Health in the village.

Contributors

Acland, Henry W. 1815-1900.
Royal College of Physicians of London

Publication/Creation

London : William Clowes and Sons, 1884.

Persistent URL

https://wellcomecollection.org/works/je2z7ucz

Provider

Royal College of Physicians

License and attribution

Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
https://wellcomecollection.org

HEALTH IN THE VILLAGE.

BY

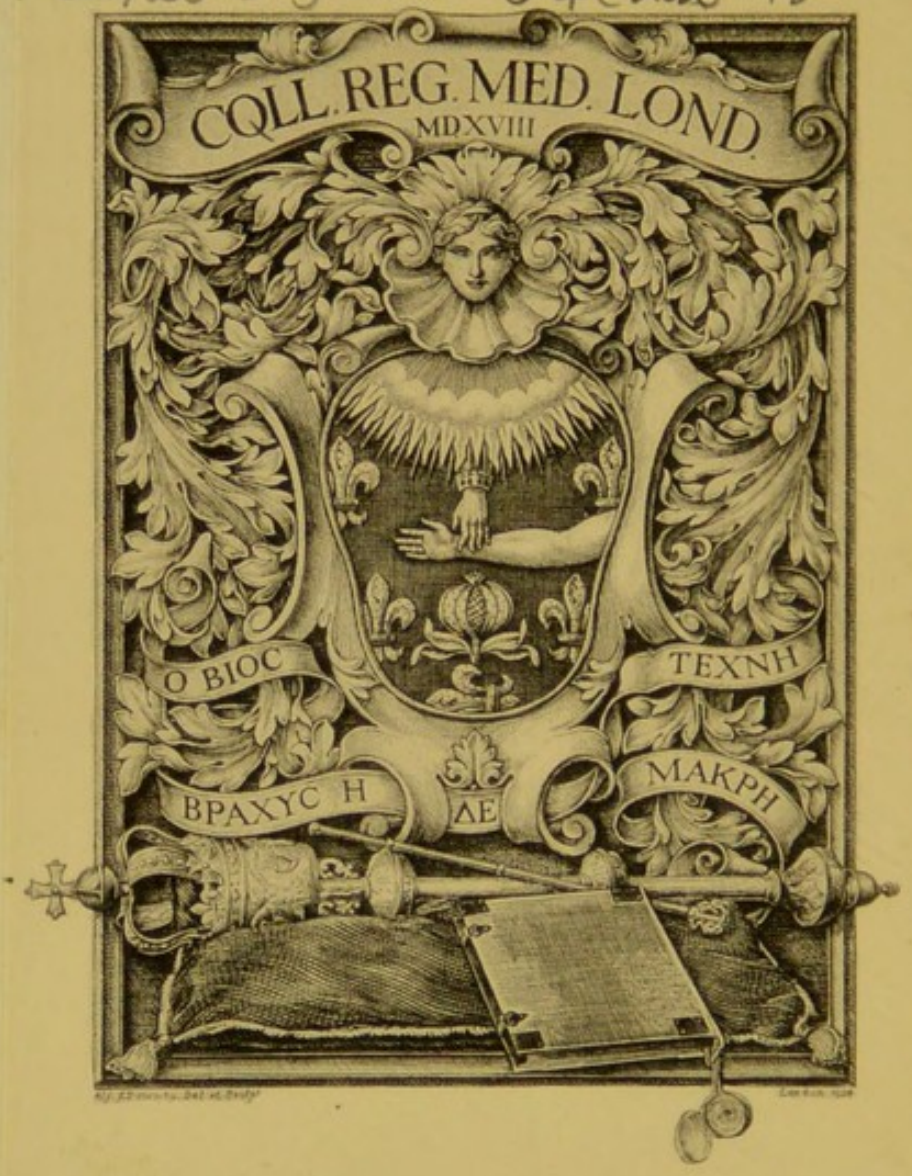
SIR HENRY W. ACLAND, K.C.B., F.R.S.,

Regius Professor of Medicine in the University of Oxford;
Honorary Physician to H.R.H. the Prince of Wales;
&c.

Σοφία καὶ ἐπιστήμη καὶ εὐσέβεια πρὸς τὸν Κύριον, οὗτοι εἰσι θησαυροὶ δικαιοσύνης.

"Wisdom and knowledge shall be the stability of thy times."

1884.



International Health Exhibition,
LONDON, 1884.

HEALTH IN THE VILLAGE.

BY

SIR HENRY W. ACLAND, K.C.B., F.R.S.,
Regius Professor of Medicine in the University of Oxford;
Honorary Physician to H.R.H. the Prince of Wales;
President of the General Medical Council; Hon. LL.D. Cambridge, Edinburgh, Durham;
Hon. M.D. Trin. Coll. Dublin,
&c.

Σοφία καὶ ἐπιστήμη καὶ εὐσέβεια πρὸς τὸν Κύριον, οὗτοί εἰσι θησαυροὶ δικαιοσύνης

"Wisdom and knowledge shall be the stability of thy times."

PRINTED AND PUBLISHED FOR THE
Executive Council of the International Health Exhibition,
and for the Council of the Society of Arts,
BY
WILLIAM CLOWES AND SONS, LIMITED,
INTERNATIONAL HEALTH EXHIBITION,
AND 13, CHARING CROSS, S.W.
1884.

LONDON:
PRINTED BY WILLIAM CLOWES AND SONS, LIMITED,
STAMFORD STREET AND CHARING CROSS.

PREFACE.

THE object of this Paper is twofold :—

1st. To sketch certain conditions of village life that are clearly unfavourable to health and to well-doing ; and at the same time to show that observers sometimes attempt to assign too precise limits to the conditions requisite for Village health.

2nd. To present to the general reader a broad view of the circumstances most favourable to the good order and happiness of a rural population.

The mass of information on these questions is so great, the instances that might be given so numerous, and the choice of illustration so wide, that these few pages seem to the writer wholly inadequate to treat so large a subject. He throws himself therefore on the mercy of the reader.

Still he hopes that the instances given are fairly typical and suggestive. Space will not allow him to make here any detailed acknowledgments to the great sanitary teachers of our time, such as Farr, Parkes, Christison, Stokes, Sidney Herbert, Shaftesbury, Simon, Chadwick, Rawlinson, Galton, Pettenkofer, Michel Levy, Morin, Bowditch, Waring, or Billings. For forty years he, as many others, has been under deep debt to them and their colleagues in this and other countries for unwearied scientific and philanthropic work. Nor can he forget what the world owes to Miss Nightingale, and now England to Miss Octavia Hill.

The writer desires to record his hearty thanks to several who have assisted him in this seemingly trivial task. Especially he thanks all who have furnished him with plans of cottages and information about them ; His Royal

Highness the Prince of Wales, His Grace the Duke of Northumberland, His Grace the Duke of Bedford, the Earl of Rosebery, His Excellency the Earl Spencer (for permission to describe his village of Chapel Brampton), the Office of the Ecclesiastical Commissioners, Messrs. Clutton and their Architect, Mr. Beauchamp, The Honourable C. A. Gore of H.M. Woods and Forests, his brother Sir Thomas Dyke Acland (among whose labourers he has passed from childhood some of his most instructive and happiest hours in the Hill Country of the West), to Mr. Harbottle, Architect, of Exeter, to Mr. Robert Castle, of Oxford, and Mr. Field, for their plans and advice, for years past, in the little parish of Marsh Gibbon, to his co-trustees there, to Mr. E. F. Griffith, the Civil Engineer, who gave the designs of the Chapel Brampton drainage and water-supply; and lastly, to Mr. Collings, for his patience and skill in hurriedly preparing all the delicate woodcuts from sometimes very rude material.

Oxford, May, 1884.

CONTENTS.

I.—THE TALE TOLD.

II.—THE NEED STATED.

III.—THE LESSON LEARNT.

IV.

ILLUSTRATIONS.

I. THE TALE TOLD.

1. Sketch of Low Marsh, an English Village in the Pre-sanitation Period.

On a sultry evening in the summer of 1858, I was sitting on a grassy knoll, looking over a flat and broad expanse in a midland county of England. A delicate outline of hills, not wholly unlike that of the Alban mount which bounds the Campagna of Rome, could just be seen some miles away through the heated haze that rose from the surface of the plain.

Dividing the level lands were rare hedgerows and rarer trees. No sounds were to be heard save the nibbling of stunted grass by some ill-fed sheep, and the continuous hum of countless insect life so uncommon here, so common in some other lands. As I stayed gazing on this not extraordinary scene (for in country life there is always a rich field for reflection), suddenly there rose, from below a mile away, the pleasing murmur of village bells. Then distant, and yet more distant, peals took up the melody, in churchyards far beyond. Peering through the hot and wavy air I saw first one church tower half hidden among clustered trees and then another; but though several vesper bells were heard I could see through the mist no other sacred edifices. As I slowly descended the green and slippery slope, the music of ever remembered words seemed to chant in unison within me:—

> Dear lovely bowers of innocence and ease,
> Seats of my youth, where every sport would please;
> How often have I loitered o'er thy green,
> Where humble happiness endear'd each scene!

How often have I paus'd on every charm,
The shelter'd cot, the cultivated farm,
The never-failing brook, the busy mill,
The decent church that topt the neighbouring hill,
The hawthorn bush, with seats beneath the shade,
For talking age and whispering lovers made!

I entered a straight, rough parish road, bounded on either side by a grassy border some twenty feet wide, and by treeless hedges beyond. Soon I came to a spot where the way divided into two. At the angle stood a spare wiry man, past the prime of life. He seemed to be a yeoman. To judge by the twinkle of his grey eye, his intelligence was above the common run. "Which is the way to Lowmarsh?" I said. "Well," he answered, "you can go which way you please. This way (pointing south) will take you to the 'Bulldog.' This one (pointing eastward), to the Church and School." "Which is the best road?" I said. "You can decide that for yourself," he replied; "and if you don't like to go either way, you can stop here." He was then leaning against a low wall. It was the boundary of a prim plaster-fronted Chapel. At this moment a hymn, sung lustily, arose within. On this, he, saying nothing, briskly went away along the eastern road. I stood for a minute listening and musing what he should mean. "The 'Bulldog,'" he said, "or the Church and School, whichever you please, or stop here." Then I chose the way by which he had gone, towards the Church and the School. But he was out of sight.

