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RHODE ISLAND BUREAU OF INDUSTRIAL STATISTICS.

TENEMENT HOUSE CONDITIONS

IN

Five Rhode Island Cities.

GEORGE H. WEBB, Commissioner.

CAROL ARONOVICI, Special Agent.

PART I OF THE ANNUAL REPORT FOR 1910.

PROVIDENCE:

E. L. FREEMAN COMPANY, STATE PRINTERS.

1911.

“ It is easily perceptible that no matter how heavy the sacrifice necessary for the abolition of unsanitary housing, it will be far from equaling the suffering and misery that results from tolerating disease producing tenements.”

PREFATORY NOTE.

This report relates to the tenement house conditions found in Providence, Pawtucket, Central Falls, Woonsocket, and Newport in the course of an inquiry which extended over a period of two and a half years. The work was done by the Director of the Bureau of Social Research, which is the agency of the Union for Christian Work in co-operation with the Bureau of Industrial Statistics.

The Bureau of Industrial Statistics found it advisable to co-operate with the Bureau of Social Research because of the larger period of time which their investigation covered and because the latter agency had at its disposal trained men who were prepared to do the work in a scientific manner.*

*Special mention is due to the following students in the department of Sociology at Brown University, for their assistance in the work: Milton B. Hunt, Grover Graham, J. Semonoff, S. D. Pyle, Jr., and W. W. Greene.

INTRODUCTION.

Few problems of social economy are so closely related to the welfare of the people as the housing of the working classes. This is particularly true at the present time in the industrial cities of the United States. The conditions revealed by the investigations carried on within recent years in New York, Philadelphia, Chicago, Jersey City, and other large centers, have led to important changes in legislation and to a stricter enforcement of sanitary and building regulations. But while these influences have stimulated activities which revolutionized the housing conditions in the large cities, the benefit to the smaller communities has been of little, if any, value.

Statistics show that an increasingly large proportion of industrial workers live in smaller cities and that the mortality rates and disease are as alarming in the smaller communities as they are in the slums of our cities of millions of population. Moreover, while conditions continue to become more and more serious in small communities, investigations into conditions prevalent in large cities have not only diverted attention from the smaller towns but have misled the public into believing that *acreage-congestion* is the only cause that breeds unsanitary conditions.

The study that follows is the result of an inquiry into the housing of certain sections in the cities of Providence, Pawtucket, Central Falls, and Newport, the first four being industrial centers and the last a summer resort of the highest rank. The results obtained point to conditions which although not wholly similar in kind to those found in large population centers, are of a character that should warrant a wide-spread interest in the housing of the workers in the smaller cities of the United States with the emphasis on the industrial rather than the populational aspect of the community.

METHOD OF INQUIRY.

The methods used in this inquiry was modeled according to the methods used in New York, Boston, and St. Louis. The cards which were similar to those used in similar investigations in other States were filled out by trained investigators, who canvassed the individual home and obtained as much direct information as was available.

Measurements of the rooms and buildings were made and a personal inspection of every sanitary device accessible in each house was conducted. The work of the investigators was later reconvassed by the writer in order to co-ordinate the discrepancies in point of view between the different investigators and to gain a general knowledge of conditions necessary to an understanding of the means and methods of sanitary supervision and control existing and the legislation needed for the improvement of the conditions found.

THE FIELD COVERED.

Owing to the difficulty of securing trained and reliable workers to make the investigation accurate and exhaustive, the field covered has of necessity been limited.

The most extensive investigation was carried on in Providence, where 806 tenements were studied. In Woonsocket, 199; in Newport, 68; in Pawtucket, 178; and in Central Falls, 109 tenements were made the object of a careful inquiry.

The tenements were taken not necessarily from among the worst sections of the cities, but districts which contained working people's homes, were chosen according to the distribution of the nationalities most prevalent in the community. In this manner it was possible to compare conditions and ascertain whether unsanitary tenements are as closely related to poverty and neglect on the part of the tenants as seemed to be the prevalent opinion among landlords and city officials.

In all 1,360 tenements were considered with results which warrant the publication of the present report.

HOUSING CONDITIONS IN FIVE PRINCIPAL CITIES IN RHODE ISLAND.

CHARACTER OF BUILDING.

The character of buildings varies with the locality, the contour of the land, and the history of the development of the community. We find in Providence every possible type of structure, from the six-story tenement, with dark rooms and ninety-five per cent. of the land covered by buildings, to the little three-room cottage perched upon the river bank with its poor roof, insufficient drainage, damp walls, and neglected hopper toilet.

The rapid industrial growth of the cities and influx of foreign elements has created an unprecedented demand for tenements in the cities of the State. The landlords have been placed at an advantage under these circumstances owing to the absence of adequate legislation controlling the building and maintenance of tenements and the disproportionate demand for homes on the part of the inflowing population. The result has been, as will be seen from the following pages, a degeneration of some of the best residential sections of our cities and dangerous state of neglect due to conditions which involved increased profits and the absence of legislative control.

The following types of tenements were found:

1. Tenement houses with two or more families, living independently of each other and doing their cooking separately.

This type was the most prevalent, ninety-seven per cent. of the tenements investigated being of this type.

2. The one-family house. This latter type of tenement represents only three per cent. of the total number of homes considered in the course of this inquiry.

The old large one-family home which is often found in the recently

transformed sections of the cities, are often altered to accommodate two and sometimes even four families, in spite of the inadequacy of light, plumbing, fire protection, and other necessities required for the health and safety of the tenants. This type represents three and one-half per cent. of the total number of two or more family tenement-buildings.

WHAT IS A TENEMENT.

Within the last ten years a good deal of discussion has taken place among social workers and legislators as to what a tenement is and how it should be defined. The New York tenement law defines a tenement as a building *in which three or more families are living independently of each other and doing their cooking separately*. This definition has been copied by other cities to the regret both of the social workers and of those whose duty it is to enforce the tenement laws.

In this inquiry a departure was made from the generally accepted definition of a tenement and all buildings which were occupied in the district in which the inquiry was made were studied when the building was occupied by families which did not own the tenement in which they were living, or where there were at least two families in the building regardless as to whether the owner was one of the tenants or not.

