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OVERCROWDING AND  
DEFECTIVE HOUSING  
IN THE  
RURAL DISTRICTS

BY HARVEY B. BASHORE



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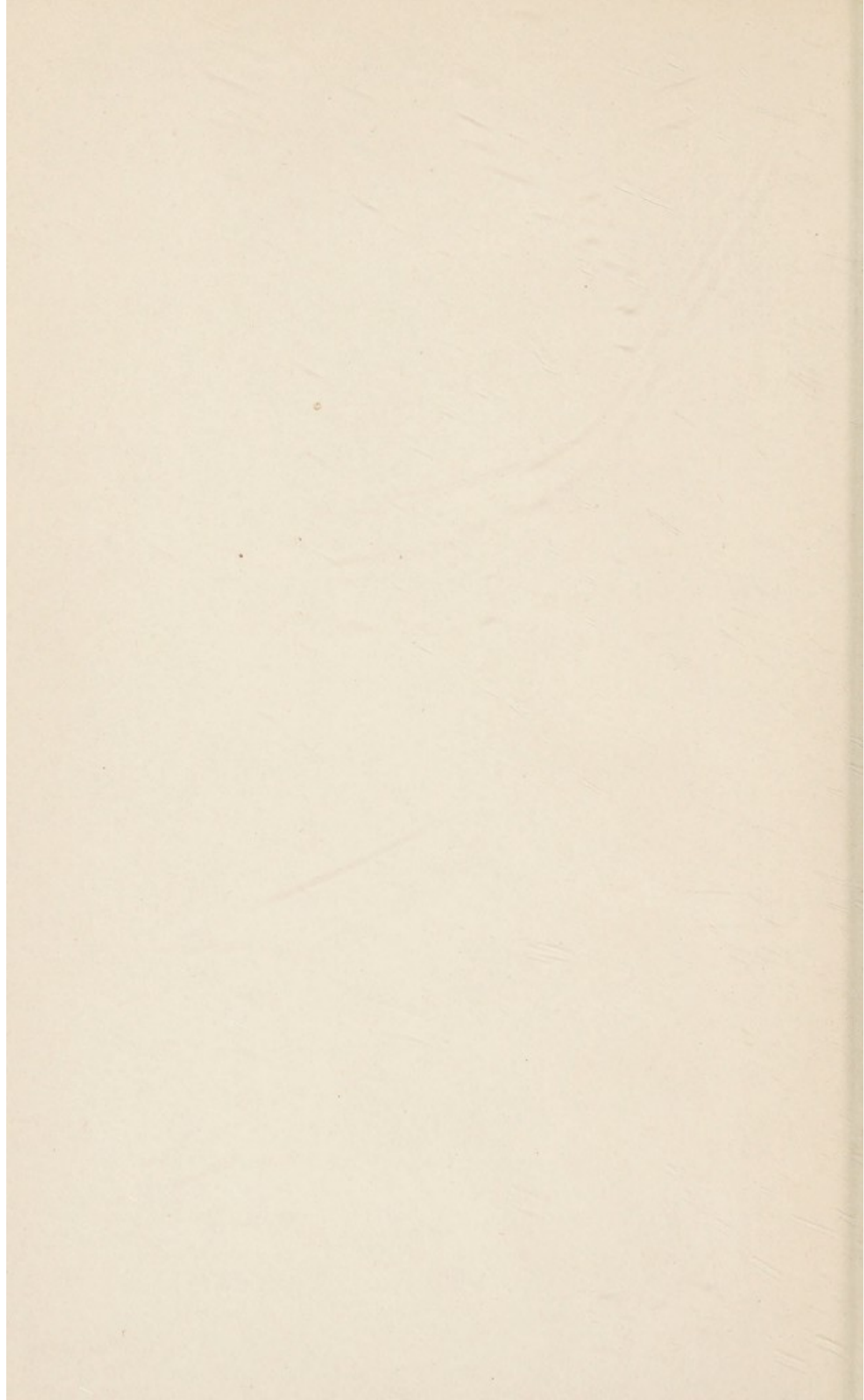
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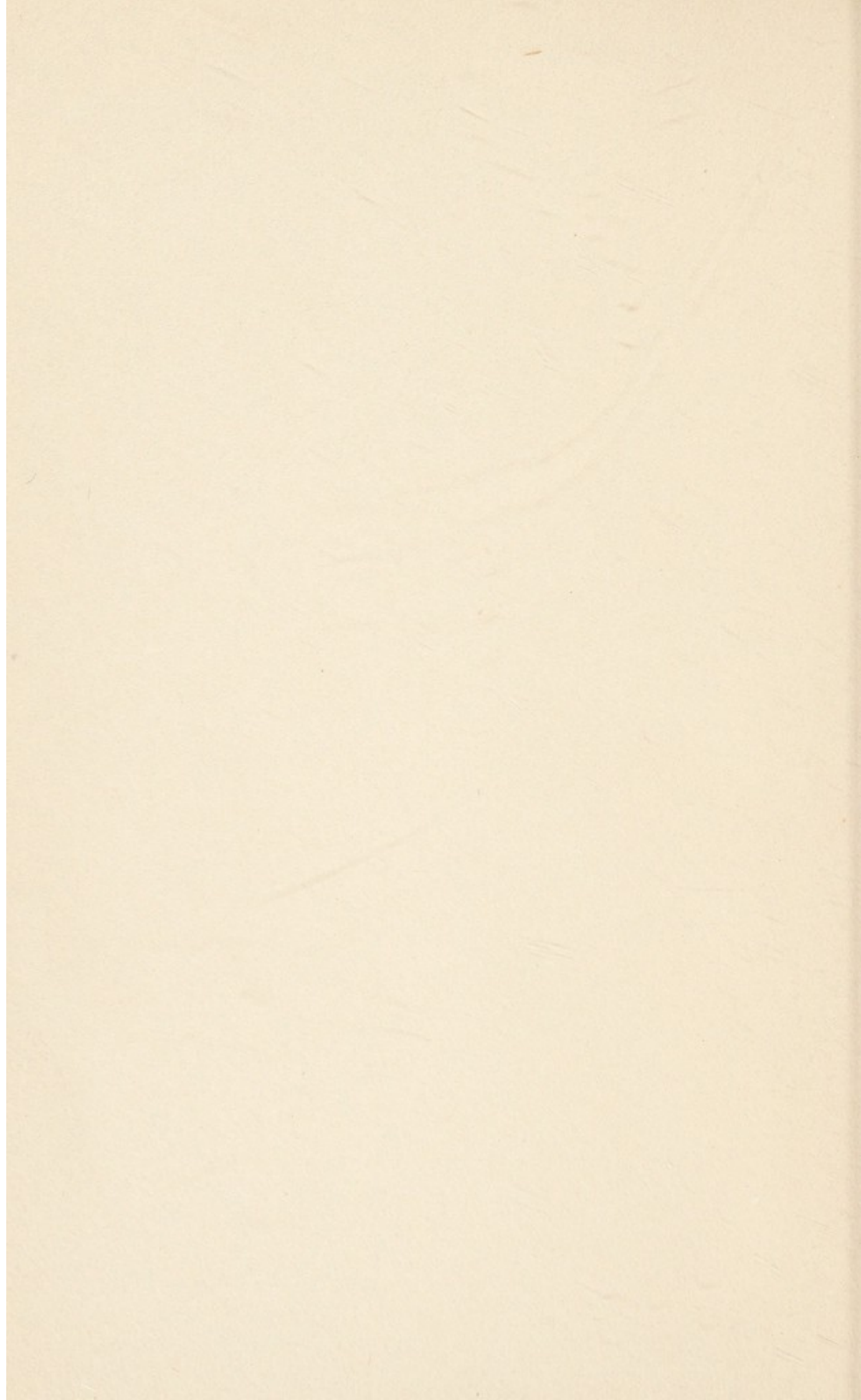
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## WORKS OF DR. H. B. BASHORE

