

**Suggestions for the sanitary improvement of labourers' cottages and of villages / by William Menzies.**

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SUGGESTIONS

FOR

THE SANITARY IMPROVEMENT

OF

LABOURERS' COTTAGES AND OF VILLAGES

BY

WILLIAM MENZIES

DEPUTY SURVEYOR OF WINDSOR FOREST AND PARKS

LONDON

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THE SANITARY IMPROVEMENT  
OF  
LABOURERS' COTTAGES AND OF VILLAGES.

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IN THE WORKS which I published in 1865 and 1866, referred to below,\* on the subject of the Drainage of Towns and Dwellings of the better class, I attempted to lay down the broad principle that, looking at the question in all its bearings, sanitary, engineering, and agricultural, the separation of the rainfall from the sewage was the only satisfactory solution of the difficulties under which the country was placed.

After much controversy, that principle has been officially sanctioned in the report, dated the 29th October 1868, by Lieutenant-Colonel Ewart,† of the Royal Engineers (appointed by the Home Secretary); and two of the leading towns in the Thames valley, viz. Eton and Windsor, have already signified their acquiescence in the

\* *The Sanitary Management and Utilisation of Sewage in 1865. Additional Statements in support of his views on the Drainage Question. The Present State of the Drainage Question, 1866.* By William Menzies. (Longmans.)

† Second edition, Harrison & Sons, 59 Pall Mall.

soundness of the arguments given for following that course, and are now proceeding to prepare plans on that system.

This precedent will, it is hoped, to a great extent, settle the question.

I now venture to contribute to the kindred enquiry by laying before the public the result of my investigations into the best means of extending the benefits of health and comfort to those who are not congregated in towns, and I am induced to proceed a little further in the same direction by attempting to show the feasibility, as almost all agree in the desirability, of bringing in some law to regulate still further than has yet been done the Dwellings of the labouring classes in Cottages and Villages.

I am unwilling to join in much that has been written to show that the agricultural labourer has not the same position either in independence or comfort as he had, in some previous times, of this country's history. On the contrary, I believe they have been, as a body, gradually advancing from the earliest times. The amount of wages they receive, and a comparison of the prices at which articles of food and clothing could be purchased at different periods, do not afford so sure a test as is supplied by the average duration of life of the whole body of the people.

It would, I believe, be generally admitted that the life of all classes has constantly been lengthening, and this could only arise from the whole community possessing more comforts in the shape of house accommodation, better food, more skilful medical attendance, better provision in the shape of hospitals, unions, and asylums ; all of which institutions are supported, some by voluntary contribution of the richer classes, and some by rates upon all descriptions of property. These institutions extend their benefits to all the lowest classes of society, and might safely, therefore, be reckoned as wages.

Special exceptions there may be and are to this statement of general improvement ; such, for instance, as appears to be the case, referred to in the pages immediately following, giving an account of what has happened in those parts of England where the agricultural gang system has been developed to such an extent within the last fifty or sixty years ; but I believe the general conclusion is correct. In former years there was no such enquiry into these matters as now exists ; so that, when evils of the present day are strongly brought to light, it is too often at once assumed that in former times nothing so bad existed.

To extend provisions for health and decency still further, and to enlist, if possible, the active

co-operation of all classes in seeing that a healthy population is, in reality, the cheapest and the most beneficial for the country at large, is sufficient warrant, I hope, for my attempt to help on the work.

It is impossible that I could refer to the number of works I have consulted on this subject, or mention the names of so many able men who have been for years in the field. I have freely availed myself of their labours, and have incorporated their suggestions with the results of my own experience and observation.

I shall endeavour to make my remarks apply both to England and Scotland, but my attention has been more directed to Dwellings in the rural districts of the former.

It is quite evident to everyone that much of the unhealthiness and immorality, both in Cottages and Villages, arises from the bad condition of the dwelling-houses of the labouring classes, and as the effects of these evils fall upon the community generally, the legislature is entitled to deal with the matter.

On this part of the subject I may refer to the report lately made by the Commissioners appointed to enquire into the agricultural gang system in the eastern counties of England. I may make one quotation :—

‘ 91. The public gang system does not appear to be  
 ‘ anywhere in these eastern counties (where alone it is  
 ‘ found) more than sixty years old ; in some localities it  
 ‘ has not existed more than thirty years. It is the direct  
 ‘ result, as has been described, of two causes : first, of  
 ‘ the pulling down of cottages in what are termed close  
 ‘ parishes, to avoid poor-rates, and thereby driving the  
 ‘ agricultural population off the land into distant villages  
 ‘ and towns ; secondly, of the formation, by the enclo-  
 ‘ sure of wild land, or otherwise, of large farms, without  
 ‘ providing an adequate number of cottages to contain  
 ‘ the workpeople required to supply the demand of  
 ‘ labour for the farm.

‘ 92. It is not to be believed that any landowner who,  
 ‘ either in the past or present generation, was led to  
 ‘ adopt that policy, in regard to the distribution of  
 ‘ agricultural labour, could have realised the amount  
 ‘ of physical hardship, of unnecessary fatigue, imposed  
 ‘ by it on old and young, on the strong and the weak,  
 ‘ from day to day, and year to year, at all seasons, and  
 ‘ in all weathers ; still less could he have anticipated  
 ‘ that the absence of a proper distribution of agricultural  
 ‘ labour would have given rise to a system which has  
 ‘ increased to so great a degree the temptations to, and  
 ‘ opportunities for, moral evil to several successive gene-  
 ‘ rations of the young of both sexes in the localities  
 ‘ where it exists.