From the results of this study it would seem advisable to define a tenement as a building in which two or more families are living independently of each other. Such a definition would obviate any criticism on the part of those living in one-family homes, which are of a higher class than is generally found to be lacking in sanitary provisions and would include the well-known mill-dwelling type, which is so common in Rhode Island.

OWNERSHIP OF HOMES.

It is of the utmost importance in considering the ownership of homes to consider at the same time the character of housing legisla-

tion and its enforcement as well as the character of the population occupying their homes. If we compare the ownership of homes, that are not farm-houses, in Rhode Island, with the similar class of homes in the other New England States, we find that Rhode Island shows a home ownership of only 25½ per cent. of the total number; Massachusetts shows 30.90 per cent.; Connecticut, 31.41 per cent.; New Hampshire, 63.93 per cent.; Vermont, 42.92 per cent.; and Maine, 46.86 per cent.

We find in the State of Rhode Island that the number of foreign immigrants has increased very materially during the ten years that have elapsed between the censuses of 1895 and 1905. They form a group of population which has within recent years entered largely into the work of the cotton and woolen mills of the State with a comparatively low wage standard and a correspondingly low standard of living. Their families are usually large and for this reason they are driven to the cheapest dwellings. The demand that such an influx of population would create upon the poor type of houses tends to increase the revenue from the rental of such homes and to encourage their owners without a corresponding improvement in their maintenance.

It is well known that the largest part of the population goes to the industrial towns and cities of the State. The figures of the 1905 census show clearly that in the cities and towns, and especially in the cities in which investigations have been made, that the percentage of ownership of homes is very small.

The following table gives the facts:

	Per cent. of Homes.		Per cent. of Homes.
Providence.....	78.27	hired.....	21.73
Ward 4.....	88.73	“.....	11.27
Ward 7.....	68.36	“.....	31.38
Pawtucket.....	72.72	“.....	27.18
Ward 2.....	68.08	“.....	31.92
Ward 5.....	79.68	“.....	20.32

	Per cent. of Homes.		Per cent. of Homes.
Woonsocket.....	79.13	hired.....	20.87 owned.
Ward 1.....	70.81	“	29.19 “
Ward 3.....	92.08	“	7.92 “
Central Falls.....	79.11	“	20.89 “
Ward 2.....	81.78	“	18.22 “
Ward 3.....	72.88	“	27.12 “

This should not be understood to mean that housing depends largely upon ownership, but that lack of control on the part of the State or city combined with the increase of population and a corresponding increase in the number of tenants would contribute very materially towards lowering the housing standard.

In New York city the per cent. of ownership of homes is constantly decreasing, but at the same time an increased control of housing conditions due to effective legislation and its rigid enforcements are making possible improvements which could not be made under the most common ownership. We can best illustrate the relation between poor housing and ownership as it exists in the cities of this State from the inquiry which was made during the present investigations regarding the ownership of tenements and homes. It was found that only one and one-half per cent. of the houses investigated were inhabited by their owners and that practically without exception these houses were of the better class from a sanitary point of view, although in many of them some structural defects were discovered.

CHARACTER OF OWNERS.

As to the character of the owners in whose hands the housing of the working people rests, nothing very definite can be said. In several instances the neighboring mills owned the homes of their workers and these were, perhaps, of the most preferable class. A large number of tenements are owned by wealthy persons who make a business of renting them either directly or through their agents. Where agents have charge of the renting and the collection of the

rentals, the property is often permitted to run down in spite of repeated complaints and appeals on the part of the tenant. The communities in Rhode Island have not reached the standard of business management of tenement that has been attained in the large cities of the country. The agents are only nominally in charge of the property while their real function is the collection of rent. It is a harmful method which works injury both to the tenant and to the property owner.

One of the most pernicious methods of increasing the number of tenements is used by some business men who buy run-down ramshackle structures and by repairing them sufficiently to meet the strictest requirements of the law turn them into the cheapest types of tenements which neither are nor can be made sanitary. The best cared for tenements were owned by persons who lived in one part of the building and rented other parts.

CROWDING.

With a poor population and an insufficient supply of tenements we would expect to find a large amount of crowding. According to the statistics gathered by the Bureau of Labor, 1905, of 106,226 families in this city 19,709, or 18 per cent., live in tenements of less than one room per person. If we consider these facts in terms of persons, we find that out of a population of 471,204, 125,802 persons, or 30.93 per cent., live in less than one room, over 30,000 live in less than two persons for one room, and about 3,000 people have less than one room for three persons. When we consider that in these 19,709 homes there must be a kitchen and spare room, as they were found in 90 per cent. of the homes visited, we can realize the amount of crowding in bedrooms which would necessarily result.

If statistics generally gathered do not express the facts as we found them in the course of our investigation, some specific cases illustrate conditions existing in at least part of the tenements of these cities. In Woonsocket, we found in one tenement house every

bedroom was used by three persons or more. Another tenement had three rooms with a family of four persons and six roomers. In another tenement of two rooms eight Hungarians were living, provided with only three beds. Further investigation revealed a condition of eighteen people living in three rooms and twenty-three in four rooms. The latter two cases were in tenements occupied only by men.

In Providence it was found that fourteen persons in one tenement were living in four rooms. In another locality six members belonging to two families lived in two rooms and were doing their cooking together. A family with four children and seven boarders occupied three rooms, another family of four with eight boarders occupied four rooms, etc.

RENTALS.

A recent investigation into the proportion between the rentals and income on the east side of New York city, showing that the population in that section pays about eighteen per cent. of its income in rent. Similar inquiries in connection with the 1,300 tenements investigated in the five cities considered in this report, gave the following results:

Providence.....	13.55	of total income.
Woonsocket.....	13.68	“ “
Newport.....	14.94	“ “
Central Falls.....	11.21	“ “
Pawtucket.....	12.14	“ “

This proportion is much lower than the proportion found in New York city, but we must take into account the fact that in many of the tenements there were boarders who, while swelling the family income in money, leave after all cost of maintenance is paid, a very small balance, which goes to the actual support of the family, and also that the average income in New York city is higher than in the cities of Rhode Island.

The above figures, while representing the average rental, by no means are representative of actual conditions. The families in which a large number of adults are working naturally will show a smaller per cent. in rentals, but the families in which only one person is working shows a high per cent. of rental. In some cases rent is paid by the week, and in that way the owner derives a little higher return, because of the intentional calculation of the month on a basis of four weeks. Such houses were found to yield from fifteen to fifty per cent. of the total income.