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Overcrowding and  
Defective Housing  
in the Rural Districts





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# Overcrowding and Defective Housing in the Rural Districts

BY

DR. HARVEY B. BASHORE

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"The Sanitation of a Country House," "The Sanitation of Recreation  
Camps and Parks," "Outlines of Practical Sanitation"

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## PREFACE

WHEN we first began to investigate this subject it was hard to believe that real overcrowding existed in the country districts, but the more the subject was studied the more the fact became apparent. I little imagined that we had conditions in our own small towns and villages almost as bad as I had seen in the great East Side on Manhattan Island. Yet why not? Greed for gold is just as strong in the country speculator as in the city millionaire, and the owner of a few lots is going to make the most of them—if he has a chance.

The observations noted in this little



work were made for the most part in a typical rural farming community, inhabited by native-born Americans. That conditions are vastly worse in the great mining and manufacturing districts, no one can doubt. Many thanks are due to Miss Lucy Shellenberger, visiting nurse for the Pennsylvania Department of Health, for assistance in preparing the work, collecting data of the various "lung" houses, and reading the MS.

WEST FAIRVIEW, PA., *February*, 1915.

## CONTENTS

CHAPTER	PAGE
I. LAND OVERCROWDING.....	13
II. HOUSE OVERCROWDING.....	26
III. DEFECTIVE BUILDING.....	51
IV. OVERCROWDED AND DEFECTIVE SCHOOLS.....	66
V. RESULTS.....	80





# Overcrowding and Defective Housing in the Rural Districts

## CHAPTER I

### LAND OVERCROWDING

OVERCROWDING the land with buildings is not so very common in the country, yet it does occur in many villages and small towns, especially in those which are on the "boom" from some rapidly increasing industry, and much of this overcrowding in villages is due to the "row." We can readily understand how building in rows may be necessary in the great cities, but it surely is not necessary in villages and small towns: indeed, I have seen the "row" far out in the country, where land

is almost valueless. These barrack-like houses—and I know one small town where a certain small row is called the barracks—are perhaps satisfactory for soldiers, but for raising families they are anything but what they should be. At first thought you will say there is no overcrowding, but if you will think a little further, you will see that there is too much building—probably we ought to call it defective building—on each lot.

This overcrowding the land with houses does not, of course, injure the land nor the houses, but it is likely to injure the occupants, for, necessitating lack of air and sunshine in some of the rooms of the building, it leads to the consequent evil of house and room overcrowding, for the less air and sunshine a house has, the less people it can properly house. There may be room overcrowding in the isolated house standing in the middle of a ten-acre



field, but it is more likely to occur when the land is crowded with buildings, permitting the influx of more families caused by the apparent greater amount of housing space and cheaper rental.

There is hardly a village street which approaches anything like the width of the streets in the great cities—yet adjoining these narrow village streets as much land is covered relatively by buildings as in the city; on the other hand, although the village houses do not approach the height of the city houses the real condition is even worse than in the city, for the narrow street is frequently lined on both sides by low, bushy trees, and the houses, due to the lack of height, have such low ceilings that there is really less circulation of air than in the ordinary city home.

In Fig. 1 is shown an example of one of these village “rows” which has overcrowded the land. These lots, only



seventy-two feet wide, are completely covered at one end by a building which is divided into six so-called houses: each house contains two rooms downstairs and two upstairs. The end houses alone of such a building can have light and air on more than two sides, but, unfortunately, these ends are, in the present instance, furnished with very small windows, so that these end houses are very little better than the intervening ones. These lots should contain just about one-half as many houses and the increased rental derived from the better houses would, probably, in the end, yield about as much income from the land as when it was overcrowded with the "row." This insanitary row is situated in a town of less than a thousand people, but some years ago when a little "boom" struck the place, everybody wanted to get rich quick, and the owner of these lots found





FIG. 1.—THE ORDINARY VILLAGE "ROW"; OVERCROWDING THE LAND WITH BUILDINGS.





that he could rent many small houses profitably.

Of course it is well to remember that by proper building many more people can be housed on a given lot than by the improper building characterized by the usual village "row." However, to put up buildings which would be proper for housing many people would necessitate more expense than the value of the land would justify, consequently it is better to have relatively less building and house relatively fewer people on the village lot.

I was once driving in a wild mountain valley in Pennsylvania and came upon a settlement made up of the houses of the workmen of a nearby industry: rather, there were no houses; only a long row, divided into compartments, called houses in the company's books. The conditions here were scarcely better than a city block, and the inhabitants—pale, sallow,



dirty, and unkempt, from living in badly ventilated rooms—showed the typical countenances of the overcrowded. Yet right here there was land in plenty, land everywhere that nobody wanted—land for ten dollars an acre, and yet defective housing conditions crowded the land because the company employing these people were too penurious and too careless to build houses fit for human habitation.

Another improvement in the money-making scheme of overcrowding is to build additional houses on the rear end of the lot; very frequently the stable being changed into a dwelling-house. I knew an instance in which this happened in a small town: a man bought the stable at the end of a certain lot—a 100-foot lot—and fitted it up as a house and lodged therein his numerous family. He could have gotten an entire lot and house for the same cost a mile or so farther away,



but he preferred the crowding to the longer distance from the village centre.

I know of a case where a corner lot, 109 feet long and 58 feet wide, was by this arrangement so covered with buildings that barely 25 per cent of the lot was unoccupied; but 25 per cent unoccupied is the rule in some of the large cities, yet here was a village lot almost imitating the plans of the big city. Now, of course, one instance of this class of overcrowding might not be so bad, but the tendency is there, and sooner or later there will be a row of houses facing the street and a row in the alley. At first, as there is a demand for houses, a fairly good class of people may occupy them, but as the houses depreciate and the demands lessen, a poorer and more negligent class move in and the locality degenerates into a veritable "slums."

In Fig. 2 is shown another phase of rural overcrowding the land, which I sup-



pose does not happen very often, and that is an actual rear tenement,—small and insignificant the building is, yet nevertheless it differs only in degree from the big city tenement—the fundamental principle is just the same. It probably came about through a re-survey of the street which left the old house some distance back from the pavement: then an additional building was put up in the front and the old rear building rented as a Chinese laundry—almost as bad as some of the buildings in the Chinese quarter in New York.

A similar case worth recording is that in which an entire corner lot is covered with a building, so much so that the toilet accommodations are on the street. This result was, to be sure, brought about very slowly. A bankrupt speculator owned the building and lot, and gradually sold off the lot to his neighbor; in fact, sold every-





FIG. 2.—AN ACTUAL REAR TENEMENT IN A SMALL TOWN.





thing except the house, and that his neighbor didn't want!