‘ 93. The alterations in the law of rating effected  
 ‘ by the Union Chargeability Act of 1865 (28 and 29  
 ‘ Vict. c. 79) has happily put an end to the inducement  
 ‘ which led in so many instances to the pulling down  
 ‘ of cottages, and driving the rural population to a  
 ‘ distance from the land which they cultivated. It may



‘ be expected that by degrees sufficient cottage accommodation will now be provided on each farm.’

The good economical, social, and moral effects arising from the fulfilment of this duty are strongly pointed out by various persons of authority and experience in the course of the evidence.

Over the kingdom, generally, the demand for good houses for the upper classes every year is becoming greater, and the wages of mechanics increasing, so that builders will gradually become still more unwilling than they are at present to undertake the erection of cottages of the lowest class on speculation.

It is quite evident also to everyone that the effect of the Union Chargeability Act, passed for England in 1865, will be, in time, largely to increase the building and maintaining of cottages upon landed estates in the rural districts, so that the labourers necessary for these estates may be nearer their work than they have hitherto been. Speaking more particularly of agricultural labourers, it is a common calculation among themselves that every hour they can save in travelling to and from their work is worth 3*d.* to them, and directly or indirectly it is worth about as much to their masters.

Taking labourers in country districts from

fifteen to sixty-five years of age, two-thirds of the complaints from which they and their families suffer, are rheumatism, colds, fevers, or epidemics of that class ; all of which diseases, more or less, either arise from or are influenced by the sanitary condition of their dwellings.

With respect to the number of dwellings in country districts, it would appear to be impossible to introduce a Bill compelling landowners to build so many cottages in proportion to their estate. Arable land is changed to pasture or to building ground, while clay land and light farming land require a different number of men and horses, so that, in fact, no rule could scarcely be fixed as to the number that would be required ; but, subject to such special cases as I shall subsequently specify, I think the building of a sufficient number of cottages for their labourers may safely be left to the certain effect of landlords finding it their interest to do so, and they are becoming every day more convinced of this.

It is desirable, however, that information and different opinions should be collected on this head, so as to arrive at a safe conclusion.

Vast numbers of cottages, however, are built and kept up solely as an investment or on speculation ; the owners having no other object

in view except to get as large a rent for as little outlay as possible.

The greatest offenders in this respect are small tradesmen, who invest their surplus money in such cottages, and compel the labourers to take all their supplies from themselves, and thus often inflict a double injury.

Residence in these cottages becomes then practically compulsory upon the labouring classes, as no others are available.

It would therefore appear to be the duty of the State to provide that such residence shall not, if possible, entail injury to the health of the people, or violate the common laws of decency, and thus lay the foundations of disease and immorality in the rising generation.

The principle adopted by the Government of this country for regulating emigration may, perhaps, be followed as a precedent.

Cottages and dwellings, as I have stated, are built to meet the general demand, and, in like manner, ships are fitted out on private speculation to carry emigrants from Britain to different parts of the world ; but the legislature has carefully taken every precaution so that health and decency shall be maintained on the voyage.

Thus in a ship, where space is so immensely valuable, the legislature has provided that every

adult emigrant shall have on the upper deck, with all its facilities for ventilation by the sea breezes, a minimum of ninety cubic feet of space ; on the lower deck, where ventilation is more difficult, a much larger area ; there must be five feet superficial of deck for each passenger for exercise ; the amount of space for ventilation to each cubic foot is determined ; those of different sexes above twelve years of age must be separated ; the number, sizes, and shapes of the berths made compulsory ; sanitary arrangements made for each sex ; the number of closets is specified, and, finally, the total number to be carried in any ship is fixed.

These laws have been passed for the safety and comfort of those who are probably leaving the country for ever, and in whose after-life those who remain might reasonably feel little interest. It surely cannot be thought unreasonable that the government of this country should make some similar stipulation for the protection and well-being of those who are its permanent and constantly increasing residents, and with whose fate the whole community is directly and indirectly involved.

In the merchant service, in like manner, the common sailor is secured by law his minimum sleeping space of either fifty-four or seventy-two

cubic feet according to circumstances, and it is encouraging to know that owners of ships, however valuable the space is, see that their interest lies so much in keeping the men in the highest state of health, and are anticipating a change of the law on the subject by voluntarily giving the men a larger area.

Under the Bakehouse Regulation Act (26 & 27 Vict.), the journeyman baker is secured against his master compelling him to sleep in a room that has not a proper amount of ventilation and communication with the external area.

In the Metropolis Local Management Act (18 & 19 Vict.) this principle of interference for the general good is carried much further by laying down most stringent stipulations as to the conditions under which inhabitants of London may live in buildings under the level of the pavement. The minimum height of the ceiling, the width of the surrounding area, the size of the windows, the fire-places, and many other details, are all specified.

Precedents are therefore not wanting on behalf of the interference by the government with the liberty of the subject, and the terms which the houseowner may make with his tenant.

Even the thief in his cell is secured by the law his six hundred cubic feet of space ; has it

warmed for him in winter, and every medical comfort provided.

It is quite true that the principle of securing to the labourer a healthy dwelling is recognised by the existing laws, but for reasons afterwards mentioned these laws do not meet the necessities of the case.

Under the Local Government Act, 1858, local boards in England have power to make by-laws 'with respect to the closing of buildings or part of buildings unfit for human habitation, and the prohibition of their use for such habitation,' and under the Public Health Act, 1866, still more stringent power is given to them, and to 'nuisance authorities' for the country generally, thus including Scotland, to bring under control 'any house or part of a house' so over-crowded as to be 'dangerous or prejudicial to the health of the inmates.' The chief officer of the police within the district is usually the person charged to take the first steps in the matter, and bring any infringement of these Acts under the notice of the authorities.

The difficulty is the absence of any exact account of what constitutes an infringement of the Act. Police officers at present are little qualified to judge of the sufficiency of house accommodation.

If once, however, specific rules are laid down, the course becomes easier.