Before I reached the church I passed a half-ruined cottage; in front of it lay a brown and stagnant pool. The cottage had been of the better kind. It had an old carved door; the panels of which, with the solid oaken styles, formed a broad, deeply moulded cross. A post-office and the house of the village grocer were opposite. Then I passed the workshop of a wheelwright. The doors of this were formed as barn-doors, closed to-day, being Sunday, but, as I learnt afterwards, on week days thrown open wide for daylight and free air as he worked at his laborious

and skilful occupation. He is maker of the heavy waggons and lighter tax-carts for the district of the Marsh.

Now I was near the churchyard and the church. But first I passed a grey old manor house of the Elizabethan kind. There was a little garden in front with a grass plot unshorn. There were drooping fuchsias in the corners; wall-flowers generally wandered about unweeded beds. Ivy alone seemed triumphant here. I could now hear, through the open doors, chanted in measured cadence, the words, "Lord, now lettest thou thy servant depart in peace." I did not then enter the church, lest, being a stranger, I should disturb the congregation. I might perhaps have brought on me the rebuke, which, as I learnt afterwards from my friend with the grey eyes, the churchwarden had poured down on a devoted couple, heard whispering in the corner. "Mr. Woods," said he, rising after the second lesson, and addressing the Vicar slowly and distinctly, "Will you stop a bit, if you please? Bessy Jones and John Thorn have something to say to each other. One at a time, if you please, during church, Mr. Woods." It is said that no untimely whispers have since been heard in Lowmarsh church.

I walked through the churchyard. Scarce any inscription caught my eye. Literature had not as yet flourished in Marsh-by-the-Moor, though close to the churchyard was "the College." Into this institution I found my way, stepping over the ruins of a low wall that would have parted it from the burial-ground had not it, the wall, been in ruin. The College needs special description. It stood on the south side of the church. Between the chief buildings and the broken boundary, were privies and pigsties. These were each constructed of grey lichen-covered boards, set up at every possible angle, and bound into a kind of wall by every contrivance of post, or withy, or strips of rusty iron. The surroundings of each were equally nauseous; brown, dark slush that never dries. I picked my way to the chief of the buildings. The College is the name given to the composite group of about twenty. In Oxford it would rather

be the university and the single buildings the colleges. But let that pass. Two only will I describe in detail. One is noteworthy because it can no longer be seen. The other may perchance still have held together.

The first, and the nearest the church, was a long cottage, two storied. It was almost in ruins. Only one half was habitable. The pig and privy slush permeated the fragments of the broken wall to within a few feet of the inhabited dwelling. The size of the rooms, above and below, was about nine feet square. In these two chambers the earthen floor of the lower rooms was scarce less crazy than the gaping planks of the latter. Nor was the moss-grown roof more dry than the reeking ground around. This building was the freehold property of the resident, who owned but the soil covered by the cottages, the piggery, and the intervening muck-covered ground. Thus instructed, I walked south some five yards to the adjoining tenement. It was a yet more wonderful freehold property. It measured in full ten feet by nine. The house covered the whole demesne, and not an inch of land outside it.

I.—THE COLLEGE.

All beyond was public way. The room above and the room below constituted the castle of three unmarried sisters. They each had some pittance from the parish, and held little intercourse with their neighbours. One poor soul had been bedridden for several years. She had

harmless delusions of frequent communication with the unknown world, which made her an object of terror to all but her devoted sisters.

2.—THE BEDRIDDEN SISTER.

At this point my yeoman guide suddenly accosted me: "Well, sir, what do you think of our College? Would you like, sir, to see our drinking-water as well? maybe it will be a new sort to you, sir." We wound our way through the other dwellings. Each had a small garden, bright with flowers; some of them were very patterns of order and neatness. They were freeholds, of about four square perches each. Through open doors I could see pillows of lace-workers carefully covered over for the day of rest. We walked some two hundred yards across a grassy field. "There is our reservoir," he said, pointing to a shallow pit about eight feet across, full of brown peat-coloured water, which trickled over the lower lip of the crescent hollowed out of the sloping field. The footmarks and droppings of sheep and of cattle showed the spring of Stump well to be as popular with the quadrupeds, as needed by their masters. An aged dame just then came up, with a pail in either hand. "Good step from Summers Town on a hot night," she

said. "How far?" said I. "Well, three quarter of a mile to my home—no water no nearer," she said. She filled her pails and returned. "You might like, maybe, to see Summers Town," said my grey-eyed companion. "It is a nice little lot of squatters—it is so." "Oh, squatters!" said I. "How is that?" "I will tell you. It was years ago that they took to enclosing the moor. It made a great change for us all. We all got on pretty well till then. We are a rough lot, but we understood one another. Why, how do you think they sometimes cured the bacon, till they was found out? This way it was. A lot on 'em agreed on a farm some miles off. They went in the night, got hold of a pig and killed it without noise, and brought it home. It was well known, but no one could ever trace these pigs. Then it was found out that they were cut up and stored away for salting on the leads of our church roof. But after this was known they had to give up that plan. Oh, yes; I mind very well the last of this. It was chiefly squatters as did it." I naturally desired to see alike the homes, and persons of the race. For the race I can truly say I found them much as other men, or perhaps more kindly. I have often seen them since. There is not now one that is not my friend. If we were not all harassed by the demand of certain professors of political economy to flout our affections, I might since have done more for them, and neither had been the worse. By this time we reached Summers Town. It was nearly dark, so that what I relate was not all learnt this evening. I presently turned back, wished my companion good-night, and walked briskly to the 'Bulldog.' It was surrounded by the quaint paraphernalia of a true village feast, with the still quainter owners, with their tight trousers, thin legs, and short overcoats. It had been the Marshmoor Feast the day before. The *débris* of gingerbread and tobacco-pipes strewed the ground. There were a few still drinking, strangers who had come to the feast to leave only on the morrow. Though the Morris Players had ceased a few years before in this part of England, yet the villagers had danced here

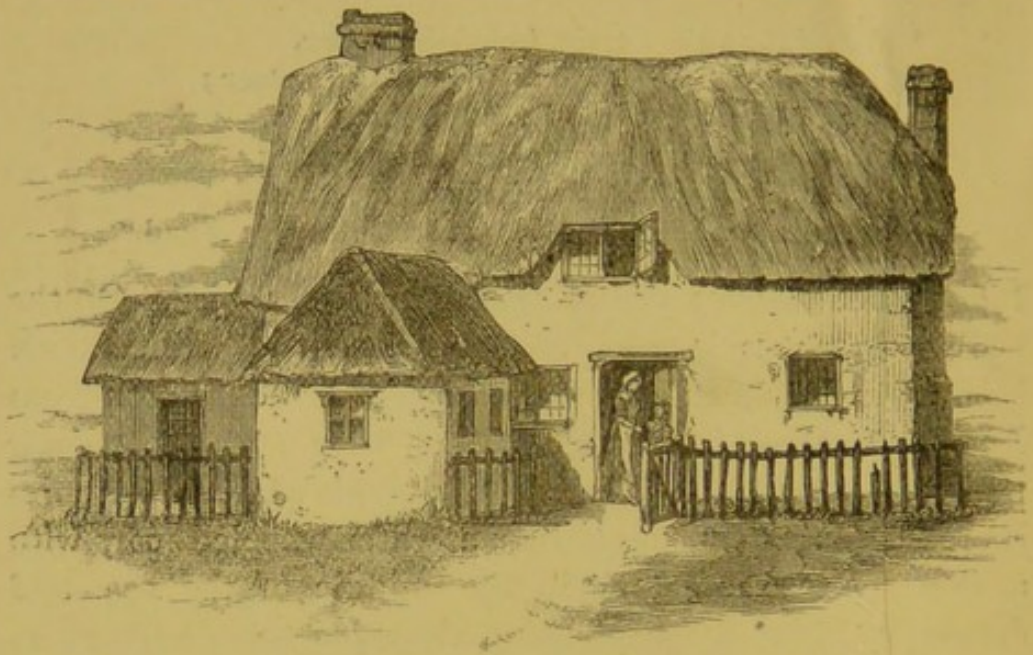
till past twelve on this summer moonlight night, with homely fiddle and boyish fife, on the open ground :—

> " For all the village train, from labour free,
> Led up their sports beneath the spreading tree ;
> While many a pastime circled in the shade,
> The young contending as the old surveyed ;
> And many a gambol frolicked o'er the ground,
> And sleights of art and feats of strength went round."

I got a bed which a pedlar should have occupied. On the walls were two rude coloured prints, invented before South Kensington ruled the arts and sciences of the nation from Lerwick to the Himalayas, and men were still left to draw their own " free hand." In one, 'Britannia's Glory' is represented by Britannia seated in a water-wheeled car, with a lion for her footstool, in the middle of the sea, and drawn by two mastiff-headed dolphins with portentous fins. In one hand is an ensign on a staff, with a portrait of Nelson with yellow hair ; and on the other is a figure of George III. in a full-bottomed wig. Neptune is swimming, the waves not reaching to his waist, with outstretched arms, one pointing to a fleet of full-rigged ships on the model of Dutch barges, and above him, in full flight, a fleshy cherub trumpeting his praise. On the mantlepiece were plaster cats, with coarse whiskers painted black, and plaster spaniels with thick brown dabs of paint promiscuously put on. I slept till the cries of the gipsies, the oaths of the showmen, and the shrill scoldings of the women awoke me at early dawn. I rose and visited Summers Town. The folk were already up; the men were off to work in the fields ; the women and children were already at their heavy task of piece-work in lace.

Here is the training-school ; an industrial annex to a squatter's ordinary home. It is now closed, and the deft little fingers ply no more. You can believe they had not much space, even if they had time, for the frolics of child-life. When I saw them, there were in a room nine feet by eight, and not seven feet high, thirteen children. Here they

are happy enough, and very busy. Oh, shades of Howard and of Parkes, thirteen children in a cubic space of 504 feet!



