

LIBRARY
OF THE
UNIVERSITY
OF ILLINOIS

331.83

C498t

cop. 3

CENTRAL CIRCULATION BOOKSTACKS

The person charging this material is responsible for its return to the library from which it was borrowed on or before the **Latest Date** stamped below.

Theft, mutilation, and underlining of books are reasons for disciplinary action and may result in dismissal from the University.

TO RENEW CALL TELEPHONE CENTER, 333-8400

UNIVERSITY OF ILLINOIS LIBRARY AT URBANA-CHAMPAIGN

AUG 12 1993

NOV 26 1995
DEC 03 1995

JUN 08 2004

MAY 25 2005

When renewing by phone, write new due date below previous due date.

L162

TENEMENT CONDITIONS IN CHICAGO

REPORT

BY THE INVESTIGATING COMMITTEE

OF THE

CITY HOMES ASSOCIATION

TEXT BY

ROBERT HUNTER



CHICAGO

PUBLISHED BY CITY HOMES ASSOCIATION

1901

The Lakeside Press
R. R. DONNELLEY & SONS COMPANY
CHICAGO

221.05
C498t
cop. 3

PREFACE

To the Executive Committee of the City Homes Association :

This report is submitted by your Investigating Committee as a result of their work undertaken in the beginning of the summer of 1900. After consulting with various charitable and reform societies, and receiving from them many suggestions as to the best methods of obtaining accurate information concerning the evils of tenement-house conditions, it was decided that an investigation should be made of representative portions of the city. The advice of the Settlements, the Bureau of Charities, and the Visiting Nurses' Association as to which districts showed the worst sanitary and housing evils was requested, and the districts as shown in the following maps were selected. Dr. Frank A. Fetter, Professor of Economics at the Leland Stanford Jr. University, directed the work of the enumerators. Through the courtesy of Mr. William R. Stirling and Munger, Ebbert & Co., copies of the insurance maps covering District One were obtained. Mr. Dunlap Smith permitted the Committee the use of real-estate maps of the districts. The Department of Health supplied all of the enumerators with stars worn by their sanitary inspectors, which gave them the right to enter every tenement. Dr. Fetter was assisted by Dr. Edwin Ryerson and the following enumerators, mentioned in the order of their length of service: E. D. Solenberger, Roswell H. Johnson, S. G. Lindholm, Miss Jennie Dupuis, Mrs. M. S. Johnson, Miss Alice Winston, Mrs. L. W. Taft, Miss Pease, Miss Katherine B. Davis, and H. Wirt Steele. Of those who gave clerical help, Mr. C. W. Price deserves special mention. Acknowledgment is due Miss Katherine B. Davis, Ph.D., for especially valuable co-operation in the investigation of the Bohemian district. The plumbing investigation was done, with the advice and assistance of President Clinch of the Plumbers' Union, by the following licensed plumbers: F. B. Mower, Joseph Mooney, P. J. Mitchell, J. J. Malone, and H. Jacobson.

The actual work of the inquiry was commenced about the 15th of August, 1900, and was carried on with as much speed as was compatible with thoroughness. The work of compilation and the making of maps, charts, and diagrams was completed about the last of October. On the completion of the work, Dr. Fetter furnished the Committee with a statement of the actual conditions found, and with maps, diagrams, and statistical tables.

All of the materials collected in this investigation, with the returns of the enumerators, are filed at the office of the Secretary of the City Homes Association, 215 Dearborn Street, and may be consulted by any one who is interested to go more deeply into the subject.

The report as now submitted not only shows the result of the inquiry, but also compares conditions in Chicago with those elsewhere. These original materials have all been most carefully worked over, and the tables and diagrams verified.

Respectfully submitted:

ANITA McCORMICK BLAINE,
JANE ADDAMS,
CAROLINE McCORMICK,
L. V. LE MOYNE,
ERNEST P. BICKNELL,
ROBERT HUNTER, Chairman,
Committee on Investigation

TABLE OF CONTENTS

CHAPTER I.

INTRODUCTORY: PURPOSES AND IMPORTANCE OF THE INQUIRY

	PAGE
SECTION 1. THE PROBLEM OF THE OLD AND THE THREATS OF THE NEW HOUSING EVILS - - - - -	11
SECTION 2. A SMALL AREA IS CHOSEN FOR INQUIRY FROM A WILDERNESS OF HOUSING AND SANITARY NEGLECT - - - - -	12
SECTION 3. THE PURPOSE OF THE INQUIRY IS TO LAY A FOUNDATION FOR REFORM - - - - -	14
SECTION 4. OFFICIAL NEGLECT AND CORRUPT POLITICS ARE NOT ALONE TO BLAME FOR BAD CONDITIONS - - - - -	16
SECTION 5. THE STRUGGLE BETWEEN THE INTERESTS OF THE INDIVIDUAL AND THE LARGER INTERESTS OF THE COMMUNITY	18

CHAPTER II.

OVERCROWDED AREAS

SECTION 1. ECONOMY OF LAND AND THE TENEMENT PROBLEM	21
SECTION 2. OVERCROWDING THE BLOCK, AND ITS MEANING -	24
SECTION 3. OVERCROWDING ON LOT AREAS - - - - -	31
SECTION 4. THE EVILS AND EXTENT OF REAR TENEMENTS -	36
SECTION 5. THE GROWTH OF THE DOUBLE-DECKER - - - - -	43

CHAPTER III.

THE OVERCROWDED POPULATION

SECTION 1. TESTIMONY ON THE EVILS OF THE CLOSE CROWDING OF PEOPLE - - - - -	51
SECTION 2. CHICAGO'S TENEMENT POPULATION IS OPPRESSIVELY DENSE - - - - -	52
SECTION 3. A STUDY OF THE DENSITIES OF POPULATION -	53
SECTION 4. A DETAILED STUDY OF ROOMS AND APARTMENTS	58
SECTION 5. FAMILIES IN CROWDED QUARTERS - - - - -	60
SECTION 6. THE SACRIFICE OF DECENCY, HEALTH, AND MORALS IN OVERCROWDED APARTMENTS - - - - -	67
SECTION 7. THE DENSITY IS INCREASING IN CHICAGO -	71

CHAPTER IV.

INSIDE SANITARY CONDITIONS

	PAGE
SECTION 1. CAUSES OF INSANITARY CONDITIONS IN HOUSES	73
SECTION 2. A STUDY OF APARTMENTS WITH DEFECTIVE LIGHT- ING AND VENTILATION - - - - -	77
SECTION 3. A STUDY OF THE AIR-SPACES IN OVERCROWDED APARTMENTS - - - - -	83
SECTION 4. THE EXTENT AND EVILS OF CELLAR AND BASEMENT DWELLINGS - - - - -	88
SECTION 5. HOUSES UNFIT FOR HABITATION - - -	94

CHAPTER V.

DEFECTIVE PLUMBING AND BATHS

SECTION 1. THE PRINCIPLES OF SANITARY PLUMBING -	100
SECTION 2. THE CONDITION OF SINKS, CATCH-BASINS, AND UNDRAINED LOTS - - - - -	101
SECTION 3. THE PREVALENCE OF THE OUTLAWED PRIVY VAULT	104
SECTION 4. INSANITARY WATER-CLOSETS - - -	105
SECTION 5. THE NEED OF BATHS - - - - -	108

CHAPTER VI.

OUTSIDE INSANITARY CONDITIONS

SECTION 1. THE IMPORTANCE OF OUTSIDE SANITARY CONDITIONS	111
SECTION 2. BADLY PAVED AND UNCLEAN STREETS AND ALLEYS	112
SECTION 3. THE EXTRAVAGANCE OF DANGEROUS SIDEWALKS	117
SECTION 4. FILTHY VACANT LOTS, YARDS, COURTS, AND PASSAGES	124
SECTION 5. OFFENSIVE STABLES AND MANURE BOXES -	128
SECTION 6. THE NEGLECT OF GARBAGE - - -	133
SECTION 7. MISCELLANEOUS OUTSIDE INSANITARY CONDITIONS	141

CHAPTER VII.

SOCIAL PATHOLOGY, DISEASES AND DEATHS

SECTION 1. THE SOURCES AND VALUE OF THE DATA -	144
SECTION 2. POVERTY AND PAUPERISM IN THE TENEMENTS -	145
SECTION 3. INTEMPERANCE AND BAD HOUSING - -	147
SECTION 4. CRIME IN THE HOMELESS AND YARDLESS TENEMENTS	149
SECTION 5. SICKNESS AND INSANITARY CONDITIONS - -	152
SECTION 6. DEATH-RATES IN NEGLECTED DISTRICTS -	154

CHAPTER VIII.

CONCLUSION: A REVIEW OF REMEDIAL EFFORTS

	PAGE
SECTION 1. THE HOUSING PROBLEM AND CHICAGO'S LACK OF PREVENTIVE MEASURES - - - - -	161
SECTION 2. THE TREND OF ADMINISTRATIVE ORGANIZATION IN OLDER CITIES - - - - -	162
SECTION 3. THE NEW LAWS MOST NECESSARY AND THE IMPORTANCE OF REGULAR INSPECTION - - - - -	164
SECTION 4. THE NEED OF SMALL PARKS AND GARDENS -	166
SECTION 5. PUBLIC BATHS SHOULD BE RECREATIVE AND EDUCATIONAL - - - - -	172
SECTION 6. THE WORK OF SANITARY AND HOUSING ASSOCIATIONS	174
SECTION 7. THE EXTENT OF REMEDIAL EFFORTS - -	177
APPENDIX - - - - -	181
BIBLIOGRAPHY - - - - -	203

CHAPTER I.

INTRODUCTORY; PURPOSES AND IMPORTANCE OF THE INQUIRY

THE PROBLEM OF THE OLD AND THE MENACE OF THE NEW HOUSING EVILS

Section 1. There could not be a more opportune moment for announcing and describing the serious housing problem which exists in Chicago. A few years ago, and to a limited extent even now, the worst features of certain neglected portions of the city appeared but temporary and transitional. The optimism of citizens interested in this phase of municipal development led to the belief that conditions would improve with time; at least no one could have done more than to prophesy the growth of a serious tenement problem. In fact, it could not have been known, until the results of such an inquiry as this were studied, that the housing conditions are growing steadily worse, and that the slum now building is likely to repeat the history of those in other cities. An important factor, on the one hand, is the natural desire on the part of landlords to cover every inch of their ground space with large tenements without sufficient provision for light and ventilation. On the other hand, it is the short-sighted policy of the municipality which permits the growth of housing conditions for whose improvement years of agitation and vigorous effort will be necessary. The histories of many other cities show that the forces which built their slums are almost exactly those at work here. Tenement-house conditions in other cities have cost the lives of many thousands of innocent working people, and the public expenditure of millions, before the municipalities have been able to destroy the most dangerous districts. In view of what follows, it is safe to say that the night of the double-decker, the worst of all tenements, is enveloping

the West as yesterday it blackened the East.* To present this new problem in relation to the old, at a time when preventive legislation and the enforcement of restrictive laws on tenement-house construction have great possibilities, is the purpose of this report.

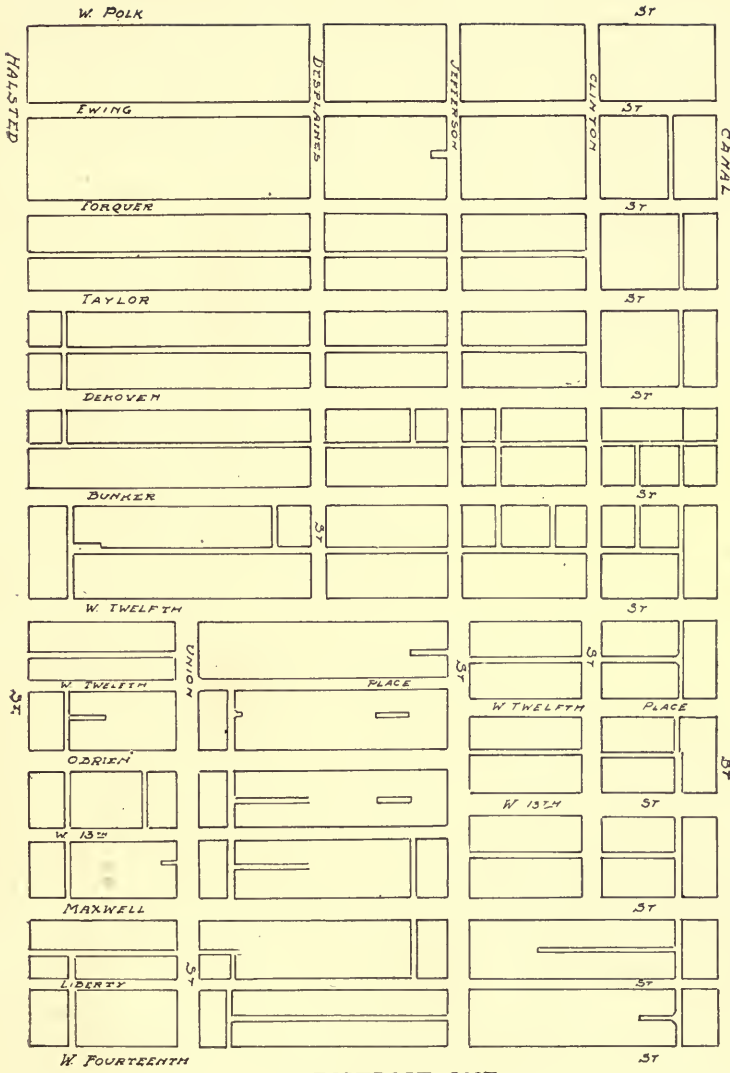
A SMALL AREA IS CHOSEN FOR INQUIRY FROM A WILDERNESS OF BAD HOUSING AND SANITARY NEGLECT

Section 2. The endeavor has been to seek out and explore typical or representative portions of the city where the problems of the old and the menace of the new housing evils are both manifest. If the purpose had been merely to select the worst houses and blocks that the city can show, portions of the North and the South sides would have been chosen. The Stock Yards district and portions of South Chicago show outside insanitary conditions as bad as any in the world. Indescribable accumulations of filth and rubbish, together with the absence of sewerage, make the surroundings of every dilapidated frame cottage abominably insanitary. These evils do not extend over a large area. They are, in their worst forms, extraordinary and not typical of conditions elsewhere in Chicago. If the worst evils of covering the whole of lots with tenements, or the worst examples of the misery and degradation of rear tenements had been chosen, certain blocks in the First Ward would have been investigated. If the worst examples had been chosen of the destruction to morals and health resulting from overcrowded dark rooms, or the manifold dangers to those who are compelled to live in sunless, airless, and yardless double-deckers, certain blocks in the Twenty-second Ward and portions of the South Side would have been selected.

Examples of various forms of housing at its worst are to be found in the First and Twenty-second wards, and in the districts for eight miles along the North and South branches of the river.† The districts selected as typical of bad conditions throughout the city are: First, the Jewish and Italian district, in the Ninth and Nineteenth wards, between Polk Street on the north,

* The double-decker, or dumb-bell, is described and defined on pages 43-46. The terms are applied to a large tenement covering too much ground space, and without proper provision for light and ventilation.

† See appendix, pages 181-184.



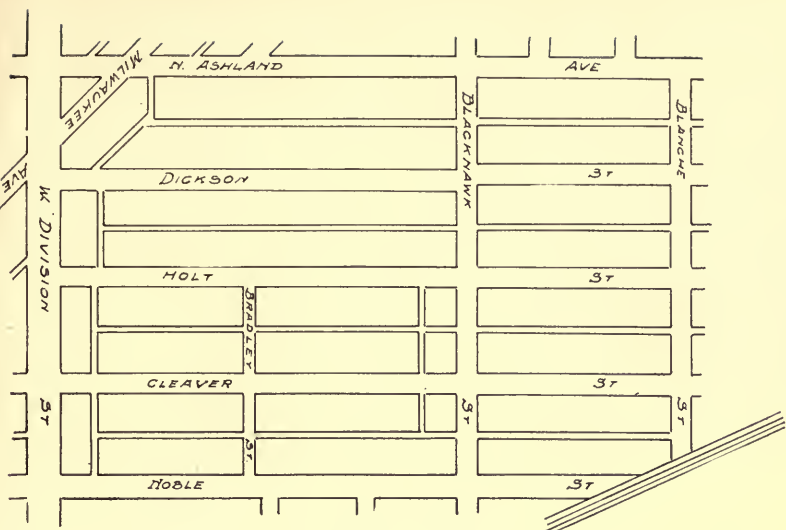
DISTRICT ONE

Fourteenth Street on the south, Halsted Street on the west, and Canal Street on the east; second, a Polish district in the Sixteenth Ward, bounded by Division Street on the south, Blanche Street on the north, Noble Street on the east, and Ashland Avenue on the west; and third, a Bohemian district in the Tenth Ward, bounded by Sixteenth Street on the north, Twentieth Street on the south, Lavin Street on the west, and Allport Street on the east.* In these districts are seen, side by side, the old system of housing—which, in spite of its evils, never presented a serious problem—and the beginning of a new and much worse system with the appearance of the double-decker. Forty-five thousand people live in these districts, and the insanitary conditions which surround them are typical of the conditions in which from three to four hundred thousand people in many parts of Chicago are now living.

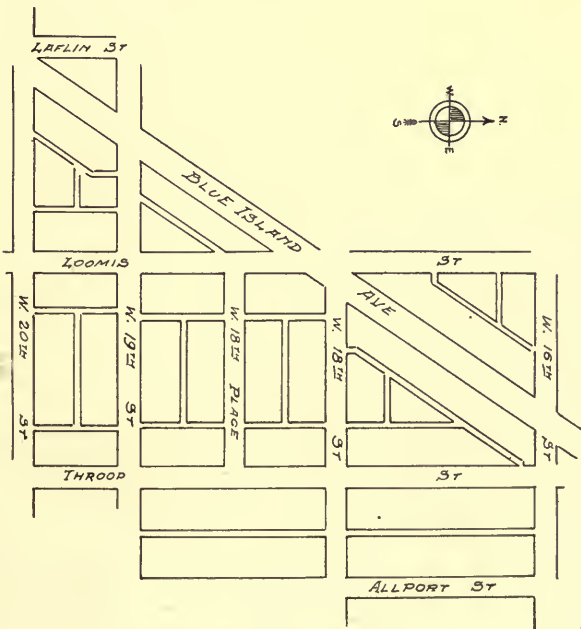
THE PURPOSE OF THE INQUIRY IS TO LAY A FOUNDATION
FOR REFORM

Section 3. The Committee, in publishing this report of the investigation, have in view certain definite objects. Above all, they consider that accurate knowledge of existing conditions must be the basis for future reform. As the results of their investigation will probably surprise many people, who have believed that there is no serious housing problem in Chicago, the Committee wish to say that the statements in this report are all based upon actual facts gathered in their investigation, which, though restricted to a small area, they have tried to make scientific, thorough, and exhaustive. In presenting the facts, they have tried to cover the subject intelligently, and to give under each heading a brief account of the experiences and decisions of other and older cities on the subjects in hand. This method of presentation was chosen with the hope that those would be reached who might build upon this small beginning a great and important work of reform. Therefore, it should be understood that the Committee have no desire to present a harrowing picture of the misery of the tenement-house population simply to create a sensation. Indeed, this report will be of little value unless it proves an incentive, and

* See maps opposite.



DISTRICT TWO



DISTRICT THREE

perhaps a partial guide in the future, to persistent and organized preventive and reform efforts.

The Committee are aware of the many obstacles in the way of obtaining lasting and useful results in tenement-house reform. In the first place, reforms are apt to be sporadic and short-lived; municipal officials are likely to be conservative, and even obstructionists; the slum landlord is sure to be shrewd and persistently attentive to his own interests. The history of almost every older city shows how great these obstacles are. Liverpool once arose in wrath at the dangerous housing conditions and the fearful death-rates prevailing in certain portions of that city. In obedience to the strong public sentiment, the overcrowded houses were destroyed. The wretched tenants were compelled to leave their old overcrowded houses to still further overcrowd the neighboring ones. Basements, cellars, attics, sheds, and all available forms of shelter were put to use, but the evils meant to be remedied were increased tenfold,* as the increased death-rate fully proved. Action being taken, however, the emotion subsided.

Since 1842 New York has had many reform movements.† Many investigations have been made; again and again the city has been aroused to a high pitch of excitement, but the efforts have been ephemeral. Of the little done, a part was injurious. The double-decker itself was introduced to slum landlords by well-meaning reformers. What is most needed in all reforms has come only recently to New York, namely, an organized body of public-spirited citizens who are determined, if necessary for success, to fight another "Ten Years' War." It is well for Chicago to realize, therefore, that the serious conditions presented in the following pages will not be quickly or easily abolished.

OFFICIAL NEGLECT AND CORRUPT POLITICS ARE NOT ALONE TO BLAME FOR BAD CONDITIONS

Section 4. The second obstacle exists in the fact that a radical change in policy on the part of the city is hardly to be expected without the constant and unmistakable pressure of public opinion. Being thus far without definite demands on the part of

* See Liverpool newspapers of summer of 1899.

† See Veiller's Tenement-House Reform in New York, 1834-1900.

the people regarding the enforcement of tenement-house laws, the city has permitted the slum landlords to build as they chose. And, therefore, the onus of neglect lies not alone upon the municipal authorities. Many evils charged to corrupt politics exist because there is an absence of public opinion against them. Most of the problems brought out in this report are the products of great social improvements and changes. Within the last few years there have been marvelous industrial, commercial, and agrarian revolutions, through which populations have been redistributed upon the earth; country districts have been depopulated; small factories have given way to large ones; country and suburban stores have succumbed to the department and mail-order stores; the millions have thronged to the cities, which were not prepared for their coming. The municipal authorities had not planned to protect the citizens against insanitary dwellings, and landlords were permitted to build as they wished. To municipal governments in the entire western world have been presented a thousand new problems.* That these problems have not all had a satisfactory solution is not entirely the politician's fault. Unpaved and unclean streets, dangerous sidewalks, garbage disposal and removal, rubbish and refuse upon open spaces, the outlawed privy vaults, houses unfit for habitation, damp basement dwellings, overcrowded, dark, and unventilated rooms are not inevitable or necessarily permanent evils. If Chicago will take the matter in hand, it can abolish existing evils and prevent the growth of a great tenement-house population crowded in stifling quarters. It can provide needed breathing-spaces, parks, playgrounds, and baths. As Albert Shaw says: "The abolition of the slums and the destruction of their virus are as feasible as the drainage of a swamp and the total destruction of its miasmas."†

* Shaw's Municipal Government in Great Britain, pages 1-19.

† Shaw's Municipal Government in Great Britain, page 3.

THE STRUGGLE BETWEEN THE INTERESTS OF THE INDIVIDUAL AND THE LARGER INTERESTS OF THE COMMUNITY

Section 5. The third and most important obstacle to reform is the slum landlord. He will vigorously protect his property interests. Indeed, this whole question resolves itself into a long struggle between the interests of the individual on the one hand and the larger interests of the commonweal on the other. In Chicago the interests of the slum landlords have been thus far protected and promoted by the municipality itself. But tenement-house reform means that the interests of landlords owning property injurious to the welfare of tenants and neighbors are of secondary importance. To permit landlords to build without careful municipal regulation is to encourage a tenement-house blight. For it should be understood that the construction of houses, the relation of one house to another on the same and on adjoining lots, and the size in height and length decide the inside conditions. In the absence of careful municipal regulation, tenements are built without uniform and adequate provision for light and ventilation. Builders of tenements, and even of many new and cheap apartment buildings, disregard all principles of good construction and erect dangerously insanitary dwellings.

In fact, pressure for the economical use of land has established within certain limits a new and vicious kind of private property. It is the private ownership of the rays of the sun and the health-giving properties of the air. A landlord who builds a tenement to the limits of the lot and several stories high takes from his neighbors both air and sunshine. He also provides many of his own tenants with dark and foul homes. The returns of this investigation are replete with such instances. For the landlord's tenant and his neighbor's tenants, the airless and sunless rooms nourish disease germs. Babies, almost like blind fish inhabiting sunless caves, suffer from ophthalmia.* Tuberculosis thrives, and cannot be stamped out without the aid of sunshine.†

* Dr. Bowmaker's Housing of the Working Classes, page 15.

† Dr. S. A. Knopf's Testimony, Chapter VII, page 152.

It is the common testimony of physicians that the working people are being noticeably affected by city habitations. People cannot live without air and sunshine, and strange as it may appear that any one should have to plead for these things, this Committee and all other tenement-house committees exist pre-eminently for this one purpose; that is, to insure to every one the necessary light and air, and to make it impossible to build or use as tenements those houses where the light and air are insufficient. It is the mass of the working people who are the sufferers. The whole question is, How long will interests of landlords, through ignorance or thoughtlessness, be allowed to remain an obstacle to necessary reform? It is possible that at first many people will object to a municipal policy of interference which will hold in check the individual. But objections of this kind will come only from those who have interests involved or who know nothing of the evils caused by the present policy. That property interests must give way to health and sanitary necessities is a recognized municipal prerogative.

When shall this increased restriction of the individual commence? New York, London, Liverpool, Glasgow, and Birmingham were slow to act even when delay meant more deaths, and when it also meant a larger and more costly struggle with slum landlords. It did not, however, mean that the struggle could be avoided. The clash between the interests of the individual and the needs of the community had to come. To take away from slum landlords their property and demolish it is a costly matter; \$3,504,760.83 was paid by the taxpayers of Glasgow for the demolition and renovation of wretched slums in that city.* Edinburgh, before 1892, spent \$2,725,240.00 for sanitary amelioration carried out under an improvement scheme.* New York has had a long and hard struggle in destroying two or three slum areas. A million dollars a year has been given by the city for the purpose of making small parks in overcrowded tenement districts. It cost a million and a half and many years of effort to condemn and demolish the more notorious rookeries.† Such experiences have taught the older cities the extravagance of neglect and the

* Report of New York Tenement-House Commission, 1894, page 353.

† Jacob Riis's *Ten Years' War*, pages 177 and 178.

economy of prevention. This Committee is of the opinion that Chicago, being forewarned by the experiences of other cities, will give immediate thought to this important political question and prevent the growth of such serious conditions as those afflicting the older cities.

CHAPTER II.

OVERCROWDED AREAS

ECONOMY OF LAND AND THE TENEMENT-HOUSE PROBLEM

Section 1. There is no more important test of the tenement-house conditions than the amount of space covered by buildings. Where there is overcrowding of houses upon lots and blocks there arise all of the most dangerous results of bringing together, in the artificial surroundings of large cities, vast populations. Close and often indecent crowding, natural accumulation of filth, insufficient provision for light and ventilation, lack of yard and breathing-spaces, and a high tax upon the health and life of the people are a few of the results which inevitably accompany crowding of houses upon ground space

The history of tenement-house building in Chicago is much the same as it is in every large city, in that it shows a growing economy of land space. In the earlier days, when tenements were built covering no more than forty or fifty per cent of the depth of the lot, no interference from the municipality was necessary. The individual could be permitted, without injury to the common-weal, to build as he chose, since it was not then profitable for him to cover more than fifty per cent of his lot with buildings. But when it becomes to the financial interest of landlords to build high tenements covering every inch of the lot, the municipality should formulate laws and regulations restricting the height of tenements and limiting the percentage of the lot which may be covered by buildings. The time for such interference has been reached.

For over ten years Chicago has been in that stage of development where landlords have been winning increasing profits from large tenements and groups of tenements, covering from sixty to one hundred per cent of the lot space. A study of the four tables—first, front and rear houses; second, material of houses; third, front and rear houses classified according to stories; fourth, one

story frame dwellings compared with all others introduced on subsequent pages—will supply those interested with definite and valuable information on the genesis and evolution of the present housing conditions.*

The small frame house, formerly the characteristic dwelling of the working class, survives, usually in dilapidated form, as is shown in the following photograph, or has undergone radical changes. Often it has been moved to the rear of the lot to give place to a larger tenement, and has been partitioned, in a slovenly and unsatisfactory manner, to adapt it to the uses of more than one family. Occasionally the remodeling has taken the form of raising the small frame house onto a lower story of brick. (See photograph, page 35.)

The degeneration of the two-story frame and brick houses from the home of one family into a tenement for several families is a commonplace in the housing histories of all large cities. The lack of conveniences and the partitioning of large rooms into small and dark ones are a part of the mischievous results. The next step in the evolution is the tenement-house built for several



* See pages 189-195.

families, and this varies in size from a two-story house covering fifty per cent of the lot to a four or five story tenement covering from eighty to one hundred per cent of the ground space. It is now almost universal in the tenement-house districts to have either one large tenement or two smaller ones, or occasionally three very small houses, covering a large percentage of the ground area. This is very much the same history as that of London,



New York, and Boston. Their problems are, and will be, very likely, our problems.

To prevent the foregoing evils the older cities have restrictive laws. As early as 1879 New York passed a law permitting only sixty-five per cent of the interior lots to be covered by buildings.* In Boston the same legal maximum has been established.† Both Boston and New York have also limited the height of

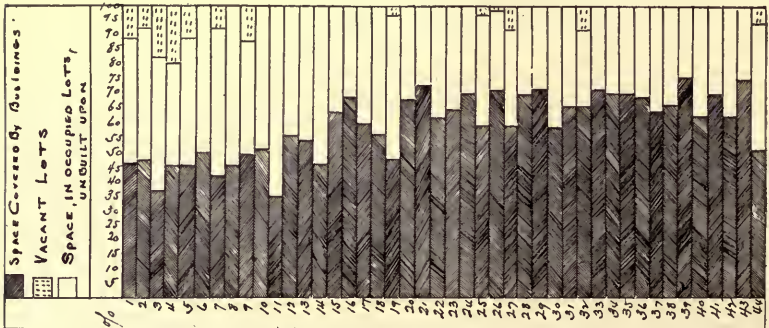
* Veiller's Tenement-House Legislation in New York, 1852-1900 page 74.

† Veiller's Housing Conditions and Tenement Laws, etc., page 16.

dwellings.* To the shame of Chicago, no limit in height and only an inadequate one in depth has been set by the city. The law with regard to depth provides that ten feet shall be left uncovered at the rear of the lot, but it is not sufficient and the law is not enforced. As a result, a landlord may build upon every inch of his lot. Indeed, in this investigation eighty-seven lots were found entirely covered. This is in violation of the very inadequate city ordinance. This and the information to follow will show the serious conditions found in this small region. Chicago may take to account that the neglect which permitted these conditions to arise is at the expense of the health and welfare of thousands of working people who are now living in these tenements. They are at the risk of even greater danger when the tenements covering a large amount of space are built to a considerable height, as is being done to a large extent already.

OVERCROWDING THE BLOCK AND ITS MEANING

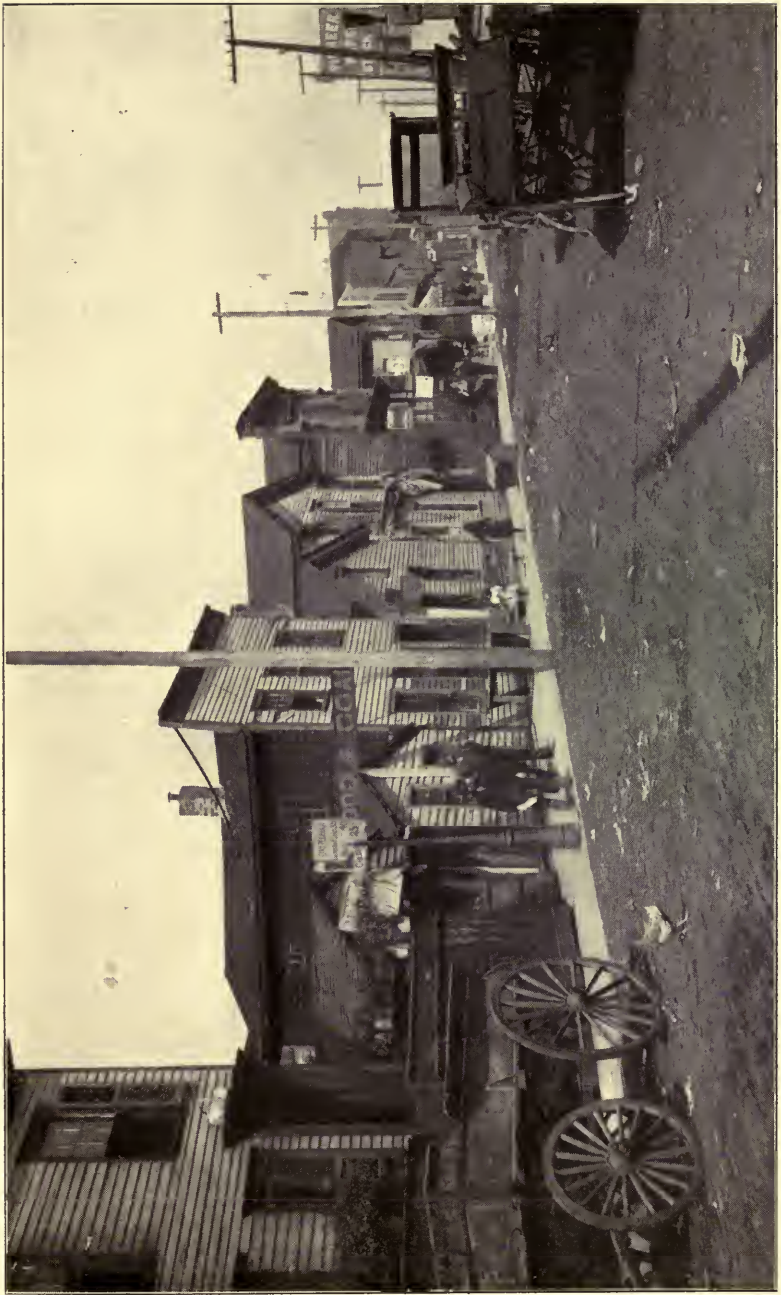
Section 2. The general statements in the last section find ample proof in the special study of selected areas. The percentage of space covered by buildings, the amount taken up in vacant lots and unoccupied spaces in the forty-four blocks of District 1 are given in the following diagram.†



This diagram shows that two of the blocks were covered over seventy-five per cent with buildings. Fourteen of the blocks

* Veiller's Housing Conditions and Tenement Laws, etc., page 16.

† Based upon insurance and real-estate maps and verified to a certain extent by the enumerators. Like figures were not collected for the other two districts.



were covered more than seventy per cent of their area. Twenty (nearly one half of the forty-four blocks) were covered sixty-five per cent by buildings. It will be a great surprise to most students of tenement-house conditions in Chicago to learn that so many blocks were covered more than the Boston and New York law permits on a single interior lot. Over a large area this is an amazingly high average, and clearly and forcibly foreshadows what will be shown later, namely, the overcrowding which exists on many lots in each block.

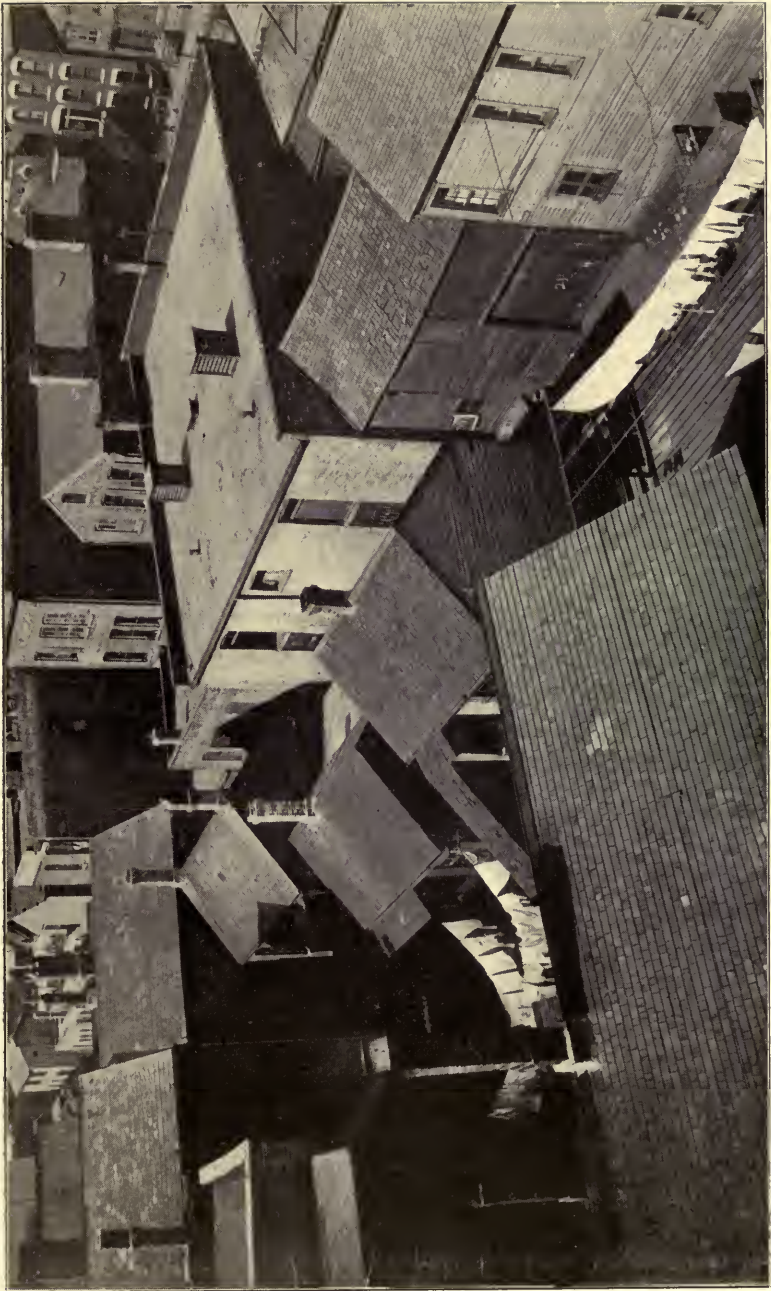
An excellent idea of what these figures mean will be obtained by a study of the following photographs. The photographs on page 27, show how closely the ground is built upon. The front houses to the right run far to the rear of each lot. A mass of rear cottage tenements are placed almost against the front houses, without regard for light or ventilation. There being no yards, the roofs of the houses are utilized as a space for drying clothes. This somber and hideous conglomeration of tenements very clearly shows the need for municipal regulation.