Anyone can measure, and everyone can judge of, the state of a house when he is told what to look for.

The general care of the health of a rural district is left by the vestry of each parish to an inspector of nuisances.

It would be difficult to conceive a more inefficient body of men. Sanitary science requires a vast amount of special study, and may well engage the most highly cultivated minds. The inspectors of nuisances, however, are almost always men of a low class in the community; have generally been unfortunate in business; are often ludicrously ignorant, and by appealing to the members of the vestry, on whom they are dependent, almost always outvote the higher and better informed class.

The last thing which they will think of doing is to take these precautionary measures which would prevent serious outbreaks of disease, and nothing ever rouses the vestry to action till some evil has broken out and cannot be stayed. No satisfactory system can be in operation until the whole community are better educated in these matters, and it is worthy of consideration whether the country should not be divided

into districts with an Inspector of a much higher class, and independent of all local influence, placed in charge of the health of that district, and also whether certain fixed conditions should not be specified beyond local question or objection.

I am desirous, therefore, of suggesting that legislation must proceed further than it does at present and be more precise and detailed. The country generally requires to be instructed in the knowledge of those conditions of dwellings which for the general welfare are essential to health, and to have specific rules laid down for their guidance so as to avoid dispute as to what is 'dangerous or prejudicial to the health of the inmates;' and, further, it is necessary to enlist the general support of the community in seeing these essentials carried out.

It may be added that a law against overcrowding cannot be thoroughly effective unless some provision is made enabling certain public bodies to provide dwellings for the poorer classes, as they cannot possibly build them for themselves; and I think everyone must see that private speculation never can meet the whole requirements of the labourers if stringent sanitary laws, which necessarily involve expense, are



to be enforced. On this point, however, I state my recommendations with the greatest diffidence, knowing how difficult the subject is, and what careful restrictions would have to be exercised if such a scheme were attempted.

The increase of wealth among the higher classes ; the bringing of hitherto unoccupied lands into cultivation ; the general progress of the whole community ; and the effect of emigration show everyone that there is no superabundance of the strong labouring classes in the country ; while it is desirable to economise their health and strength, and to attach them to the soil on which they live, as far as is practicable ; a comfortable home being of the first importance. Private benevolence and exertion are quite unable to encounter the great difficulties of the question.

Neither clergyman nor physician can hope for much success for their labours in a dwelling where a family resides, and who, partly through long confirmed traditional habit, partly through ignorance, and, to some extent, under compulsion, violate all laws of sanitary science and decency ; and such habitations unfortunately are very prevalent in the country.

To make a law regulating the building of future dwellings, without, at the same time,

attempting to remedy the evils of the present ones would be, probably, objectionable, as one of the first effects of such a bill for regulating new cottages would be to increase the value of the old ones, and the labouring classes might be driven even more than they are now to live in these objectionable dwellings.

I presume there would be no legal difficulty in devising the machinery by which cognisance should be taken of unhealthy dwellings.

If, when the notice to repair or reconstruct is served, the owner of the cottage prefers to pull it down, some arrangement, or some power, should be given to the officers of the union or parish either to build or provide by some means more wholesome lodgings for an equal number of those who have been ejected.

Further, I might suggest that an inspector appointed by some central authority, and quite independent of all local influences, should visit the different parishes or counties regularly to see, generally, that the officials on the spot do their duty.

As to the general state of cottages in England, Dr. Hunter's report to the Privy Council in 1864 may well be consulted, and will justify many of the remarks I have ventured to make.

There is no official report upon those in Scot-

land, that I am aware of, but the conditions are much the same, especially among the mining population.

It would prevent, as I have previously stated, a great amount of discussion and delay in all matters concerning the condition of cottages or dwellings for the labouring classes if certain principles could be defined and inserted in any bill that might be passed as being sanitarily essential.

I have attempted to define these from my own experience in this neighbourhood, and I think they will apply both to houses in the villages and cottages in England as well as Scotland. I have no doubt many others will be ready to give further information on the subject from their investigations in other parts of the kingdom. The object of this paper is to attempt to define the general principles on which such a bill might be framed. All these points marked as 'essential' would be added in a schedule at the end of such bill; and it is believed, with these specific data in his hand, any inspector would have no difficulty in acting.

Those recommended as 'desirable' might or might not be included in the bill, as was thought best afterwards.

Some special directions would be given for

temporary dwellings, put up for such purposes as during railway works, &c. Probably a stipulation that 'such houses, if occupied for more than six summer months,' must come under the general law, would be sufficient.

### *Situation.*

The soil and subsoil should be dry, or made dry, as far as practicable. No site should be adopted, if possible, where permanent water underlies the surface at a less depth than three feet in winter. In support of these two recommendations, I may quote from the 10th Report of the Medical Department of the Privy Council (1868).

Speaking of the effect of damp soils in producing consumption, Dr. Simons says:—

Distinction must, of course, here be drawn between populous and non-populous places. An undrained state of soil in any place where population is aggregated answers to the legal intention of the word 'nuisance;' and I apprehend that, even in the present state of the law, the local sewer authority is bound to provide that such a state shall not continue through want of proper constructions for the drainage. For agricultural lands, no doubt, the case is different. It may not be practicable to require that such lands, though damp enough to cause phthisis to the comparatively few and scattered persons who reside on

them, shall be artificially drained by their owners; and the interests of agriculture in this respect are not always identical with those of human salubrity.

But at least the law might unequivocally condemn, so far as detrimental to health, all damming of natural drainage. And for river conservancies it would be a function scarcely, if at all, less important than that of preventing the pollution of rivers, that they should also, so far as possible, prevent or remedy all such artificial and natural obstructions of water-flow as keep tracts of inhabited land sodden with stagnant wetness.