3.—THE TECHNICAL SCHOOLROOM.

How did they accomplish the feat? I was chatting with the mistress of this school of technical instruction on the quantity

4.—THE INTERIOR OF THE SCHOOL.

of lace that could be made, the money that could be earned and the school fees paid to her, when my old guide again

appeared. "Good morning," he said, "you only see them now they are up. Have you a mind to look into a bedroom or two?" I assented. "Come, then: can you go up ladders? there ain't no stairs." We entered a squatter's hut not far off, and mounted a short and fragile ladder, of which two out of six rounds were gone. "There," says he, "them is eleven in family; parents, growed up girls and boys, and little ones, all sleep in twelve feet by ten! Oh! they does somehow; very bad for 'em all. You can't move betwixt the beds. The three Hares, though, ain't troubled that way, for they ain't got any." "How is that?" said I. "Why," says he, "they are three brothers that live together; live, I say; no one knows how they live. At all events; they goes out and goes in; and has food somehow. Here is *their* home close by: come and see 'em." The brothers Hare happily were in; they sat in a row on a log, which also served as the block whereon to chop their fuel with an old billhook.

This billhook is important as being one of five articles of domestic use which the Hares possessed, viz., the hook, two knives and a fork, with an iron pot. The log which I named, and a block of stone were all the furniture proper of the house. The official ladder was in the corner north of the chimney. A glance at the upstairs sleeping apartment showed only a heap of straw in one corner become soft by long use, and the fragments of old sacks,—the bed clothes. There was always some doubt as to the exact labour performed by the Hares. They had a worthy, steady brother, who lived under the same roof, in the adjoining hut, with his wife and seven children. They were a tidy, industrious family, with two well-appointed rooms. The ladder was whole, and was concealed by a clean cotton print curtain. The three bachelors were a thorn in the side of the married brother. He did not approve their gipsy ways. Some time after the date of this visit, he enquired of one skilled in the law if he might take steps to reform them. The exact reply I do not know, but the same day, the bachelors being away from home, he leapt on to the low roof, with a bar like the "Weaver's Beam," and before twilight, first

roof, and then walls were laid low, and the bachelors on reaching home found themselves houseless. The result was on the whole satisfactory. The deed was counted to be on the side of order and morality—two bachelors took to more methodical ways, and one third only maintained the rights of vagrancy. He worked by day as much as got him food, and by night reposed without leave in his neighbour's linhays. His garments were latterly made by himself from old sacks which he begged of his friends. He refused the gift of a good, strong working suit to be made by the tailor of the neighbouring town ; he would not have his measure taken. And so he lived. He read with facility, and for long attended church with punctuality and devoutness. A change of ministration thwarted his special convictions, and he ceased from his Sunday service.

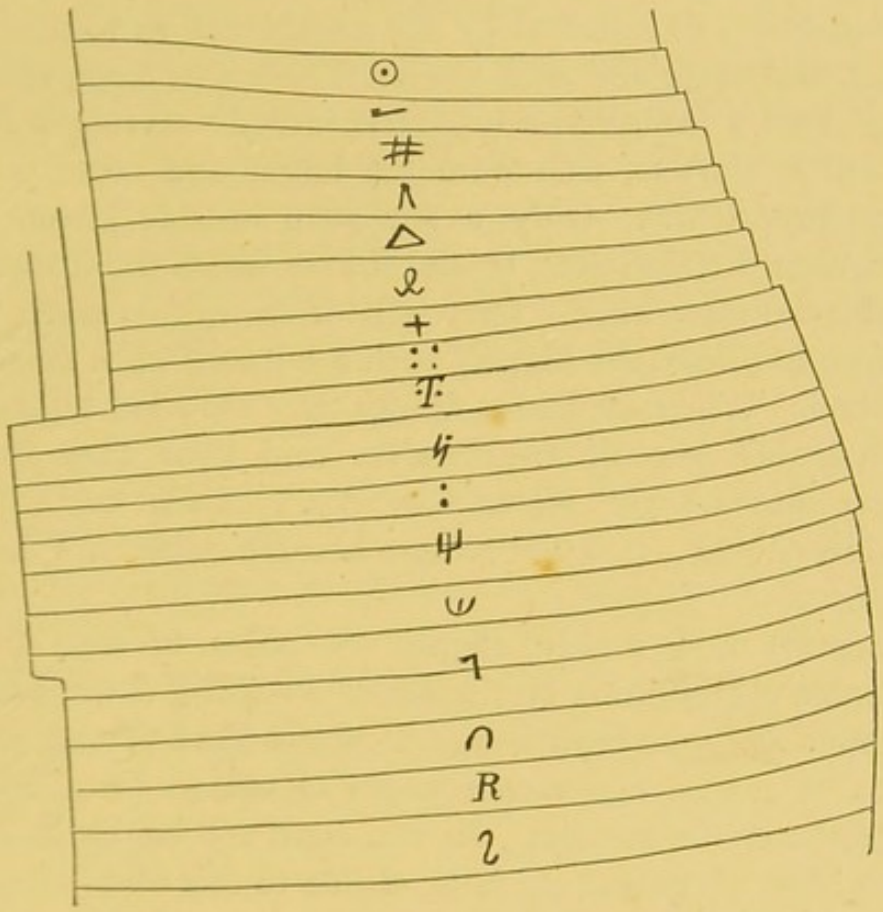
There was not much illness in the village. The parish surgeon was at this time, and is still, as most parish surgeons are, a kindly man. But the poor had then to send full four miles for necessary, and perhaps also sometimes unnecessary, medicines. This did not encourage in them the vice of polypharmacy.

To the row, or esplanade, of Summers Town there is no outlet behind. It was arranged in this wise. The squatters built unmolested on the twenty-foot grass waste of which I spoke. Behind the houses, and between them and the adjoining hedge, was a deep ditch. The plain being flat there is scarce any fall. Some of the twenty houses had, some had not, special rudely-built latrines. In either case the deep ditch was made by the daily excretions an elongated and hateful cesspool. Fever was not common.

It is not my purpose now to enter into historical details more than is necessary to illustrate the health conditions of a typical village, which exhibited with no fault of its own many of the evils as well some characteristics of the growth and making of England ; but a few words may indicate how the village came to be laid out in the way described. The broad flat lands, some of the peculiarities of which we have seen, were given by William the Conqueror to one of

The dotted lines indicate the boundaries of the separate lands. Of these there were in Marsh Gibbon Map no fewer than 3509 in that portion of the 2752 acres which were so divided. The baulks are still visible.

his followers. By him they were bestowed upon a Norman monastery. On its suppression in France Marshmoor became escheated to the Crown. They passed into the possession of a charity, and then underwent but few changes. Of these the most notable was the effect of the Inclosures Acts of 40 years ago. Till then the parish system and parish life were all in all. Within the memory of living men, the wholly unenclosed land was parcelled out into lots, which



6.—LANDMARKS ON THE "LANDS."

were called "lands," and these were separated from each other by "balks," or strips, which are still visible. These lands seem to have been apportioned by common agreement to certain proprietors. Each strip had a sign which marked the ownership. "They called the lands after their own names." Of these many are still remembered. A hook, a pitchfork, a crowsfoot, a pair of pincers. These strips of land containing sometimes only a few perches,

might be held singly by one proprietor. But in many parts of the divided lands in this parish one person would hold as much as three yardlands, (by a "yardland" was meant thirty acres), or he might have but one land of half an acre. Outside these apportioned lands all was *common*, with "common" rights enjoyed by the parishioners. Before the inclosure, all cattle and horses were necessarily tethered and watched, as there were no hedges. A straying animal might do much mischief, and quickly. The crops were rotation crops, determined by the parish both as to time of sowing, and as to the seed sown. There was kept, moreover, a Parish Bull. The labourers, called "serving men," lived with masters, who were the larger and more prosperous proprietors. Only a few were outside labourers. There were certain roads, by the side of which these toilers would build their huts. They built them in this wise. A youth would build for himself such a hut as I have already described. When he had a family they crowded together till their life became insufferable, and then they built another hut on the waste hard by. Then came the Inclosures Acts; and the village became such as I have described.

We must now wholly change the point of view from which this village must be regarded, premising always that the above is the merest abstract of one kind of the conditions of tenure and development of village life. They are characteristic enough. In one sentence let us gather up the ideas suggested by facts, visible to this day.

Look down from our grassy knoll upon the church (in this case dating from the 13th century) which was the centre of the parish life, and then on the manor house, the parsonage, the school, the village chapel—sign of freedom and dispute, the then hostelry—now the public house, the village pedlars, the rude development of rustic amusement; the games, the half savagery of the wandering men; the industry, the order of the better souls, the difficulties of growth without skilled guidance, and yet the yearning for a higher life, personal, political,

and spiritual, which we find cropping up at every turn. Only once more let the saddened village Seer speak :—

> "A time there was, ere England's griefs began,
> When ev'ry rood of ground maintain'd its man;
> For him light labour spread her wholesome store ;
> Just gave what life required, but gave no more :
> His best companions, innocence and health ;
> And his best riches, ignorance of wealth."

Such then is my experience of what a village in England can be and has been, and is with some alterations even now. No evictions here, no tyranny, only the operation of natural causes, assisted, I am bound to say to some extent, by the generally beneficial Inclosures Acts. I do not doubt that upon the whole these Acts benefited the upper yeomen, and consolidated farming operations, as a study of the annexed map, and as Mr. Seebohm's book will show. As to the effect on the class below that is a further and different question.