As in this inquiry it was impossible to separate the actual family income which goes in toto to support the family, from the total income of all the members of the family, and as we were unable to ascertain the amount of idleness of the supporters of the family throughout the year, the above figures should be considered only as a tentative estimate.

STRUCTURAL CONDITIONS.—FIRE PROTECTION.

As ninety-eight per cent. of the tenements considered in this inquiry are wooden structures with inflammable stairways and halls, it is important to consider the provisions for escape in case of fire.

Of the 102 structures examined in the city of Providence with regard to fire-escapes only eight were provided with such facilities, while ninety-four had no such provisions.—Of these structures, three had only one story; thirty-one, two stories; forty-five, three stories; and fifteen, four stories.

In several cases, particularly in the new buildings, two sets of stairs were provided, but as they were not made of fire-proof material, the danger to life in case of fire is not thereby diminished. The stairways in the old houses are generally very worn, and the halls poorly lighted or wholly without light.

In two buildings on North Main street, Providence, the hallways were being used as store-rooms, so that the passage from one end of the hall to the other was blocked. In another three-story building with six families, the stairways were only twenty-eight inches wide,

and the hall door had to be opened inside, practically blocking the exit in case of fire.

As the large tenements contain large numbers of persons, the provision of fire-escapes is a very serious matter. If the proportion of structures without fire-escapes throughout the city is the same as the proportion found in the course of this inquiry, the danger to life and limb due to the absence of such provisions is no small part of the housing problem in Providence. Recent events have demonstrated the need for fire-escapes and has shown that the fire department of Providence, efficient as it is, can not guarantee the safety of the tenement dwellers in case of fire without the necessary structural provisions for such safety.

While the condition in Providence is very serious the smaller cities, owing to the size of the buildings, present a less alarming situation. In all cities, and particularly in Woonsocket and Newport, cases of four tenements holding from four to sixteen families with from sixty to ninety-six persons were found, without any provision for escape in case of fire. In Woonsocket a row of four-story buildings, with a population of 147 persons, was found to be utterly devoid of means of escape in case of danger from fire. The staircases were all constructed of wood, with only one exit to a tenement.

In Newport, although the city ordinances provide for adequate fire protection, two four-story buildings and one business building were found to be structurally so lacking in provision for escape in case of fire as to make them a menace not only to the persons occupying such dwelling but to the neighboring structures as well.

In Pawtucket and in Central Falls, while some provision seemed necessary in cases where the buildings were provided with only narrow staircases and dark halls, as far as this investigation is concerned the facts show no serious conditions. Most of the houses are one and two-story tenements, with easy access in case of fire.

DAMPNESS OF WALLS AND CEILINGS.

The dampness of walls and ceilings is one of the most serious sanitary defects that was found in the course of our inquiry. This dampness is produced by three causes: leakage in roofs, leakage in water and sewer connections, and dampness of land immediately surrounding the tenement building. All three of these causes were found active. Garret rooms, with damp walls, owing to broken roofs and poor drainage were found in the following number of cases: Pawtucket, fourteen; Woonsocket, eleven; Central Falls, three; and one in Newport. This number is far from being complete, not only throughout the cities mentioned, but not even in the tenements that came under observation, as the tenants change very frequently, and the inquiry was made when dampness and leakage would not be easily observed. In Woonsocket three cases of tuberculosis (one far advanced case) and one case of rheumatism were found in rooms in which the dampness of the walls was very clearly apparent. In Pawtucket a very bad case of rheumatism and one case of tuberculosis were found in rooms with the walls damp on account of poor condition of the roof and the rain-drain pipes.

Dampness caused by leakage of sewer pipes or water-pipes was not as common, although five cases of sewer pipe leakage of the most serious character were found in Woonsocket. In one case a woman who was suffering from tuberculosis in its advanced stages lived with three other families in a house in which the sewer pipes had been leaking for more than a month, and had filled the cellar with four inches of water by actual measurement. The walls of the bedroom were very damp, and the family in which the tuberculous woman was found lived in two rooms with four children. Of the dampness caused by the poor condition of the water pipes, we have spoken in the chapter on water supply.

One of the most important causes of dampness is the condition of the surrounding territory immediately connected with the walls of the building. A whole row of houses in Woonsocket is so built that

the back rooms of the tenements are directly against the side of the land upon which the street is built. The rooms are below the level of the street, except for about a foot of space which contains the windows, narrow little openings, hardly sufficing to light the room even on a bright day. The walls in all the rooms adjoining the street were without exception very damp. Only two of these damp rooms adjoining the street elevation were not used, the others were used as bedrooms. There was a room of this type to every tenement so built, and there were twelve buildings of this character, with two tenements below the street in each tenement.

In Providence, in only one case were the walls found to be very damp, but cases of slight dampness was comparatively common. In Pawtucket three houses were found so near an embankment as to make the drainage of the water flowing from it a menace to the cellar and the walls of the building. In one case a family of five living in a basement near an embankment complained that the walls always had a certain chill about them that could not be overcome by any amount of heating.

The number of persons suffering from severe or slight diseases, which are likely to become more serious by living in damp tenements was considerable, and a more thorough investigation of such conditions would be a distinct benefit to the health of tenants living in such homes and to the enforcement of the health and building regulations.

Visits recently made to several tenements in the city of Providence showed that out of twenty-three tenements visited, nine had defective roofs which produced leakage into the halls or rooms, and three had large openings in the roofs through which the sky was easily seen.

At present owing to the absence of any definite regulation for the improvement or prevention of such neglect neither the health officers nor the building department are in a position to remedy conditions.

DARK ROOMS.

The problem of securing direct sunshine into tenement house living-rooms has been one of great concern to builders and tenement dwellers. In small cities this problem is usually not a very large one. But in spite of that fact in the course of our investigation, one hundred twenty-eight dark rooms were found in Providence, twenty-seven in Woonsocket, fifty in Pawtucket, twenty-two in Central Falls, and seven in Newport.

Dark rooms may be described as being of three kinds: dark rooms with exterior windows opening into alley-ways less than six feet wide, dark rooms with windows opening into air shafts, dark rooms without windows.