The photograph on page 28, in a general view, shows the great variety of tenements which occupy a very crowded block in the Jewish quarter. People are crowded into the basements. The dark passageways between the houses are almost the only open spaces in the block. The view shows clearly the small, dilapidated rear houses, the poorly constructed two-story frame and large three-story brick tenements. The photograph on page 29 shows a block built up almost solidly with tenements. There are several new brick tenements covering a large percentage of the lot. The rear of almost every lot has a brick tenement, or a small frame house. The three small ones at the left are each occupied by more than one family. Almost the only open spaces are the passages, the streets and alleys, with their filth and garbage boxes.

The last view of rear tenements in the Polish district, (page 30) shows one large rear house and many tenements running along the entire length of the alley, consuming a large amount of ground space. The old stable in the foreground completely shuts the light from half of the neighboring house. This is a fair type of a block in the Polish district. Worse conditions of



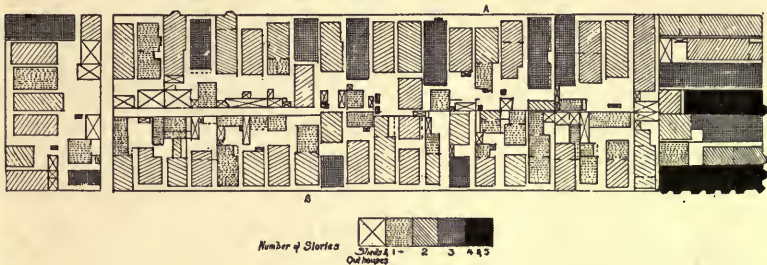






overcrowding on the block exist in that quarter than in the Jewish and Italian districts, which we are now considering.

To further illustrate the overcrowding by buildings, the following diagram is given of a block well covered by tenements. In the middle of the block almost all the houses are of two stories. Often in the rear a one or two story tenement is seen. Sheds or one or two story tenements occupy the rear of every lot. "A" and "B" are examples of front and rear houses resembling the English "back to back houses" spoken of later.* At the right end of the block the conditions are extremely bad.



Almost every lot facing on this street is entirely covered. The height of the buildings here accentuates evils. The overcrowding is excessive, and for parts of these houses light and ventilation are impossible.

The following photograph (page 33) will supplement the diagram to illustrate how little uncovered ground space there is in this block. It has a population of over one thousand people. The ugliness of the street, its wretched tenements, and its ill-smelling garbage boxes in front of each house cannot be imagined from the photograph. Photography seems to mellow or soften the disagreeable features, which when seen with the eye are extremely offensive. The tall building at the end of the street is shown on the diagram by the darkest shading.

OVERCROWDING OF LOT AREAS

Section 3. While what has already been said will show to a certain extent the general overcrowding of houses which exists in this part of the city, the worst conditions can be seen only by

* See page 37.

observing the crowding on certain selected lots. In this investigation many lots have been found so built upon that no provision has been made for proper lighting or ventilation. Previous to this inquiry it was supposed that the housing problem consisted mainly of small frame houses. It was, therefore, a surprise to find entire blocks covered more than the Boston law permits on a single lot.* The Report of the Bureau of Labor on the Slums of Great Cities stated in 1894 that fewer people in the slums of Chicago had the use of yards than in either New York, Baltimore, or Philadelphia, and it was natural to infer from that, that the small rear tenement was universal in the poorer districts.† But it depended upon this inquiry to show that 628 lots, or thirty-nine per cent of all lots investigated, were covered more than sixty-five per cent, which is the limit in other cities, and that 275 lots, or seventeen per cent of all lots, were covered more than eighty per cent. After these figures were placed before the Committee, it requested a list of lots covered more than ninety per cent, with the height of the buildings and the number of people living in them. There were reported 144 lots covered from ninety to one hundred per cent by dwellings, exclusive of all other buildings; 108 of the lots had houses over three stories in height, and 46 had tenements over four stories high; 3,181 people lived in these dwellings.

The following table shows the number of lots covered more than the specified percentages in the forty-four blocks in District 1. A few of the lots are covered with factories, warehouses, churches, etc., but if that happens to be the case the conditions of light and ventilation in the block are worse.‡ The crowding of houses grows steadily worse in going from the Italian district (blocks 1 to 24) into the Jewish district (blocks 25 to 44).

The reader will see that in several blocks from 13 to 22 lots are covered eighty per cent by buildings. The worst conditions seem to prevail in the long, narrow blocks of the Jewish district. (See map, page 56.) These blocks, 34, 36, 39, 41, and 43, are also the most thickly populated blocks in that quarter. The

*Report of the Improved Housing Association on Chicago's Housing Problem, by Robert Hunter. (Not published.)

† Federal Report on the Slums of Great Cities, page 96.

‡ See Chapter IV., page 82.



LOTS IN DISTRICT 1 COVERED MORE THAN CERTAIN PERCENTAGES

Block No.	No. Lots Covered 65 per cent.	No. Lots Covered 80 per cent.	Block No.	No. Lots Covered 65 per cent.	No. Lots Covered 80 per cent.
1	9	4	23	15	4
2	2	1	24	16	7
3	3	1	25	9	4
4	7	2	26	28	8
5	15	7	27	8	5
6	5	1	28	13	5
7	3	—	29	9	5
8	9	4	30	13	5
9	13	6	31	16	6
10	2	1	32	8	4
11	—	—	33	6	4
12	9	4	34	38	20
13	21	9	35	12	11
14	6	2	36	44	15
15	17	—	37	16	8
16	9	6	38	9	3
17	21	9	39	23	13
18	7	3	40	28	19
19	7	2	41	36	13
20	8	5	42	10	7
21	25	13	43	47	22
22	10	3	44	16	4

excessive economy of ground space, seen in this table, in the diagram on page 31, and in the photographs, is in violation even of local laws. But what is allowed by the inadequate laws of Chicago would be impossible *under the laws* of other large cities. This overcrowding is a serious matter; a dwelling, or group of dwellings, built upon ninety per cent of the lot area causes manifold evils. It not only makes no provision for its own light, but also interferes with the light and ventilation of neighboring houses.

The photograph (opposite) is an illustration of overcrowding. It is a picture of a rear court, taken from the alley. The two-story frame house perched on a brick foundation, making a basement story, is in the rear of a four-story brick building. The two houses cover ninety per cent of this lot. The house at the right is a three-story tenement in the rear of a three-story brick house. These two houses cover ninety-five per cent of the



lot. In the basement of the rear house is a stable where four horses are kept, and the basement of the front house is a dwelling-place. There are ninety-eight people in the four houses, and the crowding in the rooms is shocking. There are fifteen families crowded on a small twenty-five foot lot. This court is only 10 by 25 feet, and it is inclosed on three sides by high brick walls. The court is like the bottom of a well, and the rooms opening on it are damp and unwholesome. Eight little children live in the brick basement at the left. Their rooms are never touched by sunlight, which reaches the pavement of the court for only a few moments each day, and the air is polluted by a foul alley and overflowing garbage and manure boxes.

THE EVILS AND EXTENT OF REAR TENEMENTS

Section 4. A large part of the overcrowding on the lots is caused by the rear tenement. Rear tenements have always been considered the most unhealthful of dwellings. This is as true in England, where they are rarely if ever more than two stories high, as it is in New York, where they are frequently built to a greater height. Sickness, epidemics, high death-rates, are universally more common in rear tenements than in other dwellings. In fact, almost all insanitary conditions are found in and about rear tenements. The houses are usually in bad repair, and are permitted to become damp and unwholesome. The front houses cut off the source of light, and the rooms are dark. These tenements are, as a rule, on an alley, with windows opening directly over manure and garbage boxes. In some the ground floor is used as a stable. The ill-smelling privies are near, and the filth of rear yards and alleys is all about. The poorest class of people live in these houses, consequently there is often overcrowding in the rooms. The demoralization and degradation to which the people living in the filthy surroundings of these alley houses eventually descend is obvious. With all these evils combined, rear tenements make the worst possible dwellings for human beings.

A realization of the evils of some of the rear tenements can be gained from the photographs. The first (page 38) shows a two-story house with a basement. It stands at the rear of a large

front tenement, which cannot be seen in the photograph, with almost no space between the two houses. Eight families live in the rear house. The rooms on the first floor in the front of the rear house are overshadowed by the front house, and are damp and dark. The surrounding conditions are very insanitary, and the ill-smelling broken garbage boxes, overflowing into the alley, offend even the passer-by at the end of the alley.

The next photograph (page 39) shows the general insanitary conditions which surround the houses on both sides of the alley. The first house on the right is a small dilapidated frame house. Beyond it are three larger rear tenements. The outbuildings at the left are all dilapidated, and contain privies which are in a foul condition. There are not enough garbage boxes to supply the needs, and the ones provided are so seldom cleaned that the families dump their slops and garbage in the alley.

The next photograph (page 40) shows a typical alley scene. Rear tenements occupy nearly every lot. The second on the left is a new brick rear tenement with a basement. The second tenement on the right is a three-story frame. This alley, as do many others, serves as a playground for the children living in these alley houses. The playground is filthy and by no means a healthful place for growing children, but neither it nor the foul garbage boxes are offensive to the little ones. One of these children lives in the cottage, the basement of which is used for a stable.

The rear tenements are often not unlike the "back to back houses" which have caused such an outcry in English cities. For example, the side or back of a rear tenement will often be placed almost or quite against the rear of the front house. In consequence, parts of each house are made unfit for habitation, because of the dark rooms and the lack of through ventilation. Enormous sums of money have been spent by English municipalities to remodel or destroy property of this kind.*

Study of the following table will give facts concerning the extent of rear tenements in these districts. A rear tenement is one which does not open upon the street, and stands in the rear

* See Bowmaker's *Housing of Working Classes*, page 19; or almost any book on English housing conditions.







of another house. The figures below show the number of front and rear tenements and the number of people living in them. The diagram shows further the percentages of front and rear tenements in three selected blocks.

STATISTICS OF FRONT AND REAR HOUSES AND THEIR
POPULATION

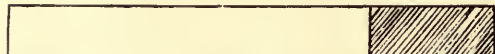
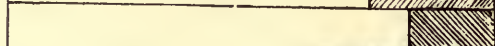
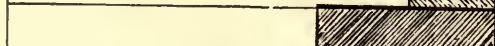
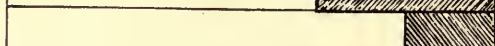
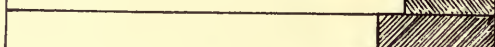
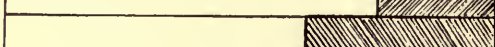
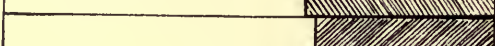
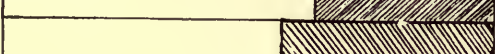
Districts.	Front.		Rear.		Total.
	No.	Per Cent.	No.	Per Cent.	
One, N. of Twelfth.	802	75.5	260	24.5	1,062
One, S. of Twelfth.	696	82.5	148	17.5	844
Two -----	529	68.6	242	31.4	771
Three -----	360	81.8	80	18.2	440
Totals -----	2,387	76.6	730	23.4	3,117

POPULATION

Districts.	Front.		Rear.		Total.
	No.	Per Cent.	No.	Per Cent.	
One, N. of Twelfth.	12,217	85	2,143	15	14,360
One, S. of Twelfth.	9,395	80.3	1,057	19.7	10,452
Two -----	11,225	81.2	2,600	18.8	13,825
Three -----	6,261	89.3	745	10.7	7,006
Totals -----	39,098	85.6	6,545	14.4	45,643

This diagram and table shows that 730, or 23.4 per cent of all houses are rear houses. In the Polish district this percentage runs very high, and nearly one-third of all houses are rear tenements. In this district alone there are 242 rear houses. Two thousand six hundred people in the small Polish district, less than one-half the size of District 1, find it necessary to live in the abominable conditions common to these alley houses. Altogether over six thousand five hundred people in the districts investigated live in rear tenements. In the diagram we see that in Block 51, 42.3 per cent of all dwellings are rear houses. One-third of the

PERCENTAGE OF FRONT AND REAR HOUSES IN DISTRICTS
AND, IN SPECIAL BLOCKS

	Front.		Rear.
Dist. 1, N. of 12th.	75.5		24.5
Dist. 1, S. of 12th.	82.5		17.5
Dist. 2.	68.6		31.4
Dist. 3.	81.8		18.2
Total.	76.6		23.4
Block 17	64.1		35.9
Block 46.	64.7		35.3
Block 51.	57.7		42.3

dwellings in Block 17 face on the alley. In this block there are 294 people living in the thirty-seven dwellings situated on the alley. Dr. Fetter says in his report: "There are thirty-six rear dwellings in a total of eighty-five in the block bounded by Holt, Cleaver, Blackhawk, and Bradley streets. In these rear houses dwell 432 persons, 211 adults and 221 children. There are thirteen blocks in District 1 with over one hundred persons in rear dwellings. Every one of the ten blocks in District 2 has at least 147 persons, and six of them have over 200 persons in rear dwellings." The average in the Bohemian district shown in this table is low, largely because the small triangular blocks do not admit of rear dwellings, but in the other blocks the average of rear dwellings is quite high.

To stop the growth of these evils foreign cities have passed restrictive laws which are preventive. Miles of sunless, ill-ventilated back to back houses and rear tenements have been closed, at such great cost in most of the older cities that they have learned the hard lessons of neglect, and appreciate the wisdom of prevention. Chicago has upon her statute books* a law which provides that there shall be spaces between front and rear houses as follows:

* See Veiller's Housing Conditions and Tenement Laws, etc., page 40.

If one story-----	10 feet.
If two stories-----	15 feet.
If three stories-----	20 feet.
If four stories-----	25 feet.

But the law is entirely ignored by builders, and there are hundreds of flagrant violations.

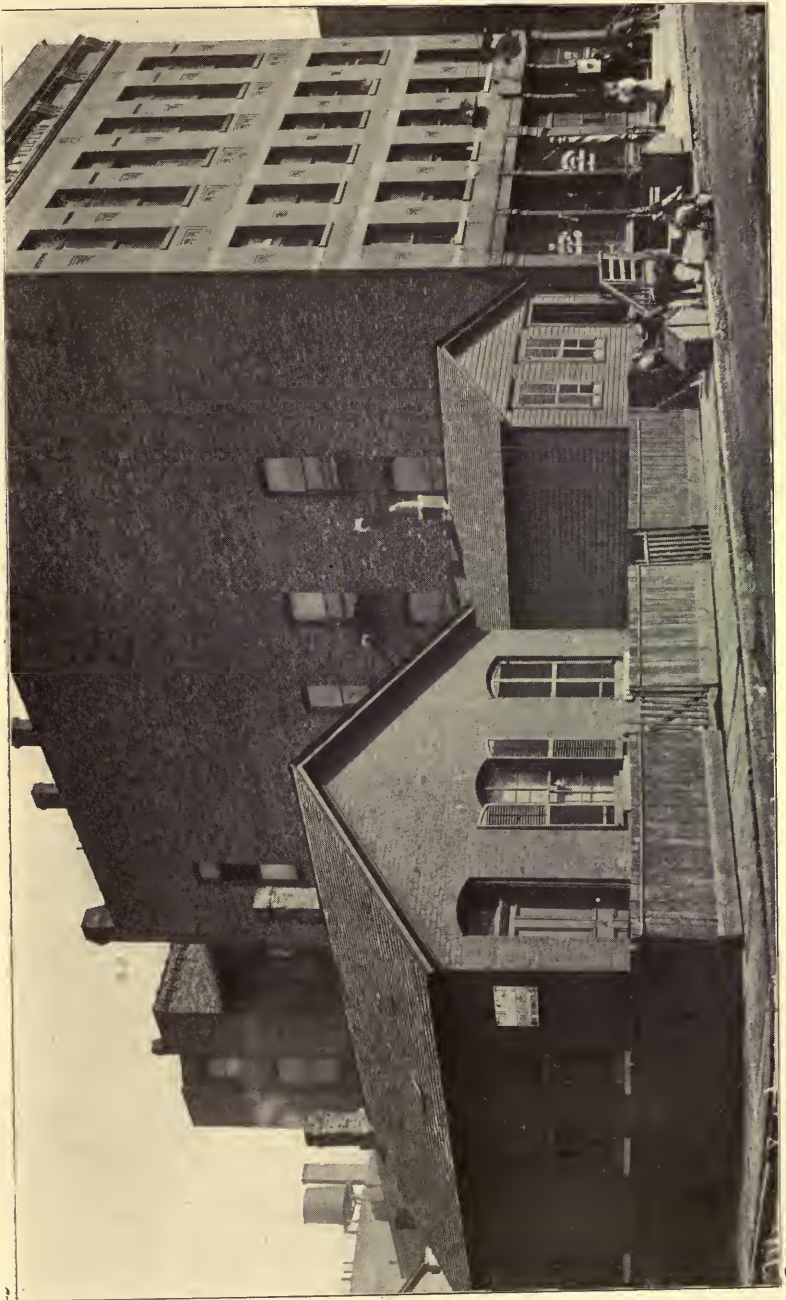
THE GROWTH OF THE DOUBLE-DECKER AND ITS MENACE TO CHICAGO

Section 5. Overcrowding on space is done either by building two or three houses on the lot, as has been shown, or by building a single large tenement covering the entire lot. The problem is to prevent the growth of this large tenement. It is necessary to realize that Chicago has entered upon a new era in tenement-house building. It is an era which promises a regular and determined growth of this tenement which offers great discomfort to the wretched people sheltered under its roof. A city of double-deckers would be indeed "a homeless city." A slum of small houses may be a serious municipal problem, but the slum of double-deckers, which is likely to appear if our lax municipal policy continues, is a certain and appalling evil.

The two photographs following (pages 44, 45) represent two good examples of this tenement. They are handsome enough outside, and appear to be quite well built. A casual observer might even consider them a very good sort of home for poor people. Those unacquainted with the lives of the people living in these tenements, and those without imagination, might look at them with considerable local pride in comparison with the slum dwellings of village communities or foreign cities. But these people do not understand the real evils of these large tenements. The dumb-bell, or double-decker, was described as follows by the New York Tenement Commission of 1894:* It "is the one hopeless form of tenement construction. . . . It cannot be well ventilated; it cannot be well lighted; it is not safe in case of fire. . . . Direct light is only possible for the rooms at the front and rear. The middle rooms must borrow what light they can from dark hallways, the shallow shafts, and the rear rooms. Their air must

* See page 13.





pass through other rooms or tiny shafts, and cannot but be contaminated before it reaches them. A five-story house of this character contains apartments for eighteen or twenty families, a population frequently amounting to one hundred people, and sometimes increased by boarders or lodgers to one hundred and fifty or more." Mr. Jacob Riis adds:* "The Committee, after looking in vain through the slums of the old world cities for something to compare the double-deckers with, declared that, in their setting, the separateness and sacredness of home life were interfered with, and evils bred, physical and moral, that 'conduce to the corruption of the young.' "

Double-deckers are being built almost every day in Chicago. In this investigation of the small territory on the West Side, eighty-seven of these dwellings have been found and many more approaching this type. All of these large tenements have been built since the passage of the law compelling the plans and construction to be approved by the Department of Health and the Building Department. In addition, it will be remembered that 144 lots were found covered more than ninety per cent of their area by dwellings.

One of the worst of these double-deckers is shown on page 45, and following is a side view of the same tenement. The genesis of the dumb-bell can clearly be seen by the way this is built. It is a front and rear tenement joined together by passageways. Another double-decker has forty tenements, each of which rent for four to seven dollars monthly. There are 127 people living in it. Some apartments are badly overcrowded. For instance, there is one set of three small rooms in which six adults and four children live. Two of the rooms are dark. Another apartment of two rooms has six people living in it. Another apartment of three rooms, all of which are dark, houses three children and six adults. In this tenement-house there are seventy dark rooms, most of which are bedrooms. The photograph introduced on page 48 is a picture of the interior court of this great building. It is an area of seven feet seven inches by eighty-two feet. The photograph suggests the dark, damp well by which the adjoining rooms are aired. Some apartments have no windows opening upon any other space. The sun reaches the bottom for a few moments

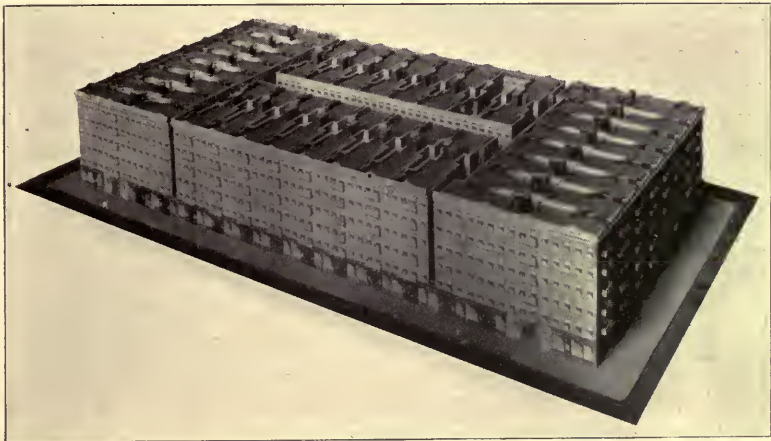
* See "A Ten Years' War," page 57.





only each day, and the lower rooms opening upon it are always dark.

It is well to consider the result of permitting a further growth of the double-decker. These large tenements not only rob others of light, air, and ventilation, but do not provide for their own, and the results are dark rooms and other insanitary conditions. Imagine, for the sake of illustration, a block in which every lot is covered by these large insanitary tenements; the result would be a block such as is shown below:



If landlords, with greed for profits and economy of ground space, continue to erect such tenements, the city man will soon have new conditions to confront. The factory by day, the tenements by night, will be his environment. By living in the city, man has divorced himself from the soil. He must now live in rooms where the sun never enters. The air he breathes must reach him through dark passages and foul courts. He must be content with about two yards square* of earth's space for himself, for each one of his children, for each one of his thousand close neighbors, and for each one of their children. These restrictions of the crowded tenements become all the more oppressive when they are viewed in the light of the past lives of most of the inhabitants of these crowded districts. Comparing the life

*See page 88.

of the dweller in the city to that of the olive-grower of Southern Italy, or the plowman of Roumania—the ancestors of many tenement-house dwellers—the hardships of the present are more serious than those of the past; for whatever difficulties life offered, the people still had air to breathe and expanse of earth.

This overcrowding has been prevalent for many years in the older cities; and it partly explains why the death-rates of the newer American cities are so much lower than those of the older foreign cities. Here the newness and open construction of the dwellings have been important agents in preventing illness, and in keeping down the death-rates. In contrast to the sunny short-lived frame cottages (now passing away) are the century-old stone and brick houses of foreign cities. The recently constructed dwelling-houses, with their frame walls, are aired and purified by sun and wind. The old well-built brick and stone houses of foreign cities are filthy and alive with disease germs. One of the witnesses before the Royal Commission on the Housing of the Working Classes testified that: "In Liverpool nearly one-fifth of the squalid houses, where the poor live in the closest quarters, are reported as always infected, that is to say, the seat of infectious disease. It is not surprising to learn that among the fever dens of that city overcrowding is growing less, owing to the fall of the population which mortality produces."*

The double-decker begins again this train of misery, which is a menace to the coming century, a force for evil creeping into the newer cities while the citizens are unaware, but which might be averted if they would open their eyes to see the danger and would assume the responsibility of its prevention. While we may congratulate ourselves upon the past, we must forewarn ourselves of the future.

*Report of Lords Committee on Housing of the Working Classes, Vol. II., pp. 498-499.

CHAPTER III.

THE OVERCROWDED POPULATION

TESTIMONY ON THE EVILS OF THE OVERCROWDING OF PEOPLE

Section 1. The density of population is an important consideration in estimating the evils of tenement-houses. Overcrowding is common among working people, and it is found in its worst form among the very poorest of the tenement-house inhabitants. Overcrowding is one method of reducing rent charges, and as the necessity for a low rent is most pressing among the very poor, the overcrowding often becomes frightful. Not only among the very poor is overcrowding found, but also many of the thrifty and industrious of the working class, especially the Polish, make constant efforts to reduce the rents of their narrow quarters by keeping lodgers. One of the most important reasons for the overcrowded sweat-shops is the desire to reduce the rent cost in the cost of production. These and many other causes increase overcrowding.

The evils are manifold. The medical officer of the London County Council has shown that the death-rate steadily increases with the density of population.* The secretary of the New York Tenement-House Commission of 1894† says that overcrowding has evil effects of various kinds, for example: "Keeping children up and out of doors until midnight in warm weather, because rooms are almost unendurable; making cleanliness of house and street difficult; filling the air with unwholesome emanations and foul odors of every kind; producing a state of nervous tension; interfering with the separateness of home life; leading to a promiscuous mixing of all ages and sexes in a single room, thus breaking down the barriers of modesty and conducing to the corruption of the young, and occasionally to revolting crimes."

*Bowmaker's Housing of the Working Classes, page 15.

†See Report, page 12.

The Royal Commission of 1884, in London, gathered a wealth of testimony on the evils of overcrowding.* In England the school board visitors, clergymen, charity agents, and others know far more intelligently and intimately than similar workers in this country the lives of the poor in their homes. From their testimony it was gathered that immorality, perverted sexuality, drunkenness, pauperism, and many forms of debauchery were caused in some instances, in others abetted, by the indecent overcrowding which existed. The testimony further showed most distressing physical results due to overcrowding. High death-rates; a pitiful increase in infant mortality; terrible suffering among little children; scrofula and congenital diseases; ophthalmia, due to dark, ill-ventilated, overcrowded rooms; sheer exhaustion and inability to work; encouragement of infectious diseases, reducing physical stamina, and thus producing consumption and diseases arising from general debility, were some of the evils of overcrowding. With these facts in view, the following statements of overcrowding of the districts investigated in Chicago will perhaps be more intelligently considered by the general public.

CHICAGO'S TENEMENT-HOUSE POPULATION IS OPPRESSIVELY DENSE

Section 2. It is often said, and it is probably quite true, that New York has the densest and most overcrowded population in the world. But no idea can be gained of the comparative evils of overcrowding in two cities entirely unlike each other, by a comparison of the density of population per acre. The density of population per acre in the Polish quarter in Chicago is three times that of the most crowded portions of Tokio, Calcutta, and many other Asiatic cities.† On the other hand, Chicago's densest quarters are not as thickly populated as those in New York. And yet all of these cities are said to have stifling conditions of overcrowding. It is said that Asiatic cities, although having in their overcrowded portions only a third of the population per acre of one of our districts, have the most serious and oppressive

* Report, Housing of Working Classes, Vol. I, pp. 13-14.

† See Dr. Roger S. Tracey's tables in New York Tenement-House Report, 1894, pp. 256-257.

conditions of overcrowding in the world. Of course this simply means that a comparison of people per acre in various cities gives one a very superficial idea of the real conditions of overcrowding. Chicago has larger houses than Tokio, and New York has larger tenements than either. If all houses in the districts investigated were as large as a typical double-decker, a population of seven hundred persons per acre would not be oppressive. And although as is shown in older cities certain terrible and for us altogether new evils are likely to arise because of so many people living together on a single acre, one of the evils would not be, necessarily, dense crowding of population. That overcrowding is not always associated with a large population on a given acre is shown by the conditions prevailing in certain large and fashionable apartment buildings. In considering our density of population we must remember that 11.8 per cent of the front and 35.4 per cent of the rear tenements are houses of one story.* Over ninety per cent of the rear tenements are two stories and under, and about sixty-two per cent of the front houses are so classed. Considering the size of our dwellings, our density of population is most appalling. It is very probable, if we could compare the height of the dwelling and its density of population in the Jewish, Italian, Polish, and Bohemian districts, with the like in districts elsewhere, the real density would equal the worst in the world.

A STUDY OF THE DENSITIES OF POPULATION

Section 3. The following table is the first of a series to show the density of population in the portions of the city covered by this inquiry:

STATISTICS OF POPULATION

District.	Population.	Families.
District 1, N. of Twelfth-----	14,360	3,108
District 1, S. of Twelfth-----	10,452	2,060
District 2, Polish-----	13,825	2,716
District 3, Bohemian-----	7,006	1,544
Total-----	45,643	9,428

*See Appendix, page 191.

As will be seen, this investigation covered the conditions of 9,428 families, or 45,643 individuals.

The following table shows the density of population per acre. But the averages in this table include streets and alleys, and it therefore is not the same as the one printed later.

DENSITY OF POPULATION PER ACRE
COMPARISON BY DISTRICTS

District.	Gross Area in Acres.	Population.	Persons to the Acre.
District 1 -----	137.3	24,812	180
District 2 -----	52	13,825	265.8
District 3 -----	32	7,006	219
Total -----	221.3	45,643	206.2

The greatest density is in the Polish district, and the least density in the Italian and Jewish districts. It will be interesting, merely for the sake of comparison, to place alongside of these figures some others, showing the conditions in certain towns having a population of the same size as that covered in this inquiry.

Name of City.	Gross Area in Acres.	Population 1900.	Persons to the Acre.
Norfolk, Va. -----	2,240.00	46,624	20.8
Waterbury, Conn. -----	2,400.00	45,859	19.0
Holyoke, Mass. -----	10,464.00	45,712	4.0
Fort Wayne, Ind. -----	3,300.00	45,115	13.6
Youngstown, O. -----	6,144.00	44,885	7.4
These Districts -----	221.3	45,643	206.2

Of course in these towns the houses are small and there is ample ground space, but it is fair to remember that in Chicago many of the people in these badly overcrowded districts are still living in the little village homes of one and two stories. To be sure they are crowded in most instances to the rear of the lot, but that accentuates the evils of a dense population. By com-

parison it will be seen that in the districts investigated there is a great crowding of population in a small area.

The figures to follow give the density per acre in each block of the first two districts and a final summary.

DENSITY OF POPULATION PER ACRE BY BLOCKS

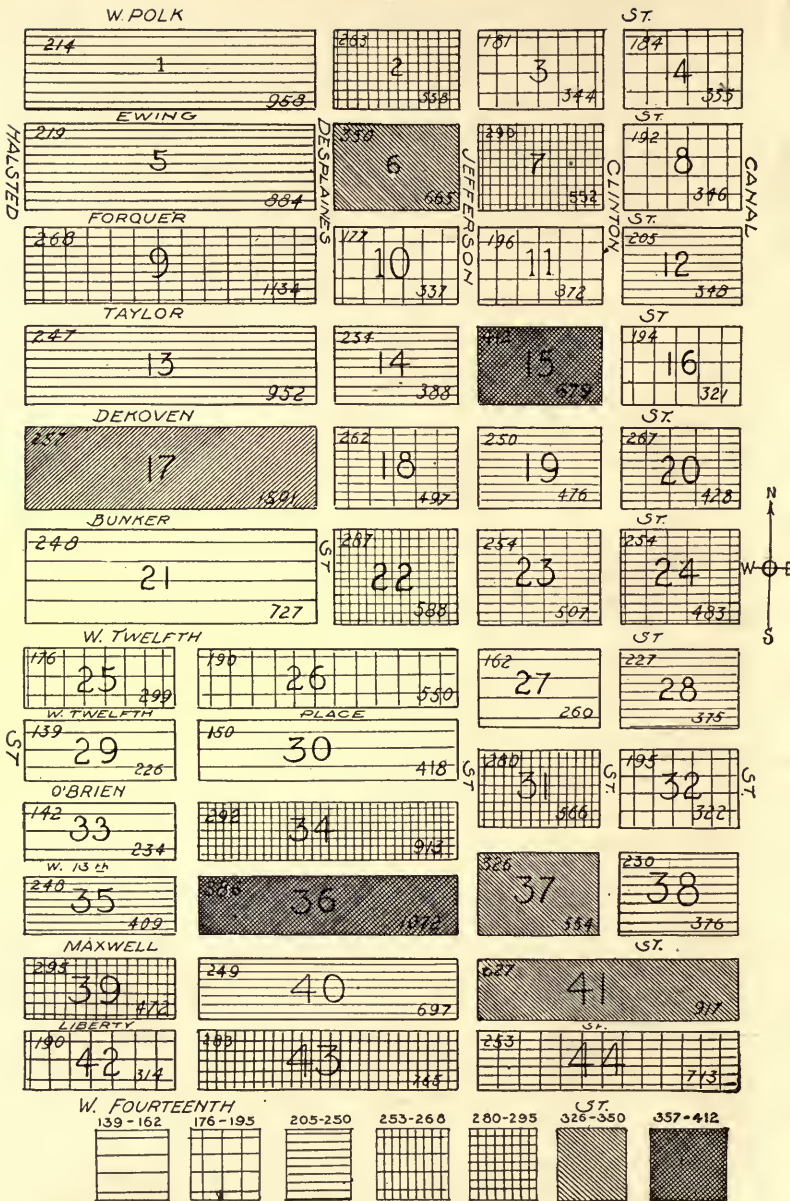
DISTRICTS 1 AND 2

No. of Block.	Net Area in Acres.	Density per Acre.	No. of Block.	Net Area in Acres.	Density per Acre.	No. of Block.	Net Area in Acres.	Density per Acre.
1	4.48	214	19	1.9	250	37	1.7	326
2	1.9	283	20	1.6	267	38	1.63	230
3	1.9	181	21	4.97	148	39	1.6	295
4	1.82	184	22	2.05	287	40	2.8	249
5	4.04	219	23	2	254	41	2.8	327
6	1.9	350	24	1.9	254	42	1.65	190
7	1.9	290	25	1.7	176	43	2.7	283
8	1.8	192	26	2.9	190	44	2.82	253
9	4.24	268	27	1.6	162	45	3.41	333
10	1.9	177	28	1.65	227	46	3.41	352
11	1.9	196	29	1.63	139	47	3.21	368
12	1.7	205	30	2.8	150	48	3.15	368
13	3.7	247	31	1.68	280	49	7.6	239
14	1.66	234	32	1.65	195	50	6.2	375
15	1.65	412	33	1.65	142	51	3.5	457
16	1.66	194	34	2.8	292	52	3.53	372
17	4.2	357	35	1.65	248	53	3.4	286
18	1.9	262	36	2.7	396	54	3.27	340

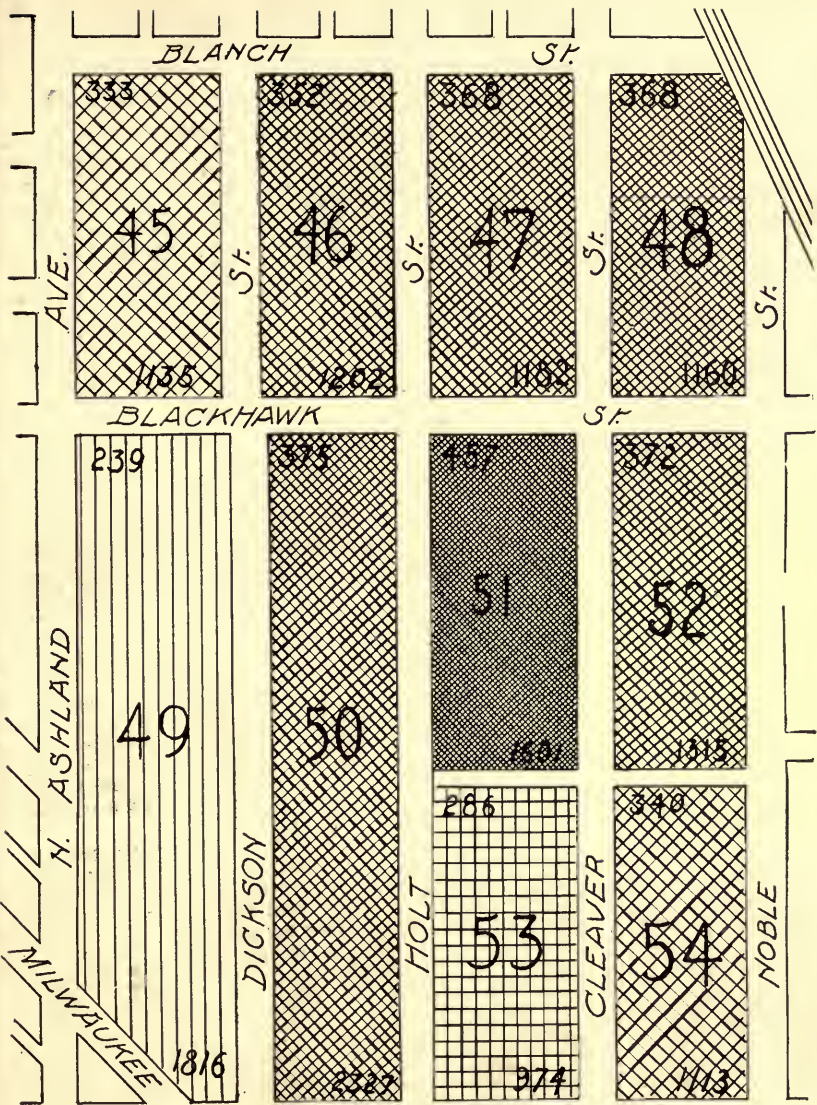
SUMMARY OF DISTRICTS

District.	Net Area.	Density per Acre.
District 1, N. of Twelfth Street -----	58.67	244.6
District 1, S. of Twelfth Street-----	42.11	248.2
District 1, total-----	100.78	216.3
District 2 (Polish)-----	40.68	339.8

This table shows in a most interesting way the varied densities of the different blocks. In certain blocks the density falls to 139 and 142 persons per acre, which are only a few more persons than



DENSITY OF POPULATION DISTRICT ONE



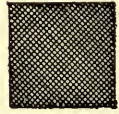
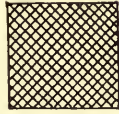
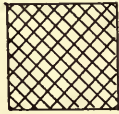
200 to 250

250 to 300

300 to 350

350 to 400

457



DENSITY OF POPULATION DISTRICT TWO

are housed on certain lots in other portions of the districts, but, as it happens, the density in certain rooms of both of these blocks is frightful. In both instances the houses are usually small and a great deal of space is occupied by factories, stores, livery-stables, etc., which have no population. The population on the other hand in certain portions runs to a great density, and in blocks 15 and 51 there are over 400 persons per acre. The conditions which result from such densities are pictured in the first part of the chapter, but to understand how dense the population really is, Dr. Frank Fetter's figures are herewith inserted:

"The area of Chicago is 187 square miles, which contain 119,768 acres.* At 200 per acre this area would hold a population of 23,953,600, and at 270 persons per acre it would house 32,337,360. Let one imagine this vast multitude of people, equal to the whole population of England, on the present area of Chicago and he will have an idea of what is meant by a population of from two hundred to two hundred and seventy persons per acre. The density of some of the blocks is over four hundred per acre. If this were extended over the whole area it would mean that nearly the entire population of the United States fifteen years ago could be housed in Chicago. This, however, is far from being the maximum density possible, for a large part of these districts is covered with small detached buildings. In one lot of less than one-seventh of an acre in one of the newer tenements one hundred and twenty-five people are housed, or at the rate of nine hundred per acre. Applying this figure to the whole area of the city would mean that more than the population of the Western Hemisphere could be housed in Chicago."