This tale of Lowmarsh, when in type, was sent by me to a well-known Land Agent, who knew the place in 1858. *He has travelled in his profession, from then till now, throughout all England. He returned me the proof, with the following comment, of the truth of which I am too sadly aware :—*

"Your picture of Lowmarsh in its old days is a very faithful one in its most pleasing, or, perhaps I should say, least shocking moments. But I certainly knew it in phases and moods which are strongly and painfully impressed upon my memory, and which your more pleasant picture does not recall to me. I ever think of the squalid misery of poor, wretched, woebegone men and women, and above all, of children, from whom happiness of any wholesome kind seemed hopelessly gone ; the hungry, half-starved families crowding round a miserable bowl of potatoes, often without even a bit of bacon, and thankful indeed to get it, supplemented with a supply of bread and weak tea ; the miserable girls of 15 or 16 years of age, with still more miserable puny babies in their arms, clothed in rags, and,

as a matter of course, illegitimate ; and the reckless and sullen fathers, ready to hate and curse, and with very little encouragement, to do worse than that. These also were only too common in those days, and were the fruits of the circumstances in which they, poor people, were compelled to live. I think a complete picture should have some reference to them."

The land agent being a gracious man leaves me to complete my own picture. I will therefore add yet one touch in black, and one in white. Tom was a wild man and lived a rough life. He never took kindly to reproof. The agent crossed Tom's mood. Like lightning he rushed for his axe to cut off his visitor's head. The agent stood firm and still; the uplifted arm fell powerless. The grey-eyed yeoman witnessed this scene. On Tom's behalf he says to this day, "Tom was a rough man ; but Tom wouldn't never have took to his axe to chop off the agent's head in Lowmarsh if he warn't more hot than usual." So in this state of human degradation there comes ever and anon the touch in white which I promised, "Blessed are the peacemakers."

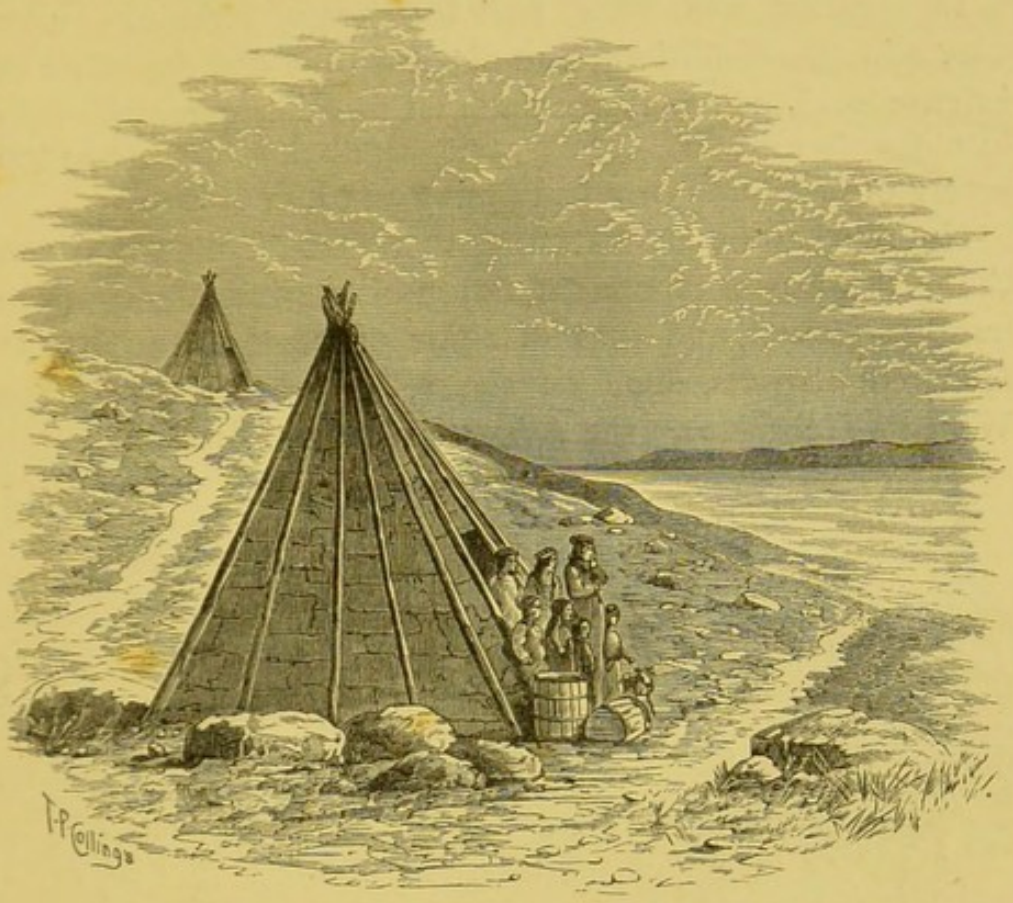
Various Health Conditions in Villages.

Four instructive instances of the effects of very dissimilar conditions upon human dwellings may here be shown by the woodcuts which follow. They are taken from sketches drawn on the spot by myself at various times since 1834.

The first is a Micmac Indian wigwam in Nova Scotia, on an open breezy site. There is ample space about it. It is easily left when offensive or inappropriate to the few wants of the inmates. It is on a slope where natural drainage is perfect, and it is near the lake for canoe and fishing.

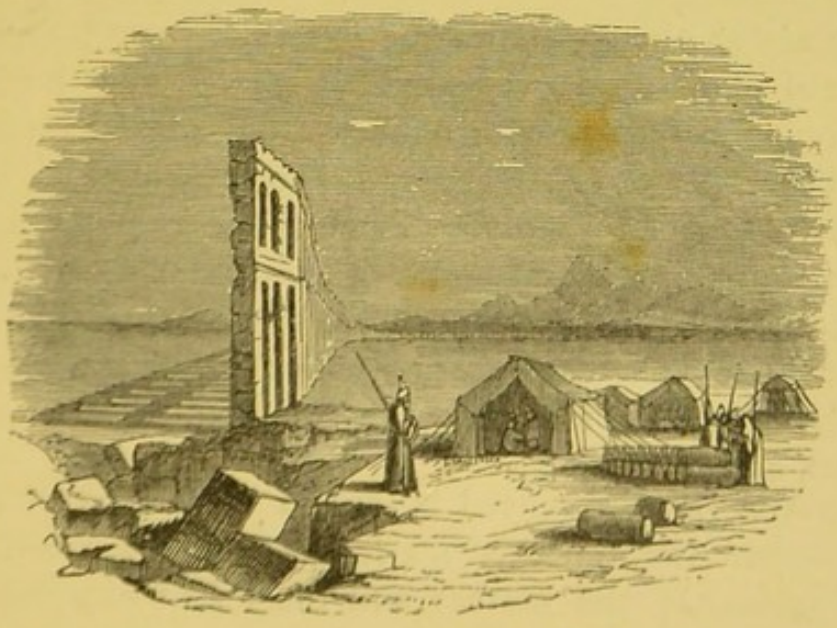
The second is a collection of Bedouin tents between Tunis and Zagouhan reposing awhile under the shadow of the great aqueduct which supplied a copious stream of pure water to Carthage. They are on an arid, porous, sandy soil ; the sun and the soil all tending to the comfort

and perfection of armed gipsy enjoyments, though in fact full often offensive and foul.



7.—THE WIGWAM UNIT OF AN INDIAN VILLAGE.

By the side of the tents are rows of wicker bee-hives, showing the pleasing bee-keeping industry so prized by



8.—BEDOUIN TENTS NEAR CARTHAGE.

these tribes, and so often neglected now in the villages of England.

In contrast with these frail tenements, existing under DRY climatic conditions, one of great heat and the other of intense cold, you may compare far more *substantial* hovels in climates where dampness, uncontrolled, is the cause too surely of enfeebled physical power and loss of life.

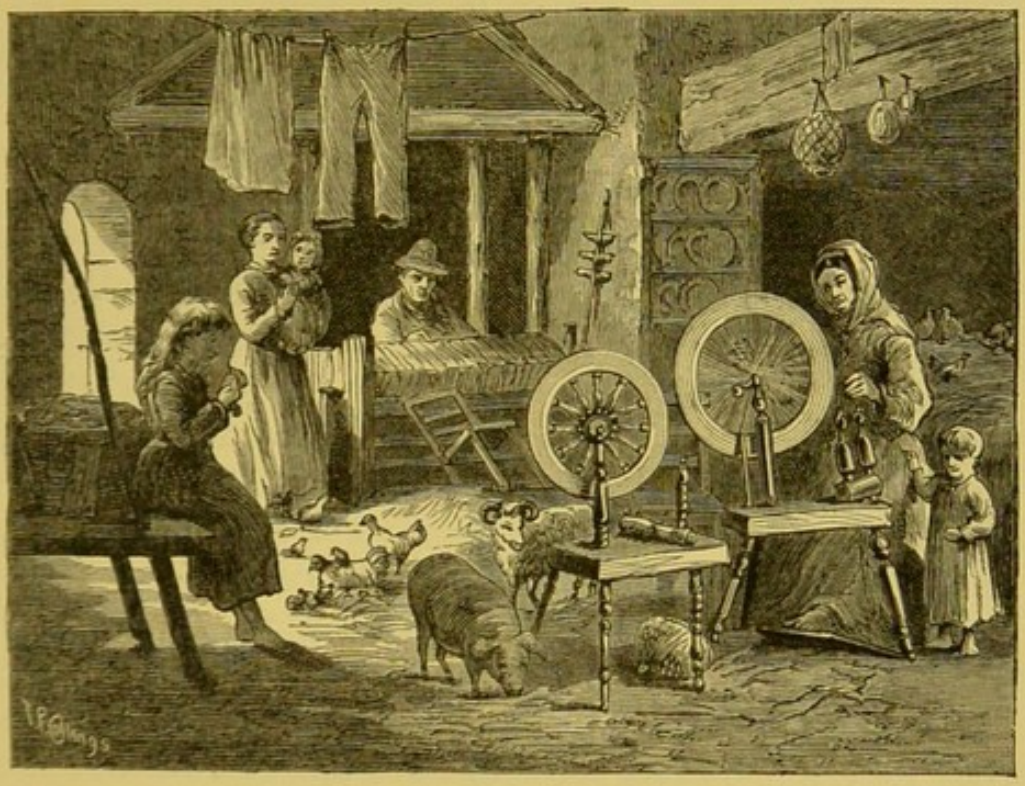
Nothing can be more striking than the difference between the health-aspect of these children of the desert and of the hunting-ground, and that of some of the dwellers in less favoured districts, such as the saturated islands of the Western Hebrides or the Atlantic coasts of Ireland.