Of course these are all isolated instances given only as samples of conditions which exist in many places: they serve to show it, possibly, at its worst. There are, however, few towns and villages which do not have some of these defects: they are mostly, I think, in the older ones. In the newer towns it is less evident.

How to prevent this condition from arising is not so easy save by proper education of the people. The building of rows and shacks begins quite often before the village is incorporated, while it is still the "country,"—only with township supervision which does not amount to much as long as a man keeps to his own land and pays his taxes. When the straggling houses become incorporated into a town, proper building rules can be made and enforced, but often already the damage is done.

## CHAPTER II

### HOUSE AND ROOM OVERCROWDING

HOUSE or room overcrowding is the common housing defect met with in the country—sometimes due to the ill-constructed building, poverty, or thoughtless landlord, but in many instances due to the carelessness and shiftlessness of the people themselves. The “house in the row” mentioned in Chapter I is very often responsible for a great deal of overcrowding; but not all rows are overcrowded. I have seen instances where small families lived in such limited quarters under proper sanitary conditions, but this, I think, is the exception. The “house in the row” very often contains only four rooms, so it is





FIG. 3.—SEVENTEEN PEOPLE ONCE LIVED IN THIS "ROW" OF THREE HOUSES.





very evident that when more than three, or at the most four, people live in such a house, with only small windows front and back, there will be overcrowding and with it lack of fresh air and sunshine.

As an illustration of this overcrowding, take the row shown in Fig. 3. Supposed to be three houses: at one time this building contained seventeen people, and as there are only four and one-half bedrooms (if there can be such a thing as half a room) in the whole row—one and one-half in each house—there was evidently a vast amount of overcrowding. The gable ends in this case have one small window: much better, however, than some others, which have no windows. Though the end houses in such a row are almost as bad as the middle one, they are still considered by far the best in the row, as is shown by the increased rental paid for them.

Why are such houses, insanitary they



surely are, built in our towns and villages? Simply because the owner hopes to make 10 or 12 per cent on his investment; and many an opulent family lives on the proceeds of a "rotten row" that is a disgrace to modern sanitary knowledge. These people, the proprietors, I mean—generally the best people in their respective communities,—fail to realize that insanitary dwellings built in sunless rows, even on another street, are a menace to their own health.

In the photograph (Fig. 4) is shown an example of gross overcrowding in a certain old-fashioned country town. Each wing of this building is called a home and rented to different families, although consisting of but one room; one of these is occupied by a mother and two sons—one eighteen years old: all three live and eat in this single room, and all three sleep in the one bed (Fig. 5). The other house is





FIG. 4.—GROSS OVERCROWDING. EACH WING OF THIS BUILDING IS RENTED AS A HOUSE, ALTHOUGH CONSISTING OF ONLY ONE ROOM.







FIG. 5.—THE INSIDE OF ONE OF THE "HOUSES" SHOWN IN FIG. 4. THREE PEOPLE LIVE AND EAT IN THIS ROOM, AND SLEEP IN THE ONE BED.





occupied by a man, wife, and two children. Bad it surely is, yet this house is owned by very respectable people who apparently fail to recognize the iniquity of renting such a house in the manner given.

The overcrowding mentioned above is in a great measure due to environment and landlord, the people themselves not being responsible for the existing conditions. On the other hand, there is very much overcrowding due wholly to the habits and ignorance of the people themselves. For example, a nurse from one of the State Dispensaries, in her visiting work, came across a certain farmhouse where five people were accustomed to sleep in one not very large bedroom, which had only one small window, and even that was nailed shut; one of these five had incipient tuberculosis. These people were well-to-do farmers living in a large twelve-room stone house, and sim-



ply crowded into one room for the sake of mistaken economy—presumably to save coal and wood. The picture of this house (Fig. 6) shows it to be a very comfortable and airy building which would be entirely suitable for an even larger family to live in, under proper sanitary conditions.

Another form of this overcrowding is seen in certain mountain districts of Pennsylvania, and I suppose it may be very much the same in other States. It has been noted in these places that the natives do not have the strong, healthy build, and a color redolent of health, but the thin, pale, and wan features of those suffering from the lack of pure air. Yet these people live in the purest of God's fresh air, in places akin to those in which we build our Sanatoria. Why is it? In many instances the explanation seems to be dependent on the personal habits of these mountaineers, who, on the advent