It is desirable that trees should not overhang the house, and essential for health that the house should not be smothered with trees, especially on the south and west sides. I attach much importance to this, and could give many reasons for doing so; the health of females and children always suffering from such overshadowing. The exact extent of this, however, is a matter of practical opinion. No site should be adopted where there is a wall more than five feet high in front of the house, if that wall is within a distance of twenty feet, and this clear distance in front might be modified according to the height of the houses and the population upon the area. After houses in such circumstances are occupied, some stipulations might be made that walls should not be built nearer to

them or higher than I have specified. The front of a house might be described to be 'that side where the window of the living room is situated.'

### *Foundations and Walls.*

It is essential on all clay soils that there should be under the walls, and below the general surface of the original soil, concrete of a minimum depth of one foot and minimum width of two feet.

It is essential over all internal and external walls which communicate with the earth that there should be a damping course at least six inches above the level of the surrounding ground when finished.

This damping course to consist of slate, or tar and sand, or some impervious material.

It is essential that the outside walls, when of brick, be of a minimum thickness of nine inches ; when of wood, that such wood should be built upon brick and concrete foundations, with damping course in the same manner as specified for brick walls, and that the structure of such buildings should be of quartering, four inches thick, covered outside with wood or tiles, and inside with wood, or lath and plaster, and air-tight, and when of stone, the walls

should be of a minimum thickness of one foot, with concrete and damping course as before specified.

It is desirable that the line of the floor be at least one foot above the surrounding ground.

When water stands permanently under the house as previously referred to, within a distance of three feet, it is desirable, if not essential, that the whole area of the house be covered with a layer of some impervious material to prevent the damp rising. On this part of the subject, I may remark that there are many excellent proposals at present being made for lowering, during winter, the level of the Thames above London, so as to give the inhabitants a drier sub-soil on which to live ; but unless there is some care taken, builders will take advantage of the improvement, and follow the water, so to speak, and erect new houses which will become as damp as the old ones.

### *Living Room.*

The minimum size of any living room should be, where one or two bed-rooms are attached, 120 feet superficial, and where three bed-rooms are attached, 144 superficial feet, inside the walls,

and the minimum height of ceiling should be eight feet.

Where the floor is laid with stones or tiles, it is essential in all cases upon clay that there should be a layer of concrete not less than six inches thick under such stones or tiles.

It is desirable, however, that the floor should be of wood, upon joists with sleeper walls, and that there should be ventilating bricks in the side walls.

It is essential that there should be in the living room a fire-place fitted up with a grate and oven attached, of not less dimensions than two feet eight inches in width, and not less than fourteen inches in depth.

It is essential that the living room have a door of which the boards shall be of a minimum thickness of one inch and a half, and that the minimum width be two feet six inches, and height six feet.

It is desirable that there should be a porch to this living room, and that such porch should have a door.

It is essential that the living room be ceiled in.

It is essential that such living room have a window or windows of not less than twelve superficial feet.



It is essential that not less than one-third, and desirable that one-half, especially the upper half, of such window or windows should open. It is desirable that these windows should face east, south, or west. A due south aspect, as compared with one due north, will make two months' difference in firing in the year.

It is desirable that none of the doors of this living room should be in the chimney corners, that is to say, on the same line of wall as the chimney, but that they should be on the opposite or side walls. The reason for this recommendation is that, if the doors are at the side of the fire-place, it is impossible to sit at the fireside without being in a draught, or in everyone's way going out and coming in. Old and sick people especially have not a comfortable corner to sit in if the door is put near the fire-place. It is, I am aware, very desirable to retain the chimney in the centre of the house, but it will be found almost impossible to combine these two features economically in a single cottage, although easier in a block of two, and I should recommend the retaining of the chimney corner as being the more desirable alternative of the two, if the chimney has to be put on an outside wall.

*Pantry.*

It is essential that there should be a pantry in each house, not less in area than ten feet superficial, and having a minimum cubical area of forty feet, and that such pantry should have communication with the external air, with a window or opening facing north or east, and not less than two feet superficial. The size of pantry might be rather less for houses in villages.

It is desirable that such pantry be fitted up with two rows of shelving.

*Scullery.*

It is essential in every Dwelling that there should be a scullery not less than twenty superficial feet in area, and that this scullery be fitted up with a sink.

It is essential that this scullery be paved with stones or tiles. It is essential that the sink be connected with a drain not discharging into a privy, but taken to some safe distance from the house, and be properly trapped ; and it is desirable, in addition to the trap, that the communication be broken outside the house. It would, however, be better if all such slops were saved in a pail, and distributed daily over the garden. The size of this scullery might also be a little less for houses in crowded villages.

It is essential that the cubical contents of the scullery should not be less than 140 feet.

It is essential that such scullery have a window not less than six superficial feet, and it is essential that one-half of it should open.

If there is a copper in the scullery, it is essential that there should be a ventilator from the ceiling into the open air, not less than one foot square, in addition to the window.

It is desirable that the scullery should have a door opening to the outside, *without* passing through the living room.

### *Staircase.*

It is essential in all cottages of two stories that there should be a staircase, with a maximum rise of each step of nine inches, and a minimum breadth of step of nine inches. The same dimensions will apply to winders on the centre line of the stairs.

It is essential that the staircase should not be less in width than two feet six inches.

If the staircase is steeper than this, or narrower, it is dangerous for old people and children, and it is almost impossible to carry a sick person up or down. Where there is a staircase window, it is essential that it should be made to open, and be of a minimum size of four superficial feet. If

there is no staircase window, it is essential that there should be a ventilator not less than one foot square through the ceiling of the staircase into the space under the roof.

### *Fuel and Ashes.*

It is essential in every cottage that an enclosed place be provided for fuel, of not less cubical contents than twelve feet.