Each of these types presents its disadvantages. The dark room with the exterior window opening into an alley-way has not only the disadvantage of insufficient light, but also that of bad ventilation, owing to the common use of such passage ways as a dumping ground, which results in so polluting the air as to make windows practically useless for purposes of ventilation. Of this class of rooms in the tenements investigated, Providence has ninety-seven, Woonsocket has fourteen, Pawtucket, sixteen; Central Falls, seventeen; and Newport, four.

In the twenty-one dark rooms, with interior windows opening into air-shafts, found in Providence, conditions were found similar in character to those seen in the dumb-bell tenements of New York, where air-shafts four to six feet square, completely inclosed, and usually covered to the top, are the chief sources of light and ventilation. Into these enclosures the windows of both toilet and sleeping rooms open. At the bottom of every interior shaft accumulations of refuse were noted, which could not be removed on account of the inaccessibility of the enclosures except through rooms or toilets.

The last and most serious type of dark room is that entirely devoid of windows. Of this class, nine were found in Providence, fourteen in Woonsocket, five in Central Falls, and two in Newport. These

figures do not represent by any means the total number in these cities, but simply those that were discovered in the sections under our observation. Without one exception the dark rooms were used as bedrooms. In Woonsocket, in one tenement building, twelve completely dark rooms of the most unsanitary type were found used as bedrooms, mostly crowded to the limit of their floor capacity.

LOCATION AND CONDITION OF TOILET FACILITIES.

The following table shows the number of toilets inspected and the conditions found in the five cities under consideration.

TABLE I.—TOILET FACILITIES.

	Hall.	Apartment.	Yard.	Cellar.	Basement.	SEWER CONNECTIONS		FLUSHED.		VENTILATION.		CLEANLINESS.			No. of Families for Toilet.
						Yes.	No.	Yes.	No.	Possible.	Impossible.	Clean.	Dirty.	Very Dirty.	
Providence.....	161	125	39	123	12	361	22	346	69	307	107	130	177	112	2.1
Pawtucket.....	2	16	91	23	....	46	77	32	40	22	38	10	39	34	2.4
Central Falls.....	....	2	74	3	....	5	67	3	15	10	....	7	57	13	2.9
Woonsocket....	4	4	90	3	....	75	79	54	86	81	53	38	49	20	2.8
Newport.....	8	8	28	....	....	23	19	18	2	39	4	9	22	12	2.0
Total.....	175	155	322	152	12	510	264	453	212	459	202	194	344	191	

TABLE II.—WATER SUPPLY AND BATH ROOMS.

	Hall.	Apartment.	Yard.	Cellar.	Hydrant.	Cistern.	Well.	ADE- QUATE.		Bath.	HOT AND COLD WATER.	
								Yes.	No.		Yes.	No.
Providence.....	8	375	5	.....	376	1	2	355	21	21	8	14
Pawtucket.....	4	130	.....	.....	133	.....	.....	120	13	2	1	2
Central Falls.....	1	80	1	.....	82	.....	.....	77	1	7	1	1
Woonsocket.....	.....	155	3	.....	153	.....	.....	144	4	1	4	1
Newport.....	2	36	7	.....	40	4	3	37	7	.....	1	.....
Total.....	15	776	16	.....	784	5	5	733	46	31	15	18

The above table clearly indicates the prevailing conditions in the toilet facilities of the five cities. In Providence the prevalent location of toilets is in the hall; in Woonsocket, Pawtucket, and Central Falls, and Newport, it is in the yard. In every city toilets were found in cellars, yards, and apartments, the smallest aggregate number being in the basement.

As is shown by the table the largest number of families per toilet was found in Central Falls, where we also found the heaviest crowding per room and apartment. The same table shows that by a classification of the condition of cleanliness.

While the above table shows in a general way the conditions that were found, it may not be out of place to give a somewhat fuller discussion of specific cases and prevailing conditions.

On the whole, the toilets situated in apartments were the most cleanly and showed the best care. Only in three cases in Providence and one case in Woonsocket was the water found shut off in the apartment toilet, during the winter months. The hall toilets were the most objectionable, owing to the common use to which they were put by more than one family, and the lack of care and attention that they showed. In some cases the condition was such as to make

the toilets practically useless. Such instances were found in every one of the cities considered in this inquiry. The hall toilets showed decided neglect and lack of proper construction. In twenty-nine cases in Providence alone, and in practically every case in the other cities, the plumbing in the hall toilets was out of repair. In several cases the floors varied in degree of decay, and in one case the condition of the floor and the leakage of the plumbing was such as to cause serious dampness in the ceiling of floors below.

Yard toilets were generally unflushed in all the cities of the State with the exception of Providence, where eighteen of the toilets out of a total of thirty-nine were unflushed. The condition of these toilets was usually one of neglect and disrepair. During the winter months, as is shown by the table, twenty-two of the toilets in Providence, seventy-seven in Pawtucket, sixty-seven in Central Falls, seventy-nine in Woonsocket, and nineteen in Newport were not connected with the sewer. These were all yard toilets. In several cases it was found that the yard toilets had to be entirely abandoned, owing to the very filthy condition and the unsafety of the floors, that was caused by neglect and use by a large number of families. In two instances photographs were taken of conditions, which show clearly that not only were the toilets unsafe for use, but they were a menace to the health of the whole neighborhood. In Woonsocket, five toilets were found in such condition as to be entirely abandoned by the families which were supposed to use them. The lack of flushing facilities was another of the specific defects found in the toilets. This was invariably the condition in the toilets that were used by more than one family, and was due to the condition of the repair of the toilets and the shutting off of water, during the winter months. In the city of Providence twenty-nine such cases of water being shut off during the winter were found. In the other cities the investigations were made during the summer and no data could be obtained on this subject. The shutting off of the water as has been ascertained within the last two months, is a common practice among the poorer classes of tenement houses in the city

of Providence. Cases of the water being shut off in the whole building were found in a number of instances, and upon visiting twelve tenements on January 6th and 7th of this year, it was found that in ten of the twelve tenements the water had been shut off. This visitation was done by a health officer of the city of Providence in company with the writer.