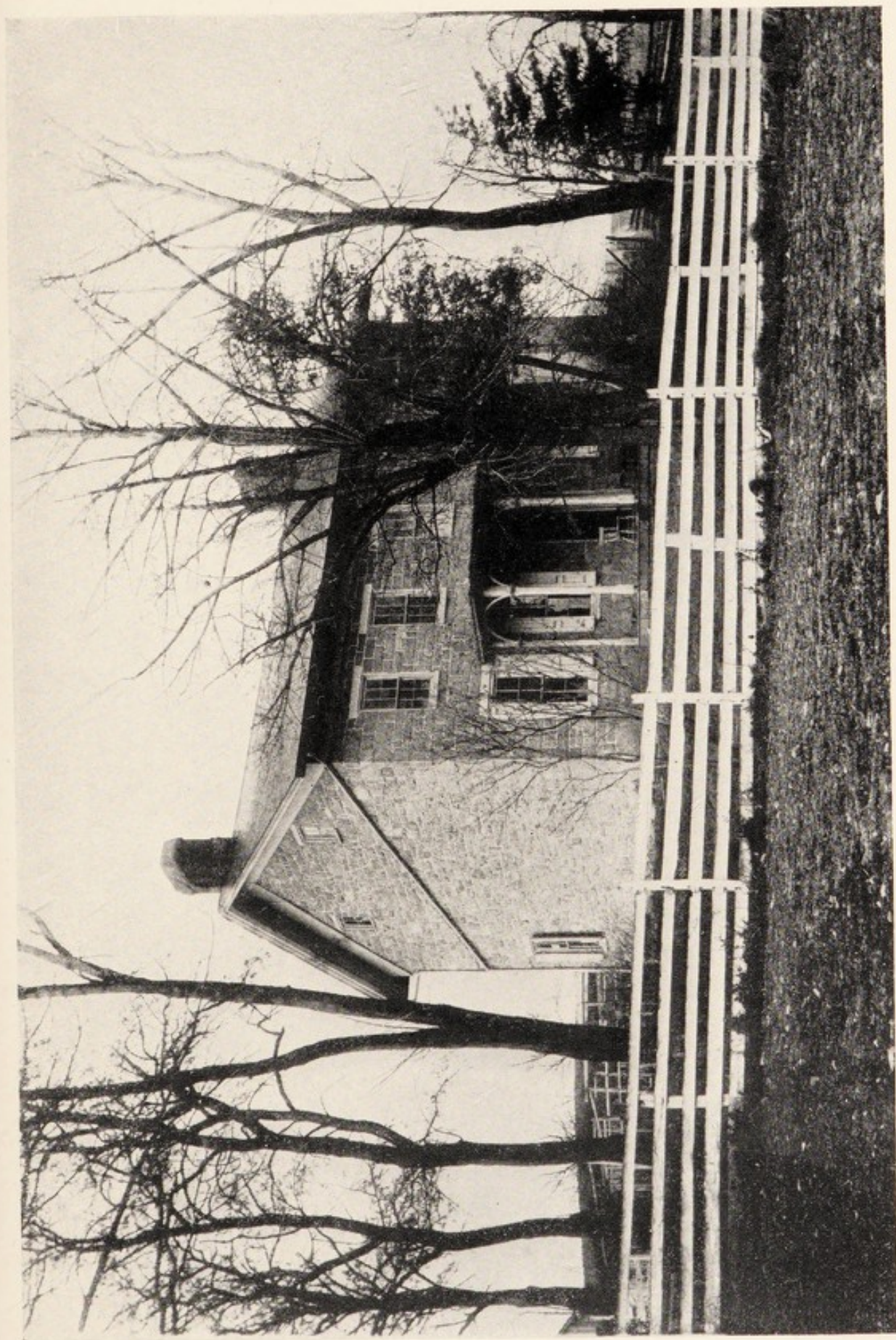


FIG. 6.—VOLUNTARY OVERCROWDING IN A TWELVE-ROOM FARMHOUSE. FIVE PEOPLE WERE FOUND TO BE SLEEPING IN ONE ROOM, AND ONE OF THEM HAD INCIPIENT TUBERCULOSIS.





of winter, "hole up," a good deal like certain animals. They lay in a supply of wood, but as wood is becoming scarce and they are generally lazy and shiftless, the supply is not over-abundant, so they economize space and heat, and have fire only in the cook-stove in the kitchen. Windows and unnecessary doors are nailed shut, and here around the stove the family spend most of the winter, eat and sleep in one, or at the most two, rooms: and the result? The faces you see here in these mountain homes remind you of the faces you see in the densely crowded, insanitary tenements of the cities. The complete outdoor life of summer is barely able to combat the bad air and lack of air during the winter months, and a chronic condition of lowered vitality results.

In the photograph (Fig. 7) is shown one of these mountain homes—a typical one. The bedroom of this house (Fig. 8),



which is the loft with a floor surface fifteen feet square, is habitually used by eight people. Three sleep in one bed, two in another, two more in still another, and the mother, who is tubercular, sleeps on the cot in the corner. One would hardly believe it possible that such overcrowding exists, yet there are many cases like this among these mountain people. When I remonstrated with the owner, who is well known to me, about his insanitary living, he admitted that conditions were bad and that he had hoped to build an addition to his house, but he was short of funds. I knew he was telling the truth, and as I was not anxious to help him negotiate a loan, I found it profitable to change the subject; loaning money to such does not overcome the defect, or if it did, it would certainly be temporary.

A similar example of this overcrowding in a mountain home is shown in the pho-



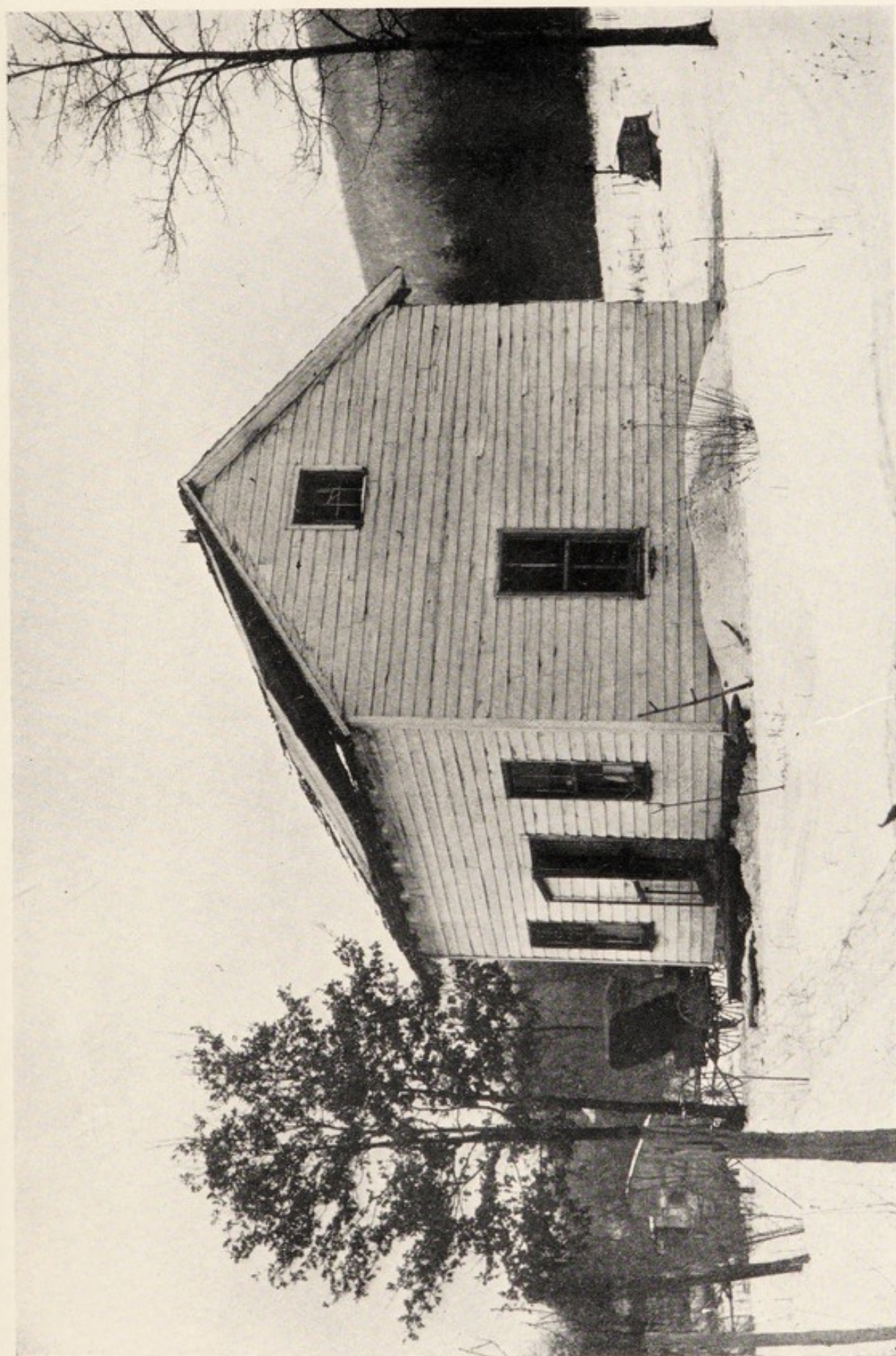


FIG. 7.—A SAMPLE OF BAD HOUSING IN THE COUNTRY: PLENTY OF FRESH AIR OUTSIDE, BUT SADLY LACKING ON THE INSIDE.







FIG. 8.—THIS BEDROOM (15 X 15), THE LOFT OF THE HOUSE SHOWN IN FIG. 7, WAS USED HABITUALLY BY EIGHT PEOPLE.





tograph (Fig. 9); this small shack—one could hardly call it a house—contains seven people. The building is composed of four rooms—kitchen, sitting-room, and two bedrooms: one of which is used by four people and the other by three. The rooms are so diminutive and the windows so small that, although these people live right on the foothills of a wild mountain country, they are living under very badly overcrowded conditions and are paying the penalty—tuberculosis.