9.—THE VILLAGE OF ST. KILDA, 1834.

The above sketch shows the low huts constituting the village of St. Kilda, drawn by me in 1834—filled with smoke, the ground saturated with offal, the entrails of sea-birds, the resting-place of their cattle and themselves alike. The second is an example of one of the brighter cabins of the Celtic inhabitants—drawn two years since by Mr. Muirhead and myself in the west of Donegal. The two first of the four sketches are suggestive of activity, freedom, and the winds of Heaven; the two last of damp, discomfort, and dirt.

The Arts have advanced indeed in the cabins of Erin. The weaver and the weaver's loom; the distaff and the spinning-wheel; the mother and the infant in arms, the bright-haired beautiful girl; the wizened grandmother; the

babies, the fowls, and the cat in a common bed; the inquisitive swine and panting sheep; the floor of earth, and thereon the chimneyless smoky peat; the outside of the hovel all slops and muck and refuse from the ruined cow-shed—all set forth conditions in which mankind live, in which family life is often virtuous, bright, and not unhappy, though in it are found all the conditions for making that life a burden and that family a hotbed of crime and of vice.



10.—THE WEAVER'S HOME IN DONEGAL.

Both time and space forbid me from giving other descriptions of Village life among the nations of the earth. It were easy, indeed, to draw similar contrasts in various parts of Europe—in Norway, in Switzerland, in Italy, in France—without going so far afield as India or Africa, or the countless modes of existence in the continents and islands of the Southern Hemisphere. I will therefore conclude this portion of a rough sketch of Village life by the following extract from a Report on the Village of Great Horwood which I drew up in the year 1858. I

insert it, because from the perusal of these facts, together with those which I have already presented, and the inferences which may be justly drawn from them, the account of which will presently follow of the simple requirements of a healthy village will be more interesting, and the lesson to be drawn will be more convincing.

"The causes of disease that are common to all these houses are offensive exhalations of some kind adjoining the houses, coupled with deficient ventilation in all the rooms, and more particularly in the bedrooms. In some of these good health is impossible. There are doubtless, in Horwood, many sanitary errors, but scarce any that may not be found in hundreds and thousands of other rural parishes.

"In most agricultural districts there are many points connected with the older dwellings, which are either remediably or irremediably bad. Some have thatch, where they should have slate; half-bricknogging, when there should be walls of the thickness of a brick and a-half; and porous, absorbent tiles instead of hard flagstones, or wooden flooring. They have rooms six feet high below, or even between the rafters, when they should be 7 feet 6 inches, or 8 feet, as a minimum below them; the door and the windows are not seldom on one side of the house, whereas there should be a back door and windows at the back for through draught; they have one casement of the window to open when they both should be hinged; they have a pantry without a window, when it should always have free access to the outer air. Some have a small ladder to the bedroom, instead of convenient stairs; have one bedroom window a fourth of the proper size on the floor below the wall plate, or on the floor, dormerwise, instead of two against the ceiling; and allow in some instances but half of the cubic air space for two adults which should be allowed to one. Every such fact may be seen in most agricultural districts, which have not been thoroughly taken in hand by influential landlords.

"Nor is this all; the exterior of many of the dwellings is no less unsatisfactory than the interior. In some instances,

even if the dwellings were better than they are, the gardens might cause disease. Into one an open privy overflows; into another the refuse of the house is thrown near the door, and forms a putrescent heap round which the children play; from it the father, as he returns home weary from a breezy field, inhales foulness which blasts the energy that the hours of night should give.

"The evils which are alluded to, which might be much enlarged upon, were pointed out long ago in the Reports of 1842 on the labouring population of England. Those who are ignorant of the habits and dwellings of our rural populations would be surprised to find how little the labouring classes interest themselves in improving their cottages. If a drain be out of repair, it is usually left untouched until the owner of the property becomes aware of the defect; and if the privy becomes full, it is left uncleaned until the increase of the soil renders the accommodation inaccessible. To the state of the privies in the cottage gardens is attributable more illness than to any other cause. The construction of these conveniences is usually of the rudest character, being nothing more than a hole dug in the ground. In the course of time the soil rises in these holes to the level of the surface mould, when a natural drain is formed beneath the cottage floor, which is usually lower than the surface. In a row of cottages on a dry heath in Buckinghamshire, I was surprised to find fever prevailing amongst the inmates, who were agricultural labourers, possessing unusual advantages. The cottages had been constructed with much attention to the comforts of the inmates; yet by the neglect to empty the privies, the vegetable mould beneath the floors had become thoroughly saturated by the drainage, thus producing frequent and serious indisposition amongst the inmates.

"The following history gives probably an example of the two simplest modes of origin of fever; the one by poisoning through malarious exhalations from the soil, the other by infection from a person already ill. A young man dug the foundations of a wall at Horwood, on a spot where

refuse and ordure had been accumulated; he went home to Winslow and had fever. Two brothers and a sister have since fallen ill in the same house; all are recovering.

"Compare the following. The cottage which I should designate as the most dirty, worse kept, and on the whole, as far as I know, most unsatisfactory cottage in Horwood, has not had a single death. One inmate had severe typhus twelve years ago, and more than one minor attack since. Three slight cases have occurred in the house this spring; all the inmates are always unhealthy; but in this endemic, though no one has been very ill, no one has been well in it.

"In truth, where a combination of circumstances is required to produce the disease, people seem sometimes to escape because they are worse off than their neighbours; just as in the thickest of the fire a man escapes, while a single chance shot kills his comrade. A parish house, near the village, which seems positively dangerous, is two feet below the road, and has the floor three inches below the door sill, is yet airy, because it is large and out of repair; the bedroom looks miserable, and has no ceiling at the collar; but if it were tiled, from the reasons given, would be healthy enough. I have seen in Oxfordshire and Bucks many such houses, and have heard the people say 'they prefer them to (what they call) the better sort: to be sure they look slovenly, but you see, sir, we have room to move, and fresh air.'

"Again, a positive good is neutralised by one carelessness. It has been already said that some of the cottages have no back door; it is almost impossible that a labourer's dwelling should be healthy when this is the case. This fact alone condemns the construction of the new buildings at Nash End, and renders them dangerous. But, on the other hand, a back door may lead to concealed and confined filth, unless there be adequate space behind. Lately I asked, during a sanitary inquiry in a house to which there was a back door, where the privy was placed. The answer was, 'Mine ain't a privy, it's a tub!' The tub was, among other articles of domestic use, at the back door. The object was to collect the manure for the garden.

"Or compare these two instances: in one charmingly kept cottage, with a capital garden, the whole of one side of the garden is occupied by a privy; its overflow, a general swamp, 9 inches deep, for the pig to play in; and his stye; and in the tenement next to it, were is a similar arrangement, there has been scarcely any illness in this house. The pigs' swamp is open (*i.e.* has no roof), and the bedroom window is not over it. But in another cottage, where the bedrooms are larger, the window is over the roof of a reeking pig-muck, and the strong man that slept by the window fell ill and died, and his widow is yet struggling for life.

"There is no reason for supposing that the food is inferior, or the general condition of the labourers at all worse in Horwood than in agricultural districts generally. On the contrary. The allotments which were apportioned to them when the common was enclosed have greatly helped them in providing the house. But I fear also that the muck has been treasured up, and more pigs kept close to the cottages, for the purpose chiefly, if not wholly, of supplying manure. The water is obtained chiefly from wells, and is not complained of. That obtained from the rivulets is not fit for drinking, and is not used for it. The south-eastern rivulet, as it flows at the back of the Wigwell, is often impregnated with oozings from cesspools, and from surface refuse.

"It remains only now to sum up into a few words the conditions which appear to have favoured the development of fever in these cottages. They were destitution, bodily and mental depression, contagion, over-crowded dwellings, putrescent animal and vegetable matter, and an insufficient supply of fresh air, or, as it is called, bad ventilation. We must attribute the persistence of the affection in various degrees to the last four, and especially to bad ventilation. The evil is most grievous in the sleeping-rooms. 'We can do no more,' said one admirable woman, 'than keep clean that which we have. We cannot get our landlord to give us more air, or make the windows we have to open. "Women," he said, "are best shut up."' Some of the small

cottages at Wigwell are models of personal cleanliness and of neatness on the part of the inmates. The fault is not in them, but in their tenements. So offensive do the bedrooms of some become in the rooms where the windows are near the floor, that one said to me, 'I often awake in the night stifled, and me and my husband go and sit at the window.'

"Too much stress cannot be laid on this. It is an evil, which the inmates cannot, with their present education and notions, rectify. It would seem very easy, by borrowing a tool or two, to make, at the cost of a little labour and the exercise of a little wit, an additional window in a roof; but, 'it is the landlord's place' to do it. He does not know of the necessity, or has not the means, or doubts the soundness of what he considers sanitary innovations. And as for the father, he comes home tired. From day to day the old small casements remain; no better are substituted, and none are added.

"To this I must only append the oft-repeated caution against the accumulations of muck, filth, and piggeries close to human dwellings. The great difficulty of the case must be admitted. Custom, convenience, poverty, want of time, family cares and close living, combine against the formation of the energetic moral habit which leads to the most healthful state of body and mind. With many, therefore, the difficulties of living are barely surmounted; complete mastery of their circumstances is seldom attained."

At the time when the above passage was written it had hardly been generally recognised that typhoid fever* ravaged the dwellings of the agricultural labourer as certainly as the alleys and courts of our large towns. This fact is now thoroughly established, and has led to the publication of many admirable works, more or less detailed, on the condition of the farm labourers. Now that, as a consequence of the Sanitary Commission of 1870, a medical officer has been appointed for every spot in the kingdom, under a special sanitary authority, it can only be a question of time when truly evil conditions shall cease, though it

* See Registrar-General's 21st Annual Report, 1860, p. xxv.

was calculated by Lord Napier and Ettrick * that it would cost seventy millions sterling to rebuild the 700,000 labourers' cottages which he concluded would need reconstruction in Great Britain.