A DETAILED STUDY OF THE ROOMS AND APARTMENTS TO THE HOUSE

Section 4. What precedes shows very graphically the overcrowding which exists in these districts of the city. But some other figures collected in the inquiry will add valuable details to these general statements. The statistics following will show the number of apartments, or tenements, in each tenement-house.

*This is approximate. The actual figures are 122,240 acres in Chicago. See Bulletin Federal Bureau of Labor, September, 1900.

NUMBER OF APARTMENTS PER DWELLING

District.	In Front.			In Rear.			Total.		
	Number Dwellings.	Number Apartm'ts.	Ratio Apts. to Dwellings.	Number Dwellings.	Number Apartm'ts.	Ratio Apts. to Dwellings.	Number Dwellings.	Number Apartm'ts.	Ratio Apts. to Dwellings.
District 1---	1,498	4,705	3.14	408	769	1.88	1,906	5,474	2.87
District 2---	529	2,242	4.27	242	554	2.28	771	2,796	3.62
District 3---	360	1,413	3.92	80	176	2.2	440	1,589	3.61
Total----	2,387	8,360	3.5	730	1,499	2.05	3,117	9,859	3.16

These figures show that the average number of apartments to a house is over three. But this is deceiving, as averages always are. Some tenement buildings have a very large number of apartments; for instance, one tenement-house has forty apartments. A great many have from ten to twenty apartments. And there were five hundred and nine tenement buildings in these districts having over eight apartments in each. Despite the large tenement-houses, the average is very low. It is brought down to 3.16 apartments per house by the great number of tiny rear tenements with one and two families or apartments. In the Polish district, where the population is most dense, there are 4.27 apartments to a front house. This shows that the apartments in that district shelter more people per acre than those in District 1; that is, the apartments average somewhat over three to each tenement-house, and the following figures show that in the average apartment there are somewhat over three rooms. The average home, therefore, of the working people in these districts is approximately an apartment of three rooms in a tenement-house accommodating three families.

The following table shows that the density of population, averaging in the Polish district 339.8 and in the Italian and Jewish districts 216.3 per acre, is not a density of people living in large double-deckers, but in houses which average 3.16 apartments to the dwelling and 3.65 rooms to the apartment. It is clear that this means an oppressive density in the rooms of these tenements.

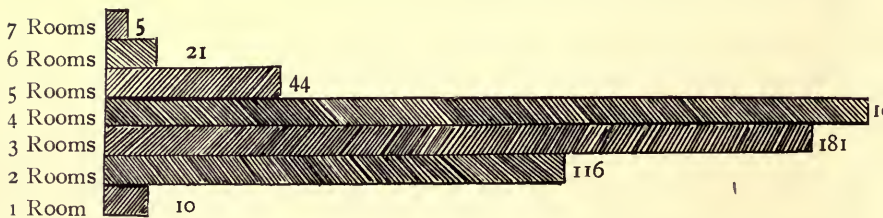
NUMBER ROOMS PER APARTMENT IN THE THREE DISTRICTS

District.	In Front Houses.			In Rear Houses.			Total.		
	No. Apts.	No. Rooms.	Ratio.	No. Apts.	No. Rooms.	Ratio.	No. Apts.	No. Rooms.	Ratio.
District 1---	4,705	17,550	3.73	769	2,397	3.11	5,474	19,947	3.64
District 2---	2,242	8,374	3.73	554	1,943	3.5	2,796	10,317	3.68
District 3---	1,413	5,258	3.72	176	509	2.89	1,589	5,767	3.62
Total----	8,360	31,182	3.73	1,499	4,849	3.23	9,859	36,031	3.65

FAMILIES IN CROWDED QUARTERS

Section 5. In a certain sense averages always convey wrong impressions. The fact that the average apartment is of somewhat over three rooms partially conceals the fact that many apartments are of one and two rooms. The worst conditions, of course, prevail in these rooms. The diagram just following will explain what is meant. It illustrates an examination of 571 apartments, showing the number of families having one, two, three, four, five, six, and seven rooms each.

571 APARTMENTS CLASSIFIED ACCORDING TO THE NUMBER OF ROOMS



As before, it is shown that the largest number of families occupy three and four rooms. Ten families occupy but one room each, and one hundred and sixteen families occupy but two rooms each. This last is about twenty per cent of all families. Computing from this percentage, which is based upon an examination too limited to be safely used without question, we find that of the 9,428 families living in the entire three districts, 1,971 families are living in apartments of but two rooms each. 1.7 per

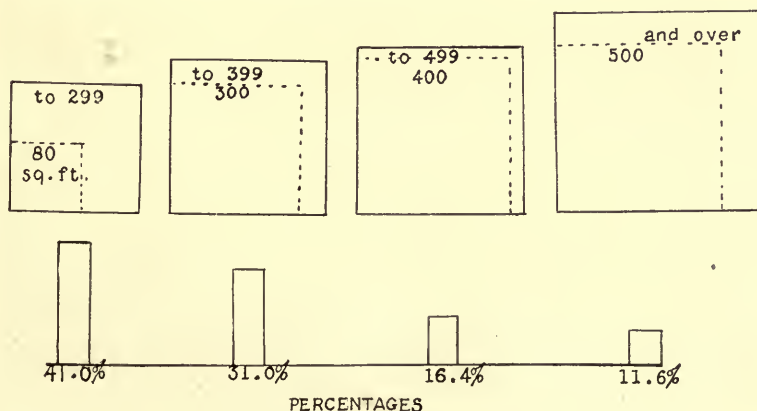
cent occupy but one room. An estimate with this as a basis indicates that 167 families are living in but one room each.

To say that an apartment has two or three rooms gives the ordinary reader an exaggerated notion of the size of these quarters. When one sees a statement concerning two and three room tenements, one unconsciously likens them to those with which he is most familiar. To know what the following figures mean, that forty-one per cent of all apartments investigated have under three hundred square feet of floor area, let any one measure off in one direction by seven paces the length, and at right angles by five paces the width, and he will have about three hundred square feet of floor area.

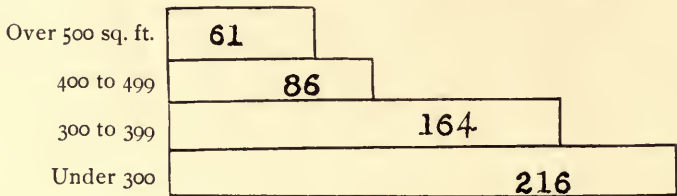
FLOOR AREA OF APARTMENTS BY SELECTED BLOCKS

Location.	Number of Apartments, with Floor Area.			
	Under 300 Sq. Feet.	300 to 399 Sq. Feet.	400 to 499 Sq. Feet.	Over 500 Sq. Feet.
Block 15	35	51	30	31
Part of Block 34	15	32	25	24
Selected houses in District 1	152	30	4	1
Selected houses in District 2	2	34	15	1
Selected houses in District 3	12	17	12	4
Total	216	164	86	61
Percentages	41.	31.	16.4	11.6

CLASSIFICATION OF APARTMENTS ACCORDING TO FLOOR SPACE
PERCENTAGE IN EACH OF THE FOUR CLASSES
FLOOR AREA



CLASSIFICATION OF 527 APARTMENTS ACCORDING TO FLOOR SPACE



It will be seen that 380 apartments have less than 400 square feet of floor area, and that 216, or 41 per cent, have space varying from 80 to 300 square feet. An estimate on this basis indicates that 4,042 of the 9,859 apartments have less than 300 square feet of floor area. It would be shocking to believe that 4,042 families are crowded in this small area for all the purposes of life. Eating, sleeping, giving birth to children, the nursing and rearing of children, the care for the sick and the care for the dying are all managed after some painful fashion in these cramped living quarters. Any one who will measure this space off on the floor will agree that it is inhumane and hardly credible.

The few instances which follow, of the number of people living in crowded quarters, are not chosen because they are the worst. There is no need for that, even the good (comparatively speaking) conditions denote painful overcrowding.

No. Rooms.	No. Persons.	Floor Area.	Average per Person.
3	7	228 sq. ft.	33 sq. ft.
3	8	228 "	28 "
2	3	96 "	32 "
3	6	176 "	28 "
2	6	168 "	28 "
3	10	320 "	32 "

The apartments indicated by these figures are inevitably uncomfortable and are never free from the friction of overcrowding. If there are over four thousand families in these three small districts of Chicago, crowded in these narrow quarters, how many are there in the entire city? One day the writer visited the family of a man who had been prostrated by heat while at work

with the street-paving gang. They were a family of seven, living in a two-room apartment of a rear tenement. The day was in August, and the sun beat down upon one unintermittently and without mercy. The husband had been brought home a few hours before, and the wife, in a distracted but skilful way, found pathways among the clamoring children. The air was steamy with a half-finished washing, and remnants of the last meal were still upon the table. A crying baby and the sick husband occupied the only bed. The writer had known before of five people sleeping in one bed, so he supposed the father and oldest child usually slept on the floor. As he watched the woman on that day he understood a little of what it meant to live in such contracted quarters. To cook and wash for seven, to nurse a crying baby broken out with heat, and to care for a delirious husband, to arrange a possible sleeping-place for seven, to do all these things in two rooms which open upon an alley, tremulous with heated odors and swarming with flies from the garbage and manure boxes, was something to tax the patience and strength of a Titan.



In the light of the foregoing studies, showing the small apartments and few rooms for each family, the following figures on the number of people in rooms and apartments will be significant of overcrowding:

District.	Average No. Persons per Room.			Average No. Persons per Apartment.		
	Front.	Rear.	Both.	Front.	Rear.	Both.
District 1-----	1.24	1.36	1.26	4.8	4.4	4.8
District 2-----	1.35	1.34	1.35	5.1	4.8	5.09
District 3-----	1.2	1.47	1.22	4.5	4.3	4.53
Totals - - -	1.23	1.36	1.28	4.8	4.5	4.8

The average number of persons per room, which includes all rooms and not simply bedrooms, it will be seen, is 1.28. The average runs considerably above this in the Polish district. In the rear houses the crowding is greater in Districts 1 and 3,



but less in District 2. The average number of persons per apartment is larger in the front houses than it is in the rear houses. But the floor space in the rear tenements averages less per apartment than the floor space in the front houses, consequently the overcrowding is greater in the rear dwellings. That the crowding is greater in the Polish district than it is in the Italian and Jewish districts is shown by the large average number of persons per apartment. An average of over one person per room for every room in three districts of considerable size is evidence of a very close crowding of population. It shows that if the whole population, with a density in certain places of four hundred persons per acre, were equally distributed throughout the entire 36,031 rooms in the three districts, every room would shelter more than one person, and every single apartment, large and small, would contain nearly five persons.

But averages are deceiving, and in some parts of the district there are houses in which every room is crowded, and in other parts houses only sparsely populated. The following table and diagram shows an examination of 1,114 occupied apartments in six different blocks, classified according to the number of persons per room:

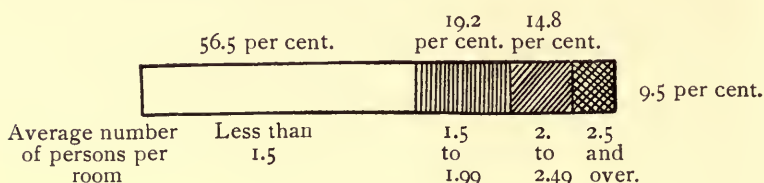
APARTMENTS WITH CRAMPED LIVING QUARTERS IN SIX SELECTED BLOCKS *

Block.	Occupied Apartments.	With 1.5 to 1.9 Persons per Room.	With 2 to 2.49 Persons per Room.	With 2.5 or More Persons per Room.	Total No. of Apartments, Cramped.	Per Cent of All Apartments, Cramped.
No. 16	64	13	10	4	27	42
No. 21	155	23	23	7	53	35
No. 51	316	72	58	14	144	45
No. 53	187	33	26	25	84	45
No. 60	219	42	32	37	111	50
No. 62	173	31	16	19	66	38
Totals - -	1,114	214	165	106	485	43.5
Percentage -	100	19.2	14.8	9.5	43.5	43.5

* The apartment includes all rooms except closets and pantries.

CRAMPED LIVING QUARTERS

Distribution of apartments in six selected blocks into four classes according to number of persons per room. Total number of apartments is 1,114.



This table shows that 43.5 per cent, that is to say, 485 apartments, have more than three persons in every two rooms; twenty-five per cent, or one-fourth of all the apartments, were so crowded that two persons were compelled to occupy every single room, living-rooms and bedrooms alike. This table and the diagram further shows that about (9.5 per cent) one apartment in every ten was fearfully crowded, and that often more than three people were crowded in every room of each apartment. The following examples are a few of the cases of overcrowding commented upon by the enumerators:

Street.	Rooms.	Persons.	Adults.	Children.
Taylor -----	3	9	4	5
Taylor -----	2	11	3	8
Dekoven -----	2	8	3	5
Dekoven -----	2	8	3	5
Dekoven -----	2	8	2	6
Bunker -----	2	8	3	5
Bunker -----	3	11	2	9
Thirteenth -----	2	6		
Thirteenth -----	3	9		
Liberty -----	4	12	5	7
Fourteenth -----	3	11		
Holt -----	2	6	3	3
Holt -----	2	7	3	4
Holt -----	2	5	2	3
Holt -----	2	9	2	7
Holt -----	2	6	2	4
Noble -----	3	10	2	8

Some of the comments on these and other cases are:

Dekoven. Case of eight persons in two rooms, Polish. "The woman says four sleep in the kitchen and four in the bedroom."

Cleaver. "Two double beds and crib in bedroom 10 by 8, with one window opening on passage one and one-half feet wide."

Holt. "Thirteen persons in four rooms, two of them bedrooms 6 by 8. Family consisted of father and mother, three grown children and eight others.

Holt. "Old residents say families keep boarders in winter. A family of five, two adults and three children, living in four small rooms near, take as high as seven boarders and roomers in winter, making nine adults and three children in four rooms."

The following photographs are two excellent examples of tenements badly overcrowded. The first is a rear court surrounded by four-story houses. The cellar in the middle of the picture looks as it really is, dark and unwholesome. One family with five children live in it. The crowds of children which call these barracks home have only this low, damp court to play in. It is five feet below the level of the street, and is not drained. The tenement directly in the middle has thirty-seven people in five apartments. The house at the right has a stable in the basement story. Its manure box is used for garbage. When the enumerator passed it was full and weeds were growing in it. There are no fire-escapes on the houses and the lives of the large population would be in great danger in case of fire.

The second photograph shows a passageway between three tenements, two large brick tenements on the front of the lot and one large frame tenement on the rear. Almost every inch of the two lots is covered by buildings. The little group of tenements, of which these are three, house forty-four families, altogether 182 individuals. The lower rooms never receive sunlight, and are consequently dark and unwholesome.

THE SACRIFICE OF DECENCY, HEALTH AND MORALS IN OVERCROWDED APARTMENTS

Section 6. To understand the full value of the figures given in this chapter, it will be necessary to explain to the general public what overcrowding really means to the working people. A



A "BACK YARD"



HOUSES COVERING ALL OF LOT

little imagination will show you how difficult or impossible delicacy or decency is in such narrow quarters. Note what the Polish woman on Dekoven Street says, and the two comments on the Holt Street tenements. These conditions present grave dilemmas to these poor people who try to reduce their rent by overcrowding a few rooms. If the doors are closed between bedrooms, which is desirable when boarders are taken, three or



more people will be crowded in a bedroom with not enough air-space for one human being. This is decency at the high price of health. Many times the kitchen is used as a bedroom. But as Mr. George Haw says* in "No Room to Live": "Thousands of families try to make their overcrowded living as decent as possible for the children's sake. They avoid sleeping in the living-room as far as they can, so that the son of twenty, who leaves home for the factory at eight, can have his breakfast apart from the room where the daughter of eighteen is dressing to

* See page 19.

begin her work in the warehouse at nine." The late Lord Shaftsbury, speaking of the influence of indecent overcrowding, especially among children, said before the Lords' Committee: * "It is totally destructive of all benefit from education. It is a benefit for the children to be absent during the day at school, but when they return to their houses, in one hour they unlearn everything they have acquired during the day." A probationary officer of the Juvenile Court recently said that almost all of her children lived in overcrowded rear tenements.

The moral influences set in motion by the necessity, in overcrowded quarters, of disregarding decency and forgetting sex are not the only evil results of overcrowding. Because of it the health of tenement-house people is in constant danger. Unconsciously but irresistibly, the physical demands of their bodies, which cannot be satisfied indoors, impel the people to stay on the streets as much as possible. Besides this, overcrowded rooms are not pleasant. That overcrowding makes the houses unbearable is attested by the crowds of men, women, and children which swarm into the streets on evenings when the weather permits. The air, the light, and the breathing-space which cannot be had in their crowded tenements they get in the streets at night. On hot summer evenings the people sleep on the streets, sidewalks, and in the yards, where there are yards. The nervousness, listlessness, and wearisome depression frequently noticed in the people of the tenements is largely due to their overcrowded sleeping-rooms. It is a fact that the mass of people in tenements have not what people commonly call a home. It is a place of shelter for the sleeping-hours of the night, and in the hot weather it is often abandoned even for that purpose.

THE DENSITY IS INCREASING IN CHICAGO

Section 7. As it is worth while for Chicago to give some consideration to the problem of overcrowding upon the ground space, so it is worth while for Chicago to consider, without delay, the serious problems which result from crowding people in tenements, almost as stock cars are crowded with cattle. The evil does not stand still or abate; it is steadily growing, and to-day it

* See Report, Vol. II. page 2.

is worse than yesterday. Nor are these evils confined to these small districts on the West Side. These districts are representative of what exists throughout the entire river wards. Overcrowding affects nearly three hundred thousand people.

The down-town districts here present problems similar to those of down-town areas in London and New York. The Great Inner Belt in London is where the most serious housing problem in the world exists, and the crushing of the overcrowded population is a terror to the nation. The cry of the "no room to live" population to-day outdoes in its threatening character the "bitter cry of '84." There is a mass of people there, as here, who are compelled to live down-town. The tailors must be near the work which is given out on Fifth Avenue.* The common laborers, whose work shifts from one extreme of the city to another, must live near the center of their working circle. Peddlers must live in close proximity to their base of supplies in order to reach, in the early hours, the districts where their wares can be sold. People who own stands and small stores must live in or near their places of business. Where several members of the family work down-town, transit costs are saved by living near their work. The natural gregariousness of people belonging to the same nationality establishes colonies of working people in the inner circles of large cities.† In Chicago there are a Bohemian, an Irish, a Jewish, a German, a Negro, a Chinese, a Greek, a Scandinavian, two Polish, and four Italian colonies in the central part of the city. The dreariness of suburban life and the pleasures of certain excitements in the down-town districts draw to it certain classes. Back of all this, the temporary low rentals of the poorly constructed tenement-houses attract, at first, the colonies, and the mass of unskilled workers. But the experience of every older city has gone to prove that this advantage is ephemeral, and rents increase with the overcrowding, until the combination is reached of exorbitant rents for miserable and overcrowded accommodations. Chicago is moving toward this goal seemingly without fear. Until within the last few years, no thought has been given to the housing problem, and now, in the results shown here, are seen the beginning of all and the realization of many of the frightful evils depicted in the Report of the Royal Commission.

* See page 197.

† See page 196.

CHAPTER IV.

INSIDE SANITARY CONDITIONS

CAUSES OF INSANITARY CONDITIONS IN HOUSES

Section 1. The chief insanitary conditions in houses are darkness, lack of air, uncleanliness, and poisonous gases. Upon the construction of houses and their relation to one another on the ground space depend the inside insanitary conditions of darkness and lack of ventilation. Uncleanliness, outside of the house, depends upon the law concerning cleaning and its enforcement. As an inside condition, it depends greatly upon the crowding of people allowed in the apartments, and then upon the individual caretaker of the apartment. The lighting of the apartment affects the question seriously, since the problems of cleaning a light room and a dark room are materially different. The condition of the air as affected by poisons from sewer gas, uncollected garbage, etc., is entirely dependent upon the law concerning these matters and its enforcement, although overcrowding in apartments also vitiates the air. But the overcrowding of houses upon the lots and blocks dealt with in Chapter II, is the most important cause of insanitary conditions.

Musty, fetid rooms, which cannot be ventilated because of brick walls overshadowing the windows, inevitably accumulate in their dark corners dirt, mold, and vermin. Emanations from the body and foul air in dwelling and sleeping rooms have no outlet except by through ventilation. The overcrowding in rooms shown in Chapter III, moreover, complicates all difficulties of bad building and construction, and doubles the cost to the tenants of dark, unclean, and badly ventilated rooms. The limited amount of cubic air-space for each individual caused by overcrowding has been known to suffocate children.* The miserable construction and ill-repair of many tenement-houses cause

*See report of inquest in Dr. Bowmaker's Housing of the Working Classes, page 13.



damp and unwholesome dwelling-places which are obviously unfit for human beings to dwell in. Basements and cellars are inhabited, and in some of them all of the most serious inside insanitary conditions are found. The construction of a house, the relation of one house to its neighbors, the size and height and length, decide largely the inside insanitary conditions.

Originally, the small old-fashioned frame cottages had excellent light and ventilation. Even the old ones with certain other insanitary conditions cannot be criticised on these grounds, but occasionally even these small houses will be partitioned off for the use of two or more families, and in such instances it sometimes happens that a dark room is made. More frequently these small cottages are placed on the rear of the lot and a large three or four story tenement placed on the front. The small house is then overshadowed and deprived of its sunlight. The photograph opposite is an illustration of this. The five rear tenements in the middle of the picture are built to the rear line of the lots at the right. That there is perhaps sufficient light now depends upon the fact that the lots at the left are only partially built upon, and that there are three large vacant lots adjoining. The low square brick house is occupied by two families in four rooms. This house is overshadowed by a large brick front house in which thirty people live in three apartments. The two-story rear frame house is back of a large four-story tenement. The next rear tenement is a three-story brick house at the rear of a front house of three stories. This lot is covered seventy per cent and the court between the two houses is dark and wet. The lower rooms adjoining have insufficient light. The next rear tenement is a house of one story entirely surrounded on three sides by tall buildings. A baker occupies the basement and a family the first floor. This house is a good example of a small cottage overshadowed by surrounding houses which cut off its light and air. Its chimney has been lengthened to reach out of the well into the freer air.

The large brick tenement in the next photograph is a good example of a dumb-bell. It is practically a front and rear house joined together, covering the whole lot. The houses on both sides by its erection have been robbed of light and air. Most of the recent tenement-house construction is of this character.



From this study of the construction of buildings and the amount of lot covered it is seen how often insanitary conditions are caused by the evils of overcrowded lot areas.

A STUDY OF APARTMENTS WITH DEFECTIVE LIGHTING AND VENTILATION

Section 2. These photographs show various methods of building which are harmful. But it will be necessary to follow the tables and diagrams if an exact idea is desired of the worst conditions. These facts were not obtained in the general investigation, but were the result of a special study into the inside conditions of light and ventilation. This inquiry included in its scope 1,961 rooms, which were not selected solely because they were considered the worst examples of bad lighting.

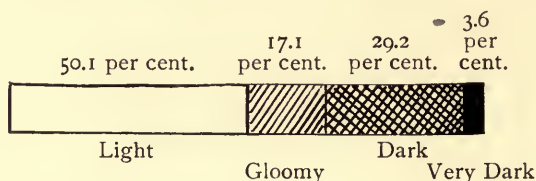
CLASSIFICATION OF ROOMS IN APARTMENTS HAVING INSUFFICIENT LIGHT

(Special Investigation.)

Location of Rooms.	Total No. of Rooms Reported.	Rooms with Bad Lighting.						Totals.	
		No. Very Dark.	Per Cent.	No. Dark.	Per Cent.	No. Gloomy.	Per Cent.		
Block 15-----	502	30	6.	131	26	95	18.9	256	50.9
Block 34-----	587	1	.01	81	16	188	31.6	270	47.7
Selected houses in Dist. 1-	595	34	6.7	207	41	29	5.7	270	53.4
Selected houses in Dist. 2-	201	---	---	79	39.8	20	10	99	49.8
Selected houses in Dist. 3-	166	6	3.6	79	47.5	3	1.8	88	52.9
Totals - - - -	1,961	71	3.6	577	29.2	335	17.1	983	49.9

Location of Rooms.	No. of Rooms with Window Space Less Than 1-10 of Floor Area.	Windows not Supplying Good Ventilation.	
		No. on Narrow Courts, Six Feet or Less.	No. on Other Rooms.
Block 15-----	92	169	113
Block 34-----	1	359	152
Selected houses in Dist. 1-	41	118	227
Selected houses in Dist. 2-	3	71	42
Selected houses in Dist. 3-	15	56	30
Totals - - - -	152	773	564

1,961 ROOMS SPECIALLY EXAMINED AND CLASSIFIED
ACCORDING TO GRADE OF LIGHTING



The first table gives the classification of 983 rooms, or 49.9 per cent of all rooms as they were found to be either very dark, dark, or gloomy. The second table gives the number of rooms existing in violation of the Chicago ordinance requiring every room to have window space equal to at least one-tenth of its floor area.* The second part of this table gives the number of windows of small use for the purpose either of lighting or ventilating rooms.

The diagram shows that the rooms classified as having insufficient light are about half of all rooms investigated. It also shows by its shading what is meant by the terms gloomy, dark, and very dark. The first part of the table, of which the diagram is explanatory, shows that 49.9 per cent of all rooms are badly lighted. Block 34, in district one, is an exception, but even here 47.7 per cent of all rooms are dark. As the apartments selected are fairly representative of conditions in several different places in the three districts, the total percentage of 49.9 per cent could perhaps be applied with fairness to most tenement-house districts in this city.

The number of badly lighted rooms in Chicago's tenement-house districts would be enormous if an estimate were made on this basis. In these districts alone about eighteen thousand rooms would be either very dark, dark, or gloomy, and about twenty-two thousand five hundred people would live in rooms in a more or less unhealthful condition. The showing is amazing, and there is sufficient reason for alarm. If these figures were based upon the casual observation of an unskilled and hurried enumerator they could hardly be accounted trustworthy. But they are

* City Ordinances, 1934, sec. 1371.

based upon measurements of floor areas, of windows, and a study of their sources of light, and every statement can be reinforced by a great body of facts.

The table shows some striking things in Block 15. More than half the rooms are badly lighted. One-third of the rooms have conditions which are designated as either dark or very dark, 161 rooms are considered not fit for people to live in. As is shown in the lower part of the table, 113 windows open upon other rooms and not to the outer air; 169 windows open upon narrow courts; 92 rooms have windows too small to furnish sufficient light. The sunless bedrooms are crowded to the point of suffocation; 41.9 per cent of the people have less than 250 cubic feet of air-space per occupant,* which is 150 cubic feet less than is required by State law for each homeless and vagrant man in the down-town lodging-houses. There are 412 persons to the acre in this block; over 122 persons live in alley homes; 52 persons live in basements, and the worst of many bad conditions reach a climax here, for not only are the inside conditions of light and ventilation most reprehensible, but the serious overcrowding of population also complicates and intensifies the evils of sanitary defects.

The following table is a careful examination of lighting in this block. A graphic representation of the table is also given in the diagram.

LIGHTING OF APARTMENTS IN BLOCK 15

Location.	Total No. of Rooms.	Dark and Very Dark.	Percentage of All.	No. Gloomy.	Percentage of All.
Basement-----	56	37	66	8	14.2
First inhabited floor (including basement)----	156	79	50	34	21.5
Second inhabited floor---	190	40	21	50	26.3
Third inhabited floor----	102	16	15.7	14	13.8
Fourth inhabited floor---	7	2	28.6	2	28.6
Fifth inhabited floor----	7	1	14.2	3	42.8
Totals - - - -	462	138	30	103	22

This table shows not only the total number and percentage of rooms badly lighted, but also the number and percentage of

* See page 87.

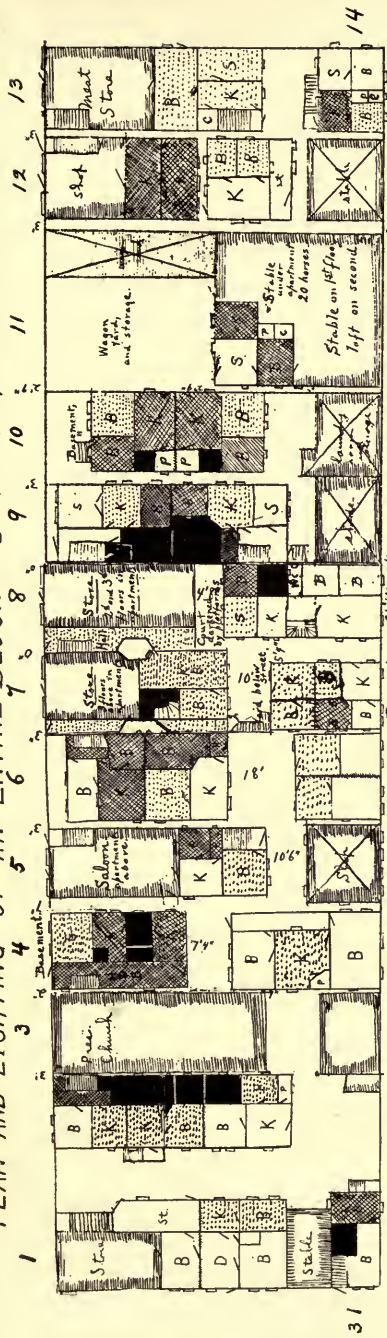
rooms in the various stories which receive insufficient light. In the basement the conditions seem to be extremely bad. Sixty-six per cent of all rooms have insufficient light. Half of the rooms in the first story, which include all basements, suffer the worst conditions. Thirty per cent of all rooms in the block have conditions which should not be permitted by sanitary laws.

To further illustrate defective lighting, the following diagrams showing the lighting of all apartments in the first and second stories of this entire block are given.

In looking over the diagram it will be seen that seventy-nine rooms are either dark or pitch black. The latter should be abolished by the Department of Health, as almost every one exists in violation of the city ordinances. At the left of the diagram you will see at figures 28, 29, and 30 ten rooms marked black. Two of these are bedrooms without any openings to the outside air; eight of the rooms get their entire light and ventilation from airshafts measuring 4 by 4 feet. The building occupying three lots covers seventy-five per cent of the entire ground space. Another instance of rooms—bedrooms, more's the pity—without light and ventilation is at No. 22. The rooms open upon a passageway one foot and a half wide. Three children under five years of age sleep in these rooms, where there is never any daylight. They are always foul and fetid, and it is hard to understand how people, and especially babies, live at all in such conditions.

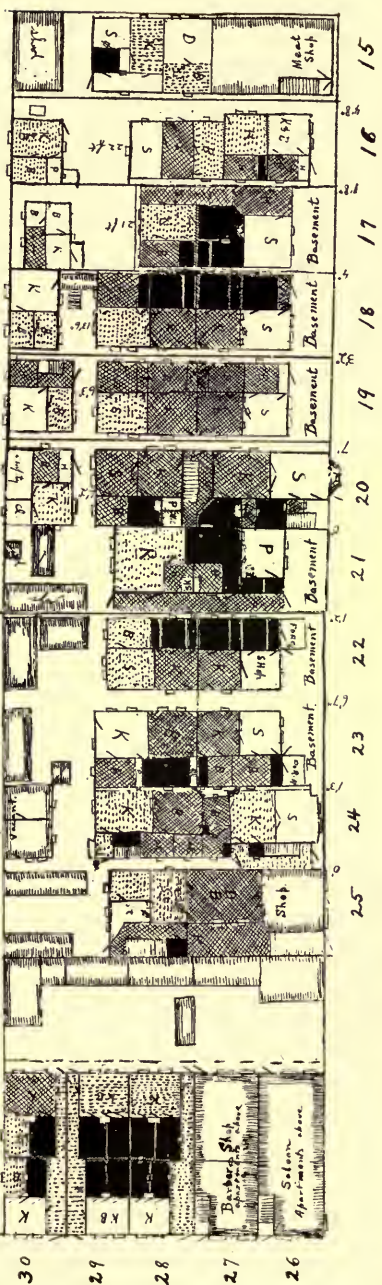
A glaring instance of the possibility of fearful results under the existing building regulations is to be seen in Lots 2, 3, and 4. The owners of Lots 2 and 4 built up their property with tenements to within three inches of their lot boundaries, perhaps trusting to chance that the owner of Lot 3 would be compelled to leave sufficient space for lighting and ventilating any building he might put up, and that they could in this way impose on him to furnish them with light and ventilation. However, as it turned out, Lot 3 was built up almost solidly to its lot line by a building having no need for windows on the sides, and so covered the windows of the adjoining buildings. In these tenements sixty-one people live. On the second floor of one house sweat-shop workers toil in darkness over their tasks, being deprived of any chance of light and air. Until the law requires that only a defi-

PLAN AND LIGHTING OF AN ENTIRE BLOCK - 1ST FLOOR, OR BASEMENT.