A common phase of overcrowding in the country, just as in the city, is the "lodger evil," especially in some of those districts which are rapidly developing. I know of a certain family in a certain small town—a typical case—in which this condition exists. The family of five adults are living in a six-room house and take one boarder. They are frugal and industrious Americans, and are trying to pay



for their small home; and they are doing it, but at the high price of overcrowding; for one daughter has died of tuberculous meningitis and another at present has the appearance of developing the pulmonary form of the dread disease.

The worst case of overcrowding, however, that I have ever seen appeared one day last summer when I prepared to administer immunizing doses of antitoxin to an Italian family during an epidemic of diphtheria: thirteen children lined up to take their "medicine"; in addition, there were six adults, making nineteen human beings living in one house, and this house containing only six rooms. Where these people slept was almost a mystery, for there were but three beds in the house. They simply stretched out on the floor; and their pale and sallow faces told the cost—the great cost—of overcrowding. You might think this was a Hester Street



FIG. 9.—SEVEN PEOPLE LIVE IN THIS FOUR-ROOM SHACK, OVERCROWDED, WHEN THERE ARE ACRES UNOCCUPIED.





tenement, but it happened to be a farmhouse, situated in one of the most beautiful valleys of Southern Pennsylvania, far from the smoke and din of cities. The old idea that the country is such a healthful place to live in is good only so far as the country is fresh from the hand of the Lord, for Man's make-over in the country is generally poor—very poor.

And now a word about the factory: we used to have an idea that the factory, often insanitary and unventilated, was a big item in the problem of defective housing, simply because factory workers so often show the ill effects of bad housing. The real fact seems to be that most of these workers live in very insanitary homes—badly housed and badly fed—in an environment tending to lack of sleep and rest, which often ends in dissipation: and that it is the home-life environment, and not the factory, which brings disaster



to this class. In taking a census of certain workers in a factory in a rural town, it was found that those whose home conditions and personal habits were good were just as healthy and successful as those who didn't work in the factory. The factory people, in this investigation, who were suffering from physical deterioration had invariably bad home conditions, or else bad personal habits.

## CHAPTER III

### DEFECTIVE BUILDING

A GREAT deal of the bad-housing conditions in the country is due to defective building. In the country an architect is rarely employed: the country carpenter, or a self-made contractor, does the work, neither of whom knows the first principle of construction: their sole object is to get the most building on the lot for the least money. Very often the owner himself plays the part of the architect, and then conditions, very often, are worse than otherwise. As a result of this state of affairs many country houses have gross sanitary defects, which could have been easily remedied by a little forethought.



As was mentioned several times before, one of the greatest defects in rural housing is the "row," which of itself would not be bad—it isn't in the large, well-aired and roomy house of a great city—if the construction was properly made, but where window space is neglected or sacrificed and sunshine lessened, when ceilings are low, as they always are in such buildings, air-space is so curtailed that the building must contain, of necessity, serious faults; and when you find a room—a bedroom where there are no windows—you might almost believe you were transported to some of the places in New York which Mr. Riis tells about in his "Battle with the Slum." Yet such things are not mythical in the country: I can show you a windowless bedroom, and occupied too, in a certain house in a country town of less than 10,000 inhabitants. A good many of these bad conditions are brought



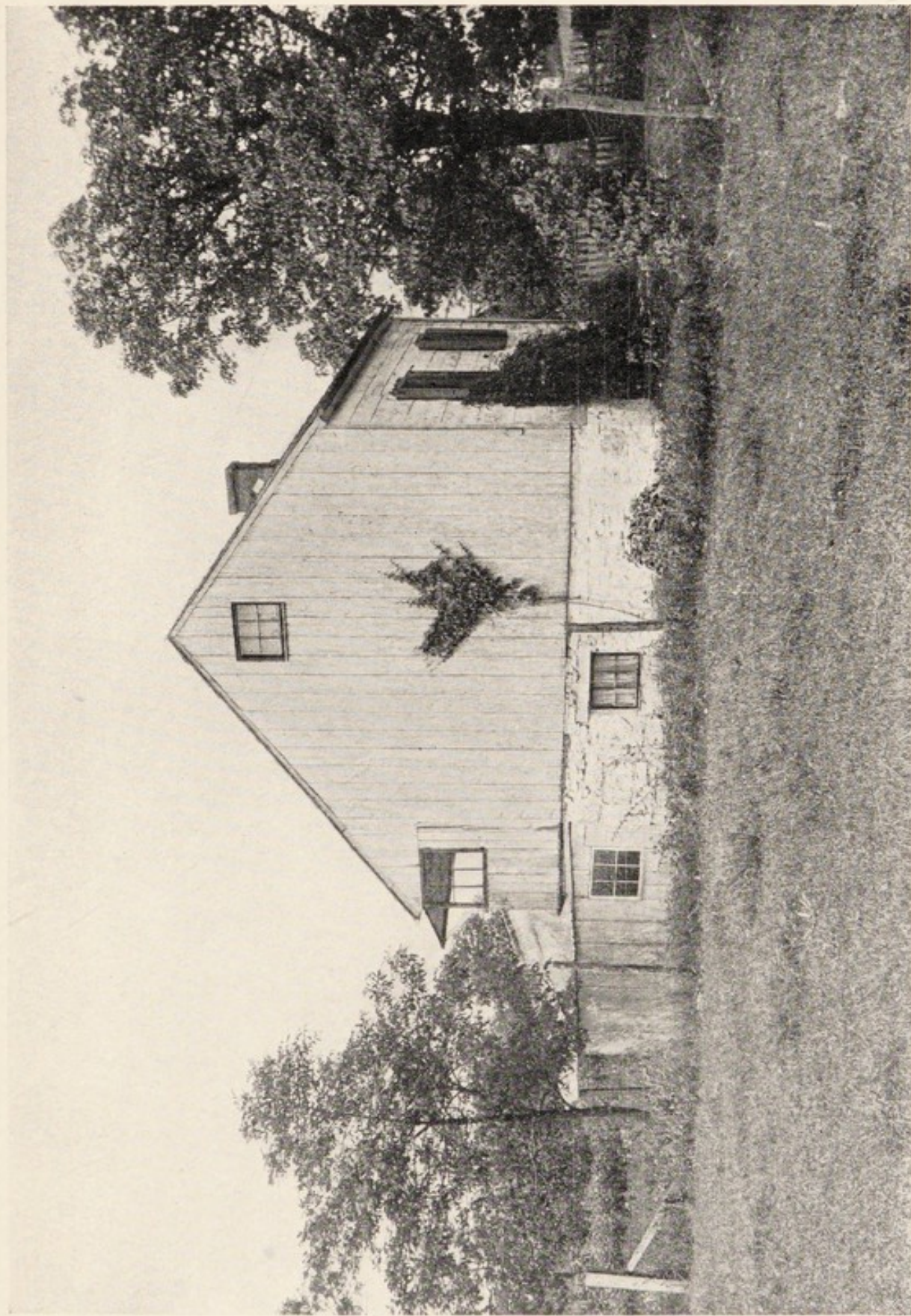


FIG. 10.—A COUNTRY "LUNG" HOUSE, SHOWING BAD BUILDING: SMALL WINDOWS AND LACK OF WINDOWS.





about by the remodeling of old buildings without the supervision of an architect. If ever an architect is needed, it is when an old building is made over—here, surely, expert advice is necessary. Of course, such serious defects are not so frequent, but they occur often enough to warrant the attention of those interested in improving housing conditions.