The remarks which follow now will not be confined to the question of cottage building, but will comprise the general conditions which may be assumed to be desirable for health in a village. It was nobly said by Michel Lévy, and cannot be too often repeated, "l'Hygiène c'est la moralité et l'aisance." Public and personal health rest on morality and competency. Morality and order are the presumed foundation of the parish system: competence is to be attained by the toiling dwellers in the country, through the possession of adequate land, or of adequate wages, *with industry and contentment.* It is obvious, however, that the political principles, and the relation of the population to the land and to manufactures, touched on in this statement, involve questions which lie at the root of the national life, and cannot be discussed here.

II.

THE NEED STATED.

1. General Requirements for Healthy Village Life.

The health, then, of a village depends chiefly upon these factors :—

1. The Dwellings.
2. The Water-Supply.
3. The Removal of Refuse and Drainage.
4. Education, Occupation and Recreation.
5. Care in Sickness.

* Transactions of Social Science Association, 1872, p. 22.

1. Dwellings.

In considering what houses are to be recommended as the best units of dwelling in a village, it has to be remembered that it is not possible to name any plan which is actually the best, or which is either desirable or possible for all villages. It is, however, easy to say what are the essentials of all fairly good, though humble, houses for the families of an agricultural labourer and for the other classes of inhabitants in a rural village. In every mixed village community in this country there are to be found as occupants the parish clergyman, possibly the squire, perhaps also the doctor of the district, the small shopkeeper, grocer and mercer, or keeper of a general shop, artizans, *i.e.* carpenters, masons, wheelwrights—not often the glazier or painter, possibly a farrier, butcher or pork butcher, baker, shoemaker, one or more publicans, and by chance other trades and occupations depending on the local conditions of the district about the village. But of these last it is not necessary to speak, for these persons are generally provided for, either by themselves or by their predecessors in the same occupation. They constitute only individual cases, and have not to be considered as a large class. But besides, we have chiefly to regard the active agricultural labourers; to whom must be added the aged, the unmarried, and those without families who do not require such a cottage as is needed by a man in the prime of life who is maintaining and bringing up a family. This is all well known to every one of every class who has ever lived in the country for even a short time.

In building, then, a labourer's cottage, the following points have to be considered and decided upon:

1. The site, the general materials—stone, brick, concrete, cob, wood, iron; the walls—hollow, solid, plastered; the character of the windows as regards ventilation and light; the material of the roof; position of the door or doors; the floor; warming; cooking, and washing.

2. The water-supply.

3. The drainage.
4. The cost and the principle on which rent is to be fixed.
5. The garden or allotment, or both.
6. The pig-sty.
7. The approach.

Upon carelessness in any one or more of these details a large part of the comfort and character of the rural population throughout the world depend. Many of the details are regulated by local custom, and by local conditions; some by geological formation, as regards material and water-supply; and some by the conveniences or difficulties of transport. In this country, however, the last is rapidly becoming everywhere equalised.

It is not in the province of this paper to discuss in detail the work of the architect or contractor. Certain general principles should, however, be stated.

As regards the site, it would not be recommended as a good rule to follow the practice of more than one speculative builder, or even, as has been observed in towns, of more than one member of a Sanitary Board, and to purchase cheap suburban lands—cheap because too low and wet, or foul for garden ground—and run up artizans' dwellings thereon, knowing the water to be within nine inches of the surface, and then not even attempting to lay down a concrete floor. These days are past, at least Sanitary Authorities can and should stop the erection of such buildings. In villages generally, the site depends on the convenience of the situation. None should be sanctioned where drainage and dryness of soil are impossible. A layer of concrete should be laid over the whole area to be occupied by the house. A damp course of pitch or of cement and slate, or the hard stoneware perforated tiles now to be obtained at no great cost, should be built in. The last seems to be far the best; and sleepers for supporting floor joists should be of the same material.

The plans which follow may be taken as a standard for a convenient labourer's cottage, containing every actual

requirement on a moderate scale, for a family consisting of the parents and five children.

The following comprise the chief provisions :

1st. A living room, with superficial area of about 150 sq. ft. ; and a capacity of 1275 cubic feet, *i.e.* 12 ft. × 12 ft. 6 in., 8 ft. 6 in. high.

This is entered by a snug porch with a double door. Through the porch is also a small ventilated pantry approached from the living room without opening the outer door.

2nd. From the living room is (1), a door to the bedroom floor ; and (2), a door to the washhouse immediately opposite the back door.

In the washhouse are a fireplace, a copper containing 10 to 16 gallons, and a sink.

All washing and cleaning operations of the family are carried on there. No steam need enter the house.

The staircase leads to three rooms.

3rd. The parents' bedroom, 150 sq. ft. area × 8 ft. 3 in. high, giving nearly 1250 cubic feet, fireplace, and ample window.

4th. Girl's room, about 100 sq. ft. area × 8 ft. 3 in. (825 cubic feet), fireplace, ample window.

5th. Boy's room, 90 sq. ft. area × 8 ft. 3 in. high (740 cubic ft.), ample window, door opening to the head of the staircase, in which there is thorough ventilation by opposite windows.

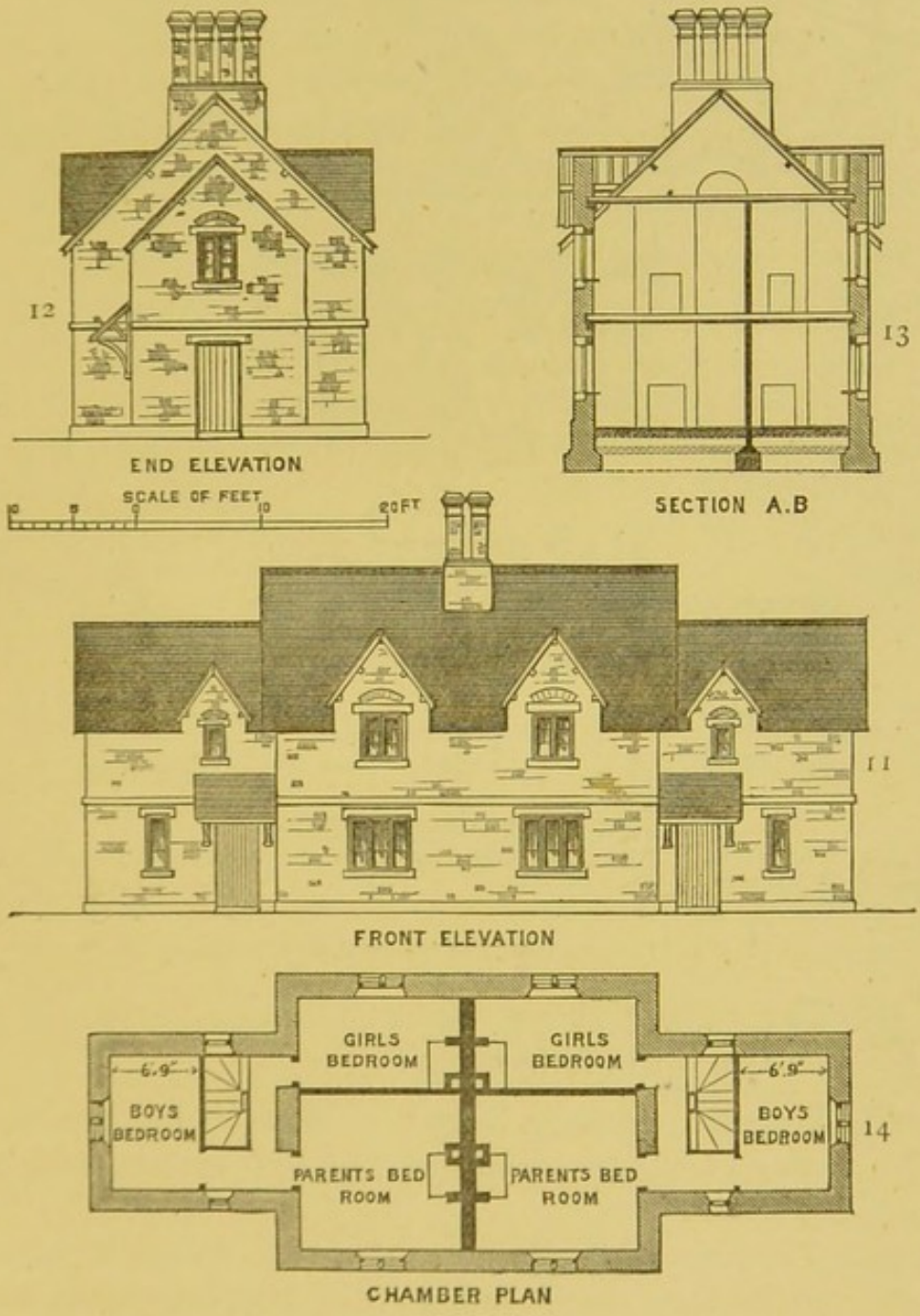
6th. The staircase is a means of thorough ventilation in itself ; and for all the rooms on either floor, by setting open the downstair door.

7th. Outside the washhouse and beyond the pantry is an ample fuel-house, about 36 sq. ft. area.

At the back of the cottage, removed to a convenient distance, say 20 ft., is a bakehouse with oven, including store room for faggots and brushwood. On one side of the bakehouse is an earth-closet and ash-heap under shelter.

Of this more hereafter, in considering the arrangements for drainage.