It is desirable that each house have an enclosed place provided for ashes, of not less cubical contents than three feet, if inside the dwelling house, and, if outside, of not less than twelve cubical feet.

But such ash-pits must not be in the living rooms or bed-rooms.

### *Bed-rooms.*

It is essential that any room to be occupied as a bed-room should have a wooden floor, and if upon the ground floor, upon sleeper walls.

It is essential that the superficial area should not be less than forty-eight feet, or contain less cubical contents than 336 feet.

It is essential that such bed-room have a window not less than six feet superficial, and that half of such window should open. Where such bed-room has not a fire-place, it is essential

that it should have an opening for ventilation, not less than one foot superficial, opening either into the ceiling or else into the staircase.

It is essential that all bed-rooms be ceiled in. Where there are one or two bed-rooms, it should be made essential that one have a fire-place; where there are three bed-rooms, that there should be fire-places in two of them.

It is desirable that the top of the window should be within one foot six inches of the highest point of the ceiling.

In Scotland it is very prevalent to have one or two, or sometimes more, folding beds in the living rooms. Where these are box beds, they are most objectionable on sanitary grounds, as they cannot be properly aired.

Where these beds are fitted into recesses in the walls, they are a little better, but they are not so good as open beds in rooms specially kept for that purpose. They are being gradually done away with, but it would be impossible to pass a law at present to render them illegal. More enquiry should be made on this point, and a stipulation might be inserted in the bill that where such use of a living room is sanctioned (although it would be better for the future if it should not be allowed at all) the cubic space provided should be the same as if a special bed-room was added.

All partitions between bed-rooms should extend from the floor to the ceiling, and be of permanent construction in framed wood, brick, or wood, lathed and plastered, and all bed-rooms should be fitted with doors.

### *The Water Supply.*

It is essential that all cottages and dwellings have a wholesome water supply, if possible, within a maximum distance of a hundred yards.

A bucket and chain are probably the best means of raising this water, as they are least liable to get out of order, and are the most wholesome.

Where storage of water is relied upon for a supply, the minimum that should be provided for is five gallons per head per day for six weeks; and for this calculation, a house with one bed-room might be rated for two people; a house with two bed-rooms for four, and a house with three bed-rooms for six.

Where the rain-water is saved as the source of supply for domestic purposes, it is desirable that the house should not be overhung with trees, and that the tops of the chimneys should always be two feet higher than the ridge of the roof.

*The Roof.*

It is essential that the roof of whatever material be water-tight.

*Spouting.*

It is essential that every cottage be spouted, and that water so collected be carried away to a safe distance from the foundations of the house.

*The Garden.*

It is desirable, in all country districts, that each cottage should have a garden not exceeding thirty poles in extent. If it is larger than this, the labourer expends upon it his strength, which would be much better reserved for his more especial employment, and if he is a regular servant on fixed wages for a certain number of hours' work each day, the temptation is too great to take something off each end of the day for working in his garden, and so unpleasant feelings arise between him and his master.

*The Privy.*

It is essential that every house be provided with a water or earth closet or privy; such privy, when dry, not to be nearer a living room than five yards, and such privy or closet should be connected with an impervious system of drainage, or have an impervious iron pan or

cesspit; and it is most desirable, if not essential, in most cases that there should be no leakage into the subsoil.

The iron pan or cesspit should not contain more than four cubic feet, so as to prevent an unsafe accumulation.

If a water closet is attached to the house, it is essential that it should be on an outside wall.

Such privy or water-closet to have an external opening or window not less than one foot superficial to open, and such cesspit, when attached to a privy, to be covered from the weather.

It is most desirable that there should be no leakage from any privy or cesspit into the subsoil if there is any well used for domestic purposes within fifty yards of such privy, and it is an open question for consideration if the right of prescription should extend to such drainage into the subsoil, so as to prevent wells being opened at any future time.

For houses in growing villages, a general water or earth closet, with at least three separate compartments, with a door upon each, might be sanctioned for buildings calculated to hold twenty people; but it is very desirable for general cleanliness that each family have its own water or earth closet. In cases where sanction was given for closets for more than one



family, it should be made essential that one be provided for males and another for females.

The law as to drainage and privies should be made applicable to all houses, or else in country villages there would be a law for cottages and no law for the better class of houses alongside of them.

Much depends upon this law, for the following reasons :—

Villages of small houses, and, indeed, towns as well, spring up in the country districts very generally, and especially in England, where water can be found in the subsoil within twenty-five feet; that being the lift of an ordinary pump, or what can be reached by a well pole.

The soil and subsoil are therefore naturally porous, and the danger is increased by the water underneath being almost always 'travelling' water; that is, water passing from a higher level, however slowly, to some natural outlet. This has been thoroughly investigated and established by Pettin-Koffer, the German physiologist, in his researches on the causes of the cholera at Munich, in 1865. The wells thus draw from a large area, and if the cesspools or privies leak into the soil, as they almost always do, epidemics are thereby disseminated through the whole population, especially towards the

end of the summer and in dry seasons. I think it would be found, upon investigation, that epidemics of the class of fever and cholera spread in country villages in proportion to the number of the houses upon the ground, and the nearness to the surface of the water in the wells. It is also a subject for full investigation in enquiries into the health of certain districts to ascertain the direction in, and rate at, which this subsoil water is travelling, as I think it would be found that villages built across the line of direction are more healthy than those which are built on the same line as the water underneath is proceeding. In villages on the sea-coast, where the subsoil water is thus tainted, it will, I believe, appear upon enquiry that cholera and fever in all its forms spread with the greatest rapidity.

The generally received opinion among those who have investigated the subject is that organic matter must be taken up by the roots of living plants, and that it is not a safe practice to bury it in the earth with the idea that contact with the inert soil will render it innocuous. Hence the necessity of preventing, by every possible means, its passing down into the subsoil.