Small windows and lack of windows are the great faults found in rural building. In Fig. 10 is shown a house of this sort which might be considered a type of such conditions—isolated and open on all sides, it should be ideal for health, but the small windows give great lack of sunshine and ventilation; one window, two by three feet, is the only opening on the entire side, and the other side, I am sorry to say, is just the same. It would be interesting to know what was passing through the mind of the builder who de-



vised such a form of architecture, which certainly may help to account for the tuberculous history of this house, which is told in the last chapter.

Another example of this defective building characterized by small windows is shown in the photograph (Fig. 11): this probably was an old log-house, made over by weather-boarding and converting the original loft into an upper room. The log-cabin of the early settler, with its port-hole windows, was really not bad building in its day, for the inhabitants of those times led so much of an outdoor life and spent so little time indoors that what would be bad housing now to the clerk, the artisan, the mechanic, and the farmer had little effect on the frontiersman and the settler.

The damp cellar is a very prominent defect in rural building: every one who lives or visits in the country knows the





FIG. 11.—A "LUNG" HOUSE IN A SMALL TOWN. ILLUSTRATING BAD BUILDING. ALMOST FIFTY YEARS OF TUBERCULOSIS IN THIS HOUSE.





damp, musty odor which pervades almost every country house, especially in the fall before the fires are started: so vastly different is it from the dry atmosphere of the usual city house. This dampness is surely a potent factor in the cause of the various rheumatic complaints so common in most rural districts. It goes without saying that the proper construction of a building demands a dry cellar such as may be obtained by means of concrete and damp-proof course in the foundation.

With the elimination of damp cellars, close building in rows, and small windows, much of the defect in rural housing would be overcome, and these corrections can usually be so readily accomplished that the only excuse for their existence is thoughtlessness or ignorance. It is hardly necessary to say that every house should have open space all around it, and be so situated that the greatest number or all



of the rooms receive sunlight part of the day, as there is no disinfectant or de-oderant equal to sunlight: none so cheap and none to make up for its absence. This arrangement can very readily be made in the country on account of the abundance of room; indeed, the country is the ideal place for building, for one is not hampered by other dwellings nor excessively high cost, as is the case in most cities.

In many places, as if to compromise with the "row," the buildings are put up double so as to house two families. While this is vastly better than row-building, it is not quite ideal; it approaches it and, in most instances, would be rightly classed as good building. In the accompanying photograph (Fig. 12) is shown a picture of a street in a small town built more or less of isolated houses: plenty of windows and open space between each house give a vastly different appearance from the





FIG. 12.—A STREET IN AN INDUSTRIAL VILLAGE, SHOWING FAIR HOUSING CONDITIONS—  
PLENTY OF WINDOWS AND OPEN SPACE BETWEEN THE BUILDINGS.





street shown in Fig. 1, which was taken in another district of the same town.

A point which is worth some thought is that dilapidation is not of necessity bad hygiene: the broken fence, the unhinged gate, the shattered window-pane, and the moss-covered roof look careless and are careless, but under cases of the greatest dilapidation I have seen splendid sanitary conditions. Some time ago, when investigating a diphtheria outbreak in a mountain district, I visited a certain house where the disease was reported to exist. The dilapidation of the premises was striking, indeed—fences, doors, windows, porch, and everything else were broken and upside down. The health-officer informed me that the family was large, and of course I expected to find conditions bad. When I entered the house I was surprised to find that almost every precaution known in the care of this disease was in



force. The patient was isolated in an adjoining room: she had her own dishes and toilet articles; the mother remained with her as nurse; the father did the cooking and caretaking of the rest of the family, and all absolutely remained out of the sick-room. When occasion required admission to an upstairs room, instead of going through the sick-room the father climbed up a ladder on the outside; in addition, the sick child and all the rest of the family received antitoxin; it is needless to state that there was only one case of diphtheria in that house.

In an instance which came to my notice a few days ago, I found a case of typhoid fever in a lop-sided, broken-down log-cabin in a little mountain community: but here, as above, the dilapidation didn't count. The patient had a room to herself; her own dishes, and disinfectant solutions right beside the bed. As soon as the



physician had pronounced the disease to be typhoid, the family began using only boiled water for drinking, and disinfected all the discharges of the sick. The mother who attended her washed and disinfected her hands as carefully as any trained nurse: there were no secondary cases in that house. So much for general sanitation in dilapidated homes: when it comes to overcrowding, dilapidation in some of the houses we meet would be a boon, and really mean more air and sunshine, and consequently help to remedy the existing defect. However, we do not recommend dilapidation as the means to overcome sanitary errors. Dilapidation is unsightly and unpleasant, and may be nothing else, although the carelessness and shiftlessness which breed it are very prone and very likely to breed real sanitary defects.



## CHAPTER IV

### OVERCROWDED AND DEFECTIVE SCHOOLS

WHILE the home life is vastly more important than the school life, and though the sanitary arrangements of the surrounding farmhouses are usually vastly worse than the neighboring schools, yet it is quite likely that the country school—overcrowded and with glaring sanitary faults—is an item in the rural health. The little one-room schoolhouse (Fig. 13), so common all over the country, has turned out some great and good men, and women too, but it has also turned out many that might have gotten along better in the world if their physical condition and wel-



FIG. 13.—THE OLD-FASHIONED SCHOOL WITH ITS USUAL PICTURESQUE SETTING. NOTE SMALL WINDOW-SPACE.

Photo by Mr. James McCormick, Jr.





fare had been looked after: it is a good thing to remember that real progress is not the progress of the few great men, but the standard and average of the plain, ordinary citizen.

Bad enough, indeed, is it when cities crowd their schools, but to have this condition, as is often the case, out in the country seems infinitely worse. The fact is that all city children, no matter what city or where, attend school under sanitary conditions far ahead of anything in the country, for, like the rest of the rural community, the school has been sadly neglected, and the days when Ichabod Crane taught in Sleepy Hollow can almost be duplicated in some of the back settlements.

In many of these schools the most prominent fault is that of construction: that entailing in turn the various other abuses. With defective housing at home



and defective conditions at school, is it any wonder that many country children fall far below the standard of physical excellence? Is it any wonder that medical inspection of rural schools shows country children to be just as defective, in proportion, as city children? We used to think that the country was such a good place to raise children! But a change is taking place, even in the country. This very day I happened to visit a certain two-room country school (Fig. 14) planned and built by a trained architect—the first of its kind in one of the rural counties of Pennsylvania. The large, light, airy, and well-ventilated rooms are a pleasure to pupils, teacher, and patrons: a vast contrast it is to the old-fashioned, dingy room of the past. Yet this township is no richer than any of its neighbors, but its school board is awake to the possibilities which come from advancing progress.





FIG. 14.—A MODERN TWO-ROOM COUNTRY SCHOOL—PLANNED BY AN ARCHITECT.  
Photo by Mr. M. I. Kast.





The city school boards employ an architect: why shouldn't we in the country? they reasoned. Nevermore in this section will the self-made contractor play the architect's part.