The question of ventilating toilets is a very difficult and serious one, properly speaking toilets should be ventilated as well, if not better than rooms of any other kind, but conditions showed that this was not the case, and in practically every hall toilet, and in most of the cellar toilets, ventilation could not be obtained. In one case in Providence a hall toilet was found used by six families, which had its water supply out of order, and had neither window nor transom in the door.

The question of cleanliness is entirely a matter of personal standard, and for this reason the classification as given in the table is more or less arbitrary. Instances, however, could be cited of the most repulsive, filthy condition which would bear no description in any kind of a report. Photographs have been taken of such conditions in some instances, and they can tell the story better than any description could convey.

The average number of families using the toilet varies, as will be seen by the table, between two and two and nine-tenths, the best conditions being in Newport, and the most crowded in Central Falls. The figures, however, are not representative of the actual state of affairs. The use of toilets varies from one family to each toilet, particularly in the apartment toilets, to eight families per toilet, as was found the case in Woonsocket and in Central Falls. In four instances in Central Falls it was found that six families were using one toilet, not because of the absence of toilet structures, but because a large number of them had to be abandoned, owing to their condition of disrepair and filth. Generally speaking the problem of providing proper toilet facilities is not met in any of the cities considered in this inquiry, and the legislative regulations dealing with

this subject are entirely inadequate for the purposes for which they have been intended.

WATER SUPPLY.

All of the cities of this State have a sufficient and proper water supply which could be used in tenement houses. The table relating to water supplies and bath-rooms shows clearly that water is supplied to practically all the tenements, and that in almost all cases the hydrants are situated within the apartment. It would appear, therefore, that the water supply problem is properly met; this however, is not the case. The water pipes are often in such poor condition and so poorly laid and constructed as to make it dangerous for the water supply to be used during the winter months.

During the months of December and January of 1910 and 1911, twenty-seven complaints of the absence of water caused by the shut-off of the supply came to the Bureau of Social Research. This by no means represents the actual number of such cases, but simply shows that this practice has in many instances reached the point where it has become intolerable to the tenants. On the 7th of January, out of six tenements visited, five had the water supply cut-off, and in one particular case the building was occupied only by one family with three little children, and the water had to be obtained a block away from the house, owing to the absence of houses in the near proximity of this particular dwelling.

It is a commonly accepted fact that landlords make a practice in the poorer parts of the city of shutting off the water supply as soon as the cold weather sets in, thereby causing discomfort and hardship to many of the poor tenants. In forty-six instances, twenty-one of which were found in Providence, the water-pipe was not sufficient to supply the water necessary for the use of all the families in the building, and in that way caused discomfort to the tenants; this however, is not quite as serious a matter as the entire shut-off of the water, during the winter months.

On North Main street, in one house with twelve tenants, the water pipes were in such state of delapidation, and so small for the amount of water required on the premises, that those living in the third story had to go to the ground floor for their water supply.

In three cases the pipes were exposed to the outer air and frozen so that for an indefinite length of time the water was entirely cut off and had to be obtained from neighboring houses.

In sixteen apartments, water pipes under the sink were broken and leaking, causing air and space immediately about the sinks to be foul, and often breeding places for vermin.

Pawtucket, Central Falls, Woonsocket, and Newport had similar conditions to those found in Providence. In Pawtucket, only six houses had the water in the hall and two in the yard, while in Woonsocket, three, and in Newport two houses with water supply from wells in the yards came to my attention. The most interesting case of a hydrant in the yard was seen in Newport, where nine families depended for their water supply upon this hydrant. This latter freezes periodically, and the tenants are left without water for days at a time.

In Woonsocket the supply is always adequate, but the pipes are frequently exposed to freezing, which condition causes tenants to depend upon their neighbors. One well which was being used by four families has its source contaminated by a filthy stable situated close to a little stream which flows directly through the well. Bacteriological analysis of the water showed it to be decidedly unsanitary.

In Pawtucket, aside from the usual exposure of pipes, leakage under sinks, etc., six tenements were found with hall hydrants for the use of tenants and two yard hydrants, all of which were more or less out of order. The latter were frozen at the time of our investigation. While on the whole the water supply of the houses seems to be generally adequate, the delapidated and worn condition of the pipes presents a very important problem. In each city where our investigations were carried on we found cellars in which the water pipes,

through leakages during winter, make a film of ice on the floor and walls.

In one case that came to our attention in Providence, on Ship street, we found a woman in bed suffering from pneumonia, the supply of water was entirely cut off from the tenement by the cutting of the pipes on the lower floors, which were uninhabited, and were being made the stamping ground of tramps and loafers. The owner refused to repair the damage, although several requests were made by the tenant.

BATH ROOMS.

Out of the 1,300 tenements investigated only thirty-one had bath-rooms, and of these twenty-one were in the city of Providence. Fifteen out of the thirty-one bath-rooms were supplied with the means for heating the water directly connected with the tub, while in sixteen cases there were no such provisions. It is only fair to say that the bath-tubs were not in each case put to the use for which they were intended, but served as storage room for a variety of articles, ranging from coal to vegetables. This, however, was not the case with the bath-tubs which had both hot and cold water connections. It should also be stated that of the sixteen bath-tubs without the hot water, nine had the water entirely disconnected, a fact which would largely explain the use of bath-tubs for other purposes.

YARD AND COURT DRAINAGE AND DISPOSAL OF WASTE WATER.

The drainage of yards and courts was surprisingly adequate in most instances. Three cases were found, however, one in Providence, one in Pawtucket, and one in Central Falls, where, owing to the grade of the yard during times of heavy rains, considerable water would flow into the halls and make the approach of the tenements very uncomfortable. It was found, however, on re-investigation that the condition found in Providence has been entirely done away with, through a change in the arrangement of the staircases and the hall.

The disposal of waste water was generally done through a properly connected sink in the kitchen. In Pawtucket, however, we found five tenements where no such connection of the sink was provided. In Woonsocket, in three separate tenement house buildings the waste water from the sink was permitted to flow out through a small pipe to the yard in the proximity of the building, and to be deposited under the windows of other tenements. These conditions have been photographed and are on record in the office of the Commissioner of Industrial Statistics.

REPAIRS.