I do not, however, wish it to be understood

that I believe water and drainage alone are the communicating causes of epidemics ; but I believe them to be very powerful agents in doing so.

These stipulations would almost lead to a compulsory bill for the drainage of towns and the utilisation of sewage by the whole country, which will probably come some day, although people are scarcely yet prepared for it. A general system of drainage becomes almost essential for sanitary reasons wherever there are some such number as 2,000 people living together upon such a space as would be equal to the area of one-half a square mile, or 320 acres.

#### *Pig-stye.*

It is desirable that no pig-stye should be permitted within twenty yards of the house, and prescription in like manner should not extend to them.

It is important, however, to consider that, if all these stipulations make the building of cottages, or similar dwellings, so expensive, or so irksome, that speculators will not build them, the labouring classes may not get houses at all.

In examining and certifying cottages already built, some discretionary power might be given

to the inspecting officer to interpret the law more liberally in such matters as are impossible to alter, without pulling the house down, such as the height of the ceiling in the living-room, and the steps up into the house ; but this discretionary power should be carefully guarded. The former, for instance, provided that the old ceiling was not under *seven* feet high, might be sanctioned if the cubical contents of the room, whether 'living' or 'bed' room, were correspondingly increased, and the latter by stipulating that air bricks should be put under the floor ; the floor, formed of wood, on sleeper walls, and the walls of the house itself lathed and plastered, and the earth removed from the outside of the walls, and kept off by brick or stonework.

As some of the basements of houses in villages are occupied, it would be necessary to make some special stipulations to provide for their not coming under the same law.

If the reasons I have given for passing these sanitary regulations are founded on correct principles, the general body of the inhabitants will benefit indirectly from the improved condition of the lower classes ; they will have less rates to pay, and the two extremes of society will be brought more together. The object in view, it is submitted, should be to reach that

very lowest class who can do nothing for themselves, and who come upon the rates whenever the least misfortune overtakes them. A very large number of landlords have, for many years, been acting on the right principle of considering good cottages on their estates to be as necessary as farm buildings, and I do not think that I have stated anything as essential which they, as a body, have not been providing already ; especially those who have been engaged upon it for some time, and have given their attention to the subject.

Perhaps, also, the Government might advance money on especially favourable terms to those who were inclined to undertake the building of cottages and dwellings which come up to the requirements of the description I have attempted to specify ; or, still further, in cases where, upon full investigation by one of the inspectors, it was evident that, owing to the increase of population, the pulling down of houses, or some causes of this description, there were not sufficient houses for the labouring classes, the Home Office might grant powers under some very stringent conditions to the local authority to compulsorily purchase land in that parish or union ; build a certain number of cottages, and

charge the union or parish with the full interest. This, however, is a question on which I feel scarcely entitled to give any opinion, as it is one of so much difficulty. Something of this principle has already been acknowledged in the Labourers' and Artisans' Act for towns, brought in by Mr. McCullagh Torrens, but how far that might be extended to country districts is a serious question.

It appears very doubtful if private enterprise or speculation can be relied upon to meet all cases, and there might be this final resort to the Government to provide for the wants of the poorest classes, but making the community of each district pay as far as possible for its own requirements.

The power spoken of here to be given is something of the same description as what already exists as to the authority of the Home Secretary over the drainage of towns. At present, if a town refuses to drain itself, he can send an inspector down, and on his receiving satisfactory evidence that such work is necessary, he can compel it to be done, and charge the inhabitants with the cost thereof.

The power is very seldom used, but the threat that it will be done is often the only effectual

argument that the better informed classes can bring to bear upon those who, generally from ignorance and indifference, oppose them in the vestry meetings.

As an illustration of the effect of the present system, and the probable working of the principles attempted to be laid down in this paper, for rural districts, let me quote the following from my own immediate neighbourhood. I think it advisable not to give the names.

The examination was made by me in December 1866.

There are at one place two double houses, built upon something less than one-fourth of an acre of land.

They are of one storey. There is only one privy and one well in the ditch immediately adjoining, for the whole families. All the houses are alike.

They are built partly of brick and partly of weather boarding, and covered partly with half-slating and partly with asphalted cloth.

There are only two rooms in each, without any other convenience whatever of pantry, cupboards, &c.: the living room, nine feet by ten feet; and the bed-room, about the same size, with a small window and no fire-place. The ceiling six feet six inches high.

The inhabitants told me that in wet weather the water streamed through the roof, and the smell of damp in the bed-rooms was very strong.

The inmates were as follows, on my visit :—

*First Cottage.*—W. P., a roadman, 10s. a week, 71 years of age, whom I found dying of disease of the lungs and diarrhœa. His wife lives in the same house.

*Second Cottage.*—J. W., a bricklayer's labourer; wife and four children, all sleeping in one room. One child died last week.

*Third Cottage.*—J. D., a heath getter. Wife and one child.

*Fourth Cottage.*—J. L., a bricklayer's labourer; wife and three children, all sleeping in one room. She informed me she had never been well since she lived in the house.

In all probability, the building of the whole of these, including the purchase of the land, did not cost above 50*l.* or 60*l.*

Each of the tenants paid 2*s.* 9*d.* a week, and did not complain of the rent if they only had better places to live in.

The total of this rent paid by them for these four houses is therefore 28*l.* 12*s.*

Supposing the law to which I have alluded was passed, these four cottages would, of course, at



once be condemned, and considering the rate of interest the tenants have already paid for them, the landlord, it would appear, would not have much claim for compensation.

Before, however, they could be ejected, the parish or union would have to provide houses for them, and would have to borrow the money.

Suppose that the Government advanced money for this purpose at five per cent. which would clear off principal and interest in a certain number of years.

The parish would be put to a still further expense of one per cent. for cost of management, and one per cent. for repairs.

