed, and qualifies the necessity for guarding machinery by inserting the words "where practicable." It would be more effective and satisfactory to both employes and employers, especially as the latter are legally responsible for accidents due to machinery not guarded as required by law, if *specific* requirements were made for the guarding of machinery, and some individual or board were given the authority to add special requirements for special cases. The practicability of protecting human life is too important a matter to be left open to question every time each hazard is to be considered.

2. The law provides for the reporting of accidents by employers. Presumably the purpose of this section is to permit a study of the causes of accidents with a view to discovering

PROTECTED CIRCULAR SAW, SANTA FE SHOPS.
Through failure to obey warning, a workman met with an accident on this saw which later cost his life.

means for accident prevention. Employers are not, however, required to report all accidents, but only those due to "defects or faults in machinery, appliances, tools, scaffolding, ropes, cables or other appliances or materials used in construction or in the operation of said machinery or appliances, or motive power so used." Obviously the provision so limits the accidents to be reported as to defeat its own ends. Only accidents due to defects or faults in machinery, etc., need be reported. Many employers would hardly consider a projecting set screw on a revolving shaft as a defect, yet hundreds of persons have had their clothes caught on them and suffered serious injury. Similar examples might be enumerated at great length. It is only because some employers consider certain machinery which is dangerous to employes free from faults and defects that any legislation of this sort is necessary.

In practice some employers report all accidents, some only accidents required by the law, some no accidents at all. Experience in other states indicates that the law should require the reporting of all accidents and permit the labor commissioner to determine which cases are due to defects which need to be remedied.

3. The provision for securing adequate protection for workers against industrial diseases is not definite, and would be improved if specific requirements were made, such as hoods and pipes connected with exhaust fans on all grinding, polishing and buffing wheels, and proper exhaust hoods and pipes over all machinery producing much dust.

Employment Agencies

Topeka and Kansas, like many other parts of the country, at the time of this inquiry, were going through a period of acute unemployment, which brought home again the importance of some efficient agency for connecting up the worker and what jobs there may be.

The state has a free employment bureau, formerly separate, but now organized under the Labor Department. At its head is a director receiving $1,200 a year, with $500 for "postage and express." This bureau has served two main functions: the procuring of farm laborers, especially in harvest time, and the supervision of private employment agencies.

Every fall the harvest fields of Kansas need thousands of extra workers. Hither from many corners of the Middle West, men come to meet the demand. The problem of getting them to the places where they are needed and wanted is not small. By correspondence, newspaper publicity, and by working in co-operation with the railway employment agencies the state employment bureau has played a useful part in the annual solution.

It has also done much in weeding out crooked private employment agencies and bringing them to time. These agencies when unsupervised, as is well known, often prey upon ignorant people by misrepresenting the conditions of work and sometimes by taking money and shipping workers off to points where no work awaits them. Women's agencies in some places also have co-operated with organized vice. In Topeka, since the spring of 1913, the state bureau has revoked a number of licenses, and conditions have greatly improved, as is indicated by the decreased number of complaints coming into the state office.

Apparently when the Bureau was established it was intended to serve in bringing industrial as well as farm workers

and employers together. The statute creating it stated that it was "for the purpose of providing free employment agencies in all cities of the first and second class." Its failure to serve this purpose is attributable mainly to the fact that city clerks were designated to act as local agents unless the city governments throughout the state designated other persons to act in that capacity. When the law was first enacted no extra compensation was allowed to city clerks for this work, and to meet their objection the law was amended so that they were no longer required to act unless local authorities provided extra compensation for the performance of these new duties. In very few instances has such local provision been made, and the result is that the purpose of the law has been almost completely nullified. Obviously with no local connections over the state the effectiveness of the bureau as a general employment agency is greatly impaired. In fact, its usefulness as a real labor exchange is negligible.

In giving up the effort to act in such a capacity, because of this setback, the bureau has, we believe, unnecessarily abandoned an opportunity to serve the employers and workers of the state. Many who have given this subject the most careful study have reached the conclusion that public employment bureaus can serve a most useful purpose by establishing themselves as clearing houses for private agencies, so that no unemployed carpenter, for instance, having applied to one agency in one city, need be idle while an employer dealing with a second agency in another city is awaiting a search for a carpenter in the second locality. In Kansas, with its unusual amount of seasonal labor and its scattered population, the desirability of such a clearing house is very great. This is, we believe, a legitimate field for the Kansas State Employment Bureau to enter—one which will not require an undue amount of work or a great increase in expenditures, but will, in addition to that already being given, render a real service to the community.

Finally, the main points with regard to labor conditions subject to public control may be summed up as follows:

I. The number of women working at low wages and long hours in both Topeka and the state, emphasize the conclusion

that their interests must be taken into account and that protective legislation should no longer be postponed.

II. Although Kansas is an agricultural state, the amount of child labor in other than agricultural pursuits is by no means negligible. The present child labor law should either be thoroughly overhauled or replaced by one providing more adequately for the welfare of children.

III. The present workmen's compensation law does not go very far in protecting workers; some method should be adopted to bring employers and employes under a workable compensation system.

IV. As a first step toward greater safety in industry, employers should be required by law to report to the Labor Department all accidents occurring in their factories, whatever the cause.

V. The opportunities for greater public usefulness urge extending the activities of the State Free Employment Bureau to cover the industrial field, especially through the establishing of a labor exchange.

In addition to these conclusions and the recommendations included in earlier parts of the report, the facts brought out show the need of carrying many of the investigations further and understanding more intimately the effects of current work conditions upon the everyday life of the people.

THE MAIL PRINTING HOUSE, TOPEKA KANSAS