Alley

Alley



Alley

Alley

Alley

Alley

Alley

Alley

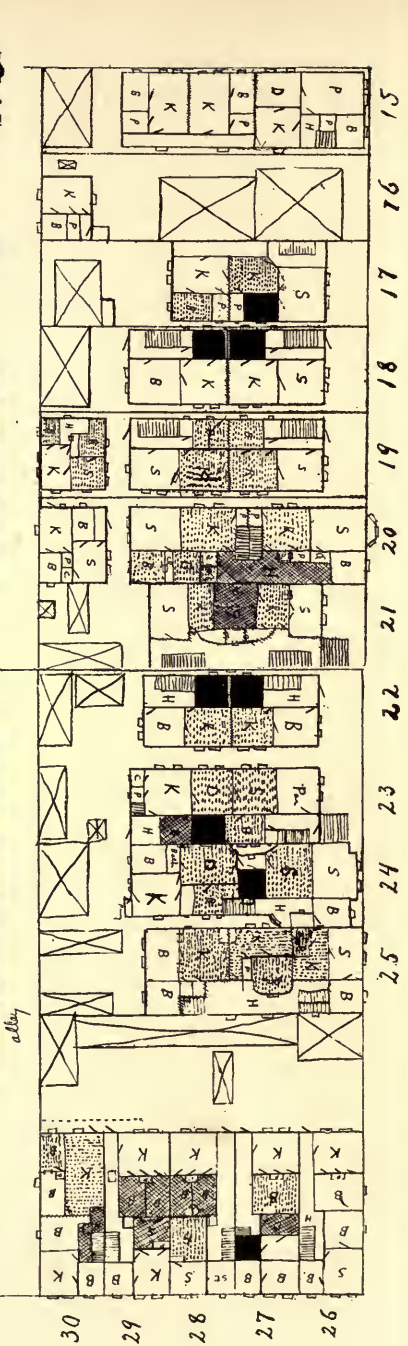
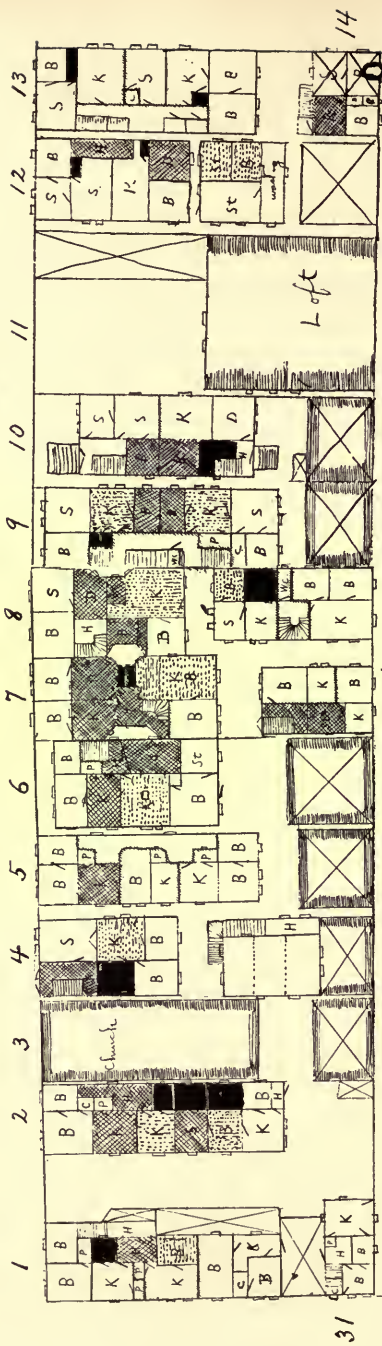
Alley

Alley

Alley

Alley

2^d FLOOR.



nite percentage of the lot shall be covered by tenement buildings, such a case as this can be repeated at any time.

The second floor apartments are shown in the diagram opposite:

While these apartments are much better lighted, there is even on this floor a considerable number of rooms to be classed as unfit for human habitation because of defective lighting and ventilation. The influence of the high buildings is still evident.

The following diagrams show the lighting in certain apartments covered by the investigation. The diagram at the lower left-hand corner shows a common type of dwelling-house in the Polish quarter. The rooms opening on the small shafts, $2\frac{1}{2}$ by 6 feet, receive almost no light. The middle diagram at the top is a long three-story tenement with a basement. The rooms in the front part of the house are all dark because overshadowed by the adjoining houses. It is a type of dwelling becoming more and more common in the Polish district. It is one of the worst forms of tenements, and has been described before.*

A STUDY OF THE AIR-SPACES IN OVERCROWDED APARTMENTS

Section 3. Even under favorable circumstances, badly lighted rooms which cannot be well ventilated are not fit to live in. But when such rooms are overcrowded the air becomes poisonous. No chemical tests were made of the air found in overcrowded apartments, nor was any effort made to collect disease germs. The purpose of our special inquiry was to determine how many cubic feet of air-space each individual had. There are many well-authorized standards by which we may determine how much living and sleeping space is needed by every human being. Professor Huxley, the eminent scientist, once a medical officer in East London, says 809 cubic feet of space is desirable.† A recent law gives the Illinois State Board of Health power to compel lodging-house keepers to give each lodger four hundred cubic feet of space.‡ In the light of these statements, judge of the frightful conditions in which the following people live:

* See photographs, pages 44, 45.

† Worthington's "Dwellings of the People," page 103.

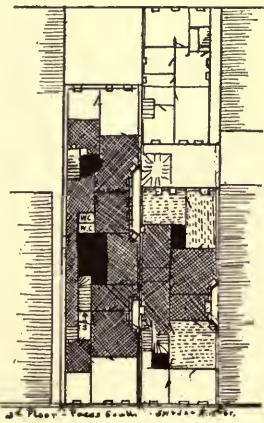
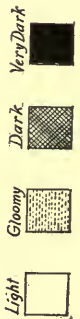
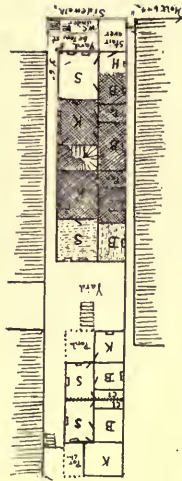
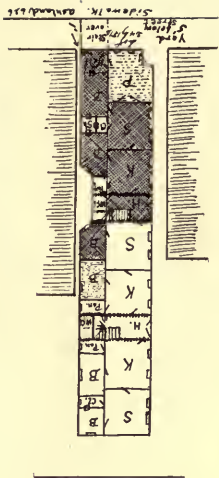
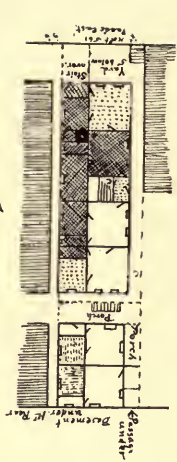
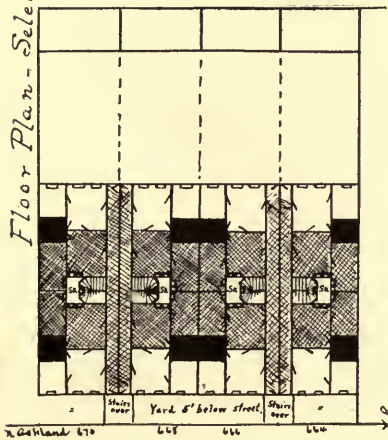
George Haw's "No Room to Live," page 18.

‡ Revised Statutes of Illinois, 1899, Chapter 126A, sec. 16.



PASSAGE TO REAR TENEMENTS

Floor Plan - Selected Apartments - Showing Lighting of Rooms.



Street.	No. of Persons.	No. of Rooms.	Cu. Ft. per Person. All Rooms.	Cu. Ft. per Person, Sleeping-Rooms.
Taylor -----	10	3	256	179
Jefferson -----	7	3	393	256
Jefferson -----	7	3	324	245
Jefferson -----	8	3	350	180
Jefferson -----	4	2	560	135
Dekoven -----	5	3	168	145
Dekoven -----	9	3	392	128
Dekoven -----	8	3	312	112
Taylor -----	9	3	221	81
Dekoven -----	6	2	266	106
Dekoven -----	10	3	352	64
Dekoven -----	8	2	319	112

The above examples were chosen out of many, and represent but a few of the worst cases found. Some of these families are not only painfully crowded, but in several of the cases mentioned above one or two of the rooms in each apartment are dark. The eight people on Jefferson Street have three rooms, two of which are dark. The family of nine on Dekoven Street also live in three rooms, two of which are dark. Here are found together the evils of dark rooms without ventilation and a bad state of overcrowding.

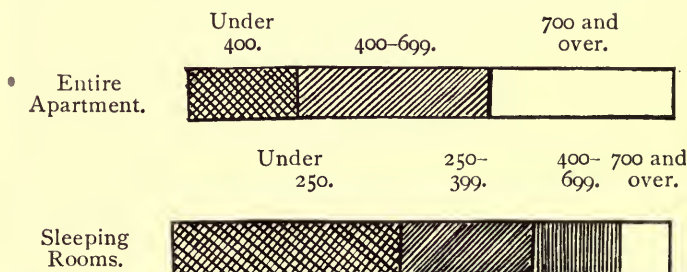
The following table and diagram give the total results of this investigation:

CLASSIFICATION ACCORDING TO THE AMOUNT OF CUBIC AIR-SPACE PER PERSON IN APARTMENTS SPECIALLY INVESTIGATED

Location of Apartments.	No. of Apartments with Cubic Air-Space per Person.			
	Under 400.	400 to 699.	Over 700.	Totals.
Block 15 -----	19	53	76	148
Part of Block 34 -----	9	32	36	77
Selected houses in District 1 -----	64	71	41	176
Selected houses in District 2 -----	6	16	22	44
Selected houses in District 3 -----	8	17	16	41
Totals - - - - -	106	189	191	486
Percentages - - - - -	22	39	39	100

Location of Apartments.	No of Sleeping Apartments with Cubic Air-Space per Person.				Total.
	Under 250.	250 to 399.	400 to 699.	Over 700.	
Block 15 -----	57	28	31	20	136
Part of Block 34 -----	33	29	27	1	90
Selected houses in District 1 ----	94	53	23	6	176
Selected houses in District 2 ----	25	11	7	1	44
Selected houses in District 3 ----	25	13	3	---	41
Total - - - - -	234	134	91	28	487
Percentages - - - - -	48	27.5	18.6	5.7	100

CLASSIFICATION ACCORDING TO CUBIC AIR-SPACE PER OCCUPANT IN THE APARTMENTS SPECIALLY INVESTIGATED



The first table includes all rooms in the apartments except pantries and closets. It assumes that all doors are thrown open at night so that the apartment is a unit of air-space. Upon this assumption each individual in twenty-two per cent of the apartments had less than four hundred cubic feet of air-space. In over sixty-one per cent of all apartments, each individual had less than Professor Huxley's standard, which it will be remembered was 809 cubic feet of air-space per person. The second table gives the cubic feet of air-space per occupant in sleeping-rooms only. The figures show that over ninety-four per cent of all apartments have less than seven hundred cubic feet of air-space per person. As will be seen, three-fourths of all apartments have less than four hundred cubic feet per occupant. Applying these figures to all the apartments in the three districts, it is estimated that in the sleeping-rooms of over 7,392 of the

9,859 apartments there is less than four hundred cubic feet of air-space per occupant, or less than the Illinois lodging-house law provides. To realize how small the quarters are in which forty-eight per cent of the people live, let the reader measure on the floor two paces at right angles, and imagine himself sleeping in that amount of walled space. The average space accorded to each individual is a little over two yards square.

These figures are as astonishing as those previously considered in reference to dark rooms. Dark rooms are the ones commonly most overcrowded. The very poorest, who cannot afford the cost of well-lighted rooms, accept, at a money saving, the dark insanitary ones. Wretchedly clad and poorly nourished, fortunate if they have a basket of slate coal, they crowd together to economize the warmth which their bodies give out. They dare not open a window for ventilation, and consequently they breathe again and again into their sickly bodies the poisoned air and filthy emanations which nature tries to throw off.

CELLAR AND BASEMENT DWELLINGS

Section 4. Cellar and basement dwellings are classified under inside insanitary conditions partly because they are mostly without sufficient light and with difficulty admit of ventilation, and partly because of dampness and odors from neighboring closets, privies, and other insanitary conditions. They have all the evils of rear tenements with several serious ones added. Indeed, many basements are a part of rear houses. Two hundred and forty-one persons in the three districts investigated lived in the basements of rear houses. In the basements examined the floors were mostly of wood and were rarely water-tight. They were not properly cemented at the sides or under the floors. The water and sewage from the neighboring yards drained under the floors and around the walls. Often where the land is low the sewage backs up in the sewer for days at a time, and menaces the health of the people in the underground homes. Very often (173 cases were found), against all rules of sanitation, water-closets not open to the outer air—that is to say, ventilated into the house—were placed in the basement and endangered the health of the people who had to live in the rooms adjoining. There is



BASEMENT WINDOWS

usually no ventilation to carry off the odors; and the rooms made unwholesome by these insanitary conditions often cannot be reached by the sun, which might dry out the floors and walls, and drive away the vermin. Filth accumulates undiscovered in the dark corners, and rats, which overrun these neighborhoods and forage in the dark places, communicate disease and become a plague to the cellar and basement inhabitants.

As this subject has been frequently discussed in Chicago, it is needless to give extended proof of the insanitary conditions of these dwellings, and the selected comments of the enumerators introduced below should suffice:

Throop Street.—“Water-closet out of order, sewerage bad, water has stood under house for three months. Thirty-three people live in the whole house, and fourteen in the basement. Both families sick and a child has just died. Neighbors also are affected.”

Fourteenth Street.—“Seven people, two adults, five children, in cellar of two rooms, dark and unfit for habitation.”

Noble Street.—“House fills almost the width of the lot. Cellar rooms very dark and apparently damp. Three people live there. Bad odor, probably from closets under sidewalks.”

Noble Street.—“Cellar damp and unwholesome. Three people live in it.”

Cleaver and Holt Streets.—“Insanitary in periods of rain, when water accumulates in the low lots with basement dwellings.”

Polk Street.—“Living-rooms in cellar all dark, very unwholesome. Three people live there.”

Twelfth Place.—“Six people, two adults, four children, in basement unfit for habitation.”

Twelfth Place.—“Six people, three adults, three children, in low basement, which appeared to receive water from the street. Unfit for habitation.”

A few comments concerning cellars and basements not occupied or not intended for occupation as dwellings are such important features of bad sanitary conditions in houses as to warrant publication:

Jefferson Street.—“Cellar full of rubbish and filthy.”

Ewing Street.—“Cellar wet and ill-smelling.”

Ewing Street.—“Basement bad. People complain of bad odors.”

Ewing Street.—“Unoccupied cellar is damp and unwholesome.”

Canal Street.—“Basement flooded during rains and filled with water.”

Desplains Street.—“Horrible cellar.” This comment repeated of a number of other houses in the neighborhood.

Dekoven Street.—“This building should be condemned; the basement is awful.” This is the plumber’s comment.

Blue Island Avenue.—“Cellar filthy and filled with rubbish.”

The results of the general investigation are placed in the following table. A cellar is defined in the city ordinances as “every basement or lower story of any building or house of which one-half or more of the height, from the floor to the ceiling, is below the level of the street adjoining.”* A basement has been understood to mean “a room or apartment less than one-half the height of which is below the street level.”

STATISTICS OF CELLARS AND BASEMENTS

District.	Cellars and Basements Compared with All Apartments.					Rooms in Cellars and Basements.		
	All Apartments.	Cellars.	Basements.	Total.	Percentage of All.	Cellars.	Basements.	Total.
District 1 -----	5,474	20	192	212	3.8	46	582	628
District 2 -----	2,706	49	507	556	19	151	1,917	2,068
District 3 -----	1,589	32	121	153	9.6	97	391	488
Totals - - -	9,859	101	820	921	9.2	294	2,890	3,184

District.	Population in								
	Cellars.			Basements.			Cellars and Basements.		
	Adults.	Children.	Total.	Adults.	Children.	Total.	Adults.	Children.	Total.
District 1 -	44	37	81	432	454	876	476	491	967
District 2 -	97	103	200	1,251	1,676	2,927	1,348	1,779	3,127
District 3 -	85	58	143	284	324	608	369	382	751
Totals - -	226	198	424	1,967	2,454	4,421	2,193	2,652	4,845

* City Ordinances, 1938, sec. 1375.

An examination of this table shows that about one apartment in ten was either a basement or cellar. In the Jewish and Italian districts there were altogether 212 of these dwellings; but they were not a large percentage of all dwellings. In the Polish district the conditions are quite bad. Here the percentage of people in these unsatisfactory dwellings constitutes nearly one-fifth of all, which is about the same percentage of people in this quarter living in rear tenements. These two things are significant, and clearly show that the Polish people are the most wretchedly housed of all the people investigated. The worst of the facts shown are that 424 people live in 101 cellars. The small number of children as compared with adults would indicate that families with children keep out of cellars whenever possible. However, we see that nearly five hundred more children than adults live in basements. The totals in this table show the fearful extent of this evil in these small districts of Chicago; nearly five thousand people are living in basements!

It is not intended to say that all basements are unfit for habitation. Where houses are built upon ground below the street level, such as is shown in the accompanying photograph, and where the basement rooms are not excluded from light and are properly protected against damp and other insanitary conditions, there is no appreciable difference between a basement and a first-floor apartment. Some of the five thousand people live in such basements. A great many people in the Bohemian and Polish quarters live in rows of good basements. The lots of these houses are below the street level, as is shown in the photograph, and they have naturally been utilized for three-story houses with basement apartments. Sometimes there are three apartments in the basement, one in the front, one in the middle, and one in the rear of the house. A passage, dark and below the street level, leads to the middle and rear apartments. Almost without exception basement rooms, except those opening on the street, have wretched light and are insanitary. That this is true is well illustrated in the diagram (p. 81) showing the lighting of all the apartments in one block. Every basement has one or more rooms absolutely pitch dark.

With the land lying as low as it does in most parts of Chicago, no cellar can be made fit to dwell in, and a basement which is



TYPICAL LOT BELOW STREET LEVEL

not constructed with water-tight floors and an unobstructed access to light, is a dwelling of dubious situation. It is said by an eminent authority* that damp walls absorb much more heat than dry ones, and that they are frequent agents in causing rheumatism, kidney disease, and colds.† In Philadelphia all cellars deprived of light and ventilation are declared nuisances and ordered vacated. In Buffalo the law is that no cellar is to be used as a dwelling-place or place of sleeping.‡ In Chicago there is an ordinance requiring cellar floors to be cemented water-tight, but it is not enforced.

HOUSES UNFIT FOR HABITATION

Section 5. Upon the construction and repair of houses depends good inside sanitation. Chicago has an enormous number of frame tenements, some of them poorly constructed and in decay. The table on page 190 of the Appendix gives complete information regarding the number and percentages of frame and brick houses in these districts. Suffice it to say that over 51.7 per cent of all houses investigated were frame. In the Italian and Jewish districts 54.6 per cent of the front houses and 79.9 per cent of the rear houses are frame. Although small houses—and these are mostly frame—are excellent houses for working people, they often fall into decay unless kept in good repair. A great deal of the tenement-house property is old and in a bad state. Aggravated conditions arise from habitual neglect of needed repairs; many of the houses are in a wretched and dangerous state of dilapidation. The roofs are leaky and the spouting defective. The interiors of the houses become damp and the paper hangs loosely from the crumbling and rotting walls. The staircases, the window-sashes, and the floors are rotten, and many injuries result from their feeble condition. It is almost impossible to keep such houses clean, and filth and vermin are most common. The smaller old frame cottages intended for one family have been turned to the use of two and three families, and the flimsy partitions and hasty reconstruction add

* Dr. Max Von Pettenkofer.

† Worthington's "Dwellings of the People," page 105.

‡ See Veiller's "Housing Conditions and Tenement Laws," page 40.



WITHOUT PLAYGROUNDS

to the general dilapidation. The rear houses are the worst, and many should be classed unfit for habitation. The photographs elsewhere show many of these wrinkled and rotten old houses. The old house patched with tin, shown on page 121, is a good example.

In the following table and diagram the terms "good" and "fair" are self-explanatory. "Dilapidated" was to be used by the enumerators when a house had such serious defects as to endanger the health and comfort of the tenants. A house was to be called "unfit for habitation" when it was incapable of being restored to sanitary conditions by any reasonable repairs. A great many houses returned by the enumerators as dilapidated should have been reported as unfit for habitation.

STATISTICS OF CONDITION OF HOUSES.
FRONT HOUSES

District.	Classified as									
	Good.		Fair.		Dilapidated.		Unfit.		Total.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Dist. 1 ----	342	23.4	819	56	275	18.8	25	1.7	1,461	----
Dist. 2 ----	235	44.7	262	49.9	27	5.1	1	.2	525	----
Dist. 3 ----	50	13.8	294	81.4	14	4	3	.1	361	----
Total----	627	26.7	1,375	58.6	316	13.4	29	1.3	2,347	100

REAR HOUSES

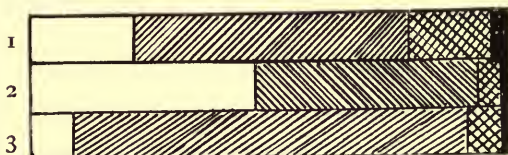
District.	Classified as									
	Good.		Fair.		Dilapidated.		Unfit.		Total.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Dist. 1 ----	26	6.6	216	54.8	134	34	18	4.6	394	----
Dist. 2 ----	24	10.1	184	77.3	25	10.5	5	2.1	238	----
Dist. 3 ----	1	1.3	75	94.9	3	3.8	--	--	79	----
TOTAL----	51	7.1	475	66.8	162	22.8	23	3.3	711	100

FRONT AND REAR HOUSES

District.	Classified as									
	Good.		Fair.		Dilapidated.		Unfit.		Total.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
Dist. 1-----	368	19.8	1,035	55.8	409	22	43	2.3	1,855	----
Dist. 2-----	259	34	446	58.4	52	6.8	6	.8	763	----
Dist. 3-----	51	11.6	369	83.8	17	3.8	3	.7	440	----
Totals---	678	22.2	1,850	60.5	478	15.6	52	1.7	3,058	100

CONDITION OF HOUSES IN THE THREE DISTRICTS, DISTINGUISHING FRONT, REAR, AND TOTAL

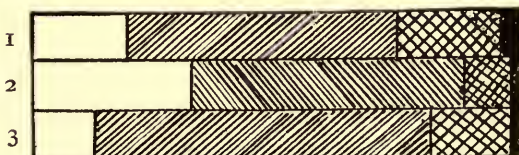
District. Front Houses.



Rear Houses.



All Houses.



Good. Fair. Dilapidated. Unfit for habitation.

This table shows the result of an examination into 3,117 houses, of which 3,058 were classed as good, fair, dilapidated, or unfit for habitation. As will be seen, 14.7 per cent of the front houses are classed as dangerous to health and in bad repair. The percentage of front houses in the Polish and Bohemian districts which are reprehensible is small, only amounting to 5.3 per cent; but in the Jewish and Italian districts one house in every five was considered dangerous. When both front and rear houses of this district are considered, the figures are astonishingly high. Four hundred and fifty-two houses are dangerous to the health and comfort of the tenants. In other words, one house in every four is a menace! When the grand totals are considered, we find that five hundred and thirty houses are in a dangerous condition of decay. This makes a total of 17.3 per cent of all houses.

The diagram shows graphically that dilapidation in the rear houses exists to a larger extent than in the front houses. It also shows very clearly that there are fewer rear houses in good condition than those classed as dangerous and unfit for habitation. As Dr. Fetter says: "It is clear that the rear houses average worse than the front, that the first district averages worse than the others, and that the third district is slightly better than the second."

The following comments of the enumerators show concretely what the above figures mean. They apply quite accurately to five hundred and thirty of the houses investigated.

Union Street.—"Condition of rear tenement is awful, awful."

Maxwell Street.—"Bad lighting, very dirty."

Thirteenth Street.—"A typical bad tenement, cheap, narrow, dark, dirty stairs."

Ewing Street.—"The worst house in the region. The front is brick, but this is only a shell, the rear being a tumbled-down frame so old and rotten that the neighbors say they are afraid it will tumble down on them. The halls are slippery with filth and garbage, and stairs are so worn as to seem unsafe."

New York and Boston have laws which provide that houses infected with disease, dangerous to life from want of repairs, or unfit for habitation because of defects in drainage, plumbing, ventilation, or construction, or likely to cause sickness among the

occupants are to be vacated within ten days.* Chicago has a law providing that buildings unfit for habitation because so infected with diseases, or from other causes likely to cause sickness among the occupants, are to be vacated. This law could be enforced with most beneficial results in many parts of these districts.†

Under the head of inside insanitary conditions have been considered many of the dangerous results of defective and unenforced laws. Those houses, which are considered unfit for human habitation because of bad repair, are not the only ones dangerous to the health and life of the working people. The conditions of dark and ill-ventilated rooms, of unwholesome basements, and of overcrowded quarters are also dangerous and often pestilential. It is unfortunate that the Board of Health does not constantly and carefully watch certain blocks and houses for the purpose of making known certain specific cases of disease and misery which have resulted from inside insanitary conditions. The accumulated evils in Block 15 surely warrant such systematic observation.

* See Veiller's "Housing Conditions and Tenement Laws, Etc.," p. 40.

† See Veiller's "Housing Conditions and Tenement Laws, Etc.," p. 40.

CHAPTER V.*

DEFECTIVE PLUMBING AND BATHS

THE PRINCIPLES OF SANITARY PLUMBING

Section 1. The investigation in District 1 was a house to house canvas made by five skilled plumbers. As far as possible every portion of the plumbing was examined. In the other two districts a general survey was made and some selected houses in each block were carefully examined. In District 2, sixty-three houses, containing a population of 1,014 people, were examined. This is seven and three-tenths per cent of the total population. In District 3, forty-nine houses, containing 735 people, or ten per cent of the total population, were examined. As these houses were not selected because they were thought to have worse plumbing than others, but because they were typical of the houses in the district, the returns can be relied upon as a safe basis for an estimate of the conditions of plumbing throughout these districts. The purpose of the examination was to see how far the plumbing and waste disposal of the districts examined were sanitary, and how far they were defective and dangerous to health. In order to make clear the meaning of the figures obtained, a few principles observed in good plumbing will be briefly stated.

The word "plumbing" applies to any and all pipes used to convey gas or liquid to or from the house or yard. The pipes coming into a house may burst or leak and thus endanger health; but this rarely occurs, is easily seen, and is usually corrected at once. The important part of plumbing, from a sanitary standpoint, is the drain which carries off all waste matter to the sewer. The waste-pipes or drain must be so arranged that the waste water and other matter will flow into the sewer without permitting the odors and gases from the sewer to enter into the rooms to contaminate the air. To prevent the escape of gas, traps, vents

* This chapter was in part adapted from the report prepared by Dr. Frank Fetter.

and revents are used. The trap is an "S" shaped pipe, which should hold in its lower half about three inches of water, called a "seal," which prevents the back-flow of gases. If the drain or waste-pipe into which the trap empties becomes filled with water flowing to the sewer, a partial vacuum is created which sucks out the water; that is to say, syphons the trap, and would, were it not for the vent and revent pipes, thus leave a direct connection between the rooms and the sewer. The vent is a pipe or ventilator extending from the drain below the trap through the roof. The revent connects the pipe or ventilator with the top of the trap to admit the air so that no vacuum can be created below the water seal. A waste-pipe without a trap is extremely dangerous, and a trap without a revent is not much better, since it is likely to syphon out and admit into the house the gases from the sewer.

The laws of Illinois and the ordinances of Chicago since 1889 specifically demand the above mentioned methods of good plumbing, and all houses erected since then, if within the law, should possess almost faultless plumbing arrangements.* All plans for plumbing in houses must be submitted to the Department of Health, and unless approved of by the Chief Sanitary Inspector, the plumbing cannot be laid. After the approval of the plumbing plans and specifications by the Sanitary Department, an inspector is sent to examine the plumbing itself before it is covered up, and unless, after tests and examinations, it is found to be within the law, it should not be approved of by the inspector. These precautions taken by our law-makers to prevent defective and dangerous plumbing are ample, and if enforced the plumbing in Chicago should be nearly perfect.

THE CONDITIONS OF SINKS, CATCH-BASINS, AND UNDRAINED LOTS

Section 2. The following facts brought out by this investigation show most wretched and dangerous conditions resulting from defective plumbing.

* See pamphlet on laws issued by Department of Health.

SINKS IN DISTRICT 1 — BLOCKS 1 TO 44

	Number in Front Houses.	Number in Rear Houses.	Total.
Sinks	4,953	667	5,620
Sinks not trapped.....	685	72	757
Percentage	13.6	10.5	13.4

MORE DETAILED EXAMINATION IN TWENTY-FIVE BLOCKS
20 TO 44

	Front Houses.		Rear Houses.		Total.	
	No.	Per Ct.	No.	Per Ct.	No.	Per Ct.
Sinks, total.....	2,734	----	320	----	3,054	----
Sinks not trapped.....	351	12.8	23	7.1	374	12.2
Sinks trapped, but not revented.....	1,385	50.6	133	41.5	1,518	43.0
Sinks defective	1,736	63.4	156	48.6	1,892	55.2

In District 1, the 5,474 dwelling apartments have 5,620 sinks. In certain front houses there are more sinks than one in a single apartment; but in the rear houses there are several apartments without any. In 769 apartments in rear houses there are only 667 sinks. The percentage not trapped is very high, there being about one sink in eight untrapped. The results of the more complete examination of the plumbing in twenty-five blocks, show that 374, or 12.2 per cent of all sinks, were not trapped; 1,518, or 43 per cent of all sinks, were trapped, but not revented. In the same blocks 12.2 per cent of the sinks had no traps and 43 per cent were trapped, but not revented, making altogether 55.2 per cent of all sinks in a dangerous and unlawful condition. It is quite safe to say that over half of the population in District 1 have in their living-rooms conditions prohibited by law, which are a menace to health.

In District 2, 221 sinks were examined. Fourteen were found, in seven different houses, with neither trap nor revent. One hundred and fourteen, or sixty-four per cent of all sinks inspected, were not properly revented. In the third district, 169 sinks were examined, nine of which had no traps, and 126 others

were not revented. Therefore, 135, or 80 per cent of all sinks investigated, were in a dangerously defective condition.

A catch-basin is the outlet of the house drain coming from the sink. The basin should be outside of the house and closed at a level with the yard by means of a heavy iron cover. The purpose of a catch-basin is to intercept the grease and prevent it from clogging the sewer-pipes. The grease rises to the top and the water is drawn into the sewer from underneath. If the catch-basin is not cleaned regularly the grease is likely to stop up the house drain.

The results of the inquiry upon this subject were most unsatisfactory. The catch-basins were under the ground, and in only a few cases could they be located. In many cases it could not be determined whether they were catch-basins or the dangerous cesspool. That there are cesspools in the districts investigated is reasonably sure, since upon examination of some old houses, recently torn down, the remains of some were discovered. The old privy vault is made to serve as a cesspool in a few instances. There are almost no returns from the inquiry, which is evidence enough that a law is needed ordering all catch-basins to open on a level with the yard where it is possible to inspect them. However, forty-two catch-basins were noted which should be cleaned.

It was in many cases impossible to determine accurately whether or not lots were drained into the sewer. However, very few of the houses in District 1 were thus drained. In District 2, fifty per cent of those examined were not drained, and in District 3 fifty-eight per cent were not drained. When the lots are below the grade of the streets, as is the rule in these districts, it is of great importance to have the lot drained, otherwise the water will run into the basements or under the foundations of the houses. Water was often seen standing under the rotten wooden pavements in the courts, passages, and yards. The ordinance of 1891 (Sec. 31, p. 17, in the pamphlet reprint of 1896) requires "that yards and areas shall be properly graded, cemented, flagged or well paved, and properly drained." This law is certainly not enforced.

THE PREVALENCE OF THE OUTLAWED PRIVY VAULT

Section 3. Privies are of two kinds: first, the old type of vault, which is merely a hole dug in the ground, entirely without sewer connections; and second, a vault connected with the sewer, flushed intermittently and with some difficulty by the rain-water from the roof or by water from a hydrant. The main difference between the two kinds of vaults is the trouble in the cleaning. They are almost equally offensive, and some of the worst cases inspected were sewer-connected. The open, untrapped sewer connection is more dangerous in a way, since it adds to other evils the one of escaping gases. Both kinds are against the law. An ordinance passed June 25, 1894 (Sec. 4956, p. 21, in pamphlet reprint of 1896), declares it to be unlawful for any one to maintain a privy vault or suffer it to remain where there is a public sewer in the adjoining street or alley. A fine of two hundred dollars is the penalty for each offense. The results in the first district examined are shown in the tables which give the number at the time of the inspection. There were 1,581 privies or separate compartments. As there are always two compartments to a vault, the number of vaults is about one-half of 1,581, which is the number reported. These outlawed accommodations are now used by 10,686 people; that is to say, about 40.3 per cent of the total population.

In District 2, twelve separate vaults, serving for twenty-four privies, were found with the sixty-three houses examined. It was found that 19.5 per cent of all the families used these accommodations, which is an average of 1.9 families, or nine persons, for each privy. In District 3, the proportion was much higher, there being found in the forty-nine houses examined twenty-two vaults, serving for fifty privies. These were used by fifty-two per cent of the total number of families. An average of 1.6 families, or eight individuals, used each privy.

The most shocking conditions prevail in the districts infected with this remnant of the broad spaces of village days. It is unworthy of Chicago to permit the evil to continue, and the Board of Health without favoritism should execute the law which provides for these privies to be abolished.

STATISTICS OF PRIVIES

Block No.	No. of Privies.	No. of Families Using.	No. of Individuals Using.	Block No.	No. of Privies.	No. of Families Using.	No. of Individuals Using.
1	47	56	250	23	29	41	197
2	33	112	538	24	33	27	152
3	18	26	133	25	19	19	89
4	17	22	83	26	23	24	118
5	82	143	637	27	9	18	90
6	45	73	313	28	5	9	40
7	41	60	288	29	11	17	76
8	25	24	131	30	27	50	239
9	66	87	431	31	14	38	197
10	35	57	265	32	18	28	155
11	31	56	231	33	21	29	133
12	29	44	214	34	65	78	429
13	66	91	325	35	29	53	252
14	37	61	240	36	65	93	477
15	52	78	390	37	19	22	91
16	28	26	136	38	35	27	138
17	92	132	611	39	12	21	91
18	40	58	244	40	36	57	273
19	44	69	267	41	74	98	476
20	35	34	146	42	8	11	64
21	48	67	315	43	40	43	212
22	26	69	267	44	52	60	242
Totals	-	-	-	44	1,581	2,308	10,686

SUMMARY

	Families.	Individuals.	Per Cent Families.	Per Cent Individuals
District 1-----	2,308	10,686	44.6	40.3
Selected houses, District 2----	45	215	19.5	21.0
Selected houses, District 3----	80	374	52.0	51.7

INSANITARY WATER-CLOSETS

Section 4. A simple form of water-closet, called a bench range or school range, consists of a trough filled with water, which is emptied by drawing the plug that connects with the sewer. Only one of these was found in the districts inspected. Another form is the pan closet, an old and imperfect form, which cannot be

used in the house without danger, and is forbidden by a city ordinance, passed November 23, 1896 (see pamphlet reprint, p. 19). A third form is the hopper closet, which is a basin connected with a curved pipe to the sewer, and flushed with water by turning a rod which opens a faucet at the top. This form is much used out of doors, under sidewalks, and in cellars. It is cheap, simple, and not likely to freeze or get out of order. It is, however, found often in houses, and as it easily becomes corroded it is then difficult to keep clean and becomes very insanitary. The best form is the tank closet, in the basin of which stands a supply of water, which assists in the flushing caused by the flow of water from the tank above. The following table gives the number of these different kinds of closets.

KINDS OF CLOSETS IN DISTRICT I

	Front Houses.	Rear Houses.	Total.
Pan -----	88	1	89
Hopper -----	894	77	971
Tank -----	780	25	805
Unspecified -----	---	---	93
Totals	1,762	103	1,958

As will be seen, there are eighty-nine pan closets which exist in defiance of the law. The other closets are about equally divided between the undesirable hopper and the tank closets.

In District 2, of the sixty-nine closets examined, four were in a bench range, sixty-one were hopper, and four were tanks. The last four were all in one house. In the third district, of the forty-one closets reported upon, one was pan, twenty-three hopper, and seventeen tank closets.

The location of the closets in the first district was usually in the house. Many, however, were in basements and yards; a very few were under the sidewalks. In District 2, of the sixty-nine closets, eight were in the house, two in the yard, and fifty-nine were under the sidewalk. The sidewalk closets were never revented, and three of those in the house were not. In District 3, there were thirty-three in the house, two on the porch, and eleven under the sidewalk. Those under the sidewalk were not revented,

and one-half of those in the house were not. While the closet in the house is the more convenient, it requires more expensive plumbing to be sanitary. For some reason the sidewalk closet has been positively forbidden in a number of cases since 1891, under a city ordinance, which reads, "The general privy accommodations of a tenement-house or lodging-house shall not be permitted in the cellar, basement, or under sidewalks." As the definition of tenement-house is any house occupied by more than three families living independently, etc., and cooking on the premises, or by more than two families on a floor, the ordinance prohibits most of the cases found. This is another of the many instances, found in the plumbing investigation, of unenforced ordinances.

The following table shows the number of places where the plumbing was found to be in a condition dangerous to health:

INSANITARY WATER-CLOSETS

Location -----	Front.	Rear.	Total.
All closets-----	1,838	120	1,958
Closets not open to outer air---	157	18	175
Closets not reverted -----	1,150	71	1,221
Closets not properly trapped --	39	---	39
Closets not properly flushed---	107	4	111
Unclean-----	236	10	246

This table shows that 175 closets are not open to the outer air. The ordinances distinctly provide that closets shall be ventilated by opening to the air either by means of a window or an air-shaft. Twenty-six of the closets not open to the outer air are situated in halls, thirty-eight in basements, and one hundred and nine in rooms. Almost every large city has a law on the subject. The more advanced communities prohibit a closet being placed in any close connection with the living-rooms of a tenement. A London ordinance compels all closets to open to the outer air by means of a window of not less than two square feet. It is most advisable, if sanitary conditions are to be maintained, that all closets should be thoroughly lighted, so as to make it possible for them to be kept pure and clean. It is also

essential that they should be adequately ventilated into the open and outer air.

Among other facts furnished in this investigation are those which point to the lack of sufficient accommodation in the number of water-closets. Although there is an ordinance providing that there shall be a water-closet for every two families, several instances were found where one closet was used by four or more families. The importance of enforcing the law in this respect will be at once seen, as it involves decency as well as health.