One of the most serious defects in our legislation relating to tenement houses is the absence of provisions for the compulsory improvement of defects in the building and for this reason it was found advisable to go into detail in our investigation of this aspect of defective housing. The defects in the buildings may be classed into three separate groups: (1) Lack of repairs to stair-halls and balcony-floors and interior staircases; (2) Lack of repairs to roofs, doors, and walls; (3) The general lack of repairs to buildings in the way of proper hinges to doors and windows, door panels, absence of window panes, etc.

The first type of defect, namely, the poor condition of staircases and floors was very common in practically every city, varying of course, in degree. In two cases on Atwell's avenue, in one case on Spruce street, and one on Lily street, in Providence, the conditions were so serious that immediate complaints had to be made to the health department, and some repairs were made. Generally speaking, the needs for repairs to staircases leading into the different tenements in tenement buildings in Pawtucket and in Providence showed serious neglect. One investigator, in attempting to go down to the cellar for the purpose of investigating the toilet, found that the steps were so defective as to endanger persons using these steps. As the defects were very common, and as they varied in degree, it

was found impossible to give definite statistics, and for this reason the subject is considered simply as one of the aspects of defective housing, and need of legislation.

(2) The question of repairs to roofs and walls has for some time puzzled the health officers of the cities of this State. In Providence, in the course of a re-investigation of certain tenement houses, nine tenements were found with the roofs so seriously defective that the water from a storm that had preceded the investigation had made the walls and stairs so damp as to be dangerous to the tenants. In three instances the roof was entirely open so that through the garret room ceilings, you could see out of doors. In these three instances a health officer was assisting the investigators. On North Main street, in Providence, a drain-pipe was found so defective as to cause the decomposure of the part of the wall to which the pipe was attached, and caused dampness throughout the whole of that building. Dampness in the roof was found to cause the dropping of the ceiling in three tenements in Pawtucket. In one instance a woman with a serious case of rheumatism, being the tenant.

(3) The general condition of dilapidation that is held to exist among tenement houses is well illustrated by streets of houses in Providence, and especially in Woonsocket. Windows broken and repaired by paper or sacks, hall doors hanging by one hinge, or being without proper panels, transoms half broken or hanging only by one hinge, and other similar conditions, giving the whole neighborhood an atmosphere of neglect and dilapidation, are common in all of the cities.

While this condition may not endanger the health of the community there is a certain moral significance to this lack of care which undoubtedly has a strong influence upon the tenants and the neighborhood as a whole.

REMOVAL OF GARBAGE AND REFUSE.

Technically the removal of garbage and refuse is one of the easiest of the tenement problems to solve, but in its present conditions, it presents one of the most serious health problems.

In Providence the removal of garbage is cared for by the city, while the removal of refuse is still uncontrolled. The boxes provided for the disposal of refuse are invariably uncovered, and in more than one-third of the cases were found to be filled to overflowing, thus rendering the yard both unsightly and unsanitary. Decayed mattresses, clothing and even animals were found about the yards on North Main, Robinson, Lily, and Spruce streets, Chalkstone avenue, and other sections of the city. The inadequate inspection and the inadequate receptacles make the tenants careless to the extent of throwing their refuse out of the window. In many cases alleys and yards were covered with from two to three feet of refuse in close proximity to the buildings in the most poorly housed sections.

As the city has no control over the means of removal of refuse the tenements often fail to place the garbage in the proper receptacles and mix it with the refuse. During the summer months such practices were found to be very common, and the condition of the receptacles and the air about them was decidedly offensive. The frequency of removal of refuse varies with the different sections of the city, the number of people and the facilities of cartage. Similar conditions were found to exist in Pawtucket, Woonsocket, Central Falls, and Newport.

In Woonsocket, in many cases no provision for the disposal of refuse is made, and in one street alone, fourteen tenements were found to be disposing of their refuse by throwing it over the river bank where, as shown in the photograph, it was allowed to decay and vitiate the atmosphere.

In seventeen cases in Providence, eight in Woonsocket, and three in Central Falls, and one in Newport, accumulated refuse was discovered in the cellar, from which it was removed only irregularly and

at long intervals. In one instance, in Central Falls, the cellar was found to be so filled with rubbish as to make it useless for any other purpose.

In a few cases the tenants, instead of collecting refuse in receptacles in their own yards, were using adjoining land as a dumping ground, and by so doing removed all responsibility from the owner of the property for the removal of such refuse. During the investigation several complaints were made by the neighbors adjoining such land that in hot weather it was impossible to keep windows open owing to the condition of the waste material there indiscriminately deposited.

Every city under consideration has some sanitary provisions regulating the disposal of garbage and refuse, but owing to the large amount of work that the enforcement of such regulations requires and the large number of persons using the premises in the more crowded sections, the regulations are not properly enforced.

We shall speak later of the question of keeping animals on the same premises with tenement houses, but it is important to mention in connection with a removal of refuse, that in three instances, in Providence alone, we found horse manure in some part of the yard, this being due to the keeping of horses on the premises. In one instance the manure was permitted to accumulate, where it has caused a great deal of unpleasantness to the tenants.

RECEPTACLES.

There is no set standard of receptacle or time for removal, and the result is that in cases where the tenements are large and the removal infrequent, the receptacles are not of sufficient size or not properly constructed to meet the needs of the tenants. Covers to the bins were found only in a limited number of places, while mixing garbage with other waste material is a very common practice. Garbage receptacles are not always adequate to the wants of the tenants. Even industrial establishments, such as bakeries and meat shops, whenever found in tenements, were lacking in proper provision for the disposal of waste subject to decay.

Whether this negligent state of affairs is due to the carelessness of the owners or that of the tenants is not altogether certain. There is no doubt that some control is necessary on both sides in order to secure improved conditions. Regular removal, proper receptacles, and frequent inspection would do a great deal towards an increase in civic pride and improvement of sanitary and esthetic surroundings of the homes. The official granting of inspection power to the police, may be one way to save inspectors, and place upon the tenants a greater responsibility.

CLEANLINESS OF ROOMS.

In spite of the crowded condition of many of the tenements the rooms were generally clean and often presented a comfortable, home-like appearance. It was interesting to find that many of the homes of working women were cleaner than some of those in which the housekeepers devoted all their time to the care of the home. There were also homes where condition of filth and neglect was such as to make the investigator's visit extremely unpleasant and even repulsive. Such a state of affairs was particularly prevalent where a number of foreign men were living in some small tenement and utilizing the largest part of the floor space for sleeping. The most filthy conditions were found among English speaking immigrants who had been in this country several years and a few natives of vicious habits, especially drunkards. In seven such cases the woman of the house was found in a drunken state amid repulsive surroundings.