This one per cent. would probably be sufficient until the Government debt was cleared off, when the houses themselves would become the property of the parish or union.

After that time more repairs would probably be necessary, but there would be more funds to meet them.

Seven per cent. therefore would be what the parish would require to raise.

Taking, therefore, the rent that these four cottages pay, namely, 28*l.* 12*s.*, the parish could afford to borrow 400*l.* to build houses for them.

To provide for these four families, there would be required two houses with one bed-room each,

and two houses with two bed-rooms each, and I think all of these might be built on the principles I have mentioned, and the land purchased, for about 400*l.*, or very little more.

When the Government loan was paid off, say, at the longest, in thirty years, the parish or union would sell the buildings, and thus put them into the general stock of houses in the country.

In order to prevent an undue accumulation of house property in the hands of local authorities, they should be compelled to sell these houses at the end of the term. They would thus have some funds either to begin the process again or recoup themselves for any outlay beyond the sum I have mentioned.

The case I have stated, no doubt, is exceptionally bad, but the general principle, I trust, is sound.

My experience would lead me to the conclusion that, taking all ages of married couples, blocks of houses in rural districts on the following arrangements would meet the general wants, that is—

One cottage with one bed-room	} In blocks of four.
Two with two bed-rooms . . .	
One with three bed-rooms . . .	

With the greatest crowding, the number

of people which each could safely accommodate would be—

For the first, two adults, with two children under twelve years of age ;

For the second, four adults, or two adults and four children under twelve years of age ;

For the third, five or six adults, or two adults and six children under twelve years of age.

If anything much or, indeed, in any excess of that is allowed, the greater part of the good arising from the improved dwellings would be lost.

There would be great economy in building such houses as I have mentioned, as no high-skilled labour would be required to put them up, and especially if lithographed sets of plans and specifications were supplied by the Privy Council Department, and other facilities given to lighten the expense of the work.

If, for instance, as proposed in this paper, the minimum sizes of doors, joists, flooring boards, rafters, &c., were fixed by law, they could be made wholesale by machinery at central establishments, or in the native places where the timber is grown, far cheaper and better than they can be made in each parish or by each proprietor, and the necessary quantities sent to each place as required. These advantages might be extended

to all people building cottages of this description.

Anything approaching comfort or decency in dwellings of such a class as those I have described exist at present is impossible, and it is no wonder if labourers coming home from their work prefer the warmth and cheerfulness of the public-house.

As the law stands at present, it is the duty of no one specifically to interfere with these matters, and say where they are wrong, but however difficult and formidable a work it is, everyone who sees the effects is, I believe, convinced that some change for the better must be attempted.

Crime in every form would, I believe, decrease, and so would the poor-rates in the long run, whilst the lowest class would be raised from their present condition, and be saved much suffering and misery. Many special cases of hardship would apparently arise in carrying out this measure, but the general welfare of the country must take precedence of individual interests.

The first of these is the fact that the  
 system of taxation is not based on  
 the principle of ability to pay, but  
 on the principle of consumption. This  
 is a serious defect, and it is one  
 which has led to the present state of  
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## ADDENDUM.

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SINCE the preceding paper was written, the first report has appeared from the Commissioners appointed to enquire into the Employment of Children, Young Persons, and Women in Agriculture.

On the subject of the condition of agricultural cottages and villages, the information is most full, and tends irresistibly in the direction in which I have endeavoured to point out. I will only quote a few of the most important of the statements and recommendations given.

The Commissioners themselves say :—

Mr. Fraser's picture of the state of the agricultural cottages in the counties which he visited cannot fail to produce a deep impression. He says of it that 'It is a hideous picture,' and the picture is drawn from the life. 'It is,' he declares, 'impossible to exaggerate the ill effects of the present state of things, in every aspect, physical, social, economical, moral, intellectual.'

At the same time, Mr. Fraser fully recognises the fact

that a great deal has been done of late years, especially by the largest landowners, to remedy the evil.

Unfortunately, the complete remedy does not rest with the wealthiest landowners. Many cottages belong to small proprietors, too indigent to have any money to spare for their improvement; some to absentee and embarrassed landowners; some to mortgagees; a large proportion to speculative builders, particularly in the open parishes. 'It is estimated,' Mr. Fraser adds, 'that the proprietorship of less than half the cottages in Norfolk is in the owners of the soil.'

As the Artisans and Labourers' Dwellings Act has now become law, the time, happily, cannot be far distant when Parliament may be able to see its way to some measure, of a similar kind, applicable to agricultural districts; and also to some more effectual inspection for the prevention of overcrowding than the present one, depending, as it does, on the local authorities alone, which Mr. Fraser notices as quite ineffective.

The evidence obtained by the Assistant Commissioners is still more detailed as to the state of the cottages and villages, and in suggesting the propriety of a law for regulating those matters.

We find, for instance, among the evidence collected by the Rev. J. Fraser, the following statement by the Rev. W. Beckett, rector of Ingoldisthorpe, county of Norfolk.

*Sanitary Arrangements.*—As connected with the sub-

ject of the dwellings of the cottagers, I would mention the great neglect in country villages of sanitary measures and precautions. This, as giving rise to sickness, is, of course, a cause, also, of poverty. I think that a law is especially needed to provide against this evil, and to secure to the poor a supply of good water, and guard against the evils arising from bad drainage, open sewers, obnoxious cesspools, privies built against the very cottage walls, and dirty pig-styes, and heaps of rotting refuse, within a few yards of the doors and windows of the cottages. During the last twelve years there have been two visitations of sickness in this parish—diphtheria and typhus fever—and in both cases they originated in some of the causes I have mentioned, and ceased when those causes were removed. On both occasions my efforts to remove the nuisances which were poisoning the neighbourhood were not only not seconded by the resident gentlemen and the parish officers but were even opposed by the latter, and by the medical officer of the local board of health.