THE NEED OF BATHS

Section 5. In District 1 all of the houses were inspected for the purpose of determining the exact number of bath-tubs; 164 were found. Only three bath-tubs were found in the 408 rear houses, which it will be remembered have a population of 3,200 persons; 161 were found in 1,598 front houses, which have a population of 21,612 people. Twenty-four of these baths were found in one apartment building recently erected. In the Polish district only one tub was found in the sixty-three houses examined, and it was not connected with the water-pipes. It is very doubtful whether there are any bath-tubs in this district. In the Bohemian district there were eight bath-tubs in the forty-nine houses. Five of these were found in good flats on Blue Island Avenue. It is probable that an estimate on this basis would overrun the actual facts.

The following table shows the number and per cent of the population in District 1 having and not having bath-tubs:

POPULATION HAVING AND NOT HAVING BATH-TUBS

District.	Having Bath-tubs.		Having no Bath-tubs.	
	Number	Per Cent.	Number	Per Cent.
One (Italian)-----	417	2.9	13,943	97.1
One (Jewish)-----	373	2.56	10,079	96.44
Totals - - - -	790	3.18	24,022	96.72

This table shows that ninety-six per cent of the working people have no opportunity in their own homes to bathe. These

percentages are in almost perfect accord with the results found in the investigation of the National Bureau of Labor in 1894. That inquiry covered some of the conditions in the First Ward and only the Italian portion of District 1.

It is surely safe, in view of the fact that both investigations have found so nearly the same conditions existing, to use these percentages for the basis of an estimate to show the number of people in Chicago who are without baths. Leaving out the population in the old 4th, 12th, 13th, 14th, 21st, 22d, 24th, 25th, 26th, 28th, 31st, 32d, and 35th wards, and taking only half the population in the old 2d, 3d, 11th, 23d, 29th, and 34th wards, and all of the population in the rest of the wards, we find, according to the school census of 1900, that over one million people live in these districts. These wards, any one will agree, are fairly chosen, and house, in certain or all portions, working people in not much better circumstances than those in parts of District 1, and in the Bohemian and Polish districts. Those wards in which only half the population has been taken are each more than half given over to working people. Granting that four per cent of this large population have baths, we find in this rough way that about 960,000 people in Chicago are without bathing facilities.

The choice for most laborers in Chicago is to pay the twenty-five cents commonly charged for the use of a bath, or to bathe at long intervals at home. In their own overcrowded and narrow homes it is difficult to obtain privacy for bathing. If a bath be taken, the water must be brought from the faucet, and at best the bath is unsatisfactory. Generally the people do not take baths, especially in winter, and upon children dirt often accumulates in what might be called scales. This, however, does not prove that the people do not wish to bathe; that they do is amply proved by the extensive patronage given the four public baths owned and conducted by the city. The attendants in these baths and those at the pumping station say that workingmen near by, whenever possible, come in regularly for a spray bath before going home to supper. Those having the dirtiest work, or work arduous enough to cause their clothing to be foul with perspiration, bring clean suits of clothing which they are in the habit of wearing in the evenings or on Sundays. In the Stock Yards dis-

trict the women bring their children regularly to secure their weekly bath. For the people living in the vicinity of public baths, the need of bathing is supplied, but for the several hundred thousand people who live in districts far removed from these establishments, the difficulty of obtaining a bath is great.

CHAPTER VI.

OUTSIDE INSANITARY CONDITIONS

IMPORTANCE OF OUTSIDE SANITARY CONDITIONS

Section 1. This study must also treat of the many conditions outside of the houses which influence the life of the tenement-house population. The constant though subtle and active influences of filth, disorder, and noxious conditions upon the habits and tastes of the people are not the only bad effects of such surroundings. The most important are those insanitary and dangerous conditions which add to the distress, weaknesses, and bad health of the working people. When the home of a poor family living in these overcrowded districts is entered from a broken, dangerous sidewalk and badly paved, unclean street, with rows of foul garbage boxes standing before the doors, how great is the surprise if a clean, well-scrubbed, and orderly interior is found, because it is easy to see what a struggle it has been to make it so and what painful labor it has cost. The photographs introduced in the following pages show how filthy these streets and alleys are. Cleanliness is almost a luxury in Chicago and a high price is paid for it. A family with much work to do—and most working people have too much already—can hardly be clean. It is with cleanliness in Chicago as it is with infectious diseases and most other things, which cannot be disassociated from their surroundings, for the neglect of the municipality in trifling with the smoke nuisance, in neglecting street cleaning and garbage removal, penalizes the just and the unjust. A foul privy or decaying matter in the garbage box respects the clean housekeeper no more than the unclean one. Nor does a defective sidewalk choose its victim by moral standards. In this and many other ways, the outside sanitary conditions of streets and alleys, of garbage and manure boxes, of vacant lots and other surrounding conditions, bear an intimate and important relation to the housing problems of Chicago.

BADLY PAVED AND UNCLEAN STREETS AND ALLEYS

Section 2. The streets and alleys are to the people of a well-to-do district only a convenience for transit. In an overcrowded tenement district there is little else more important to the happiness and welfare of the people. For the children of the rear tenements, the alleys are playgrounds. They also assure by their open spaces light and ventilation to the houses. If they are clean they serve this purpose to the comfort and satisfaction of many, but if they are foul and covered with undisturbed filth they detract rather than add to the healthfulness and well-being of the community. Streets, even more than alleys, serve the purpose of playgrounds and open spaces. In the evenings, when the weather permits, these places swarm with the people from the neighboring overcrowded houses. This common property, in the districts where it serves as little more than a convenience, is given some care; while in the districts where it is a vital necessity it is wretchedly neglected.

A study of these public thoroughfares in the neglected portions of the city now under consideration will show how true the above observations are. The following table gives the miles of streets and alleys in the three districts investigated. It gives the blocks with no alleys, those with blind alleys, and those having through alleys.

STATISTICS OF STREETS AND ALLEYS

District.	Number of Miles of		Number of Blocks with		
	Street.	Alley.	No Alley.	Partial Alley.	Through Alley.
District 1 -----	7.6	5	8	12	24
District 2 -----	2.6	1.6	---	---	10
District 3 -----	2	1.1	1	---	8
Total -----	12.2	7.7	9	12	42

Investigation shows that alleys and streets together contain approximately one-third of the entire area. Seven of the blocks without alleys in District 1 are, as will be seen in the map on



page 13, in the two northern rows, and one is just south of Twelfth Street. The only block without an alley in the other two districts is a small triangular one adjacent to Blue Island Avenue.

In District 1, in August, 1900, there was not a single moderately well-paved street, excepting Halsted. That street was paved with brick about a year before. During the summer Ewing Street was paved with brick, Liberty Street with cedar blocks, and Desplaines Street is now being repaved. The change in their appearance is notable. Several blocks south of Twelfth have fairly well preserved cedar block pavements, particularly near the Foster School, on Union and O'Brien streets. The other streets are in various advanced stages of decay and dilapidation. The cedar blocks beginning to break up are loosened by passing wagons, and are quickly taken by the people and used for fire-wood. It is safe to say that three or four miles of street in the district are practically unpaved. Apparently these streets have never been paved. But in fact most of them were paved about fifteen years ago. Ewing Street, for example, was paved in July, 1885. Desplaines Street, done at the same time, was repaved from Harrison to Taylor in November, 1892.

The streets in Districts 2 and 3 are nearly all paved with cedar blocks and are in fair condition. Nevertheless there are many ruts and holes in them. More alleys appear never to have been paved than streets. Those that have been are usually in much better repair, as they do not receive such hard usage.

The kind of pavement to be used in tenement-house districts is important. Both the cedar block and brick pavements are less sanitary and more difficult to keep clean than asphalt. The New York Tenement-House Commission of 1894 made a careful study of this subject, and in its report recommended: * "That the system of asphalt pavements be extended as rapidly as possible throughout the streets of the tenement-house districts of the city." In regard to the value of this kind of pavements it says: "It would seem that this style of pavement is of all others the easiest to keep clean, owing to its smoothness. Traffic through the streets on which tenement-houses are built is not, as a rule, heavy enough to require the more solid pavement of stone. In the latter pavement, while it will stand more heavy trucking

*See pages 76 and 77.



than any other, there are small cracks or interstices between the granite blocks, and in these dirt and other matter lodges in such a manner as to prevent the mechanical sweeps from removing them. Most of the material found in street sweepings, especially in tenement districts, is composed of animal and vegetable matter, containing micro-organisms of pathogenic character. Not only can asphalt pavement be thoroughly swept, but when necessary, as in times of threatened epidemic, it may be washed as clean as the floor of a house. It was stated by a witness before the Committee that an objection to the asphalt system had been made on the ground that, owing to the absence of noise when carts or wagons are driven over it, children on the streets are not warned of the approach of these vehicles, and are, therefore, in danger of being run over. The Committee has considered this reasoning carefully, but it finds itself unable to attach any great importance to the objection. This very absence of noise is one of the greatest advantages of the system, especially in the more crowded tenement-house districts."

Whether the paving is good or bad, the streets in Chicago are always filthy. Almost no care is given by the city to the streets of these districts. The following statements have been taken from the enumerators' reports: "The resident property owners appear willing to pay if they can have clean streets. One of them said, 'It pays, anything to be clean, if you had to pay interest and compound interest.' On West Twelfth Place the resident owners wished to have the street paved, but alien owners, especially a large corporation on the street, opposed and prevented it. A thrifty and wealthy non-resident owner in the north part of the district raised his rents a year ago, which the tenants were willing to pay in anticipation of a new street pavement which has not yet been laid. And yet, despite this desire for better conditions, Polk Street has not been cleaned for fifteen months. Several witnesses say that Taylor Street was last swept over a year ago.* Residents of Dekoven Street say, with exaggeration perhaps, that it has not been swept for years. But similar testimony is given concerning the streets and alleys all over the district. In some places the people do the sweeping themselves. The alleys are much neglected everywhere. It is said that the

*Date of inquiry, August, 1900.

reason given by the authorities for their failure to clean the streets in some places is that the paving is too bad to be kept clean. That this is not always the case has been proved by effort on the part of certain residents. In another case the authorities declared that an alley was not cleaned because it was unpaved. But one who went prospecting found sound pavement a foot beneath the surface."

This neglect of the streets and alleys produces conditions of filth. Badly paved and ill-kept as the streets are in Chicago, the conditions near the lake on the South and North sides impress one, coming from these neglected districts, as highly satisfactory. It is common in District 1 to see teams stalled in the mud, the wagon-wheels sunk to the hub. On any morning after a heavy rain one can see, in the course of a half-mile's walk, a score of teams, each straining every muscle to pull a heavily loaded wagon out of a crevice in the pavement, or in the absence of pavements, out of the deep mire. One never grows accustomed to this common occurrence. To see the nervous, steaming horses plunging about in vain efforts to move the heavy load and the driver beating them brutally is sickening.

The streets are not only unfit for their real purposes; their filthy condition is also insanitary. This delinquency of the city has other bad results, for the people seeing how unfit the streets are, use them as catch-alls for garbage. It happens sometimes that streets are not cleaned for a year or more. It is then that the gradual accumulations of dirt, mud, rotting vegetables, and garbage, makes them as noisome and insanitary as a city refuse dump. Remember that the streets and alleys are almost the only breathing-spaces of over three hundred thousand people living in the river wards.

THE EXTRAVAGANCE OF DANGEROUS SIDEWALKS

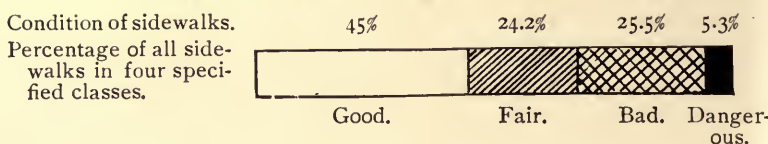
Section 3. Sidewalks cannot be so insanitary as streets, but in a different way they may be dangerous to human life. A careful statement regarding the condition of all sidewalks and the materials of which they are constructed was returned on the schedules.* The tabulation following gives the results:

*A "walk" is here understood to mean only that part of the sidewalk in front of each house.

STATISTICS OF MATERIAL AND CONDITION OF SIDEWALKS

District	Material of Pavement.			
	Number Unpaved.	Number Wood.	Number Stone or Concrete.	Total Number Reported.
One -----	25	1,481	155	1,661
Two -----	2	479	68	549
Three -----	----	295	73	368
Total -----	27	2,255	296	2,578
Percentage -----	.01	87.6	11.4	100

District.	Classification of Condition.				
	Number Good.	Number Fair.	Number Bad.	Number Dangerous.	Total Number.
One -----	590	402	504	110	1,606
Two -----	263	163	111	13	550
Three -----	284	50	29	5	368
Total -----	1,137	615	644	128	2,524
Percentage --	45	24.2	25.5	5.3	----



As will be seen in the table, the walks in District 3 are in better condition than those found elsewhere. A large proportion are of stone or concrete, and only thirty-four are considered in bad condition. These are probably all wood. In District 2 a large number, amounting to twenty-two per cent of the walks, are considered bad and dangerous. In District 1, where the wood sidewalk is universal, the conditions are extremely bad; 614 of the walks, or thirty-eight per cent of all, are either bad or dangerous. Many walks are little more than bridges of rotten wood. There is hardly a street in certain portions of the Italian

and Jewish district where the walks are not in places dangerous; where they are five or six feet above the surrounding lots, to have boards in the sidewalk break means serious injury. Many people are injured each year in Chicago by dangerous sidewalks.



The cost of the defective sidewalks to the city each year is very great. The City Attorney, in his report to the Council, says: * "The total number of suits now pending against the City of Chicago for personal injuries by reason of defective sidewalks and streets is 1,404, and the total damages claimed in these cases is \$22,550,000. There are also pending 151 petitions and claims referred to this department by the Finance Committee of the City

*See Proceedings of the Regular Meeting of City Council, January 8, 1900.

Council, wherein no specific sum is claimed. The total number of suits at law and petitions pending is 1,554.

"I desire to direct the attention of your honorable body to the alarming increase of this class of litigation against the City of Chicago during the past few years, and that it may be more fully appreciated, I quote the following figures from the reports of my predecessors: 'On January 1, 1897, there were pending 716 suits at law, and petitions and claims for personal injuries, wherein the City of Chicago was defendant. On January 1, 1898, there were 991 suits and claims of this character. January 1, 1899, there were 1,115 suits and claims of this character. On January 1, 1900, there were 1,541 suits and claims of this character.'

"It will be noted that within three years this class of cases has increased over one hundred per cent, and if the amounts of judgments increase correspondingly, the report of next year will show at least one million dollars' worth of judgments rendered against the City of Chicago for personal injuries. This matter is too important to be overlooked, and cases of this character are becoming too frequent not to cause serious apprehension. There are a number of reasons why this class of cases has increased so alarmingly during the past few years. The cardinal one, however, is the condition of the sidewalks and streets at the present time. I have directed the attention of a sub-committee of your honorable body to the deplorable condition of sidewalks throughout every ward in the city, and the difficulty of this department in defending the interests of the city because of this existing condition, and I have recommended that an ordinance be passed prohibiting the further laying of plank or wooden sidewalks. Up to the present time, no action has been taken by your body in this respect, but I earnestly hope that an ordinance framed along these lines will be speedily adopted. The judgment account against the City of Chicago, because of these damage cases, is increasing at a rate not appreciated, either by your body or the tax-payer of the city and some effort should be made to minimize it." The City Attorney gives a comparison of the number of cases pending in other cities to show the conditions existing in Chicago.



CASES PENDING FOR PERSONAL INJURIES RECEIVED FROM
DEFECTIVE SIDEWALKS

Name of City.	Number.
St. Louis	18
Boston	280
Denver	18
Cincinnati	120
Minneapolis	25
Milwaukee	50
St. Paul	27
Louisville	22
Buffalo	61
Total	621
Chicago	1,554

The total number of cases pending in these other cities does not equal half of those pending in Chicago.

The City Attorney only presents one side of this question—the cost in damages to the city. The cost in human life and in serious physical injuries is not mentioned. Lives are endangered every day and night by rotten boards and yawning holes in these wooden sidewalks. There are 4,200.81 miles of wooden sidewalks in Chicago.* On the basis of the investigation in District 1, therefore, there would be 1,596 miles of defective wooden sidewalks in Chicago—1,596 miles of dangerous walks which may at any moment select for a victim any one of thousands of people going to work before dawn or returning after dark. A playing child may slip through. The woman bringing home on her head a bundle of sweat-shop clothing, or a sack of coal, may fall through a rotten plank and suffer in consequence serious and painful injuries. The costs to these people should be considered. It is criminal for Chicago to continue this neglect, even if it has millions with which to pay damages. The cost to the city is a small matter in comparison to the cost in human suffering.

* See Report of Department of Public Works, 1898, page 11.



FILTHY VACANT LOTS, YARDS, COURTS, AND PASSAGES

Section 4. In the absence of inspection and of enforcement of sanitary laws, accumulations of filth, house refuse, dead animals, decomposing vegetable matter, and general litter upon vacant spaces become serious in poor and overcrowded neighborhoods. The lack of any system of adequate provision for the disposal, and a regular and frequent removal, of garbage, coupled with the ever present tendency in overcrowded tenements to dump rubbish upon the nearest available open space, seriously aggravates what in the better parts of the city is little more than ordinary neglect. The landlords are to blame also. And the city apparently neither holds them responsible for furnishing garbage receptacles, nor for the uncleanness of vacant lots, courts, or passages. Noisome and insanitary conditions in the courts of tenement-houses, against which some of the tenants complain bitterly, are permitted to exist for months without abatement by the city authorities. The following facts were taken from the report to this Committee:

In District 1 the vacant lots have a frontage of 1,186 feet, and an area of about three acres. They are distributed over thirteen blocks, but nine-tenths of the area is found in the northern part between Polk and Taylor. This is on the edge of a factory district. South of Taylor Street an occasional twenty-five-foot lot is vacant. In the other districts no statement was taken of the vacant lots. However, in District 2 there are several open spaces, ranging from twenty-five to one hundred and twenty-five feet in frontage. In District 3 there is perhaps half an acre in vacant lots. Between Polk and Ewing is a large space extending from street to street. It is an abandoned factory site, six feet below the level of the street. Water stands in parts of it, and weeds flourish, but for all that it serves as a baseball ground for small boys. At the corner of Polk and Jefferson streets is a large lot covered with old wagons, garbage, rubbish, and manure. At the corner of Polk and Canal is a lot twelve to fifteen feet below the street level. Stagnant water and decaying matter make it most unsightly and foul. On Ewing Street a vacant lot is covered with garbage, manure, and rubbish. In a lot on O'Brien Street, where an old house was recently torn

down, children were playing about some abandoned cesspools. On Blue Island Avenue, in vacant lots below street level, ducks disport themselves in a large mud-puddle. Not far away another lot is covered partially by water with a green scum, and in part by all sorts of rubbish. This is the condition of vacant lots. They are inexcusably ugly and ill-smelling.

Vacant lots are not peculiar in their neglected condition. Yards also are often permitted to become extremely insanitary. By crowding houses upon the lots very little space is left in the yards. These small bits of earth are often low and damp, with no drainage to the sewer. The privy vaults, manure, and garbage accumulations, and a general condition of filth make these open spaces offensive in odor and no doubt dangerous to health. The enumerators' comments run as follows:

Ashland Avenue.—“Garbage and refuse were scattered along the passageway.”

Dixon Street.—“Rubbish thrown under the sidewalk.”

Holt Street.—“Two dirty and insanitary yards the only ones in the block.”

Noble Street.—“Yard very dirty, rubbish all about.”

Dixon Street.—“No sewer to hydrant, stagnant water in yard.”

Blue Island Avenue.—“Filthy yards, full of junk and boxes.” “Yard filthy, chickens kept.” “Dreadful conditions of yards, garbage thrown in a heap.”

Throop Street.—“Yard very wet, undrained.” “Yard very filthy.” “All uncovered space in yard strewn with garbage.”

Allport Street.—“Yard very wet, bad smelling.”

The worst conditions are in District 1. A great many yards were found in a filthy condition.

Polk Street.—“Garbage thrown directly into the yard and left to decay.”

Ewing Street.—“Lots strewn with garbage and rubbish.”

Ewing Street.—“Trash and old wood with rotten paving blocks fill the yard.” (This occurs many times.)

Taylor Street.—“Lots filthy, strewn with manure.”

Taylor Street.—“Vegetables and fruit rotting in the yard.”

Taylor Street.—“Yard in filthy condition, chicken-coop in wretched state, fruit and vegetables at the door.”

Forquer Street.—“Filth and rubbish all over yard.”

Jefferson Street.—“Rear yard very bad, a menace to health.”

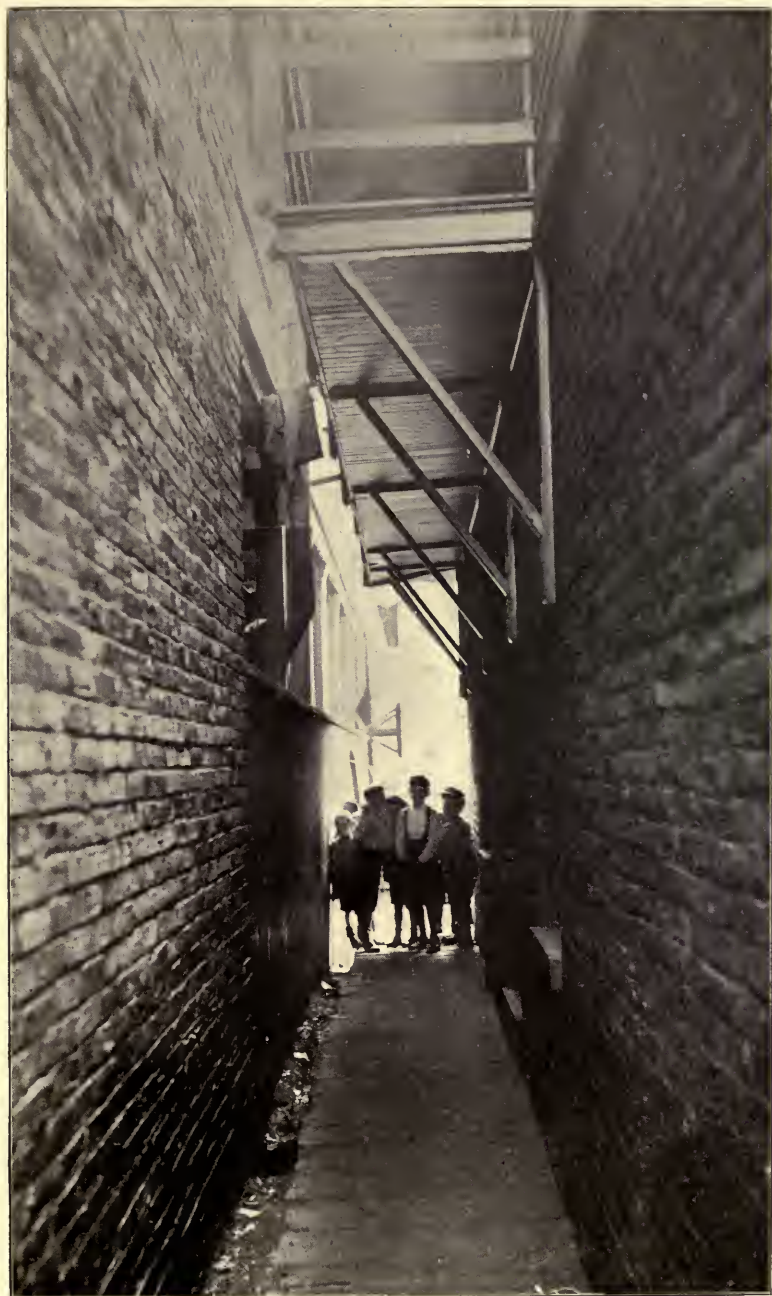
Liberty Street.—“A foot or two of rubbish between this house and next.” “Smell terrible, neighbors complain.”

Maxwell Street.—“A horribly dirty place. Back yard littered with broken furniture and rubbish. Manure piled three or four feet high in yard.”

There is no need of extended mention of the evils of these conditions. The lack of garbage removal and accommodations, combined with the inactivity of the Health Department, permits these evils to assume importance as serious insanitary conditions.

Courts and passageways suffer from the same neglect that make yards offensive and insanitary. These spaces between buildings are often dark and sometimes out of public sight. The courts especially become the dumping-place for cans, decayed vegetables, and house refuse of all sorts. The passageways are most always below the street level; the lack of sunshine and the water from the roofs of houses and sidewalks make them damp. The report says: “These open spaces are important as means of light and ventilation to the rooms adjoining. But a narrow court which does not have an unobstructed opening to the south rarely receives sunlight to keep it dry and wholesome. This is also true of passageways, except that when they are narrow they do not get sunlight enough to make them even sanitary. In scores of cases the space between houses, when not used as a passage, was found filled with rotting stuff, and the passageways were often filled with all kinds of garbage. The passageways to the rear apartments are nearly always below street level. They usually are from two and a half to four feet wide; they are damp and receive very little sunlight in the course of the day. When the houses face east and west, which is general in Districts 2 and 3, the sun never enters the passageways. They seem especially constructed to be microbe incubators.

“Despite these harmful conditions, they are the only playgrounds of the younger children who must be kept close to the mother. Sometimes the older children may be seen rolling the baby back and forth to get a bit of air in these damp and sunless places. On diagram, page 81, in the rear of the house at No. 7, is shown the plan of a court which is somewhat better



than the average. It is "L" shaped, and equal to about twenty feet square. It is four feet below the level of the alley, and is much shaded by surrounding three and four story buildings. It gets the dripping water from the roof and is constantly damp. The main exit to the alley gets the sunlight about one hour at midday, and a photograph printed on page 35 was taken at that time. The main portion is always sunless. A considerable part of the place is obstructed by platforms and steps. One hundred and four people live in the four houses for which this space serves as yard, and forty-six children have no playground excepting the street, the alley, or this court."

Locke Worthington says, in his book, that "there is perhaps nothing in the management of a house which may be a greater nuisance than the disposal of its refuse, if the tenants are sloven and careless, and the local authorities corrupt or negligent."* And indeed the worst of the evils in the vacant spaces are a part of the garbage question. We have laws which prohibit these conditions, but they are rarely enforced. There is probably no other city approximating the size of Chicago, in this country or abroad, which has as many neglected sanitary conditions associated with its tenement-house problem.

OFFENSIVE STABLES AND MANURE BOXES

Section 5. There is a surprising number of stables in the three districts. In District 1 there are only one hundred more rear houses than there are stables. Altogether there were 537 of the latter; 1,443 horses were counted. Four or five hundred were owned by large factories and transfer companies; probably a thousand were owned by the people themselves. As before mentioned, the Inner Belt is a convenient dwelling-place for peddlers and expressmen, and it is usual for each one to have at least one horse.

Peddling vegetables and fruit is not a very lucrative profession, and many peddlers can earn barely enough to pay rents and buy food. Consequently the worst old shacks, dilapidated tenements, and damp basements are used for stabling purposes. Unmarried Greeks frequently share their own rooms with their

* See "Dwellings of the People," page 114.

horses; and Italians often stable them on the lower or basement floor of their tenements.*

The following figures give a complete statement of the number of horses, stables, and manure boxes, and a classification of their condition.



STATISTICS OF STABLES AND HORSES

	Dist. 1. N. of 12th.	Dist. 1. S. of 12th.	Dist. 2.	Dist. 3.	Total.
Occupied stables-----	164	160	108	105	537
Vacant stables-----	17	23	11	24	75
Horses-----	502	566	202	173	1,443
No. blocks with less than 10 horses-----	9	7	2	2	20
No. blocks with 11 to 25 horses-----	7	7	4	4	22
No. blocks with 26 to 50 horses-----	7	5	3	4	19
No. blocks with more than 50 horses----	1	1	---	---	2

Condition of stables:

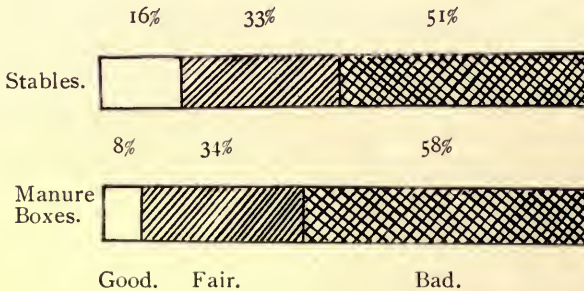
Good-----	16 per cent.
Fair-----	33 per cent.
Bad-----	51 per cent.

*See photographs.

Condition of manure boxes:

Good.....	8 per cent.
Fair	34 per cent
Bad.....	58 per cent

CONDITION OF STABLES AND MANURE BOXES
PERCENTAGES IN THREE SPECIFIED CLASSES OF EACH



Many facts in the table will interest students only. The reports, however, on the conditions of the stables should interest every one. One-half of the stables and manure boxes were considered in a bad condition. The comments further on will show what the term "in a bad condition" means.

Nearly all the manure boxes are outside of the stables. Only thirty out of the total of 478 reported on in this regard are inside. They line the alleys, in some places making them almost impassable. A photograph taken in the Seventh Ward, near Maxwell Street, shows an alley two hundred feet long, in which there are twelve manure boxes, nearly all overflowing. It also shows a number of garbage boxes with their refuse scattered over the alley. Manure piles, no part of which had been removed for a year or two, were found after the stables had been removed. Sometimes there is no box and the alley serves the need. The following comments of enumerators show the extremely insanitary conditions which exist:

Polk Street.—"Cellar and first floor used for stables."

Twelfth Street.—"Stable complained of as the worst in America." "Three cows kept in basement of dilapidated house." "Three cows and four horses kept in stable; shocking condition."

Thirteenth Street.—“Stable in basement, four horses.”

Halsted Street.—“Stable built up next to house, and contains five horses; bad conditions for family on second floor.”

Union Street.—“Bitter complaints by the neighbors of the insanitary condition of the stable; two horses are kept in it, one in the basement.”

O'Brien Street.—“Conditions are bad in rear house, which is a cottage and stable combined.” Another: “Keep two cows and sell milk. The stable is very offensive to the neighbors.”



Maxwell Street.—“Stable under rear house, two horses. Seven people live above it, and there is much complaint of the smell. Walls dirty, alley littered.”

Liberty Street.—“Much complaint of stable on Maxwell where five horses are kept. Smell is so bad that no windows can be opened.”

Next in importance to the condition and location of the stable is the proper removal of manure. The utter neglect of regular removal is shown in the following comments:

Taylor Street.—“Manure pile has been in yard over a year. Bitter complaints.”

Taylor Street.—“Manure heaps from a large barn, and long neglected waste fill the alley.”

Taylor Street.—“Manure emptied in yard.”

Twelfth Street.—“Manure still remains in alley after the shed has ceased to be used as a stable.”

Liberty Street.—“Manure seven feet high in yard.”

Fourteenth Street.—“Floor of stable covered two feet deep with manure.”

Blue Island Avenue.—“Manure-box bottom is broken out and manure falls to yard ten feet below. Yard wet and dirty.”

Noble Street.—“Two horses kept in basement of front house, causing disagreeable odors. Manure is thrown directly into the alley. Neighbors cannot leave windows open day or night because of noise and stench.”

The above comments show how great a nuisance these offensive conditions are to the people in the neighboring tenement-houses. The fumes rise from fermenting manure and enter the rooms of the rear tenements. Rats, insects, and flies swarm about these accumulations of filth and become a source of great offense to tenants in the neighborhood. Physicians have testified* that certain diseases are more prevalent in those tenement-houses of which portions are used as stables.

The conditions here show how backward, in some respects, the City of Chicago is. The reports on tenement-houses in other cities do not include studies of these conditions, for the simple reason that most other large cities would not permit to exist to such an extent these horrible and filthy insanitary conditions. In New York, under the law, no part of a tenement-house can be used as a stable, and no stable can remain on a lot where it is proposed to erect a tenement-house. This is in marked contrast to the practice here, for horses are permitted even in the basements of cottages and tenements where often neither drainage nor other sanitary conditions are possible. Even our own ordinance, demanding that, wherever two horses are kept, the manure shall be removed twice a week, is ignored. As a result of poor laws and the lack of enforcement of those already existing, the most shocking conditions are prevalent in these districts.

*See Report of New York Tenement-House Commission, 1894, page 482.

THE NEGLECT OF GARBAGE

Section 6. The conditions of filth-strewn alleys, of courts and yards littered with rubbish, of ill-smelling stables and manure boxes find their climax and in part their cause in the accumulations of garbage. The latter is a most important question of municipal sanitation. It is one of several problems intimately



connected with the sanitary conditions of overcrowded tenement-houses. The cleaning of streets and alleys, the control and inspection of tenement and lodging houses, the care of uncovered spaces in overcrowded areas, and the systematic collection and profitable disposal of garbage by the municipality are problems of great importance. The older cities have spent large sums of money in organizing and revolutionizing their village customs and habits in these matters, and in adapting the scientific and business-like methods of certain foreign cities to their own needs.

The economic sides of the question need not be dealt with here, but a few words will be said about the importance of sys-

tematic disposal and careful and regular municipal collection. First, ashes should not be mixed with animal and vegetable matter; separate receptacles should be provided for different kinds of house refuse and the tenant should be fined when he fails to use the proper one. Landlords should be compelled to furnish receptacles proportionate in size to the number of persons housed upon the lot. The boxes and iron pails should be well made and kept well repaired, so that they can be thoroughly cleaned when necessary. In a time of epidemic this is particularly necessary. The collections should be daily and before the middle of the morning. Laws containing provisions similar to these are on the statute books of almost all cities. With one or two exceptions, these provisions are already in the sanitary code of Chicago. The following table and notes from the report will show how seldom, if ever, these laws are enforced:

STATISTICS IN REGARD TO GARBAGE BOXES AND DISPOSAL
OF GARBAGE

Material of Boxes.	Dist. 1 N. of 12th.	Dist. 1 S. of 12th.	Dist. 2.	Dist. 3.	Total.
Wood	586	471	449	247	1,753
Metal	7	7	1	1	16
Use neighbor's	90	69	24	55	238
No box	113	156	54	32	355
Condition of boxes:					
Sound	275	274	65	85	699
Broken	307	197	385	175	1,064
Partly filled	500	319	364	249	1,432
Overflowing	44	22	7	7	80
Location:					
Alley	338	154	439	232	1,163
Sidewalk	210	312	9	20	551
Yard	31	7	1	1	40
House	3	2	---	---	5
Collection:					
Three to six times a week	84	67	19	49	219
One or two times a week	74	67	71	119	331
Less than once a week	6	21	7	7	41
Not known or reported	424	324	352	99	1,199

These statistics show that in the districts examined there are 1,769 garbage boxes, of which only sixteen are metal and the others are all of wood. This is a little more than one-half the houses.



One box is nearly always used in common by a front and a rear house. In 238 cases where there was no box on the lot it was reported that the tenants used one near by. In the 355 cases no garbage box at all was found. The absence was accounted for by some of the comments to be quoted later; 1,064, or nearly two-thirds of those reported, were broken. This means usually that the cover was off, and the contents exposed. But not infrequently the box has fallen to pieces and is utterly useless.

The locations of the garbage boxes in 1,659 cases were reported as follows: 1,163 were in the alley; 551, or 33 per cent of all, were on the sidewalk; 40 were in yards, and 5 were in the house. The garbage box on the sidewalk is seldom seen in Districts 2 and 3, but one-half of all the garbage boxes in District 1 are on the sidewalks. Especially in those blocks where there is no alley it is customary for the boxes to be placed on the sidewalks. For this reason Polk, Ewing, the north side of Forquer, parts of the Twelfth Place, O'Brien, Thirteenth, Maxwell, Liberty, and Fourteenth streets are lined with garbage boxes. It is impossible to describe adequately the sidewalk garbage box. If regularly cleaned it is bad enough, but if the contents stand for long periods, or only a few shovelfuls at the top are removed, its condition is always foul. Its offensive odor, its ugliness and filthiness, may be only momentarily disgusting to the passer-by, but the residents must suffer it every hour in the day. If it has a top, the children sometimes use it for a play-house by day. On hot nights it is common to see parents escape from their stifling houses, and seek slumber and fresh air, stretched out over its festering contents.

Five garbage boxes were kept in the houses. In many cases garbage was dumped on porches and in courts and yards. A large brick tenement on Polk, having been built without proper provision for garbage disposal, has several boxes and barrels standing at the door of a central court. For over one hundred people in a four-story tenement, covering almost all of the lot, this is the only provision for the disposal of house refuse.

Ten hundred and sixty-four garbage boxes were reported in a broken condition, and eighty were reported in an overflowing condition. Detailed information is given in the following comments:

Poik Street.—“The box is broken and garbage scattered half way across the sidewalk.”

Alley between Dixon and Holt.—“Garbage boxes all broken but one.”

Ewing Street.—“Garbage box thrown into the street; landlord will not furnish a box.”



Dekoven Street.—“No box, a pile of garbage. Slops thrown out of window.”

Blue Island Avenue.—“As much garbage outside as inside of box.”

Forquer Street.—“Garbage thrown into yard and street.”
“Garbage thrown into yard.” “Thrown directly from windows into alley.”

Twelfth Place.—“Tenants throw garbage into narrow space between houses, causing a bad stench.”

Maxwell Street.—“Garbage piled in hall; the smell is fearful.”