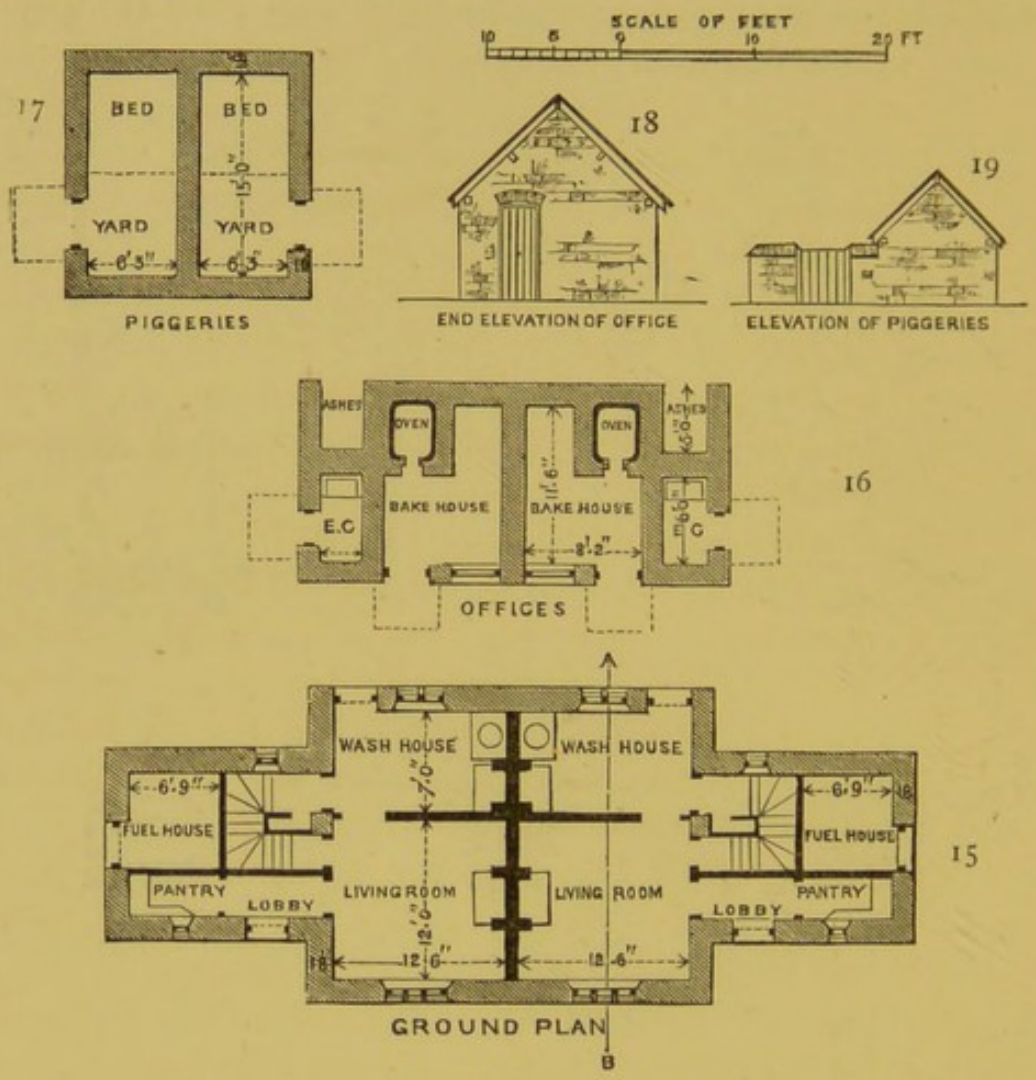
To the rear again of the bakehouse towards the end of the garden is the pig-sty, solidly built, with yard and pig-house, and a clear area of about 90 sq. ft.



STANDARD COTTAGE. (MARSH GIBBON.)

It is not, as I have said, the province of this paper to usurp the functions of the architect. But the above few

facts being taken as the basis of the requirements of a farm labourer's cottage, certain generalities on cottage building from the point of view of health may be added.



NO. I. STANDARD COTTAGE. (MARSH GIBBON.)

1st, The cottage above described should be one of a pair. On this it will follow that:

1st. That the chimney is in the centre of the two cottages for the economy of fuel, and maintenance of warmth.

2nd. The doors are placed so that they do not interfere with the space round the fire, nor with the window.

3rd. Three-fourths of the room are therefore unbroken by doors.

4th. The staircase and pantry act as an air jacket, being on the outer side of the living room, of which one side only and a bit of another are exposed to the outer air. A few feet area in this plan are given to the upstairs lobby to the abstraction of the same from the rooms. This is a choice of difficulty. The staircase is winding—an arrangement inconvenient for an adult coffin, but difficult to plan otherwise without loss of space.

5th. In three-light windows, two at least should open. In two-light windows, both. Window heads are to be close to ceiling. Window fastenings always to be made to allow window either to open wide or be set ajar.

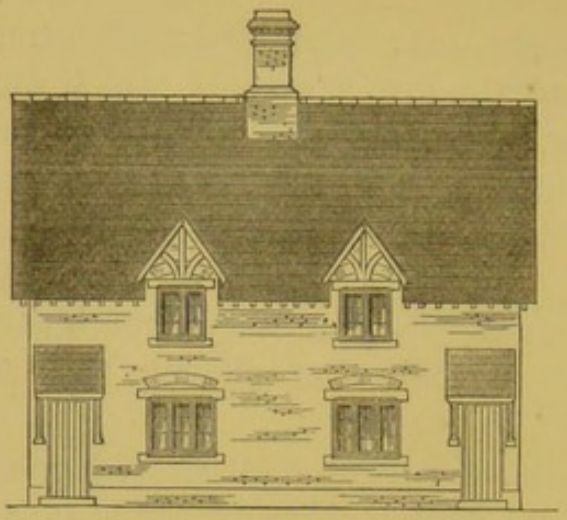
6th. The roof should be lined with plank.

7th. The whole area beneath the ground floor should be concreted. The sitting-room floor should be partly laid with best hard tiles near the fire, or in some districts with slate. The best material for the rest admits of question. *Inspectors* say *wood.* Those *who use* the floors usually say *stone* or brick.

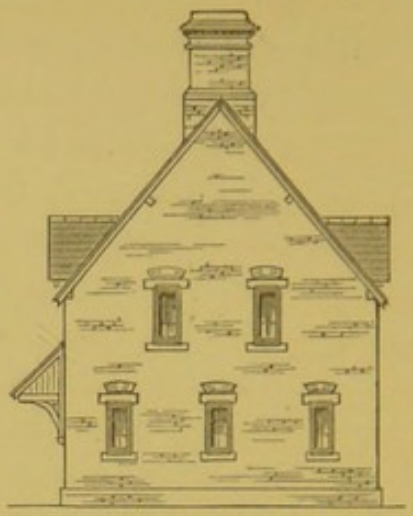
8th. The aspect of the cottage should be, if possible, one facing the half cardinal points S.W. and N.E. back and front, rather than due north and south.

9th. The plans here described *were* built in Mid-England for £300 the pair, no great sum. At present, this would not be undertaken for less than £370 or £380.

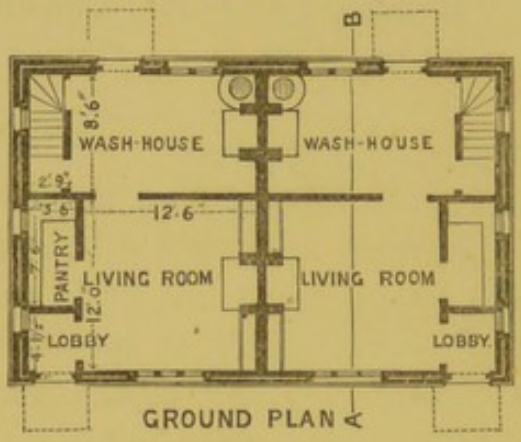
In the following plan the principles laid down above are generally followed. The arrangements and materials will be such as to reduce the cost. It will be noticed, however, that the fuel house, pantry, and staircase are disposed so as to give the least amount of wall and angle work, though the dimensions are but little less. The block is rectangular, and the walls are double, or hollow walls in bonded brick. The offices are reduced in cost by the extent of roof over the ash floor. This probably is to be built as cheaply as a good cottage of the plan described