In the first case a month or six weeks elapsed before I could procure the removal of the nuisance, and several deaths occurred in consequence; in the second, in order to secure my object as quickly as possible, and so save life, I was obliged to threaten to apply to the board of health in London to send down a medical officer to enquire into the cause of the disease.

In the latter case, immediately on the removal of the nuisances I pointed out, the disease was stopped, and spread no farther.

Again, at a public meeting at Halstead, Essex, Mr. Fraser states—



A discussion took place with reference to the inspection of labourers' cottages, with a view to prevent overcrowding, the commission suggesting the appointment of an independent inspector for the district; and ultimately it was agreed — 'That some independent surveillance of cottages was absolutely required, to prevent overcrowding, &c.; and that an annual return should be made by the overseers of the cottages in their parishes, with the number of inmates, to a Government officer appointed for the purpose.'

Again, Mr. Borham, M.D., of Halstead, Essex, states :—

Considers that sanitary legislation, when left to be carried out by a local board, is certain to be so much affected by local influences, and personal interests, as really to evacuate all the purposes of the Act. Thinks that no beneficial results can be expected till independent inspection is introduced into the system.

Mr. Samuel Clark, sanitary inspector for Norwich, states :—

Before any considerable improvement can be expected in this respect, the inspection of the sanitary arrangements, &c. of the cottages in each union district must be entrusted to some officer (like the exciseman) independent of the local authorities, empowered and required to take legal proceedings in any case where the laws of health or decency are manifestly violated. The powers given by the present sanitary Acts, and the general force of public opinion, are far too weak to prevent, or even largely to mitigate, the evils that exist. The water supply (to take one instance) is frequently

very defective, and there are no provisions in the Act for enforcing its improvement.

The privy accommodation is also generally defective ; and many cottages would have none were it not fixed up by the occupants. In fact, it is impossible to use too strong language in describing the condition of many of the cottages, considered as habitations of human beings, in a civilised country.

And Mr. Fraser then adds of himself :—

I could have multiplied these statements to any extent, but as the above opinions are given by gentlemen thoroughly competent, from their position and experience, to pronounce them, and embrace all the main medical and sanitary features of the question, as well as are, on the whole, remarkably harmonious, and entirely independent, I considered it unnecessary to add to their number.

The other Assistant Commissioners give much evidence to the same purport, and I may quote specially that of Earl Spencer, to show the feelings of some of the largest landowners.

He says :—

I think it desirable that cottages should be put under inspection, and that guardians should be able to indict the owners and occupiers of cottages which are overcrowded or unhealthy, and, if necessary, to do the repairs required for rendering such cottages wholesome and decent ; the expenses so incurred should be charged to the owner, and, on failure by him to pay, I would give the guardians power of selling the cottages. They

should remunerate the union, in the first instance, for the outlay, and hand over the surplus, if any, to the former owner. Were such a principle adopted, machinery, no doubt, ought to be constructed, in the form of some appeal, to protect the landlord from arbitrary and vexatious use of the power thus given to boards of guardians. A clause in the Act of 1866 gives considerable powers for this object; but I believe its powers might be increased; and its enforcements and application should be compulsory.

I think it very desirable for the Government to give facility to proprietors who have no capital to raise money for the purpose of building cottages. I consider allotments of great importance, as tending to raise the independent character of labourers; they should be limited to a rood, or thereabouts, within easy reach of the village.

Occasionally, corn is necessary as a change of crop. On the whole, I am in favour of allowing these labourers to manage as they please, allotments becoming objectionable when so large as to detract from the labour which the employer has a right to expect, and not large enough to support independently the labourer.

Still stronger views are expressed by John Harvey, Esq., Chairman of Quarter Sessions, when speaking of the county of Bedford, in a letter addressed to Mr. Culley, Assistant Commissioner. He says:—

As to the question of cottage accommodation for the poor, it is one in which I feel so strongly that I am almost afraid of expressing my opinions. I am con-

vinced that till the labourer has a decent habitation, you may try to teach him decency in other things in vain ; it is the most frightful evil of the whole of the social condition of Great Britain.

There is not adequate accommodation for the labourer in any county, in any town, in any district, in England.

How can you expect girls to be uncontaminated who have to sleep in the same room with grown-up brothers, or, worse, with their father and mother? Can a man be expected to keep away from the beer-shop when his cottage is what it too often is? But the practical difficulty of providing a remedy is enormous. Cottages, unless at exorbitant rent, will not pay ; and, till the Union Chargeability Act, 28 and 29 Vict. cap. 79, cottages were actually pulled down to save the rates.

I am very doubtful as to the working of that Act ; and I think that every parish should be charged to the union rate, in proportion to the number of labourers it ought to employ, according to its acreage ; i.e. where any parish did not contain sufficient cottages for the number of labourers sufficient for its acreage under cultivation, I would double all the union or common charges on that parish, until sufficient accommodation was provided.

Mr. Fraser adds of himself :—

The majority of the cottages that exist in rural parishes are deficient in almost every requisite that should constitute a home for a Christian family in a civilised community. They are deficient in bed-room accommodation, very few having three chambers, and, in some parishes, the larger proportion only one ; they are deficient in drainage and sanitary arrangements ; they are imperfectly supplied with water ; such con-

veniences as they have are often so situated as to become nuisances ; they are full enough of draughts to generate any amount of rheumatism, and in many instances are lamentably dilapidated and out of repair.

Such evidence and such conclusions will, I hope, amply justify the step I have taken in submitting my views with the hope of assisting in laying down the minimum of accommodation that will secure, so far as practicable, objects so important, especially as the details have not been specified in any part of the reports to which I have alluded.