Blue Island Avenue.—“Garbage mostly thrown on loose heap in alley; part dries and blows broadcast.”

Blue Island Avenue.—“Landlord refuses to supply garbage box, even after order of Board of Health.”

Several of the comments refer to landlords who refuse to furnish adequate garbage receptacles. A single garbage box is not sufficient for a large tenement; but in the following table the reader will see there is an average, in some blocks, of only one box to three houses. Hundreds of tenants have no proper conveniences in which to empty their garbage.

Block Number.	Number of Garbage Boxes.	Number Dwellings.	Population.
41	26	73	917
28	9	27	375
15	25	42	679
17	52	103	1,501
50	77	139	2,327

Differences of opinion existed even in the same neighborhood as to the frequency of the garbage collection. Answers were given in 591 cases, and in thirty-eight per cent fairly satisfactory service was indicated of from three to six times a week, in fifty-six per cent of the cases it was once or twice a week, and in six per cent it was less than once a week. The collection is evidently better in Districts 2 and 3 than in District 1. In District 1 the boxes were heaped and overflowing in sixty-six cases, while only seven such cases were noticed in each of the other districts. In many cases it was said that the box was not carefully emptied. A few shovelfuls, it was reported, were taken from the top to keep it from overflowing. This method reduces the number of overflowing boxes, but it permits old matter to remain in the bottom of the boxes for long periods. The ratio of overflowing boxes to all boxes was as one to thirteen in District 1, as one to fifty-three in District 2, and as one to thirty-seven in District 3. As illustrations of the complaints made, it was said on Desplaines, that the collector “took only the top layer”; on Twelfth, that “the garbage man will not empty the box unless it is full, so it smells bad.” The same remark was repeated several times. On Union, it was said that “the garbage

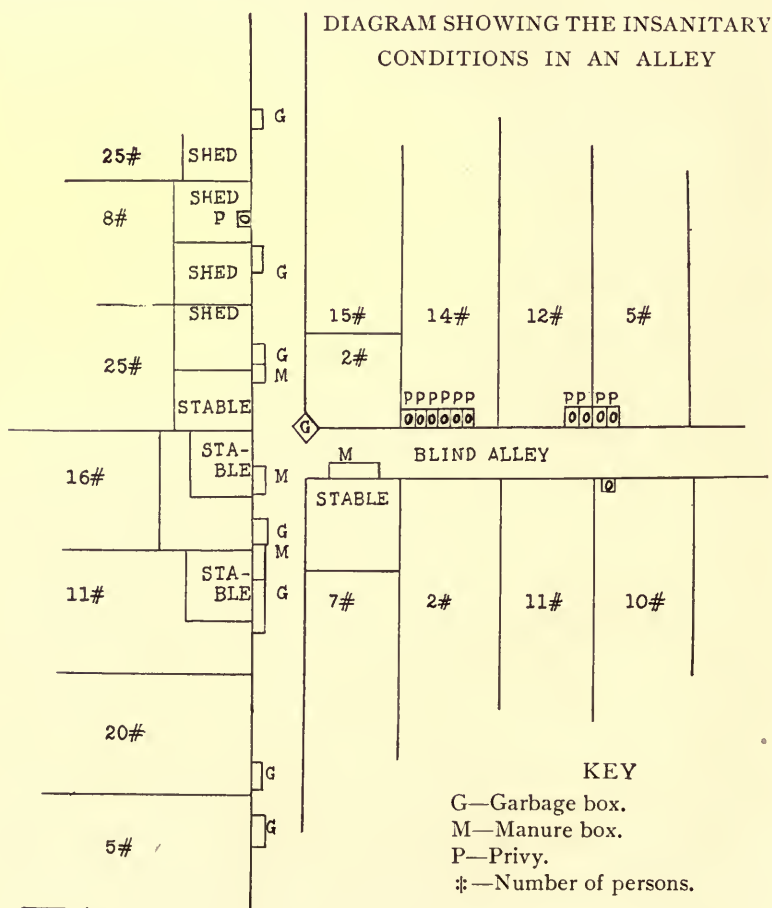
box has a horrible stench arising from it, residents say it has not been emptied for a long time"; on Dekoven, "that the garbage box has not been emptied for a week; the people say it is so horrible they want to get away"; on Thirteenth Street it was said several times; "That people are driven indoors by the smell of the garbage boxes; they can't sit on the steps." A number of touching appeals were made to our enumerators by mothers anxious for the welfare of their children. One woman said that



she kept her children in the house nearly all the time because of the filth all around. She pleaded with tears in her eyes that something should be done about the garbage collection. It was stated on Twelfth Street that: "A private garbage collector was employed because the city service is unsatisfactory."

In order to show more clearly the extremely bad conditions in a particular portion of District 1, the number and situation of the privies and of the garbage and manure boxes which were found in one alley and a portion of the adjoining alley have been placed on a diagram. The location of the twelve privies will be seen. Besides, in this small section of the block, there are four stables and four manure boxes near the mouth of the blind alley.

Nearly two hundred persons live in the neighboring houses. The photographs printed herewith illustrate the abominable conditions which exist. The garbage boxes are uncovered and the contents strewn over the alley. The alleys are unpaved and filth of all kinds has accumulated in large quantities. In one place a large pile of manure and trash has been thrown against a barn. The children shown in one picture live in a house of which the old shed is the rear portion. A rear house of two stories with windows opening upon the alley is shown in another picture. The air of the people living in this rear tenement comes from this same alley.



There could hardly be a better illustration of the accumulated evils in a neglected and uncared-for portion of Chicago. All the evils mentioned in the sections on "The Neglect of Garbage" and "Offensive Stables and Manure Boxes," were found combined in this small portion of District 1. The utter neglect on the part of the municipal authorities, and the irresponsibility of landlords, is shown in the photographs and diagram.

MISCELLANEOUS OUTSIDE INSANITARY CONDITIONS

Section 7. Many disagreeable and dangerous conditions, which have not been spoken of elsewhere in this chapter, are classed under this head. For a city possessing sanitary laws, the conditions are extraordinary, to say the least. A few of the comments of the enumerators will make the nuisances which result from keeping animals in and about tenement-houses explain themselves. The enumerators' comments:

Forquer Street.—"Chickens kept in yards, several places."

Taylor Street.—"Seven goats in back yard."

Union Street.—"Ducks and chickens in yard."

Jefferson Street.—"Two cows and chickens."

Holt Street.—"Hogs run loose in yard; Pigeons kept."

Noble Street.—"Chickens and ducks in yard, bad odor."

Noble Street.—"Odor from dog kennels where two big dogs are kept."

Sixteenth Street.—"Ducks in front yard."

Throop Street.—"Keep poultry in cellar, great odor."

In New York a law passed in 1867, and one in Boston, prohibits the "keeping of a horse, cow, or calf, swine or pig, sheep or goat in a tenement-house."* In 1897 the Greater New York charter forbids the keeping of such animals on any part of the premises of tenement-houses.* In 1901 Chicago still retains the village custom.

From certain businesses, not cleanly to begin with, accumulate all sorts of decaying vegetable and animal matter. When an enumerator is driven to call an odor a "terrific smell" in order to describe it, there is some reason for alarm.

*Veiller's "Tenement-House Legislation in New York, 1852-1900," page 118.

Union Street.—“Shop and fish market; smell terrific.”

Jefferson Street.—“Odor of butchers' refuse very bad.”

Thirteenth Street.—“Sidewalk a place for chickens and ducks; fifteen coops in front of house, which is excessively dirty and dilapidated.”

Thirteenth Street.—“Chickens and ducks sold here; feathers flying all about the street.”

O'Brien Street.—“Chicken-coops on sidewalk, poultry in back of yard; very offensive to the neighbors.”

O'Brien Street.—“‘Geese right under the window,’ says the tenant. ‘You can't sleep nights and it stinks. If you sleep in a room with that right under your head hollering the whole night you can't stand it.’”

Maxwell Street.—“Poultry market in basement; sidewalks with feathers and half covered with boxes of chickens.”

Maxwell Street.—“Market in basement horribly dirty; vile smell; sidewalk covered with corn and feathers.”

Jefferson Street.—“Refuse from produce store dumped into broken catch-basin in back yard, and into privy vault. Neighbors complain of rotten eggs and other bad smells about the house.”

Rag and junk shops and various kinds of depots for refuse materials abound in the Italian and Jewish quarters, and there are a few in the Polish district. Most of these shops have foul odors. Rag-shops particularly are dangerous by communicating disease. They should be prohibited in houses where people live. Laws in other cities forbid rags to be stored in tenement-houses. The comments of the enumerators on shops and upon other conditions are printed herewith:

Polk Street.—“Rag-shops litter the street and make it at times almost impassable.”

Canal Street.—“Many back yards covered with musty rags, old sail-cloth spread out to dry. Smell penetrates into all the living-rooms about.”

Ewing Street.—“Stumps of tobacco spread out to dry in several places.”

Twelfth Street.—“Tenants near cap factory say that the odor from it is almost unbearable and makes them sick.”

Canal Street.—“Smoke from the neighboring factories makes bad light and air.”

It will be possible to realize, if one has imagination, how much there is in all of these conditions to degrade the individual. Surrounded by foul conditions, the people almost lose their desire for cleanliness. It is almost impossible for an individual to keep free from the filth of the streets and alleys, the yards, courts, and passageways. The protests of many tenants, compelled to live in these places, are evidence enough of the struggle of many weary housekeepers against the overwhelming odds. The whole chapter is evidence of the pressing need for a municipal cleansing.

CHAPTER VII

SOCIAL PATHOLOGY, DISEASES AND DEATHS

THE SOURCES AND VALUE OF THE DATA

Section I. The most serious of the evils which result from the tenement-house system are various forms of individual and social degeneration. Happily, the worst conditions in Chicago are of recent origin and consequently those fearful results which come from urban populations living amid surroundings wherever most insanitary and artificial, are not as conspicuously present in Chicago as in certain other cities. But surely no one will doubt that unless active preventive work is soon begun this city will suffer from many of the painful experiences of older cities. Extraordinary sickness, death, pauperism, intemperance, and crime are universally associated with bad housing conditions. Many other cities have been benefited by special studies of these evils and their relation to insanitary dwelling places. The results of these investigations are the severest warning which the older cities may furnish the newer ones. It is to be regretted that in Chicago no studies have yet been made showing the relation of many social diseases to the living and working conditions of the people. There are few things which could be of greater value. The Committee recognized this fact, but in drawing the line some place, it seemed best to make the first inquiry into conditions, a study of the insanitary and dangerous dwelling places themselves.

To show the relation of housing conditions to the death rate and to various forms of social degeneration is in itself a separate and very difficult undertaking.* What is offered, therefore, is obtained mainly from studies made elsewhere and is given merely to show the recognized relation existing between dangerous housing and certain forms of social decay. After all, the results of housing conditions elsewhere must be very much the same as

* Report of the New York Tenement-House Commission, 1900, page 72.

those here. Pauperism, crime, disease, etc., are perhaps increased by conditions here in less degree than in older cities, but they are fed nevertheless from the same sources.

POVERTY AND PAUPERISM IN THE TENEMENTS

Section 2. The cause or causes of poverty in particular individuals have long interested students in economics and sociology. Philanthropic associations in various cities have also collected much data on the subject. A few years ago, with a few important exceptions, nearly all who gave thought to the matter agreed that subjective causes, such as drink, laziness, extravagance, and incapability were the most important. The testimony of those who gave alms contributed largely to this idea. More recently even charity organizationists have broadened their views of causes. A prominent one, Edward T. Divine, says: *

“It is possible that in the analysis of the causes of poverty, emphasis has been placed unduly upon personal causes, such as intemperance, shiftlessness, and inefficiency, as compared with causes that lie in the environment, such as accident, disease resulting from insanitary surroundings, and death of bread-winner due to undermined vitality. Economists have duly recognized the effect of climate upon national efficiency, but climate in the sense in which it affects earning capacity is not simply a question of latitude. It includes rather all those elements of the immediate physical environment which give vigor, elasticity, buoyancy, and recuperative power. It does its work at night when the worker is asleep, quite as much as when he is employed. That there is a favorable climate in Battery Park at the lower end of Manhattan Island is, therefore, by no means evidence that the toilers who make their homes in New York City are its beneficiaries. The overcrowded, dark, ill-ventilated tenements of New York City have a climate less favorable than that of any other great city. Directly, therefore, in their influence upon the physical well-being of human beings the tenements lessen productive power and so inevitably increase the number who are unable continuously to make a living.

*“Charities,” weekly of the New York Charity Organization Society, February 24, 1900, page 3.

“Their indirect effect upon the standard of living is no less marked. One who lives in an attractive home with plenty of light and air and with pleasant outlook from the windows will instinctively improve the other conditions of living, will work harder to provide decent furniture, will place a higher estimate upon all the decencies and comforts of life.”

In accord with this view many students have spoken of the influence of housing in causing poverty. Robert Treat Paine, several years ago, wrote that he considered bad housing one of the four most important causes of poverty.* Sickness, often the result of insanitary conditions, causes from 14.6 per cent to 29.5 per cent of the poverty coming under the observation of the New York, Buffalo, Baltimore, Boston, and Cincinnati Charity Organization Societies. But as Dr. Amos G. Warner says: “Sickness is more obvious than bad sanitation.” † Diseased appetites and under-vitalization generated in the tenements, cause most degrading forms of poverty. Among other causes are now classed bad climatic conditions, defective sanitation, and degrading associations and surroundings. The overcrowding, foul air, dark rooms, and insanitary housing conditions, shown in the previous chapters, are the handicaps in the competitive struggle which drag many families into a condition of painful and degrading dependence upon public charity. Insanitary housing conditions reduce industrial efficiency, promote exhaustion and weariness, and are potent causes in the growth of a large, dependent class.

Pauperism is a different thing from poverty. A pauper legally is he who receives public aid. Charity Organizationists consider a pauper one who has a craven, dependent spirit, and willingly receives repeated and perhaps unnecessary aid. A pauper, in the legal sense, may be one constrained because of illness or other reason to accept relief. But he will not be a pauper in the sense of the Charity Organizationist providing he retains his independence and asserts it as soon as possible. In the sense of the latter especially the tenement produces paupers. It destroys the spirit of independence.

It cannot be said that the mass of tenements in these dis-

* Pamphlet, “Causes of Poverty.”

† Warner's American Charities, pages 29 and 34.

tricts are in such condition as to be an active cause of poverty or pauperism. Occasionally, however, in tenements broken, dilapidated, and devoid of almost everything wholesome, with dirt and evident overcrowding, you will find all the conditions which make paupers and beggars. Even if insanitary conditions did not weaken the families, the evil associations would do so. For the pauper attitudes and customs are contagious. A single pauper family in a tenement may be looked down upon. But two or three such families set the standard and the getting of free coal and groceries is emulated. The Bureau of Charities knows of houses in which every family is pauperized. Houses are known from which paupers have been evicted; but the new families which move in sooner or later apply for relief. Certain tenements have housed scores of families dependent on charity. The contagion is interestingly shown by the fact that the people in certain tenements all receive aid from the county, while in a neighboring house the inhabitants have applied only to the Bureau of Charities. In this way pauperism sometimes spreads throughout an entire tenement. Self-supporting families often apply unnecessarily for aid simply because others in the same house receive assistance. Begging children frequently encourage their playmates to beg with them. It is this moral degeneration, going on in the bad tenements, which presents a worse aspect than even sickness.

INTEMPERANCE AND BAD HOUSING

Section 3. Intemperance is caused by bad housing in very much the same way as pauperism. The saloon is attractive. It is warm in winter; it is cool in summer. It is clean, not overcrowded, and is well lighted. It is in marked contrast to small rooms overcrowded, badly ventilated and lighted. The "homeless" tenement causes the greatest amount of intemperance. It is almost unbearable while awake to stay in a close and disagreeable apartment. To leave the home is to go to the only "common" in the neighborhood. For the saloon preaches the lesson of hospitality. No one is denied. Intemperance, therefore, is often the cost of a cheerful place to spend the evenings. Recognizing this, a legislative committee in New York,

appointed in 1866, recommended "the prevention of drunkenness by providing every man with a clean and comfortable home." *

The men who live in the poorest tenements are usually those who do the hardest and most disagreeable kinds of work. Students of inebriety have given attention to drunkenness as caused by occupations, but the work of a man consumes only a part of his day after which he returns to his home with his strength spent and physically depressed. He may be entertained at a theater if he can afford it, but he is more apt to seek the cheaper attractions of the saloon, not always because his house is small, but because it is unattractive. Furthermore the demands which insanitary conditions invariably make upon the human body cause a craving for stimulants.

Dr. Norman Kerr, the eminent specialist on inebriety, says† that "bad hygienic conditions, ill-ventilated, and overcrowded dwellings, from the vitiated state of the air within them, occasion languor and sluggishness which leads to functional derangement and produces a profound feeling of depression which, in many cases, predisposes and excites to intemperance in alcohol. This is purely a physical process, the blood is imperfectly ærated and charged with excess of carbonic oxide.

* * * * *

"Crothers‡ detected the influence of bad sanitation, unsuitable food and surroundings and neglect in thirty-eight out of five hundred cases. My own observation in England, including about three per cent of all my cases among the very poor, puts the proportion at about twenty-five per cent."

As for the actual drunkenness which exists in these districts, it is very hard to speak accurately. There are many other districts where drunkenness is far worse. In certain vile tenements here, as elsewhere, almost everybody, men, women, and older children, are habitual drunkards. Very often the men are regularly at work, but their evenings and earnings are spent in saloons. It is safe to say that it will be the cheer of better homes and the gymnastic and sporting features of playgrounds,

* Reynold's Housing of the Poor, page 22.

† "Inebriety," page 167.

‡ Dr. T. D. Crothers, Walnut Lodge Hospital, Hartford, Conn.

parks, and baths which will one day take the place of the warmth, light, and companionship of the saloon.

CRIME IN THE HOMELESS, YARDLESS TENEMENTS

Section 4. Crime also is caused by the conditions which exist in the worst tenement-houses. Bad hygienic conditions, evil associations, and the collapse of home life produce criminals. For the purpose of showing how bad conditions in Chicago really are, these districts are by no means sufficiently representative of the worst. The Italians, Jews, Poles, and Bohemians here lose to criminality many children, but not in the same awful way as their brothers and sisters in other portions of the city. The effect upon these peoples in the First Ward, for instance, is most pathetic. Coming to us ignorant, but honest and simple-minded, they seek out the tenements whose rents have been lowered by vicious inhabitants. Thousands of Jewish, Polish, and Italian children are growing up in tenements inhabited by the wretchedly poor, by drunkards, criminals, and immoral women. Almost every word these growing children hear, and every action they see, corrupts their minds and destroys forever their purity of heart. No one who becomes a part of the life of these tenements can escape their contaminated and corrupt atmosphere. Let any one who doubts look into the demoralization of little children going on along South Clark Street and Custom House Place, Dearborn Street, Armour and Pacific Avenues from Harrison to Twenty-second Street. It was to just such places as these that Dr. Elisha Harris referred when he said before the New York legislative committee of 1866: * "The younger criminals seem to come almost exclusively from the worst tenement-house districts. When the riot occurred in 1863, every hiding place and nursery of crime discovered itself by immediate and active participation in the operations of the mob. Those very places and domiciles, and all that are like them, are to-day nurseries of crime, and of the vices and disorderly courses which lead to crime. By far the largest part, eighty per cent at least, of the crimes against property and against the person are perpetrated by individuals who have either lost connection with home life or

* Jacob Riis' "How the Other Half Lives," page 1.

never had any, or whose homes have ceased to be sufficiently separate, decent, and desirable to afford what are regarded as ordinary wholesome influences of home and family." Although written in 1866 this is applicable to Chicago to-day. Every statement could be sustained by actual facts. The evil associations in the worst tenements and the collapse of home life just spoken of are reinforced as evil influences by the insanitary conditions. For, as Dr. Frederick H. Wines says, in his recent book:* "Insanitary conditions, especially in the most crowded centers of population, are a cause of crime, because they weaken the vitality of those who might otherwise successfully contend against these criminal tendencies."

In the districts investigated are present all of the influences just mentioned. They are less patent perhaps than in a few other places in Chicago. For instance, the collapse of home life, because freer from contact with vicious surroundings, is here seldom so complete as one finds it in the tenements in the First Ward. When it does occur it is mainly due to industrial reasons. For example, when the parents are both employed, or are working long hours, their influence upon the children is very slight, and they are left to range at will in the tenement and street. This freedom can hardly be good for them, for in the crowded quarters of the yardless tenement, the children suffer manifold restrictions and are in contact with conditions, physical and moral, which predispose them to criminality. Because of these and other reasons the juvenile criminality of these districts is enormous. Crowded in the tenements where the bedrooms are small and often dark; where the living-room is also a kitchen, laundry, and often a garment-making shop, are the growing children whose bodies cry out for exercise and play. They are often an irritant to the busy mother and likely as not the object of her carping and scolding. The teeming tenements open their doors and out into the dark passageways and courts, over the foul alleys and upon broken sidewalks, flow ever-renewed streams of playing children. Under the feet of passing horses, under the wheels of passing street cars, jostled about by the pedestrian, driven on by the policeman, threatened by the grocer, without rights anywhere, they annoy everyone. They crowd about the music or

*"Punishment and Reformation," page 275.

drunken brawls in the saloons, they play hide-and-see about the garbage boxes, they "shoot craps" in the alleys, they seek always and everywhere activity, movement, life.

This using the main open spaces as playgrounds is critically called "the street habit." But both it and "the gang habit," are at first perfectly innocent and natural results of the crowded tenements and of the universal necessity for play. In the failure to satisfy this need of the children with properly equipped municipal playgrounds, the street habit and the gang habit become the causes of a large percentage of juvenile crime. Sneak thievery and many other forms of vice and wickedness run their course in these gangs of the tenements with the epidemic power. For to contagious disease of all sorts tenements furnish the line of the least resistance.

Now a healthy expression in play of the mental, physical, and moral faculties of the children of the tenements is at present almost impossible. In consequence they break windows, they ring door-bells, they steal, they annoy everyone, they especially rejoice in "making it warm" for the unpopular neighbor who displeases them. Without the saving influence of an attractive home or playground they obtain from street life the mental and moral food they require. It impresses itself upon them and they reproduce it all; gambling, drinking, the vaudeville, the fighting, the torch-light processions, whatever they see, good or bad alike, they imitate.

It is in this spirit of play that the children commit most of their petty crimes. When one of them is caught stealing he is brought to the juvenile court. He is taken away from father and mother and the tenement and sent to the John Worthy School, where he is put behind iron bars and uniformed guards are placed over him, just as if he were a wild animal. And this is often the innocent beginning of a life of crime. For the cause of it all we must go back partly at least to the overcrowded, yardless, and homeless tenement. The boys become criminals because it can almost be said that in these districts the only things to do worthy of a boy's spirit are those things which are against the law. At any rate the victim of overcrowding sees little difference between the laws which prevent him from "flipping" on and off street cars or playing ball in the streets, and those which pro-

hibit truancy, stealing, etc. He does see that whatever depends upon bravado, which all boys love, is looked down upon by the policeman. The causes of crime are many, but among the important ones are the evil association of the tenement, the bad sanitary conditions, the collapse of home life, and lastly, the yardless tenement itself.

SICKNESS AND INSANITARY CONDITIONS

Section 5. It is, however, in sickness and death that the tenement-house evil exacts its chief tribute from the people. Always and everywhere overcrowding, bad air, dark rooms, and other insanitary conditions cause physical breakdown. The "Testimony on the Evils of Overcrowding," Chapter III., Section 1, need not be repeated here; but it will be recalled. The intimacy of the people of tenement-houses makes the spread of disease there almost unpreventable. Not necessarily of smallpox, which receives extraordinary attention from the Board of Health, but of tuberculosis, scarlet fever, and diseases of other kinds.

The dread contagion, tuberculosis, growing so fast in all large cities, is in particular caused and fostered by the tenement-house system. The relation of the tenement to this particular disease, is becoming of great interest. Dr. S. A. Knopf, before the New York Tenement-House Exhibition of 1900, in a very instructive paper, said: *

"If I should be asked what conditions are most conducive to the propagation of tuberculosis and especially pulmonary consumption, I would have to reply, the conditions that prevail in the old-fashioned tenement-houses as they still exist by the thousand in this and other large cities. In these tenements there are not only a far greater number of consumptives than in the same area elsewhere, but the proportion is actually greater per number of inhabitants. Thus they not only contain countless centers of infection for old and young, and multiple foci of reinfection for those already afflicted, but these dwellings with their bad air, darkness, and filth make a cure of the disease impossible and a lingering death for all those infected by the germ of tuberculosis a certainty. If anyone thinks me an alarmist, let him glance at

* Pamphlet, "Tuberculosis in the Tenements," page 1.

the charts exhibited in this building. There he will see that there are houses in which can be counted as many as twenty consecutive cases of tuberculosis during the last four years. This number represents, however, only the cases reported to the Board of Health. Now, you must not think for a moment that these represent the actual number of cases of tuberculosis existing in that particular tenement. They are only the ones where the disease had so far advanced that medical aid became imperative, a physician had to be called in, and the case was reported. But how many of the moderately advanced cases are made known to either physician or Board of Health? I venture to say those not reported are more numerous than the reported ones. They constitute that class of pulmonary invalids who are still able to work, and who imagine themselves to be suffering only from chronic bronchitis, and the equally large number of children suffering from tubercular manifestations other than pulmonary. To the uninitiated it may sound like a paradox when I say that the tubercular invalid who is still up and about, perhaps supporting his family, is often the greatest danger to the community, to his friends, his neighbors, and to those who may succeed him in the tenement he lives in. It is this class of consumptives, which, from either ignorance or carelessness, spread their disease broadcast by depositing their infectious sputum everywhere without any regard to the danger."

But aside from contagious diseases, the insanitary conditions of tenement-house life cause forms of debility and exhaustion. Lord Shaftesbury said,* before the Lords Committee on Housing that "the Board of Health instituted inquiries in the low neighborhoods to see what was the amount of labor lost in the year, not by illness, but by sheer exhaustion and inability to do work. It was found that upon the lowest average every workman or workwoman lost about twenty days in the year from simple exhaustion, and the wages thus lost would go toward paying an increased rent for a better house." That deterioration in health which often does not figure in the death rates is perhaps the most striking result of bad housing.

From the purely economic point of view the cost to working people of insanitary dwellings is enormous. A sick rate would

* Report of Lords Committee on Housing, page 4.

be far more accurate than a death rate as a basis upon which to judge the costs to the people of the tenement-house system. Dr. E. R. L. Gould says: * "The economic value of sanitary reform has never been fully appreciated. The loss to any nation by allowing insanitary conditions to prevail is simply tremendous. It is likewise twofold. There is in the first place a great waste of productive power which might otherwise be utilized; and secondly there is the expense of maintenance of hospitals and pauper institutions, a large number of the inmates of which are recruited through sickness caused by unhealthy living environment."

In speaking of this subject it is safe to say that the experience of all cities is more or less common. The cost of weariness and various forms of sickness to the working people of Chicago is doubtless greater than any estimate based on this investigation would indicate. No inquiries were made concerning the sickness which existed in the district; therefore, any conclusions which could be drawn from the inquiry would be based upon the observation of the enumerators and upon those complaints which were offered voluntarily by the people. It is hardly worth while to go into these data. It is safe to conclude that however much or little sickness has resulted from the housing problem in the past, its importance is slight compared with the increase which invariably follows the growth of the double-decker.

DEATH RATES IN NEGLECTED DISTRICTS†

Section 6. It is well known that the published death rate in Chicago is below that of other large cities, and this fact has inspired efforts to impeach the accuracy of the records of the Health Department. So far as the present investigation has dealt with this subject—quite incidentally—nothing, except the fact that contrary to the practice of many cities no account is taken of deaths occurring within twenty-four hours after birth, has been found to justify the assertion that the Health Department's vital statistics establish an unfairly low death rate for the

* Report of National Bureau of Labor on Housing, page 423.

† The wards mentioned in this section are necessarily referred to by their old numbers.

whole city. It is, however, undoubtedly the fact that, perhaps because of insufficient appropriation, the records of the local health office are kept in a most antiquated way and afford very meager information.

The Health Department of a large city performs one of the most valuable functions of the governmental service. It has to do with the life and death of a community. In its office are filed by law all of the important facts concerning the cause of death, the age, etc., of each decedent. It is particularly important for the welfare of the community that none of these facts should be neglected. Municipalities should require a perfect ordering of the material collected and its classification in various forms fitted to convey most successfully to the people a knowledge of the precautions which are necessary to save human life. In Chicago deaths are recorded alphabetically and registered in huge volumes. No other classification than this is observed. Such a method of filing effectually buries an enormous accumulation of extremely valuable material and makes it inaccessible even to those most interested. For instance, to find the death rate in a particular block or group of houses, is the work of weeks. The history of deaths in particular houses is therefore totally lost, even to the Health Commissioner. Charts and maps, so common in foreign cities, showing the progress of diseases in particular localities and their relation to bad housing and dwellings without sewerage, with foul privies and low undrained lots, are absent from the local records. There are houses in the districts investigated in which a large number of deaths occurred last year, and blocks where the death rate was as high as thirty-seven per thousand. But at present such districts and blocks are unknown to the Department. It is obvious that unless a system of cataloguing is adopted in which deaths may be registered in several different classifications, it will be impossible for Chicago to have such information concerning its mortality statistics as will enable it to deal effectively with local or neighborhood conditions.

In perfecting the local statistics it is also necessary to have facts which only a census of the entire population can furnish. For this reason it is of the greatest importance that the school census should be taken as much for the benefit of the Department of Health as for the Board of Education. For the use of the

Health Department, facts should be obtained concerning the name, age, sex, race, and occupation of each person and the location of his dwelling; that is, whether front or rear. Totals should be made of these facts for each block in Chicago. If this information were gathered and the records of the Health Department made to conform, the vital statistics of Chicago would pass beyond the stage of vague generalization and approach scientific accuracy.

It is, however, necessary to say that students of vital statistics have encountered great difficulty in reaching satisfactory conclusions as to the degree to which any one cause is responsible for death. But great advances might be made in showing the relation between insanitary and bad housing conditions and mortality rates if further progress were made along the above lines in the collection of vital statistics. The difficulties of the subject are so great that in the report of the New York Tenement-House Commission of 1900 no attempt is made to draw any definite conclusions from mortality statistics. How far bad housing conditions contribute to the death rate is certainly a subject upon which no absolutely scientific deductions can be made.

The mortality rates of Chicago have long been collected and published according to wards. This in itself makes it impossible to show the relation of mortality rates to housing conditions, because conditions may, and in fact do, vary widely in the same ward. For instance, there is one ward in the city which has a well to do and well housed population with a death rate of about nine per thousand, a colored community with a death rate of twenty-eight per thousand, and a death rate for the other residents of twelve. The mortality of the whole ward, when the average is drawn, is low in spite of the high death rate among the colored population. Ward death rates become in such cases as this a generalization which conceals a high mortality in certain portions of the ward. In another ward there is a very insanitary district, where the death rate may be in all probability forty per thousand, but in a rural community adjoining in the same ward the rate is doubtless not more than seven per thousand. For the entire ward, therefore, the mortality may be about twenty-three per thousand. What are the reasons for the difference in death rates between the Eleventh Ward and the neighboring Eighteenth

Ward? The first has a death rate of 12.9 and the second one of ninety per cent greater. To what is due this shocking difference? There is no explanation given by the Department of Health. Yet certain conclusions may be asserted with reasonable confidence. Fifteen wards, eight of which border on the limits of the city, have death rates not exceeding 12.76 per thousand; while nine river wards have a mortality of from sixteen to twenty-three per thousand. To what is this difference due? Why is it possible that nearly twice as many persons per thousand die in one portion of the city as in another? In the river wards, which are also, generally speaking, tenement wards, certain blocks covered by this investigation had a death rate as high as 31.03 and 37.17 per thousand, and among the people in certain insanitary tenements in these blocks there was a fearful mortality. Such a striking contrast between the mortality rates which exist in one part of the city, where sanitary rules and regulations are observed, and those of another part of the city, where the sanitary conditions are abominable, would indicate very clearly that to a certain extent the death rates differed because of the varying degrees of sanitation. Death rates of a great city should be gathered for the purpose of showing the difference which exists in various portions of the city having the same characteristics (irrespective of the local ward boundaries) so that the influences of drainage, habitation, nationality, etc., upon mortality would appear. It is, however, impossible with the facts now at hand, to explain the causes of the difference in death rate in the various wards of Chicago.

As the comparison between the various wards of the city may result in erroneous notions, so the comparison of vital statistics of Chicago with those of other cities is likely to result in inaccuracies. For example, the local death rate cannot be compared with those of Southern cities. Such a comparison fosters a wrong impression, because Chicago's death rate should naturally be lower than those of Southern cities, since the colored people, who make up so large a proportion of the population in the South, have an enormous death rate. In order to compare the death rate of Chicago with death rates elsewhere, it is necessary to determine the mortality rate of the various nationalities, and the death rate per thousand of all persons living in certain age

periods. Further reference will presently be made to these subjects, but just here it may be suggested that the mortality rates should be obtained for children under one year, for children under five years, for persons between the ages of five and ten years, and so on until the age limit is reached. Death rates gathered in the various cities on such a basis could be compared so as to avoid serious errors. There is another consideration which invalidates comparisons between cities. Chicago's rate is often compared with that of cities like Boston, which do not include within their boundaries many surrounding districts that are practically portions of the various municipalities. The comparison of rates between this city and cities of that sort is hardly justified. In Boston only the densest portion of a large urban and suburban district is included in the city limits, while Chicago includes in its boundaries many sparsely settled and almost rural wards. A low death rate in these outlying districts considerably lowers the average death rate of Chicago. If a true comparison were made, Chicago would be compelled to drop out several suburban wards where the death rate is extremely low.

Still, the question will be asked, Do conditions here urgently demand reform? Chicago as a whole has fewer deaths per thousand than the other great centers of population in the country; is there, then, any pressing reason for remedying the conditions which have been shown to exist by this Report? To such questions the answer is that there is every reason for reform. To be sure, there are climatic influences here which, other things being equal, will always tend to keep down the death rate; such are the proximity of the city to a large body of fresh water, and especially the searching south wind, which in hot weather consumes animal and vegetable corruption and is even life-giving as compared with the heavy humidity that in other localities saturates the summer atmosphere. Besides this, Chicago has a large population of Jews, among whom the death rate is low. A curious illustration of this is found in a comparison of the vital statistics of two of the river wards. In the old Seventh the death rate is only 11.99 per thousand, while in the neighboring ward it is 45.9% higher. The sanitary conditions of both wards are as bad as possible, but in the ward with a low death rate the Jews live. The only known cause for the difference in death rate in these

two wards is the difference in nationality. There is still another reason why the general death rate is materially reduced, and it lies in the fact that any child not living to be twenty-four hours old is not registered as having died. But despite all of these various influences which are at work in keeping the death rate low, the rate varies so enormously in different wards as to prove forcibly the necessity for reform. The ill-housed people,—those living in insanitary conditions, and those living in conditions most unfavorable to life,—have such high death rates as to necessitate on the part of public-spirited citizens an investigation into the conditions in which they live. But even if the difference in death rate were not great—and the death rate should not be the only criterion by which to determine the welfare of a community—there are other reasons for reform. The evils apparent in Chicago tenement-house districts are prolific of misery, crime, and moral degradation, to say nothing of disease in forms which sap vitality without inducing death.

However, the tenement-house problem in Chicago is, in its most important aspect, one of prevention, comparatively simple if dealt with now, but full of danger for the future. For there is a set of influences tending to lower the death rate here which must in time be expected to disappear. For instance, the factor of favorable age distribution may be but temporary. Chicago has an enormous population between the ages of five and forty-five years, at which time the death rate is extremely low.

A large proportion of this class are sturdy emigrants, and the strongest and ablest of the young men and women from the farms of this and neighboring states. When ill, especially with diseases like consumption, the unmarried ones often return to their homes to die. The vast population of Chicago (which, it must be remembered, has doubled in the last fifteen years) is perhaps, to a greater extent than that of any other great city, made up of newcomers who have been here a comparatively short time. They are the first generation in the city and have excellent resistance when placed in insanitary surroundings—resistance due to the youth and strength and energy which are always found in the mass of those who seek new homes. Is it to be doubted that this vital advantage will steadily dwindle as time passes? Still another thing which has kept the death rate low is the condition of the

tenements in Chicago. In Manchester, England, the death rate exceeds that of New York and the difference is largely due to the fact that there are in the former city, which has very old tenement districts, many houses fairly alive with germs accumulated through generations, not to be long resisted by the hardest constitutions. And if the current tendencies in Chicago be not checked, Manchester conditions will become Chicago conditions. Tenement-houses in Chicago are still largely old, frame buildings, affording a good quantity of light and air. As ground becomes more valuable and the frame dwellings become uninhabitable, they will surely be replaced more and more by the dark and overcrowded double-decker, if this form of tenement is not prohibited by law.

Such considerations as these emphasize the serious nature of the problem with which the people of Chicago must deal. For it is true to-day, and the truth if not dealt with now will grow in significance as time passes, that to a very large extent, at least, the people who die in neglected wards in excess of the natural quota of deaths, die because of neglect. As William Farr, the eminent student of vital statistics, said long ago: "If the people were shot, drowned, burned, poisoned by strychnine, their deaths would not be more unnatural than deaths wrought clandestinely by disease in excess of the quota of natural deaths." *

* Vital Statistics, William Farr, page 148.