It is generally conceded that a school building should have about twenty square feet of floor surface for each pupil, consequently it is easy to draw the line against overcrowding, by simply calculating the number of pupils to be admitted; but economic conditions change and a room built for thirty frequently contains fifty. The air-space per pupil should be between 250 and 500 cubic feet, depending on the means of ventilation: if there is no special arrangement for the admission of fresh air, the greater air-space—500 cubic feet—will surely not be too much. In an ordinary country school—overcrowded, of course,—I have seen the air-space as small as 100 cubic feet



per pupil, which is, without question, entirely too low.

Now, as the air-space allowed each pupil depends on the ventilation, and as this depends on the heating in cold weather, ventilation and heating should be studied together. The ordinary country school will have to be heated for some time to come with a stove, which, while not ideal, is really not so bad if a jacketed stove is used and proper means of distributing the heat and admitting fresh air are arranged. In the usual stove-heated room, the floors are considerably colder — ten degrees, sometimes,—than the other parts of the room, and though the room may seem comfortable to the visitor, and proper according to a thermometer placed four or five feet above, yet the feet get considerably chilled in the lower temperature of the floor; and this unequal heating may perhaps help to account for the ca-



tarrhal troubles so common in country children.

The space for admission of light should be about 20 per cent of the floor space, according to those who have studied this matter; yet in many, very many, of our country schools it is only 8 to 10 per cent. Imperfect lighting certainly leads to defective vision, of which there is a great deal in the country school; more to be deplored than in the city, as it is more difficult for the country pupil to get in touch with the trained oculist and have the visual error corrected than it is for the city child.

In the construction should also be included the inadequate and insanitary toilet arrangements; and while they are usually as good, generally better, than the same appliances in the surrounding homes, yet they should be as perfect as our present knowledge will permit, not



only for the sake of the health of the children, but as a matter of education to the coming generation. A good many people underestimate the value of such things, but children, with their receptive tendencies, will soon take note. Clean and bright-looking sanitary appliances, inducing personal cleanliness, will have a vast and enduring effect on the children, which will eventually affect their own homes and their whole life. I know of one instance in which a teacher's care to the sanitary details of the toilet so trained the children that not only did that school have the cleanest toilets in a whole county, but eventually the entire community felt the improvement, and the sanitary standard for the whole town was raised: of course, the result came slowly and gradually, but to this day that town owes much to the efforts of this one teacher.



It must be very apparent to any one that even with a modern school building much depends on the teacher, and the ignorance or indifference of teachers or directors will account for many sanitary oversights. The care of the toilets, as mentioned above, comes under this head. The lighting is another neglected item, for very often, even with ample window space, the light is much restricted by shades, many of which are out of order and impossible to roll up completely.

The proper temperature of a room, as every one knows, or ought to know, can only be maintained with a thermometer, yet in the few schools having such an instrument how many teachers pay any attention to it or know its use? Once, at least, I remember, when a teacher asked me what the temperature of the room should be, she volunteered the information that "there was such a diversity of



opinion among the directors"; and so it may have been.

Much good may be done by the teacher in the way of habits of personal cleanliness. In our school inspections we notice very plainly that when the teacher is in sympathy with the work the improvement is far-reaching. Take, for example, the care of the teeth. Some of the large manufacturing chemists have made it a rule to send out to school-teachers samples of dental paste or tooth-powder, for the use of their pupils, and a number of teachers with whom I am acquainted have obtained these samples and distributed them among their pupils: the children are then encouraged to buy a tooth-brush and use it, and the result is an array of clean teeth and mouths that would have been a wonder a few years ago. And there are now tooth-brushes in Pennsylvania farmhouses, where the

parents never dreamed of such an article. This kind of work is worth encouraging, for the tooth-brush, like soap, is a sign of advancing civilization. No savage ever used a tooth-brush—nor soap, either.



## CHAPTER V

### RESULTS

WHAT is the result of this overcrowding and lack of proper housing in the country? Just exactly the same as in the great cities. Lack of efficiency, disease, and premature death to many. We have been talking much lately of our conservative policy of lumber, coal, and wild animals, but in many instances fail to see the great loss due to human inefficiency brought about by lack of suitable environment. While the great majority of people subjected to overcrowding and bad housing conditions do not prematurely die, yet they have a lessened physical and mental vigor, less able to do properly their daily

work, and not only become a loss to themselves and their families, but to the State; and forever stand on the threshold of that dread disease—tuberculosis; for tuberculosis is the one great disease of the overcrowded.

Just how much tuberculosis we have in the rural districts in proportion to the great cities is pretty hard to say: but every one who has investigated it is positive in the opinion that there is just as much in the country districts: indeed, some report more in the country than in the adjoining cities. We find it in the farmhouse and the mountain home: habits of carelessness possibly keep up the infection. We do not have “lung blocks,” like the large cities, but we do have “lung houses” where case after case of tuberculosis has lived and perhaps developed. Take, for example, the house shown in Fig. 10: situated far out in



the country, and surrounded by as favorable conditions as one could wish, yet look at its record in three different and unrelated families:—

1896–1898.—M—— family: father died, mother sick of tuberculosis.

1898–1900.—E—— family: father and one son died of tuberculosis.

1900–1912.—L—— family: father and mother died of tuberculosis.

Five deaths from tuberculosis in this one house—surely a record that carries some meaning with it!

Here is the story of a country “lung house,” which, although its occupants belonged to one family, and probably had that terrible hereditary tendency to the disease, they had such favorable environment that improvement in the resisting powers of the various individuals should have developed, but voluntary bad living kept these people in about the same con-