In one Italian tenement in Providence, the very disorderly and uncleanly condition of the rooms was due to the fact that eight men were boarding with a family of four in four rooms. The beds were used day and night by persons employed in a mill which was working in double shifts.

CONDITION OF THE STREETS.

Owing to the crowded condition of the tenements in many of the streets to the narrowness of the alleys, and the insufficient city

appropriation for street cleaning, the appearance that certain sections present to the observer is one of neglect. Some of the streets in the Italian quarters of Providence were found to be entirely neglected, and so far as could be ascertained from the tenants, no attempt was made either by the city or the property owners towards sweeping or flushing of any kind. In some cases where advertising boards are common the papers after a time fall off or are taken off by the hangers and left upon the streets. The condition of many of the yards owing to the lack of provision for the collection of refuse make it impossible to keep the streets clean, especially on windy days, when papers and ashes are blowing freely about, and are scattered throughout the adjoining streets. This condition is particularly prevalent in Providence, where crowding per acre is highest, and where the tenements are closer to the streets than in other cities.

As no flushing is ever done on residential or tenement sections of the cities, refuse often accumulates, even on the paved streets, while on the unpaved streets the mud is sometimes so deep as to be a real difficulty in the way of the wagons that must circulate through them. In times of draught the streets are very dusty, and the accumulation of filth upon the streets is blown in to the tenement rooms.

This serious health problem could easily be dealt with by increasing city appropriations for street cleaning work and by the adoption of the street pavement to the tenement conditions. Macadamized roads can not be cleaned properly in crowded sections, while the prevailing pavement in all of the cities of the State is of this type.

ANIMALS ON PREMISES.

There were only a few tenements in which animals were kept. In two Providence tenements chickens were being housed, but were removed soon after the first investigation. On Cranston street there is a dairy which keeps its cattle in the yard. The condition of this latter is very offensive, both to the passers-by and to the neighbors.

Two yards in Woonsocket contained pigs, while cows and horses were more or less common.

In Providence two houses were found to have stables on the basement floors. Two similar cases were noted in Pawtucket. The manure from these places was removed only at intervals, made necessary by the room afforded for the deposit of such refuse.

JUNK DEALERS AND YARDS.

Five junk dealer's establishments were found in Providence, two in Woonsocket, and one in Pawtucket tenement yards. Invariably the yards had an unkempt appearance and the junk was scattered all about the place. In one case, in Providence, the junk was strewn half-way across the front of the house into the street. Since the investigation several other places have been found in the cities inspected. Whatever the advantages of the junk trade, there is beyond question that the accumulation of filthy rags, paper, wood, etc., in tenement yards does not encourage tidiness in the district in which it is most needed.

MANUFACTURE IN TENEMENTS.

Manufacture is not common in tenements of Rhode Island, yet some of the most offensive industries were found in very poorly constructed buildings. Twenty-three bakeries were discovered in Providence tenements, two in Woonsocket, and one in Pawtucket. Of the twenty-three only seven were clean, twelve were in a very filthy condition, the toilets in five of these bakeries were entirely out of repair.

In two Italian families sausage was being manufactured within the tenement, another tenement looked more like a pickling establishment than a home. Although we were informed that in other cities industries were carried on in tenements, we did not find such to be the fact during our investigation. Ice cream was being made in

three cellars in Providence, and in two, in Woonsocket. All five places were insufficiently clean to fit them for the housing of food manufacture.

CONCLUSION.

From the foregoing facts it is apparent that the cities of Rhode Island are facing an increasingly serious housing problem. The increase in foreign immigrants in need of homes, the large number of old houses and the legislation which places restrictions mainly upon new structure create a condition of stagnation in the building of houses for the poor that is truly alarming.

The comparative cheapness of land, the absence of natural barriers to the expansion of any of the five cities considered, the comparatively high rentals, seem to warrant a demand for better housing even in the smallest communities. The high mortality from tuberculosis, and other contagious diseases more or less directly connected with housing conditions, while not wholly caused by the conditions found in the tenement districts of the cities considered, are undoubtedly closely related to each other. Toilets open to the access of the flies, and the common occurrence of manure, in which flies breed must be made responsible for some of the many cases of typhoid fever which, within the last five years, has shown a considerably high rate.

Housing facilities represent the most concrete and the most essential element in the control of health and efficiency of our working people, and legislation which would tend to improve conditions is at this moment imperative, owing to the constant increase of our population and its foreign character.

REMEDIES.

While education in matters relating to the care of the home and the efforts of charity workers to improve conditions should not be discounted, the most effective and lasting method of improving housing conditions is proper house legislation.

For this reason a law is suggested which would include the provisions as outlined in the following pages.

PROVISIONS TO BE CONTAINED IN A TENEMENT HOUSE LAW.

"A Tenement House" should be defined as any house or building, or portion thereof which is rented, leased, let, or hired to be occupied by two or more families, independently of each other.

A tenement house within the fire-district of Providence should occupy not more than eighty-five per cent. of a corner lot and seventy-per cent. of any other lot, while in the other cities of the State, and outside of the fire-district in the city of Providence, tenements should occupy not more than eighty per cent. of a corner lot and sixty per cent. of any other lot.

The height of building be limited to the distance between building lines on the widest street upon which the tenement stands. Courts be limited to twelve feet square, if the building is forty-eight feet high, and an increase or decrease of one foot square for every twelve feet of height above or below forty-eight feet. All courts should be provided with a direct entrance from the street and connected with the yard, and shall be provided with proper drainage at the bottom and no covering at the top.

All buildings on the same lot with a tenement house should be within at least twenty-four feet from any of the walls of any other building on the same lot. A decrease of two feet for every twelve feet of height of building below forty-eight feet is permitted.

Lighting of rooms must be provided for by a stipulation that all rooms, bath-room and water-closet compartments shall have a window opening into the outer air. All window spaces should be not less than one-tenth of the floor area of any room.

Every tenement should have at least one room of 150 square feet in area and the minimum size of room shall be ninety square feet.