CHAPTER VIII.

CONCLUSION — A REVIEW OF REMEDIAL EFFORTS

THE HOUSING PROBLEM AND THE LACK OF PREVENTIVE MEASURES IN CHICAGO

Section 1. Those who have read the foregoing chapters will realize how many municipal problems are associated with that of housing. The conditions presented in these pages represent those in which the great majority of working people of low wages are compelled to live. Two and even three tenements are placed on certain lots, until either in this way or by entirely covering the land with one house, it is made to yield maximum profits. Under the faulty administration of the law, landlords can now build dark rooms with impunity. Basements, dilapidated cottages, tenements unfit for habitation, and houses with dangerously defective plumbing are used as dwellings. In addition to these conditions directly connected with the dwellings, there is great neglect of streets, alleys, and sidewalks, of garbage, etc., which result in disagreeable and unhealthful surroundings. Many of these evils have long prevailed, but the worst of all is a new one, the double-decker. Any foreshadowing of the future on the basis of this inquiry must recognize the increase of this most unwholesome form of tenement and suggest measures for its prohibition.

Chicago has no intelligible, well-planned building and sanitary code. Complicated and contradictory ordinances are common. The laws concerning sanitation and the building of new tenements are not classified and published in cheap form so that they may be put to use by the residents of Settlements, the Visiting Nurses, the Bureau of Charities, and others.* Representatives from these various charities are constantly inspecting tenement-

*All the city ordinances are codified and printed down to 1897. The City Homes Association has secured from the City Hall the codifying of the Health and Building Laws from that date to the present, and hopes very soon to have them printed.

house premises and wishing to prevent and check insanitary conditions. Without some ready method of referring to the statutes and ordinances on building and sanitation, the public is quite helpless either to assist the city departments or to learn how far city officials enforce existing regulations.

Chicago is both uninformed and unprepared for the future. The new evils of crowded areas, dark and overcrowded rooms, lack of thorough ventilation, houses too dilapidated for use, and many others, are not to be prevented or effectively restricted by the present laws. To prevent these evils definite laws should be enacted. At present the details of the sanitary construction of all new buildings are left largely to the "discretion" of our Health Department. It is easy to see in what a difficult position these officials are placed. It would take a singularly brave and honest department to force upon a landlord with political influence and power a series of restrictions which are left for enforcement to the "discretion" of the department. With present political ideas it would never be "discreet" to enforce the very laws which are now the ones most needed in Chicago. To leave the control of the construction of all future dwellings to the "discretion" of the Health Department, places upon it alone the responsibility for deciding whether or not there will be in twenty years a slum of double-deckers. In other words, if the six hundred tenements built each year in Chicago are to be a benefit instead of an injury to the city, there must be a comprehensive code of laws which will insure, if enforced, light, air, and a sufficient amount of space to every human being. It is easier to prevent than to reform. It is simpler and less expensive to check in its infancy the anti-social tendency of certain classes of property owners than it is to spend millions of dollars to destroy, remodel, or renovate their insanitary property. The most important reason for an adequate code of laws is, that very great preventive work is possible.

THE TREND OF ADMINISTRATIVE ORGANIZATION IN OLDER CITIES

Section 2. Those cities which have suffered severely by the tenement-house problem have all developed three lines in a protective policy. First, supervision and regulation of new tenement-

house building is planned so as to permit no new building which will be injurious to the community. Second, tenements dangerous to health are demolished or altered and renovated. Third, regular supervision and inspection of tenements is carried on for the purpose of preventing conditions which endanger the public health. Except for the second of these activities, Chicago has already made a tentative beginning. But for some reason, perhaps the lack of co-ordination in the activities of the various municipal and state departments, many weaknesses exist in administrative efforts.

Several different departments are depended upon for the enforcement of the laws regarding tenement and lodging house construction and regulation. The Building Department, the State Factory Inspectors, the State Board of Health, the City Board of Health, and the Bureau of Streets and Alleys, and other official bodies now divide the responsibility. Each one of these various departments is burdened with numberless other duties and only a portion of its time can be given to the consideration of tenement-house evils.

The French, with their remarkable gift for classifying and systematizing all efforts, established in Paris several decades ago a permanent commission of experts, including physicians, architects, and engineers, whose sole duty is the supervision of dwelling-houses. Between the years 1872 and 1892 the *Commission des Logements Insalubres* secured the alteration, improvement, or destruction of fifteen thousand houses and in this manner affected the lives of about a half a million people.* Paris was first to see that the housing question was of sufficient importance to require the services of a special commission devoted to this "single feature of sanitary administration." The London County Council has, after a certain fashion, followed the leadership of Paris and appointed a committee on "Public Health and Housing."† This committee has taken a broad view of the housing problem. It has seen that the question of furnishing the people "room to live" is the most serious municipal problem of the century. It means the redistribution of a population of over a million people. It involves the question of a cheap and

*Albert Shaw's *Municipal Government in Europe*, pages 90-92.

†Shaw's *Municipal Government in Great Britain*, page 288.

quick suburban train service; the regulation of factories situated in the central portions of the city, and the prevention of the old evils arising within growing suburbs. In a word, the whole time of that committee is given to the work of managing on large and comprehensive lines the sanitary housing of London's population.

Your committee would recommend careful consideration of these efforts to place upon a single responsible body the duties of regulating the existing tenements, of controlling the new buildings, and of rationally grouping the population of Chicago. There are really magnificent opportunities in this city for a committee with such powers. With architects and men of business and science on such a board, we could look forward to what every citizen wants, a healthy and well built city. The New York Tenement-House Commission is now planning a body whose duties will be extended even beyond the ones indicated here.* Their plan makes the commission assume, so far as tenements are concerned, the duties of the Health Department. There may be objections to a plan of this sort, which will be seen upon a more careful study, and at this time a consideration only of these previous efforts is urged, as affording suggestions which may be of great interest and value.

THE NEW LAWS MOST NECESSARY AND THE IMPORTANCE OF REGULAR INSPECTION

Section 3. Quite outside of the question of administrative reform, a few new laws are necessary to prevent the building of harmful tenements and gradually to secure good types of tenement-house construction. That this is most important should be realized at once, for in 1895, 957 new tenements were constructed; in 1896, 562 tenements; in 1897, 531 tenements, and in 1898, 410 tenements. These facts illustrate what power the Health and Building departments of Chicago could exert in preventing evils. But plans of each of these 2,460 tenement buildings were inspected by these departments before the tenements were constructed, and yet this inquiry shows that of this number many tenements were improperly constructed and insanitary. The main fault with the present law is, that too much is left to the "discretion"

* See advance sheets of its report, page 38.

of the officials. Chicago doubtless needs some additional legislation on the subject of tenements. A limit should be placed upon the proportion of land which may be covered by buildings, and upon the height of tenements. Stringent requirements for lighting and ventilating all habitable rooms are needed, since a prevention of the further growth of dark and badly ventilated rooms is most important. A law is needed which, in its logical outcome, will restrict overcrowding.

Laws should provide for a certain number of cubic feet of airspace for each individual. Perhaps the most successful method now in use to prevent overcrowding of apartments is the one established in many English cities. Some of the dwellings most often found overcrowded are ticketed by the local authorities. By this method a card or ticket is exhibited upon the tenement showing that no more than a certain number of people are permitted to dwell in it. It enables the inspector, when making an investigation, to know exactly how many people should be permitted to dwell in a particular tenement. A more thorough plan of making certain that landlords obey the law is a plan for licensing tenement-houses. This is being very generally urged in New York City. By this method all tenements are made to pay a yearly fee of a few dollars. If any of the sanitary laws are violated, then the licenses are revoked and the tenement-houses closed. This plan has two great advantages. First, it assists the city in its control, and second, if applied to all tenement-houses, new and old, it supplies a sufficient fund to carry on the work of an efficient corps of inspectors.

Perhaps the next most important matter is the necessity for some authority to demolish dangerous tenements. In 1895 a law, which is in substance a section of the English Housing of the Working Classes Act of 1890, was passed in New York.* In 1897, Mayor Quincy, of Boston, copied this New York expropriation act. As Jacob Riis says in "A Ten Years' War," page 72: "It provides for the seizure of buildings that are dangerous to public health or unfit for human habitation, and their destruction, upon proper proof, with compensation to the owner on a sliding scale down to the point of entire unfitness, when he is entitled to the value of the material in his house."

* See Charter Greater New York, Chapter 567, Section 7.

Many houses have been demolished in both cities under this law. No compensation is given to owners, because it is held that the owner of property unfit for habitation has no claim for damages.

If a new method of administration and a new and model code of laws were obtained in Chicago, the city would be little advanced beyond its present situation if inspection and enforcement were wanting. In the administration of sanitary and housing laws for the regulation of existing tenements, great improvement can be made. Regular and frequent inspection of all tenements should be undertaken. The inspectors employed at present are able to do little more than report upon complaints. This, of course, handicaps the department. It has been repeatedly said that laws were not enforced. Some laws of vital importance to the public health seem to be entirely ignored. In commenting upon the lack of enforcement, it is not meant that the Board of Health or other departments of the city government are entirely to blame. Undoubtedly the number of inspectors should be enlarged in order to enforce the laws now on our statute books. To be sure, the work of inspection decreases when the public realizes that there is a determination to enforce laws. It would be difficult, therefore, to say how many inspectors, clerks, and other officials would be necessary to properly enforce the old and the laws here proposed. It is, however, an economy to have a sufficient force to execute the important duties of the Health and Building departments, for, above all, in sanitary measures there is economy in quick and heroic action.

THE NEED OF SMALL PARKS AND GARDENS

Section 4. There are other reforms necessary than those concerning mere tenement-house construction and management. The subject of open air-spaces in the crowded districts should occupy a chapter by itself, as so much is to be said of vivid interest on this topic.

The National Bureau of Labor* after its investigation seven years ago made the statement that Chicago's tenement-house districts have fewer yard spaces than similar districts in Phila-

* See page 96 of the Report of the National Bureau of Labor on Slums of Great Cities.



delphia, New York, or Baltimore. This is so startling that it has been doubted by many people, and it is to be regretted that the present investigation could not thoroughly cover the whole subject for the city. However, there were no parks or playgrounds in the districts covered to report upon, and there are very few in the whole city.

What open spaces there are consist of little more than streets and alleys, small yards, passages, and courts. A few vacant lots exist, but they are not available for use by the public, and are, in many cases, so low and damp and filled with rubbish that they would be of little service if free to the use of the neighborhood. In some parts of Chicago, populations with a density of from three hundred to nearly five hundred persons per acre live without a single open space near them, and on summer evenings the people, leaning from the windows, sitting upon the steps, the curb, and the wooden garbage boxes, and walking up and down the streets in crowds, are proof enough of the need of small accessible parks or "places." At present the only alternative to walking about and sitting in these streets, which seems to many of these incomers from cleaner foreign towns impossible to bear, is a trip over car lines for miles to find a spot of open garden. This, on account of the expense, is impossible to vast numbers of these families with young children.

The utter absence of beauty in these districts is a condition almost as important as the sanitary and social sides of the subject. In District 1 there are but fifty-eight trees. About the same number exist in the Polish district, and only twenty-eight were found in the Bohemian quarter. The accompanying print illustrates the charm bestowed by even a few straggling willows and poplars in districts otherwise unattractive and bare. There were found but 266 small gardens for 2,117 dwellings. Most of these were less than ten feet square.

Many large cities see the necessity of furnishing numerous breathing-spaces in the heart of congested districts. The German cities have done most in this direction. Berlin has nearly one hundred open spaces within the city limits. Munich has forty-two, Breslau thirty-six, and Hamburg fifty-seven. Paris has about the same number of small parks as Berlin and has cut wide tree-bordered boulevards through tenement quarters. Glas-



GROUP OF TREES—A VERY UNUSUAL THING

gow, besides thirteen large parks, has fourteen small recreation grounds. The London County Council has established over forty of these small breathing-spaces.*

Mr. Roy Maltbie, in a monograph on Municipal Functions, published by the Reform Club of New York, says that:† “The first public open-air gymnasium in the world was maintained by the City of Boston in one of its small parks known as the Charles River Embankment. A more complete model playground for children has been established at Philadelphia, and many other playgrounds have recently been provided. . . . In New York a number of the schoolhouses are used for playrooms during the summer months. Boston has recently been presented with a large and well-equipped indoor gymnasium in East Boston, which is maintained by the Park Commission free to the public. The London City Council has six open-air gymnasiums for adults and twelve for children.” In 1897, Philadelphia had thirty playgrounds, besides the model one mentioned above. It is fast being recognized by the older cities as a municipal duty to provide overcrowded districts with as many small parks as possible, and to give the children of the tenements larger opportunities for development.

Much has also been done by private initiative. The Metropolitan Public Gardens Association, formed in London in 1882, has done an important work of this kind. It is purely a volunteer effort which has for its purpose the establishment of public gardens and playgrounds. It has placed seats in roads and recreation grounds and has planted trees in thoroughfares. It aids in acquiring public spaces and prevents encroachments upon commons, burial-grounds, and other open spaces. It also supports out-of-door gymnasiums. In these and other ways, it has promoted those species of common possessions which yield untold benefit to the people.‡

Contrast what has been done in other cities with what has been done in Chicago, and with the fact that of the one hundred thousand dollars appropriation recommended by the Special Parks Commission last year, but ten thousand dollars was appropriated

* Municipal Affairs, December, 1898, page 107.

† See same, page 108.

‡ See Reports.



HULL-HOUSE PLAY GROUND

for the purpose. A strong plea must be made to the ultimate arbiter of civic necessities, the public, for the holding, while there is yet time, of space enough all through the city to afford all of our citizens their needed refreshment. The children of the tenements need, as part of their education, a place to swim, skate, play base-ball, foot-ball, and games of all sorts. Playgrounds fully equipped with a competent instructor are of as much educative importance in this day of the yardless tenement as the schools themselves. They are a municipal necessity.

Could not the city economize its efforts and meet many needs by ordering that space should be made for parks and playgrounds near every schoolhouse? New York has passed a law providing that every schoolhouse shall have a playground, and is now forced to comply with it oftentimes by utilizing the roof. The Chicago Board of Education, in the spring of 1900, passed a resolution that in future school sites should have provision for playgrounds. This indicates the attitude of the school board on this subject, but as yet it is not law. Will not the city see that this becomes law and that this necessity is assured? The imagination could then see not far in the future many forces operating together for the welfare of the community. With the school itself more and more discovering the real educative needs of the individual, and with a well-equipped playground in every case, these two necessities of work and of play thus properly provided for would undoubtedly keep out of the juvenile court many of these more innocent than guilty offenders. Then, with the schoolhouse, a public possession already provided, and this allotment of public space, part of which could be park-like and suiting the needs of the older population, could not permission be had to use the schools for neighborhood centers? It seems that this provision cannot long withstand the growing attention given to it on every side. The benefits of such a provision might be untold and capable of infinite expansion.

PUBLIC BATHS SHOULD BE RECREATIVE AND EDUCATIONAL

Section 5. Next in importance to the open space movement should be considered the active efforts which are being very generally made for the establishment of public baths. Over a

hundred years ago Liverpool began the movement which has spread with rapidity, especially during the last fifty years, not only throughout all European and continental cities, but also to most large cities of this country. London has over thirty public baths. New York, Chicago, Philadelphia, Boston, Baltimore, and many other American cities have undertaken to satisfy this pressing need. Boston has progressed far beyond the others.*

There are at present four free public baths in Chicago, and in several of the pumping stations arrangements have been made to give spray baths; but without under-estimating these efforts as important beginnings, several new lines of development are essential for a rounded municipal scheme of public baths. Bathing should be made more than a dull chore which is to be put off as long as possible. Public baths should be places of recreation. To satisfy this need, large swimming tanks, which no one is allowed to enter without having first taken a spray bath, have been established in this country and abroad. In these baths swimming clubs are encouraged and competition between the clubs of the various bathing establishments lend interest and spirit.

In several cities the swimming tanks are in use both summer and winter, but in some cities the larger swimming pools are floored over in the winter season and turned into a gymnasium. One of the most beautiful baths in this country is in Brookline, Massachusetts. The location of the new baths is the center of population of the town, close to its principal playground and its new high school. Systematic instruction is given on regularly appointed days to three thousand school children.†

Educationally, the bath in the public school ranks with the playground; sprays should be established in connection with every public school where children can be taught to bathe properly and with regularity. It is said of the baths of this kind that have already been established: "Teachers are unanimous in asserting that school baths are beneficial, that they foster bodily vigor, brighten the minds of the pupils, increase interest in study, dispel laziness, improve the air of classrooms, and increase neat-

*See reports of the various cities, and Municipal Affairs, December, 1898, pp. 108-113.

†Report of Mayor's (New York) Special Committee on Baths, etc., page 63.

ness, cleanliness, decorousness, as well as the general health and happiness of the pupil." *

Mr. William P. Gerhard, in a paper on this subject before the American Social Science Association, says: "In all sections of this country, as in most other civilized and progressive countries, great attention is being paid to school sanitation. But though much care is here devoted to lighting, ventilation, and heating, to drainage and furniture in the schoolroom, comparatively little attention has hitherto been paid to the requirements of bodily cleanliness of the pupils. In the best modern schoolhouse, sanitarily planned, drained and ventilated, children are brought together who may and often do carry on their bodies and in their clothing the germs of infection. It was this very observation which compelled the hygienist, Professor Fluegge, of Göttingen, after an examination of the healthful and clean school interiors of his city, to exclaim,† 'Of what good are all these modern sanitary arrangements when dirty children with disease germs lurking on their bodies or their clothes are brought into these healthful classrooms?' "

THE WORK OF SANITARY AND HOUSING ASSOCIATIONS

Section 6. Sanitary and housing associations have been formed in many cities. A sanitary aid society, such as the "Mansion House Council on Dwellings of the Poor in London," or the "Sanitary Aid Society of New York," would find a great field for usefulness in Chicago. The purposes of these societies are, first, to create and maintain public sentiment which will support the health department in doing its whole duty; second, to obtain necessary legislation; third, to make special inquiries and investigations, and fourth, to educate the public by any means possible in the elementary principles of sanitation and hygiene. The chapters preceding show what scope there is for such societies. For a law enforcement organization, years of persistent effort could be planned.

This is a most opportune moment to investigate certain evils and the cost of reforms. Suggestions by private associations to

* Journal American Social Science Association, 1900, page 30.

† Journal of American Social Science Association, 1900, pp. 30-49.

assist our city council to deal effectively and economically with the garbage and street-cleaning problems, would be most valuable at this time. Plans for the regulation of certain trades associated with tenement-houses should be submitted to the public authorities. A carefully prepared building and sanitary code, including some necessary new laws, would be of great value. In its largest usefulness a sanitary aid society should not only undertake investigations, but should also follow up all its inquiries with practical remedial efforts. For instance, the "Social and Sanitary Society of Edinburgh" has inspectors who are constantly engaged in reporting sanitary and housing evils to the municipal authorities. The London society has groups of inspectors in every district of the city which make constant inspections for the purpose of bringing to the various vestry boards instances of sanitary neglect.

The most important private effort in the direction of providing remedies to actual evils is the work of the housing associations. Almost every large eastern or foreign city has examples of model tenement construction. Such tenements have been built by companies which are first purely commercial; second, commercial with a tinge of philanthropy—that is to say, limiting their income to a small dividend; and third, philanthropic, where the surplus income is devoted to the extension of the work. Besides these efforts, many large employers with commercial interests in view, have furnished housing accommodations to their employes. This movement has spread with considerable rapidity throughout foreign cities. In London alone there are eleven large housing corporations, with capital amounting to fifteen million dollars, yielding an income of six hundred and eighty thousand dollars a year.* In New York the Riverside Buildings pay six per cent.† The New York Improved Dwelling Association pays five per cent regularly.‡ In 1896 the City and Suburban Homes Association was organized with a capital of one million dollars. Dr. E. R. L. Gould, the president, states as the objects of this association:§ "To offer to capital a safe and permanent five per cent invest-

* Christian Social Union Leaflet II (London).

† See annual statements.

‡ See annual reports.

§ Prospectus of the Association, page 1.

ment and at the same time to supply wage-earners with improved wholesome houses at current rates." The association has made an effort to remove the better paid wage-earners from the congested districts of the city. The inner circle of all large cities almost always has a pressure of overcrowding from many different sources. It is next to impossible to remove various classes of unskilled wage-workers. To build tenements in the central portion of a city for skilled laborers or those drawing sufficient wages to enable them to live out of the inner circle, is to add more crowding to the already congested district. But the New York association has also built tenements which would furnish poorly paid laborers with sanitary homes situated in the downtown areas. It is certainly most important that model tenements which are designed to house the better paid wage-earners should not be built in the inner circle of any city.

Efforts in model housing are too numerous to specify. Washington, Philadelphia, Baltimore, Cincinnati, Boston, New York, and almost every foreign city, have model housing companies. Many more such companies would be formed probably, if it were known that model tenement building had been in the past a very safe investment. Dr. E. R. L. Gould said before the New York Tenement-House Exhibition that,* "Upward of one hundred millions of dollars have been invested in improved housing in the largest European and American cities; and eighty-eight per cent, that is, eighty-eight million dollars, is now earning and always has earned a commercial profit. Six per cent, that is, six millions of dollars, has returned a savings bank rate of interest, and only six million dollars out of the whole one hundred million dollars have been invested less profitably." The purposes of the improved housing companies have varied. The largest effort has gone in the direction of establishing model block dwellings with little or no personal influence exercised by the builders. In certain cases, some of the worst and most insanitary pieces of property have been bought by model housing companies. Following this, some skilled person has been placed in charge for the purpose of improving the condition of the tenants. Certain extremely valuable results have been attained in this kind of work by Miss Octavia Hill and Miss Victoria Cons, of London, and by Miss

* See "Charities," February 17, 1900, page 9.

Collins, of New York. These few people have at least demonstrated that the foul and insanitary conditions which exist in the worst tenements are not due alone to the habits and neglect of the tenants. They have shown that the mass of tenement-house property is very badly managed.

A most interesting suggestion in the way of tenement-house reform is made by Mr. Lawrence Veiller, of New York, and is illustrated by models and plans.* It contemplates the condemnation by the city of a whole block as a park, from which a strip of land forty feet deep on each side should be sold to a private company, who would erect model tenements, under certain restrictions. "This," says Mr. Veiller, "seems the most hopeful plan ever suggested. The company paying for only forty feet, and being permitted to occupy all of it, can pay a good price and still make six to seven per cent. The land being only forty feet in depth, the buildings would be only two rooms deep, and it would not be possible to have any dark rooms. The city selling two-fifths of the land to this company, would certainly get back two-fifths of the cost. As a matter of fact, it will get back more, for they can sell the outside for more than the inside, so that the city gets 120 by 400 feet of park land, and also gets model tenements at the same time. There is no reason why this could not be repeated all over the city of New York wherever parks are needed. There are sixteen proposed parks which are absolutely necessary at this time. Why should not this scheme be put through? Why should not this work be begun by the city? It would, of course, require special legislation, but it would be the best, wisest, and happiest solution of the problem ever made."

THE EXTENT OF REMEDIAL EFFORTS

Section 7. In conclusion, we see what varied municipal and private activities are necessary in order to control the housing conditions in large cities. The most serious reform question before the people of New York and London is the tenement-house problem. In both of these cities, the formation of a responsible commission of experts to control the distribution of population

* See Report of Tenement-House Commission, 1900, page 64. Also "Charities," February 24, 1900.

is perhaps the most thorough expression of the reform movement. With or without a change of administration, there have been in all cities a growing control and regulation by the city of the new buildings and of existing structures. Carefully planned building and sanitary codes, with the most explicit provisions for the sanitary construction and the maintenance of all tenements exist in the older cities. Along with the effort to control the distribution of population goes a carefully planned scheme of dispersing the people by means of workmen's trains; or in other words, by cheap, rapid, and convenient transportation. In all cities the movement for open spaces and baths is spreading in response to the belief that much of physical weakness, debility, and juvenile criminality are due to overcrowding. Many foreign cities are undertaking the construction of model tenements, and are themselves becoming the landlords of large numbers of working people.

It has been said for years that Chicago has no serious tenement-house problem, that owing to its prairie location it is free from the pressure which the Manhattan Island site has forced upon New York, so that it presents the most crowded tenement-house district in the world; that Chicago has not the squalid conditions of East London, which have grown up in three generations of city poor, because the poorer people of this city are for the most part European immigrants who in one generation, or at most two, grow prosperous and move to the newer quarters of the city. It is further added to this statement that Chicago conditions are changing so rapidly that no one district becomes identified with the hateful word "slum," and that whatever the problems may be, they are all in the future. But it is surely true that a problem which arouses reform activity so varied and energetic is not a mere phantom.

The results of the foregoing investigation were a surprise to the people most intimately acquainted with the districts, for although each knew of shocking isolated cases, it was supposed that these were exceptional. It must not be forgotten, however, that the temptation to each individual owner to cover his entire lot with buildings is as great in Chicago as in New York; and that there is a tendency on the part of the city to neglect those wards which for the safety of the whole community most need its

care, and that ten years' residence in an insanitary house would ruin the health of the sturdiest immigrant. This report warns the people of Chicago that the city's location alone will not save it, but that public opinion and legal enactment are essential if Chicago is to escape the housing evils of New York and London.



A CHILD OF THE TENEMENTS

APPENDIX.

I

OTHER WORK OF THE COMMITTEE

Besides the inquiry showing the sanitary evils in representative portions of the city, the Committee for a time considered a plan for undertaking a series of monographs on certain other neglected districts in Chicago. The conditions of the Stock Yards district and of South Chicago are of special interest in that they show most abominable outside sanitary conditions. These districts show evils which are really anachronisms, and it will surprise many Chicagoans to know that the application of sanitary principles to the urban standards of health are so extremely backward in these industrial communities. As a matter of interest and not as a conclusive or exhaustive treatment of conditions in these and other portions of Chicago, the following hastily prepared report, giving a general view of the conditions on the North and South sides, is inserted: "The worst district in South Chicago lies between Eighty-third and Eighty-seventh streets and between Ontario and Green Bay Avenue. The district is almost entirely inhabited by Poles, and there are but few residents of other nationalities. The general impression in walking through this district is that there exists some crowding of people in the houses, although the houses themselves are not crowded upon the lots. The dwellings are almost entirely made of wood. Some of them are dilapidated; all of them seem to be neglected. The houses are built on piles or stilts. The water stands upon the ground almost the entire year, which makes it dangerous for people to live in basements. However, several families in this district live in such apartments. The entire district lies in a swamp, and the houses are built upon land which is about eight feet below the city datum. In some places the sidewalks are eight feet above the lots and the street. There is no sewerage, unless that name is given to a system of gutters by which a cer-

tain amount of sewage is carried off. There is usually an odor from the foul waste matter which accumulates in these places. The land is undrained and in some cases the water stands for months under the houses and upon vacant lots. In certain places there was a green scum upon the water which showed that it had been standing stagnant for some time. There are no water-closets and the outlawed privy vault is in general use. The yards, streets, and alleys are indiscriminately used for the disposal of all sorts of garbage and rubbish. Almost no garbage boxes were found. None of the streets are paved, and the whole district is filthy beyond description. The atmosphere of the neighborhood is clouded with smoke and the district is extremely dreary, ugly, and unhealthful.

In the Stock Yards district there is no large area, such as the one in South Chicago, where the conditions seem to be uniformly bad. On ——— Avenue there are some old rookeries and some new little brick boxes raised on stilts, which will probably be sold on some installment plan to the working people in that vicinity. Many working people have bought, or have tried to buy, these houses, but before they paid up the installments the houses were in bad repair and wretchedly dilapidated. Very often workmen have tried to buy them on the installment plan and have lost them again and again. There is a long row of houses on ——— Avenue where the conditions are about the same as stated above. Very few of the houses in this locality are deficient in provision for light and ventilation, and none of them seem to be overcrowded. The worst features are the external conditions which surround the dwellings. In many parts of the district there are no sewers and the sewage from the houses stands in stagnant pools. The south branch of the Chicago River is really a ditch which accumulates a great deal of sewage from the stock yards, and fills the air with poisonous odors. The stench from the stock yards is also present. The district is overshadowed by heavy clouds of smoke from "the yards."

Between La Salle and State Streets, all the way from Fortieth Street up to Harrison Street, there are some exceedingly bad housing conditions. Near Thirty-sixth Street and Armour Avenue there is a portion of a block which is called "Hell's

Half Acre." The houses are badly overcrowded with colored people, and many of the rooms are dark. People live in cellars and basements which are very near overflowing privies. The alleys are dark and are strewn with garbage. The houses in this particular portion are badly overcrowded on the lots. In many other places in this portion of the city down to Twenty-sixth Street are either old dilapidated frame houses or large tenements. Many rear houses exist, and they are usually overcrowded and in bad condition. North of Twenty-second Street, there are many large tenements. One block is almost entirely covered with double-deckers from three to five stories high. There is no alley in this block, and at the rear of the double-deckers there is a small space which is altogether insufficient to provide light and ventilation.

In the Italian quarter there are several large tenements housing hundreds of people. The most dilapidated houses in the city probably exist on Pacific Avenue. Rows of houses in this part of the city should be demolished. There is a group of double-deckers on Pacific Avenue just north of Polk which completely covers five lots. The place is overcrowded with tenants and almost half of the rooms are dark and unfit for habitation. Water-closets are in a hallway on the lower floor of the house. There is a fearful stench arising from them at all times. The tenants complain bitterly, both of the odor and of their location. These tenements are as bad as any elsewhere in this country or abroad. While this, as a whole, cannot be taken as even a superficial statement of the evils existing in this part of the city, it is suggestive of the need of a more complete inquiry.

On the North Side there are several places worthy of note. On the northwest corner of ——— and ——— streets, there are five or six tenements of four and five stories in height which are built very closely together. The light and ventilation of the houses are exceedingly bad, and the Italians who dwell there are overcrowded in the rooms. At ——— Indiana Street, there are several brick tenements of three and four stories high. The houses are crowded on the lots. At one place in this group of tenements the only open space is a deep four-story shaft, or court, which is mainly used for the purpose of inclosing water-closets. Looking from the top story of these tenements to the

bottom of the court, and seeing the children and mothers with babies in their arms walking back and forth in this small breathing-space, is a forceful reminder of New York conditions. Much of the area lying between Franklin Street on the east, Erie on the north, and Chicago River on the west and south, is covered with insanitary tenements. On ——— Court and ——— Street, near Chicago Avenue, there are two long blocks where the houses are closely crowded on the lots. Almost every house has a basement, and all the lower rooms seem to be occupied. There is plenty of evidence to show that there is both overcrowding on the lots and overcrowding in the houses."

II

HISTORICAL, DESCRIPTIVE, AND ECONOMIC FEATURES OF THE DISTRICTS

The three districts investigated might be roughly taken to include nearly all of the Italian quarter in the Nineteenth Ward, a large portion of the Jewish Ghetto, a small part of the Bohemian quarter, and a small portion of the Polish colony in the Sixteenth Ward. Many other nationalities, however, are represented in these districts. There are quite a large number of Germans, Irish, and Bohemians in various parts of the Italian and Jewish colonies. Scattered here and there are some Greeks and Austrians. It is true here as in most cities that the Italian and Jewish immigrants seek out the poorest and most neglected districts of the city in order to obtain the advantages of a low rental. For this reason and the necessity of both of these peoples living in the inner circle of our American cities, they have chosen to reside in what has been called in this report District 1. It is one of the oldest parts of Chicago, and lies in the inner circle, within a short distance of the central business portions of the West and South sides. Real estate has been declining for several years in this locality. Before the great fire of 1871, which started in Block 15, one of the notoriously crowded blocks, this district was largely populated by Americans, Irish, and Bohemians. Immediately after the great fire this district was covered over with small frame and brick houses. But about the time the Jews and Ital-

ians began to move in, the better class of inhabitants were beginning to move away and leave their houses in a more or less dilapidated state. Almost no improvements, except the questionable ones of enlarging and covering more of the ground space with tenements, have been undertaken since the immigrants have chosen this district for their homes.

The rents of the apartments in the districts investigated were not gathered on the general schedules, but in the special investigation of apartments it was possible to learn the rents of 420 different apartments. In the Jewish district 27 families paid for their apartments over \$10 a month, 23 families paid from \$8 to \$10, and 22 families paid under \$6 per month. The average rent paid per apartment per month was \$8.28, and the average per room was \$2.12. The rents in the Italian colony are considerably lower than those in the Ghetto. Only one Italian family paid over \$10 per month for rent; 7 paid between \$8 and \$10; 30 between \$6 and \$8; 88 between \$4 and \$6, and 26 families paid under \$4. The average rent per apartment in the Italian district was \$4.92, while the average rent per room per month was \$1.78. The houses in the Italian quarter are more dilapidated than those in the Ghetto, which accounts for some of the differences.

The following is a tabular statement of the above and additional facts:

TABLE OF RENTS

District.	Classification of Rents Paid.					Average Rent.	
	\$10 or over.	\$8 to \$10.	\$6 to \$8.	\$4 to \$6.	Under \$4.	Per Apt.	Per Room.
Italian	1	7	30	88	26	\$4.92	\$1.78
Jewish	27	23	22	12	2	8.28	2.12
Between Jewish and Italian	2	18	41	36	3	6.24	2.04
District 2, Polish	2	2	18	17	7	5.66	1.40
District 3, Bohemian	--	2	22	10	2	5.93	1.64

The value of tenement-house property depends, of course, upon the rents. But land in parts of District 1 is worth little, if any, more than it was twenty-five years ago. It is worth less than it was seven years ago. A place on Ewing Street for which \$17,000 was offered in 1893 can now be bought for less than

\$10,000. A vacant lot of 25 feet in width on Jefferson Street was sold eighteen years ago for \$2,500; it was bought back recently by the former owner for \$1,800. Property on the business streets, such as Halsted, Twelfth, and Canal, is much more valuable.

Many non-resident landlords own vacant lots and some tenement-house property, all of which are permitted to be in a most wretched state of neglect, mainly because they are holding the property until it can be sold to advantage. In this district 44 factories, 116 stores, and 731 other places of business were found. Many of these were cigar and tailor shops. Some were saloons, but the mass were the small shops of Jewish and Italian grocers, etc.

The following table shows the number of stores, factories, and shops in the three districts investigated. The majority of all businesses, as should be expected, is in District 1. There were 33 tailor and cigar shops which are also used as living apartments. In several places it was found that apartments were partitioned off in the rear of saloons, groceries, and other stores. Most of the provision stores and clothing establishments of one kind and another were found on Twelfth Street, on Jefferson, and on Halsted.

STORES, FACTORIES, AND SHOPS

District.	Exclusively Used as		Tailor and Cigar Shops		All Other Shops.
	Stores.	Factories.	Lived in.	Not Lived in.	
District 1 -----	116	44	33	93	605
District 2 -----	12	5	4	26	131
District 3 -----	7	21	7	43	174
Total -----	135	70	44	162	910

District 2, or the Polish district, lies in the Sixteenth Ward. The workers are nearly all unskilled, but are thrifty and industrious. The business interests of the district are small, and it will be seen in the foregoing table that very few businesses were found in the districts investigated. There are, however, a few

stores bordering on Milwaukee Avenue and quite a number of tailorshops. The houses are nearly all owned by the Polish people, and the owners in most cases live in their own tenement-houses. There were very few pieces of property for sale, and only 24 "for sale" cards were found. The Polish people are content, of course, to hold this property as long as residents of their nationality predominate. The majority of tenants, as will be seen in the foregoing table, pay for their apartments between \$4 and \$8 per month. The average rent per apartment is \$5.66; the average rent per room, \$1.40. It is significant to note that while the average rent per apartment is larger in this district than in the Italian district, the average rent per room is less, showing, of course, that the Poles receive, after all, more for their money.

District 3, or the Bohemian district, lies near Eighteenth Street and Blue Island Avenue. There are a large number of tailoring shops and other factories in the district. The few stores enumerated are on Blue Island Avenue. This district is rather more prosperous than the other two. But many Bohemians live in very poor homes. The rents for this district are very nearly the same as those in the Polish district. The majority of residents pay between \$4 and \$8 per month for rent. The average rental per apartment is \$5.93, and per room \$1.64.

The housing conditions in Districts 2 and 3 are in many ways quite different from those in District 1. The houses are larger. They are built of brick and frequently cover a very large percentage of the lot. It is not uncommon in either district to see a two and three story brick tenement covering the entire depth of the lot. In a block without an alley in the Bohemian district there are occasionally three-story tenements running solidly through from street to street. Over half of the front houses in these districts are of 3 stories in height and 63.7 per cent are of either 3, 4, or 5 stories in height. The majority of rear tenements in this district are of two stories, although three-story brick tenements are frequent. More evidence of the new housing problem and of the excessive greed of landlords is exhibited in the Bohemian and Polish quarters than in District 1. But there are no tenements in either Districts 2 or 3 which will equal in size or viciousness several large double-deckers in District 1.

The mass of tenements in both the Bohemian and Polish districts are more often reprehensible.