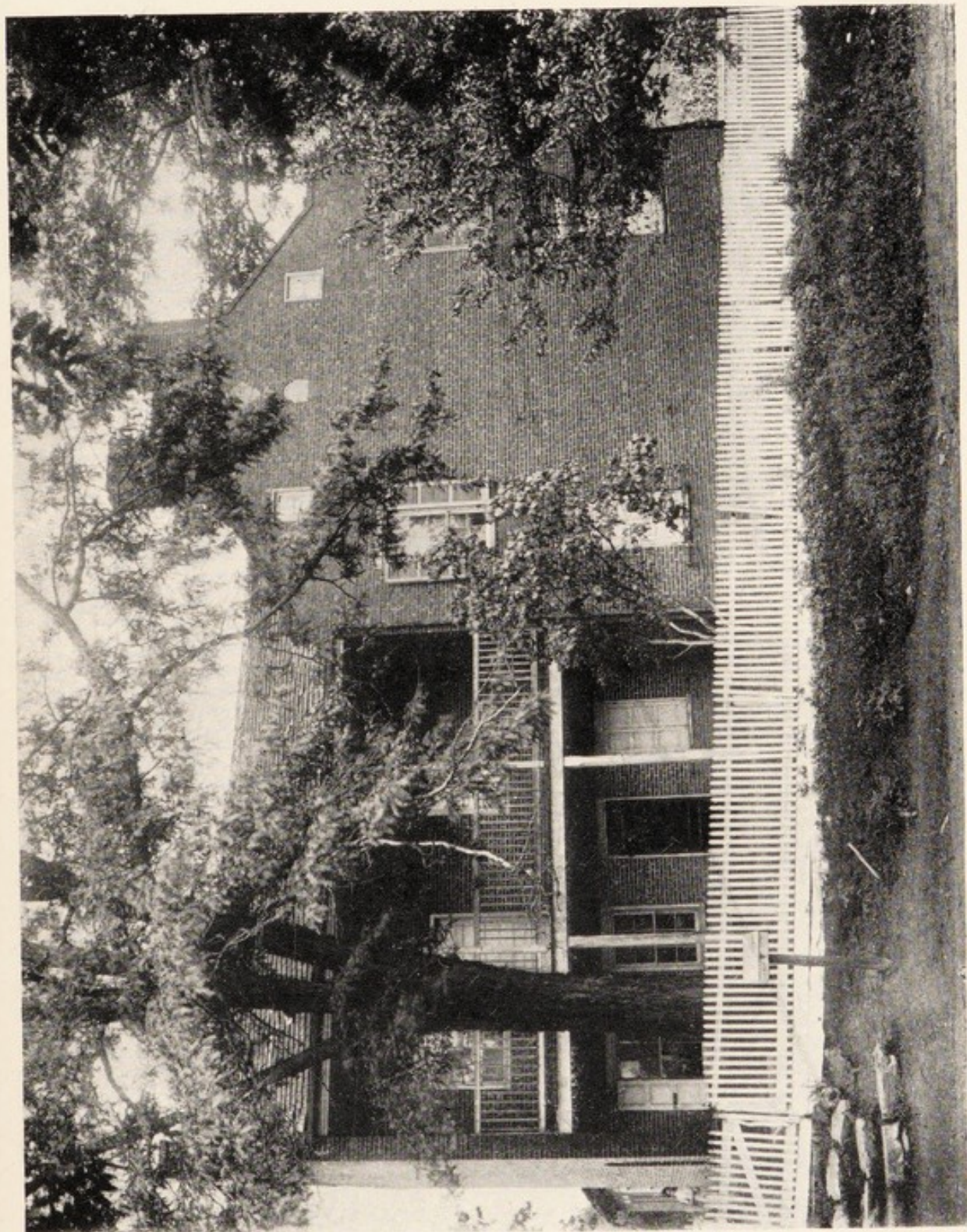


FIG. 15.—A COUNTRY "LUNG" HOUSE, MADE SO BY VOLUNTARY BAD LIVING: NOTE  
CLOSED SHUTTERS—A COMMON RURAL FAULT.





dition as if they had lived in one of the dark and windowless "lung blocks" of a great city, instead of in an isolated and inviting country house open on all sides to fresh air and sunshine.

T—— family home (Fig. 15)

1880-1901.—Inhabited by man, wife, and six children:

Four died of tuberculosis.

1902-1903.—Inhabited by man, wife, and eight children:

Man and one child have tuberculosis.

1904.—Inhabited by man, wife, and eight children:

Four children have tuberculosis: three others are suspects.

1905.—Inhabited by man, wife, and two children:

Man died of tuberculosis.

Eleven cases of tuberculosis in twenty-five years in this nice-looking farmhouse!



Fig. 11 shows a picture of a "lung house," unique in covering a period of almost fifty years. This house is situated in a small town which has many things of historic interest, and this house, too, has a history, not of border warfare and heroic defence, but a story of sickness and death, perhaps a good deal of it avoidable. Six different families—not related, some black and some white, occupied this place during the last half-century: its record was such as to attract the attention of the neighbors, who were more prone to attribute the fate of the inmates to witchcraft than to the deadly germ of tuberculosis.

#### C—— Tuberculosis House

1864.—James W—— (C.) died of tuberculosis.

1870.—Miss A—— (W.) died of tuberculosis.

- 1871.—Harry C—— (C. ) died of tuberculosis.
- 1872.—Miss H—— (W.) died of tuberculosis.
- 1880.—Mr. R—— (C. ) had tuberculosis: moved away.
- 1881.—Mr. W—— (W.) died of tuberculosis.
- 1900.—Mr. J—— (C. ) had tuberculosis: moved away.
- 1908.—Woods R—— (C. ) died of tuberculosis at Mont Alto.
- 1908.—Julia R—— (C. ) died of tuberculosis.
- 1912.—Mercedes H—— (C.) died of tuberculosis.

What a story! Ten sick of a lingering illness and eight deaths. And then the record is likely incomplete; probably the story is only "half told."

The prevalence of tuberculosis in the country is so evidently marked that there



is a growing interest in the subject in many places. The Wisconsin Antituberculosis League, a year or so ago, made a very careful and exact sanitary survey of a certain rural district in that State, relative to the amount of this disease, and found that in some parts of this district the death-rate from tuberculosis exceeded that of Milwaukee, Wisconsin's largest city.

Minnesota also discovered that it had much tuberculosis in its rural districts. "As serious," says Dr. Daugherty, who investigated the subject, "as that in the congested areas of the cities." Following a rural survey of several townships, under the auspices of the State Antituberculosis Association, there were found housing conditions much as I have described in the preceding pages as existing in Pennsylvania. "The average number of people sleeping in one room," says the report,



“was four.” “In one house there were eight, in another nine, and it was not at all uncommon to find five or six. This was not due to the fact that there was not enough room, for in many of the houses the whole family would sleep in one room, use one for the kitchen, and leave two, three, and in some cases four, rooms vacant.”

Coincident with this bad housing there was found one township where there were twenty-two deaths from tuberculosis in a population of 500 in ten years: a death-rate of 44 per 10,000. These investigators in Minnesota also found that “contributing causes, as overwork and poor food, which play such an important part among the inhabitants of the crowded tenement districts, do not usually count for much in the country. Bad housing and unrestricted exposure to contagion seem to be the great factors.” Of course,



in certain well-to-do farming districts, such as were under investigation in Minnesota, this would hold good, but in many other places, especially in parts of Pennsylvania known to the author, poor food and lack of food are a vast contributing cause to this disease. A poor constitution to start with, and insufficient food, soon engender a condition which quickly yields to the inroads of the bacillus. As a corollary to this is the rapid improvement of such incipient cases, when put on the food and under the proper environment of a sanatorium.

In illustration of this food question the following story is worth repeating. A visiting nurse was complaining to a mother that her little daughter, who was tuberculous, had not eaten any breakfast. The mother replied: "Well, it is her own fault. This morning we had prunes and bread and butter, and that is good enough



for anybody." She said this, too, as if some of her other breakfasts were not quite so good. This occurred, not in a city, but in a country town where living is comparatively cheap. The mother was poor, very poor, but she was grossly ignorant, too, of foods and cooking. Had she given her child a bowl of mush and milk her intelligence would have conquered her poverty.

And now a word, a very short word, about the remedy for overcrowding and bad housing in the country. This problem can not be attacked, as in the great cities, by legislative enactment or resort to legal measures, but the solution lies, it seems to me, in proper education by the various health authorities, by the schools, and by the press, and the crusade must be kept up until the people understand that it pays—pays in real dollars and cents—to live in sanitary homes. Educate the rural



dweller in regard to the penalties for bad housing, show him how tuberculosis follows in the wake of overcrowding, poor food, and dissipation: in a great many instances he will mend his ways. In Pennsylvania this work is carried on by the Tuberculosis Dispensaries of the State Department of Health scattered all through the State, where they have become foci for spreading sanitary knowledge of just the sort needed in rural communities. Visiting nurses from these dispensaries go to the homes, and to my personal knowledge do much, very much, to remedy the defects of bad and improper living, and do it without resort to any legal means. There is no factor so potent for good as the work of the visiting nurses of this great health department; and many other States are taking up the work and carrying it forward on the same lines.