All public halls should have windows on the end opening either into the street or upon the yard or court, and at least one window in the public hall should be two feet six inches wide and five feet high, measured between the stop beads.

In tenements of three stories or over, proper skylights with at least forty square inches movable opening should be provided. Stair halls should have windows two and one-half by five feet in size.

SANITATION.

Basement and cellar rooms should not be constructed unless they comply with provisions which will make these rooms practically as sanitary as those above the ground level. They must be four feet above the street curb, eight feet high, and must have all the necessary drainage and toilet provisions similar to those provided in the case of rooms above the ground level.

Cellars should be damp-proof and must be constructed in a sanitary manner. Water-closet provisions must be made for every tenement house within the apartment, but such water-closet should be separated by a solid wall, running from ceiling to floor in all its parts.

Sewer connections are imperative in all buildings within 200 feet of a public sewer, and in other cases the health department should pass upon any other appliances used for the disposal of waste.

FIRE PROTECTION.

Tenement houses of five stories or over must be entirely fire-proof buildings. Tenements of three stories or over should have proper fire-escapes with inclined stairways at an angle of not more than

forty-five degrees, and must have flat open steps twenty inches long and six inches wide, and a rise of not more than nine inches, if they are to serve their purpose.

In tenements of five stories or over the stairs should be erected of fire-proof material. Brick walls should enclose the stairways in tenements of three stories or over.

Entrance halls in tenement houses should be at least four feet six inches wide in the clear, and including the stair enclosure, and beyond at least three feet six inches.

Shafts in tenement houses of three stories or over should be constructed of incombustible material throughout with fire-proof, self-closing doors at all openings.

All tenement houses of four stories or over must have the first floor constructed of fire-proof material with iron or steel beams, and fire-proof flooring, if they are to be safe for habitation.

Cellar entrances in tenements of three stories or over shall be provided with proper fire-proof doors.

ALTERATIONS.

The legislation relating to alteration should include provisions which, as far as possible, accord with the provisions for new buildings, excepting that in most cases old structures already in existence should not be required to be replaced by new ones unless such structures are considered unsafe or unsanitary by the health department. The strictest economy should be observed in regulations concerning alterations.

MAINTENANCE.

Every tenement house should have a janitor or house-keeper or someone living in the house in charge of the premises so that the building may be kept in a cleanly condition. The public halls should

be lighted until ten o'clock at night, and the lowest hall must be provided with a light from sunset to sunrise.

Water-closets in cellars should not be tolerated without the permission of the health department.

In every tenement house at least one water-closet shall be provided for every two families.

Basement and cellar rooms should not be occupied without the permit of the health department, and that permit should be based upon requirements stipulated in the law relating to height of rooms, lighting, ventilation, water-closet accommodations, window space, water-proofing and damp-proofing.

Cellar walls and ceilings must be water-proof and damp-proof, must be maintained in a cleanly condition, and should be white-washed or painted, as the health department shall require. Water-closets and sinks should be kept in good repair at all times of the year and in proper working order.

Leaks in roofs, broken walls or stairs or any other condition considered dangerous to health, life, or limb should be properly repaired.

All tenement houses should be provided with proper and suitable tank, pump, etc., or any other appliances necessary for a sufficient supply of water.

Tenement houses should be kept in a cleanly condition and free from any accumulation of dirt, filth, and garbage or any other matter in or on the same courts, yards, passageways, etc.

Proper receptacles should be provided for garbage and other refuse and should be properly emptied when filled. No animals should be kept within a tenement house or on the same lot, nor should any tenement house be used for the storage of rags or any other materials likely to spread disease or any combustible materials likely to cause fire. Any other dangerous business carried on in a tenement house should be properly separated by closed doors, and no open transom shall be permitted between such premises and a tenement.

A tenement should be considered overcrowded when the number of people living in such tenement or sleeping in any of its rooms exceed in number the amount of air space to the extent of 600 cubic feet for an adult and 300 cubic feet for a child under twelve years of age.

All uninhabitable and infected buildings should be vacated upon the order of the health department, and should not be occupied again without the written consent of the same department.

Whenever a building is in the opinion of the health department improperly lighted or ventilated, not provided with proper water-closet facilities, proper drainage or is out of repair, it should be within the power of the health department to order the building vacated, until proper repair has been made, and the building shall not be occupied again without the written consent of the health department.

IMPROVEMENTS.

This section should deal with the compulsory improvements of existing tenements, and the lighting of rooms should be provided for as follows: That a room that has no window opening into the outer air shall be occupied, unless a window has been cut through into the open air when possible, or into an adjoining room and this window shall be of the size required in other rooms, except in the case where structural conditions do not permit such windows, and then it shall be of the largest size possible. Certain exemptions must be made with relation to the lighting of dark rooms and they should, as far as possible, be sufficiently elastic to be adjustable to all types of buildings.

The halls should be lighted and ventilated properly to the satisfaction of the health department, and should comply as far as possible with the regulations for new buildings.

Water-closets should have no wood enclosures about the bowls, and the floors about the closet should be put in proper repair.

Privy vaults and school sinks situated within 200 feet or less of a public sewer should be removed and replaced by proper sewer con-

nections, and water closet provisions, in cases where sewers are not accessible within 200 feet, the school sinks and privy vaults and water-closets, should be put in proper repair to the satisfaction of the health department, and should be provided with proper ventilation.

Basements and cellars should be kept free from dampness and made water-proof and damp-proof.

Fire-escapes should be provided for tenements of three stories or over, excepting that in cases where fire-escapes are already provided, they should be made readily accessible and kept unencumbered. All wooden fire-escapes should be replaced by iron ones.

A law that would include such provisions as are suggested above would solve a large part of our present tenement problem within a comparatively short time, and would soon show results in reduced mortality rates, better health, and a rise in the moral and social standards of the tenement population.

RHODE ISLAND BUREAU OF INDUSTRIAL STATISTICS.

TENEMENT HOUSE CONDITIONS.

IN

Five Rhode Island Cities.

GEORGE H. WEBB, Commissioner.
CAROL ARONOVICI, Special Agent.

PART I OF THE ANNUAL REPORT FOR 1910.

PROVIDENCE:
E. L. FREEMAN COMPANY, STATE PRINTERS.
1911.