The statement in regard to conditions in these districts would not be complete without some facts regarding saloons. The following table will show the statistics on this subject:

RATIO OF SALOONS TO POPULATION

	No. of Sa- loons.	No. of Individ- uals.	Ratio.	No. of Fam- ilies.	Ratio.
Italian District north of Twelfth Street, Blocks 1 to 24 -----	56	14,360	256.4	3,108	55.5
Jewish District south of Twelfth Street, Blocks 25 to 44-----	24	10,452	435.5	2,060	85.8
Polish District, Blocks 45 to 54 -----	46	13,825	300.5	2,716	59
Bohemian District, Blocks 55 to 63, in- clusive -----	30	7,006	233.5	1,544	51.4
Totals -----	156	45,643	293.2	9,428	60.4

This table shows the number of saloons in proportion to the population. It will be seen that the largest number of saloons in proportion to the population is in the Bohemian district. There is, however, very little difference between the ratio in the Italian district and that in the Bohemian. The lowest ratio, as expected, is in the Jewish district. The saloons, however, in these districts are not out of proportion. In Chicago as a whole the ratio of saloons to population is one saloon for every two hundred and sixty-two persons. Therefore, the averages here are about the same as those existing in the city at large. The following small towns with a population about the same as that of this district have many more saloons, for instance Yonkers, New York, has 222 saloons; Waterbury, Connecticut, 193; Fort Wayne, Indiana, 160; Youngstown, Ohio, 179; Covington, Kentucky, 201, and Galveston, Texas, which has a population of 8,000 less persons than are found in these districts, has 317 saloons.

In the investigation of the Commissioner of Labor in 1894 into the number of saloons per person in Chicago as a whole, it was found that there was one saloon to every 212 persons. While in the investigation of the slum district of the First Ward, there was

one saloon to every 127 persons. This shows quite clearly that the conditions in these districts are fairly good compared with those elsewhere. It is safe to conclude, what is after all an old observation, that the people in these districts are for the most part sober and law-abiding citizens.

III

STATISTICS ON THE CONSTRUCTION AND THE SIZE OF HOUSES

MATERIAL OF HOUSES

The following table shows that half of all houses investigated were frame houses. The percentage runs much higher than this when only the rear tenements are considered. In District 2 the percentage is much smaller. This is of course what should be expected from the studies made in the main body of the report. The old frame cottages and two-story frame houses have been moved to the rear of the lot. This is especially true in District 1, which is the oldest of the three districts investigated. The Polish and Bohemian districts have, as will be seen, a large number and percentage of brick houses. But that there is a growing number of brick tenements in District 1 is shown by the fact that at present one-third of all the front houses are of brick. There are not many houses of combined brick and frame. The photograph on page 35 will show a common type of this kind of house. Very often a frame cottage will be raised upon a basement story of brick. The reconstruction makes a tenement-house of either two or four apartments. In District 1, where this type of house is most common, we see that one in every nine houses is constructed of this material.

MATERIAL OF HOUSES BY DISTRICTS

	Location.	Frame.		Brick.		Combination Brick and Frame.	Per Cent.	Total.
		Number.	Per Cent.	Number.	Per Cent.			
District 1.	Front --	815	54.6	502	33.7	175	11.7	1,492
	Rear --	329	79.9	57	14	26	6.1	412
District 2.	Front --	185	34.9	279	52.7	65	12.4	529
	Rear --	167	70.5	53	22.3	17	7.2	237
District 3.	Front --	74	20.5	266	73.6	21	5.9	361
	Rear --	39	48.1	28	34.6	14	17.3	81
	Total	1,609	51.7	1,185	38	318	10.2	3,112

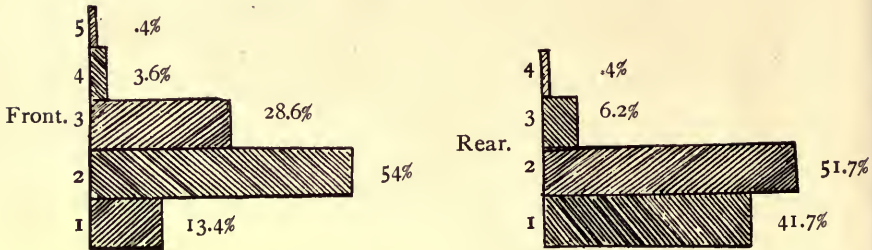
The tables and diagrams following show all of the front and rear dwellings classified according to the number of stories. As will be seen, the majority of front houses in District 1 are of two stories. This is also true of the rear houses in this district. A considerable percentage, however, of all front houses are three stories in height. A small percentage of front dwellings are four and five stories in height. In District 2 the conditions are somewhat different. There are more three-story houses and more four and five story tenements. In District 3 the conditions are considerably different from those in the other two districts. Over half of all the front houses are of three stories and one house in every ten is of four stories in height. What is true of this district is also true of all the others, namely, that the largest number of rear tenements are of two stories in height. The tables show that half of all dwellings are of two stories. It also shows that there are almost as many houses of three, four, and five stories as there are of one story.

FRONT AND REAR DWELLINGS CLASSIFIED ACCORDING TO STORIES

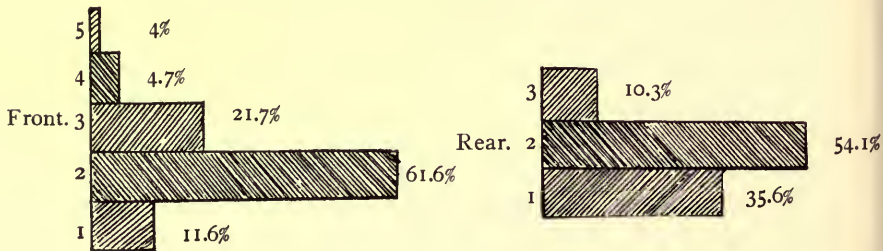
	1 Story.		2 Story.		3 Story.		4 Story.		5 Story.		Totals.	
	Num-ber.	Per Cent.	Num-ber.	Per Cent.	Num-ber.	Per Cent.	Num-ber.	Per Cent.	Num-ber.	Per Cent.	Num-ber.	Per Cent.
District 1	106	13.4	428	54	225	28.6	28	3.6	2	.4	789	---
North of Twelfth Street	100	41.7	124	51.7	15	6.2	1	.4	---	---	240	---
District 1	80	11.6	424	61.6	149	21.7	32	4.7	3	.4	688	---
South of Twelfth Street	52	35.6	79	54.1	15	10.3	---	---	---	---	146	---
District 2	66	12.5	225	42.5	185	34.9	49	9.3	4	.8	529	---
Front	68	28.4	151	62.9	20	8.3	1	.4	---	---	240	---
District 3	22	6.4	101	29.9	173	51.5	40	11.9	1	.3	337	---
Rear	28	36.4	45	58.4	4	5.2	---	---	---	---	77	---
Totals	274	11.8	1,178	59.7	712	30.6	149	6.4	10	.5	2,323	---
Rear	248	35.4	399	56.7	54	7.6	2	.3	---	---	703	---
All	522	17.4	1,577	52.1	766	25.3	151	4.9	10	.3	3,026	---

CLASSIFICATION OF DWELLINGS ACCORDING TO STORIES
DISTINGUISHING FRONT AND REAR HOUSES

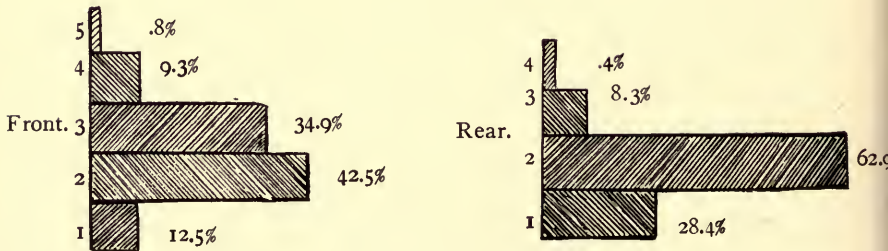
DISTRICT I, NORTH OF TWELFTH STREET



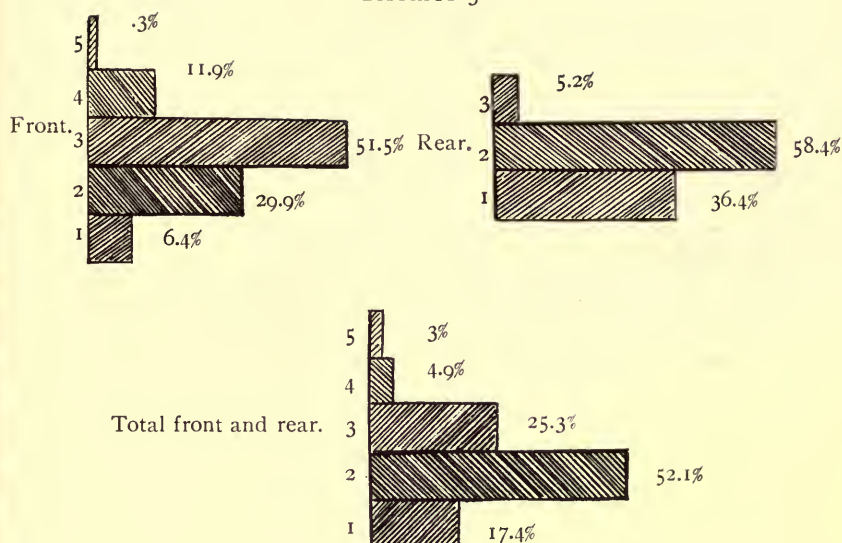
DISTRICT I, SOUTH OF TWELFTH STREET



DISTRICT 2



DISTRICT 3



The following table shows that in District 1 about one-third of all rear houses are one story and are built of frame. Only about one in ten of the front houses are one-story frame buildings. We see that one-story frame dwellings are about 14.95 per cent of all dwellings. This is a larger percentage than exists in either of the other two districts. In all three districts, one-story frame dwellings are most common as rear houses. There are, however, only 11.64 per cent of one-story frame dwellings in the districts. The smallest percentage, the table shows, is in the Bohemian district. It is quite common, as will have been noticed in the photographs, to find these little one-story cottages sprinkled throughout Districts 2 and 3. It would, however, be wrong to assume that these little cottages are at present the dwelling-houses of single families. Many times they have been partitioned off and two families, one in the front and one in the rear, occupy the little cottage. Too frequently it happens that three families have been crowded into the area which was frequently used by one family.

ONE-STORY FRAME DWELLINGS COMPARED WITH NUMBER OF ALL DWELLINGS

Location.	District 1.			District 2.			District 3.			Totals.		
	All Kinds.	One-Story Frame.		All Kinds.	One-Story Frame.		All Kinds.	One-Story Frame.		All Kinds.	One-Story Frame.	
		Num-ber.	Per Cent.		Num-ber.	Per Cent.		Num-ber.	Per Cent.		Num-ber.	Per Cent.
Front -----	1,498	144	9.61	529	15	2.83	360	8	2.22	2,387	167	6.99
Rear -----	408	141	34.55	242	42	17.35	80	13	16.25	730	196	26.84
All-----	1,906	285	14.95	771	57	7.39	440	21	4.77	3,117	363	11.64

IV

STATISTICS OF POPULATION, OCCUPATION BY NATIONALITIES, ETC.

STATISTICS OF POPULATION

Block No.	Adults.	Children.	Total.	Families.
1-----	516	442	958	212
2-----	300	238	538	112
3-----	173	171	344	77
4-----	190	145	335	72
5-----	498	380	884	202
6-----	364	303	665	148
7-----	304	248	552	114
8-----	163	183	346	75
9-----	611	523	1,134	232
10-----	182	155	337	71
11-----	207	165	372	88
12-----	180	168	348	72
13-----	507	445	952	199
14-----	228	160	388	98
15-----	373	306	679	139
16-----	172	149	321	64
17-----	828	673	1,501	337
18-----	274	223	497	116
19-----	244	232	476	113
20-----	191	237	428	90
21-----	428	299	727	155
22-----	305	285	588	130
23-----	214	293	507	99
24-----	218	265	483	93
25-----	186	113	299	68
26-----	284	266	550	111
27-----	119	141	260	54
28-----	159	216	375	69
29-----	121	105	226	47
30-----	206	212	418	103
31-----	224	342	566	102
32-----	129	193	322	63
33-----	116	118	234	47
34-----	411	502	913	181
35-----	233	176	409	84
36-----	613	459	1,072	209
37-----	219	335	554	106
38-----	151	225	376	65
39-----	231	241	472	88
40-----	355	342	697	136
41-----	386	531	917	178
42-----	170	138	314	58
43-----	447	318	765	161
44-----	298	415	713	128
45-----	616	519	1,135	227
46-----	614	588	1,202	230

STATISTICS OF POPULATION—CONTINUED

Block No.	Adults.	Children.	Total.	Families.
47-----	502	680	1,182	228
48-----	676	484	1,160	236
49-----	793	1,023	1,816	372
50-----	978	1,349	2,327	452
51-----	769	832	1,601	316
52-----	548	767	1,315	239
53-----	478	496	979	187
54-----	545	568	1,113	229
55-----	230	120	351	85
56-----	597	434	1,031	219
57-----	518	424	942	204
58-----	267	179	446	101
59-----	590	519	1,109	233
60-----	579	384	963	219
61-----	82	38	120	26
62-----	430	353	783	173
63-----	592	669	1,261	284

TOTALS

	Population.	Families.
District 1 north of Twelfth Street, Blocks 1 to 24-----	14,360	3,108
District 1 south of Twelfth Street-----	10,452	2,060
District 1, total-----	24,812	5,168
District 2-----	13,825	2,716
District 3-----	7,006	1,544
Total of all districts-----	45,643	9,428

OCCUPATIONS BY NATIONALITIES

Occupations.	Italian.	Jewish.	Bohe- mian.	Polish.	All Others.
Unskilled:					
Laborers-----	130	6	42	27	4
Paper-sellers-----	3	---	---	---	---
Scrub-woman-----	---	---	---	---	1
Express and teaming-----	---	2	3	---	1
Janitors-----	1	---	---	1	2
Peddlers-----	---	20	---	---	1
Fruit-venders-----	---	1	---	---	---
Bootblacks-----	2	---	---	---	---
Iceman-----	---	1	---	---	---
Rag-pickers-----	1	2	---	---	---
Totals-----	137	32	45	28	9

OCCUPATIONS BY NATIONALITIES—CONTINUED

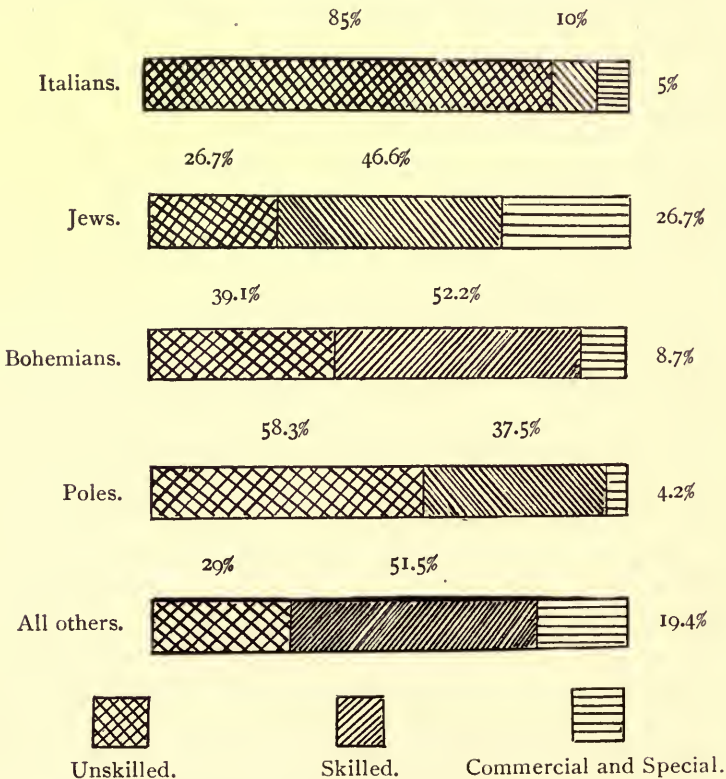
Occupations.	Italian.	Jewish.	Bohe- mian.	Polish.	All Others.
Skilled:					
Cook -----	---	---	---	---	1
Waiter -----	---	---	---	---	1
Bakers -----	3	1	---	1	---
Machinists -----	3	2	4	4	2
Blacksmiths -----	---	---	4	---	4
Tinsmith -----	---	1	---	---	---
Printers -----	---	1	2	---	---
Bookbinders -----	---	2	---	---	---
Masons -----	1	---	2	2	1
Carpenters -----	1	8	4	4	2
Shoemakers -----	1	3	7	2	---
Tailors -----	3	27	21	2	2
Barbers -----	4	2	4	---	---
Butchers -----	---	2	1	1	1
Jeweler -----	---	1	---	---	---
Cigarmakers -----	---	4	2	---	---
Firemen -----	---	---	1	1	---
Sailor -----	---	---	---	---	1
Coopers -----	---	1	---	---	1
Weaver -----	---	1	---	---	---
Electricians -----	---	---	3	---	---
Whitewasher -----	---	---	1	---	---
Upholsterer -----	---	---	1	---	---
Painters -----	---	---	1	1	---
Plumbers -----	---	---	2	---	---
Conductor -----	1	---	---	---	---
Totals, skilled -----	16	56	60	18	16
Commercial:					
Storekeepers -----	5	17	3	1	2
Saloonkeepers -----	2	---	3	---	---
Bartender -----	---	1	---	---	---
Clerks -----	---	4	2	---	---
Horse-dealer -----	---	1	---	---	---
Junk-dealers -----	---	1	---	---	1
Totals -----	7	24	8	1	3
Special:					
Rabbi -----	---	1	---	---	---
Teachers -----	---	6	---	---	---
Owners, retired -----	1	1	2	1	2
Midwife -----	---	---	---	---	1
Totals, special -----	1	8	2	1	3

SUMMARY

	Italian.	Jewish.	Bohe- mian.	Polish.	All Others.
Unskilled -----	137	32	45	28	9
Skilled -----	16	56	60	18	16
Commercial and special -----	8	32	10	2	6
Per cent unskilled -----	85	26.7	39.1	58.3	29
Per cent skilled -----	10	46.6	52.2	37.5	51.5
Per cent commercial and special -----	5	26.7	8.7	4.2	19.4
Totals -----	100	100	100	100	100

OCCUPATIONS AND NATIONALITIES

PROPORTION OF CERTAIN NATIONALITIES IN THE THREE MAIN GROUPS OF OCCUPATIONS AS FOUND IN 475 CASES IN DISTRICT I



It will be seen in the above tables and diagrams that the mass of Italians are unskilled. Their occupations are usually street work or various other kinds of shoveling or heavy lifting. They have usually come from the rural districts of Southern Italy, and when they arrive in this country they are handicapped by their inability to speak the language and by their lack of general education. They come quickly under the leadership of one of their own nationality who is generally able to obtain for them work from the railroads or the city.

The Jews are peddlers and tailors. Quite a number are store-keepers, but a few do unskilled work. A great number of Bohemians are tailors and skilled in other trades. The Poles, like the Italians, are most often common laborers. The largest number of Bohemians are skilled and the largest number of Jews are store-keepers. The Poles and Bohemians are usually more thrifty and hard-working than the Italians, and Jews have these qualities more pronounced than either of the former.

V

MISCELLANEOUS

THE IMPORTANCE OF DRY SOIL

The sanitary importance of dry soil is not generally realized. Land which has been made or built up in a swamp is apt to be dangerous to health, unless by some artificial method it is prepared to drain off water and the various other fluid accumulations. Where the population is exceedingly dense and where the waste slops of the population and the contents of the privy vaults are not properly cared for, the results are perhaps more dangerous to health than those of any other outside insanitary condition. Dampness, as has been shown elsewhere, is the cause of many forms of sickness. Lung diseases and rheumatism are particularly associated with dampness of the soil. A very large number of houses in all three of the districts have been built upon low land and made soil. In order that such a house may be sanitary it is very necessary that the whole area on which the house is built should be covered with a thick layer of some kind of concrete or cement. Damp courses also should be made to run

about the walks. These may be of asphalt or slate imbedded in concrete. Very few houses in the districts investigated have been built with any provisions for preventing insanitary evils resulting from the wet soil. In the three districts investigated there were 1,017 lots which were from two to six feet below the level of the sidewalk adjoining; 1,654 lots were at least two feet below the level of the street adjoining. Only 603 lots in the three districts were above or on a level with the street. This shows a most extensive prevalence of bad conditions resulting from a low land. Mr. Charles F. Wingate, a specialist on the sanitary construction of houses, says in an article on that subject published in the Municipal Affairs: "One of the most potent things which affect health is dampness. Manhattan Island is largely covered with rock, whose fissures collect and retain moisture. Much of the water front is filled in soil, and there are large sections of made land. Many natural water-courses have never been properly drained, and saturate the soil with moisture. To these combined influences we may ascribe much of the mortality from consumption and kindred diseases, which will certainly continue until the subsoil is drained and made dry, or the law now on the statute books which requires all tenement cellars to have an impervious flooring is strictly enforced. I consider the influence of soil dampness far more potent and insidious than the influence of bad plumbing, and therefore regard these forms as of vital importance."

Many outside insanitary conditions will appear, in the light of the foregoing, to be of more importance than they would otherwise be considered; 738 lots covered in this investigation in District 1 were not drained to the sewer; 781 cellars had no kind of drainage. These conditions, of course, accentuate the evils of the soil saturated with moisture. In parts of the districts investigated it was also true that the land was so low the sewer pipes were unable to be laid so that there was a sufficient fall and flow. In consequence, during certain seasons of the year the sewage backed up in the pipes and endangered the lives of the many thousand people living in these portions of the city. In fact, all drainage and sewer pipes are made more dangerous by the conditions which prevail in a district where the soil is wet and low.

FIRE ESCAPES

Almost no attention has been given in this report to the exceedingly important question of fire escapes and fire construction. There were almost no fire escapes reported, and there are many violations existing in all three of the districts of the laws on that subject. The law in Chicago requires that all tenements over three stories in height are to have fire escapes and standpipes. But only eight fire escapes were reported by the enumerators. Our laws on fire construction are exceedingly defective. It depends largely upon the Building Department whether or not there is any construction in tenement-houses which will prevent dangerous fires. By law the partitions between apartments are to be made entirely of incombustible material. In tenements less than five stories high the light shafts may be made of combustible material. In other cases the light shafts are to be made from incombustible material. Our laws are decidedly inadequate as compared to those of New York and other cities. The writer recently in looking at a tenement housing a very large number of people saw that the fire escapes were covered with boxes and barrels, and if a fire had occurred, the fire escapes would have been useless. There is no law to prevent incumbrances such as those spoken of. Enormous improvements can and should be made in our laws and in the enforcement of the laws which we already have.

There are hundreds of tenements in Chicago which are veritable fire-traps. Tenements housing five or six families and built solely of frame are frequently found in District 1. The writer has one in mind in which the most dangerous conditions prevail. There is a bakery in the basement where doughnuts are boiled in fat. By the merest slip the fat may drop into the fire and the whole tenement go up in a furious conflagration. Thousands of lives are endangered night and day by reason of the extremely faulty construction and the methods of escape which are now provided. Many terrible fires in tenement-houses have already occurred, and it is only a matter of time until some horrible and cruel disaster will awaken Chicago to the need of radical reform in this line.

THE SCHEDULES

The data gathered by the investigation was systematized and returned on the following schedules:

The purpose of Lot Card "B" was to obtain all facts regarding certain inside and outside sanitary conditions in and about all dwellings. Questions regarding the condition of the sidewalks, garbage boxes, and stables were gathered upon this schedule. Facts regarding the material and condition of each dwelling were placed in the section which have portions allotted for the front, middle, and rear house. On the back of this same schedule is a plumbing card. Information was gathered concerning the sanitary condition of all plumbing in all dwellings.

Apartment Card "C" was used in investigating certain apartments thought to have bad inside sanitary conditions. By this means it was determined whether or not the cellar or basement had good floor material, was water-tight, and whether or not it was damp on dry days. In regard to the cellar and the other apartments, the amount of cubic air-space per person was determined, the openings upon which windows faced and the conditions of light and overcrowding.

BIBLIOGRAPHY

HOUSING STUDIES REFERRED TO IN THIS REPORT.

- Baths, Report of Mayor's Special Committee on. (New York.)
Bowmaker, Edward, "Housing of the Working Classes."
Bulletin, Federal Bureau of Labor, September, 1900.
"Charities," Weekly of New York Charity Organization Society.
Charter, Greater New York.
Christian Social Union Leaflet II. (London.)
Department of Health, Chicago, Pamphlet on Laws.
Department of Health, Chicago, Report, 1897-1898.
Department of Health, Chicago, Bulletin, December, 1900.
Department of Public Works, Chicago, Report, 1898.
Estabrook, Harold Kelsey, "Some Slums in Boston."
Farr, William, "Vital Statistics."
Gould, E. R. L., "Housing of Working Classes," Report of National Bureau of Labor.
Haw, George, "No Room to Live."
Hill, Octavia, "Homes of the London Poor."
Hill, Octavia, "Work Among the Poor."
Housing of the Working Classes, Report of House of Lords Committee on, 1884.
Hunter, Robert, "Chicago's Housing Problem." Report of the Improved Housing Association. (Not published.)
Journal of American Social Science Association, 1900.
Kerr, Dr. Norman, "Inebriety."
Knopf, Dr. S. A., "Tuberculosis in the Tenements."
Lincoln, Alice N., "Concerning the Management of Tenement Houses."
Maltbie, Roy, Monograph on Municipal Functions, "Municipal Affairs."
Mann, John (Glasgow), "Better Houses for the Poor; Will They Pay?"
Massachusetts Bureau of Labor, Reports for 1892 and 1893.
Metropolitan Public Gardens Association, London Reports.
Newsholme, Arthur, "Vital Statistics."
New York Tenement House Commission, Report of, 1894.
New York Tenement House Commission, Report of, 1900.
Paine, Robert Treat, "Causes of Poverty."
Prospectus of City and Suburban Homes Association. (New York.)
Revised Statutes of Illinois, 1899.
Reynolds, "Housing of the Poor."
Riis, Jacob, "Ten Years' War."
Riis, Jacob, "How the Other Half Lives."

- Shaw, Albert, "Municipal Government in Great Britain."
- The Cottage Question: Reports from the Land Law Reform Association, London.
- The Slums of Great Cities. Report of National Bureau of Labor.
- Thompson, W., Alderman, "Housing of the Working Classes." (Richmond, Surrey.)
- Veiller, Lawrence, "Tenement House Reform in New York, 1834-1900."
- Veiller, Lawrence, "Housing Conditions and Tenement Laws."
- Veiller, Lawrence, "Tenement House Legislation in New York, 1852-1900."
- Warner, A. G., "American Charities."
- Wines, Dr. Frederick H., "Punishment and Reformation."
- Wingate, Chas. F., "Sanitary Construction of Houses," "Municipal Affairs."
- Worthington, T. Locke, "Dwellings of the People."

INDEX

- Air, need of fresh, 73.
 Air shaft, law regarding, 201.
 Alleys, badly paved, 117.
 statistics of unclean, 117.
 Asphalt, pavements, extension of,
 recommended, 116.
 Average number of persons per
 apartment, 65.
 per room, 64.
- Badly lighted rooms, number of, 78.
 Basements, conditions of, 88, 89.
 fitted for habitation, 92.
 Baths, difficulty of obtaining, 100.
 public, 108.
 Board of Health, 80, 99.
 State, 83.
 Bohemian district, 14, 42, 149, 187.
 Bohemians, 199.
 Boston, 32.
 baths, 173.
 Boxes, garbage, condition of, 136.
 location of, 136,
 refusal to furnish, 137, 138.
 statistics in regard to, 134.
 overflowing, 138, 139.
 Brookline baths, 173.
 Bureau of Charities, 161.
 Bureau of Labor, National, 166.
- Catch basin, definition of, 103.
 Cellars, 88.
 defined by city ordinance, 91.
 Chicago river, south branch of, 182.
 Chicago "slum," 178.
 Chickens, 141, 142.
 Children, 125, 126.
 City Attorney, 120, 122.
 City and Suburban Homes Associa-
 tion, 175.
 efforts of, 176.
 Classification of air space, per per-
 son, 86, 87.
 Cleanliness of buildings, 73.
 Closets, hopper, 106.
 pan, 106.
 sidewalk, 106.
 tank, 106.
 water, 105.
 Collins, Miss, 177.
- Commission des Logements Insalu-
 bres*, 163.
 Commissioner of Labor, investiga-
 tion of, 188.
 Comparative density of population,
 54, 55.
 Cons, Miss Victoria, 176.
 Construction and size of houses rela-
 tive to districts, 189.
 Courts, filthy, 126.
 report of, 126.
 Cramped living quarters, 66.
 commented upon, 67.
 Crime, cause of, 149.
 Crothers, Dr. T. D., 148.
- Data, manner of gathering, 202.
 Dampness, results of, 199.
 Death rate, 154.
 impossibility to ascertain, relative
 to housing conditions, 156.
 in proportion to Boston, 158.
 why materially reduced, 159.
 Death rates by wards, 156, 157.
 Defective sidewalks, 111.
 Degeneration, individual, 144.
 moral, 147.
 social, 144.
 Degeneration of two-story frame and
 brick houses, 22.
 Devine, Edward T., 145.
 District, Bohemian, 14, 42, 149, 187.
 Italian, 13, 92, 94, 149, 183, 185.
 Jewish, 12, 26, 32, 59, 92, 94, 119,
 149, 158, 185.
 Polish, 14, 26, 41, 54, 59, 64, 108, 149,
 181, 186, 187.
 Districts in the center of Chicago, 72.
 Double-decker, defined, 43-46.
 examples of, 46.
 result of, if permitted to grow, 49.
 Drainage, bad, 200.
 Drained lots, 102.
 Dry soil, importance of, 199.
 Ducks, 141, 142.
 Dwellings of the working class, 22.
- Edinburgh, improvement of, 19.
 Evils, prevention of, in New York
 and Boston, 23.

- Exhaustion, 153.
 Examination of plumbing, 100.
 Examples of bad sanitation in base-
 ment dwellings, 90, 91.
 Expropriation Act, New York, 165.
 Boston, 165.
- Farr, William, 160.
 Fetter, Dr. Frank, 58, 98.
 Finance committee of city council,
 report of, 119, 120.
 Fire escapes, law regarding, 201.
 incumbrances on, 201.
 Fluegge, Professor, 174.
 Frame houses, neglect of repair, 94.
 Front and rear tenement houses, 30,
 37, 75.
- Garbage boxes, 31, 130.
 statistics in regard to, 134.
 location of, 136, 137.
 Garbage, 133.
 systematic disposal of, 134.
 Gerhard, William P., 174.
 Glasgow, demolition of slum quar-
 ters, 19.
 Gould, Dr. E. R. L., 154, 175, 176.
 Gymnasiums, open air, 170.
 indoor, 170.
- Harris, Dr. Elisha, 149.
 Haw, Mr. George, 70.
 Health Department, 154, 155, 162.
 "discretion of," 162, 164.
 "Hell's Half Acre," 183.
 Hill, Miss Octavia, 176.
 Housing associations, work of, 175,
 176.
 Housing committee, whom it should
 consist of, 164.
 Housing conditions, in Liverpool, 16.
 comparison of, by districts, 187.
 Housing, examples of, 12.
 problems, 11.
- Indecent overcrowding, influence of,
 70, 71.
 results of, 71.
 Insanitary conditions, 141, 142, 143.
 Inspectors, 165, 166.
 Intemperance, 147, 148.
 Investigation, by committee on Tene-
 ment Conditions, 14.
 Italian district, 13, 92, 94, 149, 183,
 185.
- Jewish district, 12, 26, 32, 59, 92, 94,
 119, 149, 158, 185.
- Jews, 199.
 John Worthy School, 151.
 Juvenile criminality, cause of, 150.
 results of, 151.
- Kerr, Dr. Norman, 148.
 Knopf, Dr. S. A., 152.
- Law, prohibiting sidewalk closet, 107.
 Law regarding air shaft, 201.
 air space, 83.
 cellars, 94.
 depth of building, 24.
 fire escapes, 201
 lodging houses, 88.
 of New York and Boston pertain-
 ing to houses, 99.
 partitions between apartments, 201
 play grounds in connection with
 schools, 172.
 plumbing, 106.
 removal of manure, 132.
 window space, 78.
 water closet, 106.
- Lighting, need of, 73.
 Liverpool, housing conditions in, 50.
 Locke, Worthington, 128.
 London county council, 163.
 Lord Shaftesbury, 71, 153.
 Lot, overcrowding by buildings, 31,
 36.
 percentage to be occupied, 24.
- Low land, bad conditions resulting
 from, 200.
- Maltbie, Mr. Roy, 170.
 Manchester, Eng., 160.
 "Mansion House Council on Dwell-
 ings of the Poor in London,"
 purpose of the, 174.
 Manure, neglect of removal of, 131.
 law regarding removal of, 132.
 boxes, 129, 130.
- Material of houses, relative to dis-
 tricts, 190.
 Method of legislation, relative to
 building tenements, 165.
 Metropolitan Public Gardens Asso-
 ciations, the, 170.
 Municipal authorities, difficulties
 confronting, 17.
 Municipal legislation, need of, 26.
- Need of demolition of dangerous
 tenements, 165.
 Need of reform in laws relative to
 construction of buildings, 201.

- New laws necessary for good types of tenement construction, 164.
- New York, crowded condition of, 52.
- New York law regarding, keeping of animals, 141.
- play ground in connection with school, 172.
- removal of manure, 132.
- New York tenement house commission, 43, 51, 114, 164.
- New York Tenement House Exhibition, 152, 176.
- North Side, conditions on, 183.
- Open space, need of, 168.
- Ordinance, London, concerning water closets, 107.
- Outside sanitary condition, importance of, 111.
- Overcrowding, illustration of, 34.
- method of, 43, 51.
- results from, 51, 52.
- Paine, Robert Treat, 146.
- Pan closet, 106.
- Parks, 166.
- need of, 168.
- Pavements, asphalt, 116.
- block, 114.
- granite, 116.
- kinds of, 114.
- Pauperism, 146.
- definition of, 146.
- Percentage of families per apartment, 61, 62.
- Playgrounds, 170.
- Plumbing, definition of, 100.
- important part of, 100.
- law regarding, in Illinois, 101.
- Poles, 109.
- Polish district, 14, 26, 41, 54, 59, 64, 108, 149, 181, 186, 187.
- Poverty, 145.
- Preventative measures, lack of, regarding housing problem, 161.
- Privies, statistics of, 105.
- Privy vault, definition of, 104.
- Professor Huxley, 83, 87.
- Public baths, establishment of, by Liverpool, 173.
- in Boston, 173.
- Rag and junk shop, 142.
- Rear houses, 88, 94, 96.
- Rear tenement, definition of, 37.
- their description, 36.
- Report of Bureau of Labor, 32.
- Dr. Fetter, 42.
- Royal Commission, 52.
- New York tenement commission, 43, 51.
- Relative working qualities of the Bohemians, Italians, Jews, Poles, 199.
- Rents, in Bohemian quarter, 187.
- in Italian quarter, 185.
- in Jewish quarter, 185.
- in Polish quarter, 187.
- Restrictions of crowded tenants, 49.
- Results of investigation of City Homes Association, 178.
- Riis, Jacob A., 46, 165.
- Rooms, badly lighted, 79.
- badly ventilated, 75, 77.
- Saloons, ratio of, in different districts, 188.
- in proportion to other cities, 188.
- Sanitary Aid Society of New York, purpose of, 174.
- Sanitary reform, economic value of, 154.
- Sewage, 88.
- Sickness, 152.
- Sidewalk closet, law prohibiting, 107.
- Sidewalks, 117.
- defective, 119, 120, 122.
- statistics of, 118.
- wood, 118.
- Social and Sanitary Society of Edinburgh, 175.
- South Chicago, conditions in, 181.
- Special Parks Commission, 170, 171.
- Stables, condition and description of, 130, 131.
- offensive, 128.
- Statistics regarding apartments relative to floor space, 61, 62.
- area and population of Chicago, 58.
- conditions of houses, 96, 97, 98.
- defective lighting, 80.
- height of buildings, 190, 193.
- lighting and ventilation, 77.
- manure boxes, stables, etc., 129, 130.
- population, 53, 155, 156.
- rents, 185.
- sinks, 102.
- stores, factories, shops, 186.
- streets, 112, 114.
- tenants in each tenement house, 59.
- Stock Yards District, condition of buildings in, 182.

- Streets, badly paved, 112, 116, 117.
 statistics of, 112, 114.
 unclean, 112.
- Supervision of new tenement house
 buildings, 162.
- Tenement house, history of, in Chi-
 cago, 21.
- Tenement house reform, manner of,
 in New York and London, 177,
 178.
 suggestion of, 177.
- "Ten Years' War" in New York, 16,
 46.
- "The Health and Housing," 163.
- Tuberculosis, 152.
- Unclean streets, 112.
 alleys, 112.
- Vacant lots, filthy, 124, 125.
 "Visiting Nurses," The, 161.
- Warner, Amos G., 146.
- Water closet, 92.
 definition and kinds of, 106.
 insanitary, 107.
 lack of, 108.
- Wines, Dr. Frederick H., 150.

UNIVERSITY OF ILLINOIS-URBANA



3 0112 067852589