FRONT ELEVATION

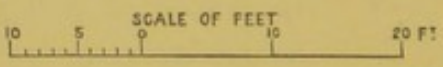


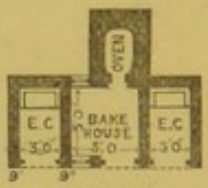
END ELEVATION



20

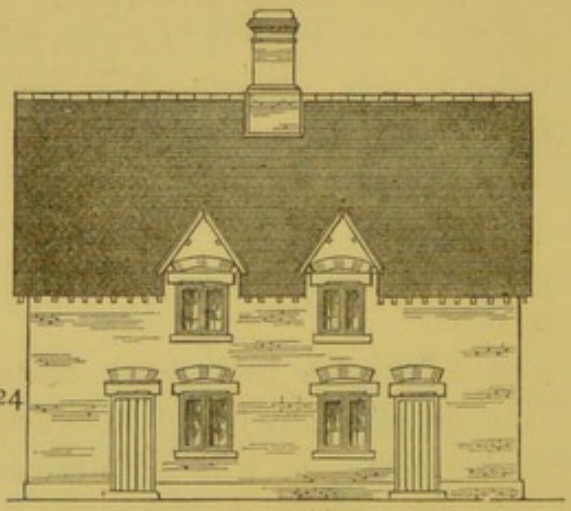
GROUND PLAN





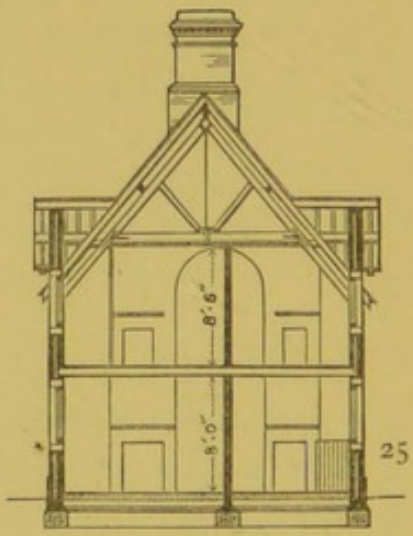
26

PLAN



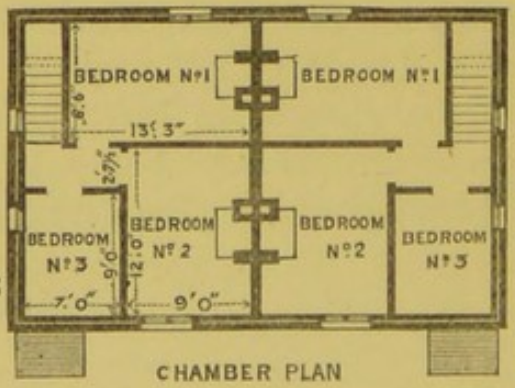
24

BACK ELEVATION



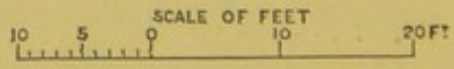
25

SECTION A.B



3

CHAMBER PLAN



27

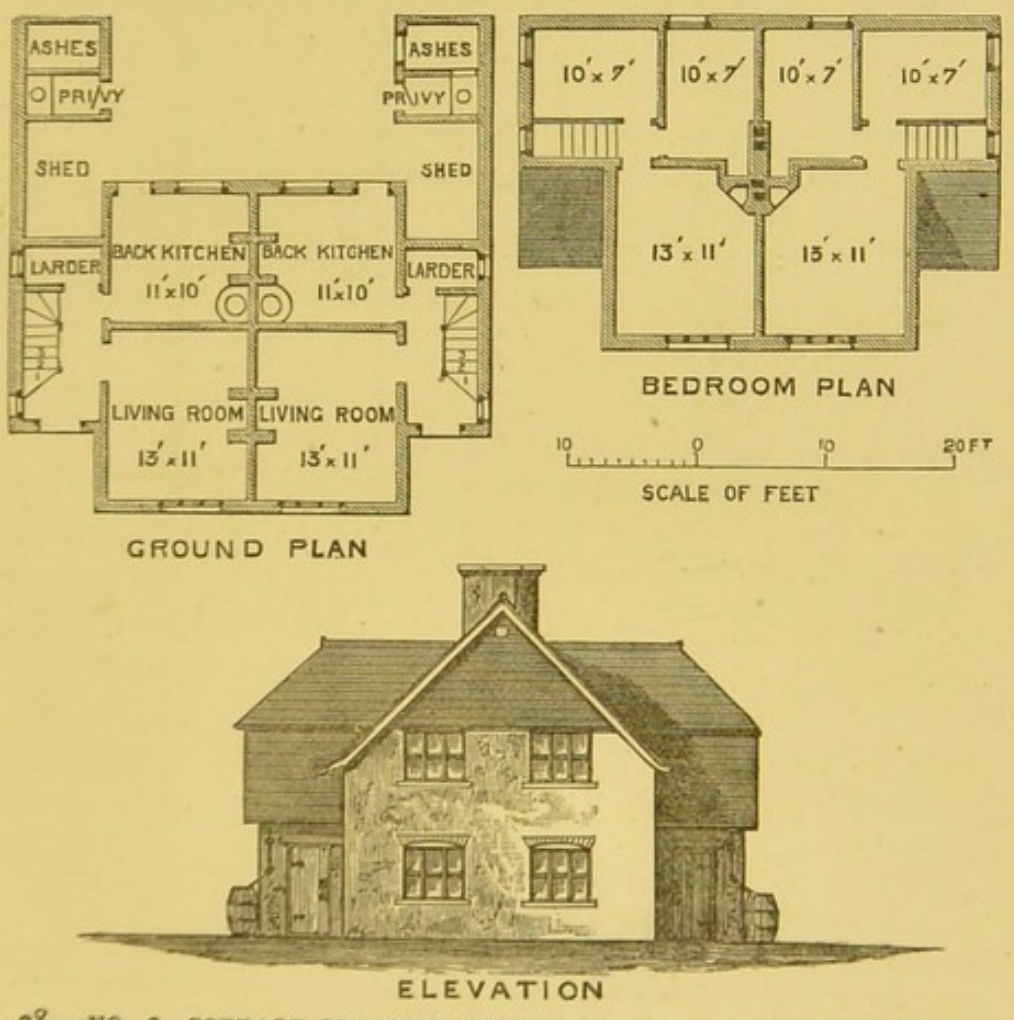
ELEVATION OF OFFICE

COTTAGE NO. 2.

can be, and might cost for the pair about £300; exclusive of fencing and water-supply, which may add 10 per cent.

One other modification of what I venture to call here the standard cottage is added, because, though these modifications are not considerable, they help to draw attention to the small difference which may add to, or detract from, the comfort of those houses of the poor, and at the same time make but little change either in the cost or general appearance of the dwelling.

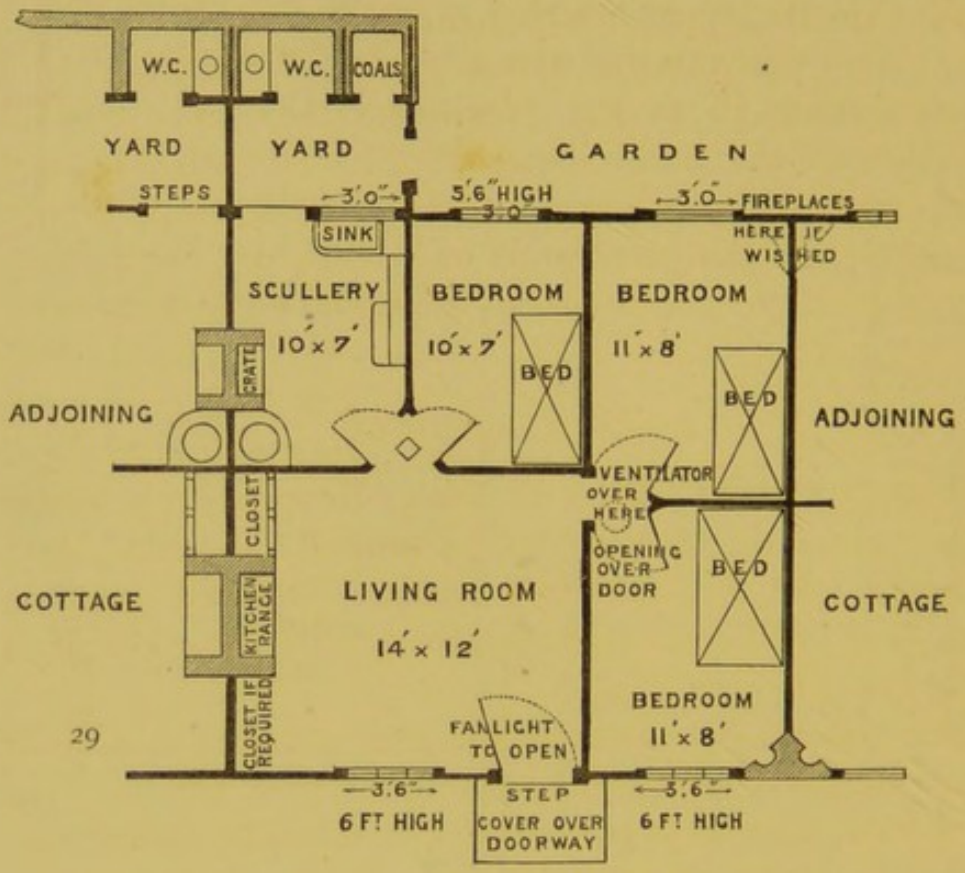
In this case the living room has only one door, that, namely, into the porch, which contains also the staircase.



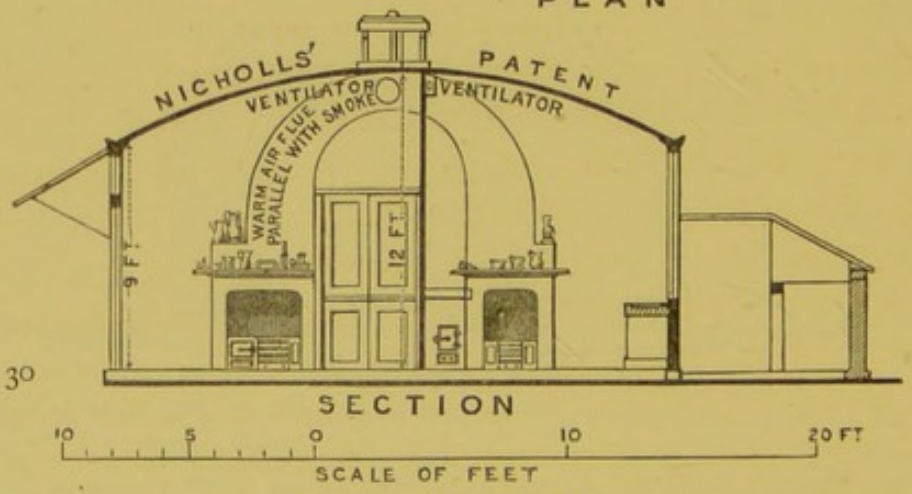
28.—NO. 3. COTTAGE PROPOSED ON SIR THOMAS ACLAND'S ESTATES.

The back kitchen, or washhouse, is of the same width as the front room, namely, 11 feet. The wood or coal shed is close to the back door, and the closet and ash shed immediately beyond. The cost would be about the same as the standard.

It would not be right, even in so slight a sketch as this paper contains, wholly to omit reference to the many proposals which have been made outside the ordinary range of building operations, such as iron or concrete cottages. The following plan is therefore reproduced from Mr.



PLAN



SECTION

10 5 0 10 20 FT

SCALE OF FEET

OCCASIONAL COTTAGE.

Chadwick's interesting Report on the Dwellings exhibited in the International Exhibition at Paris in the year 1867. To what extent this kind of construction has

found favour I am not able to say. The arrangements are ingenious, and the cost, when constructed of the wire, wattle and cement material proposed by Mr. Nicoll, is said to be not more than £60. This includes living room and scullery, and three bedrooms, with kitchen range, copper, and latrine. All have larger floor space than the types which have been above described. This plan is here inserted, not so much for the purpose of recommending it, as for suggesting the application of ingenuity to the construction of the class of dwellings which may not be required to be so lasting as well-built cottages, and which yet should be healthy as long as they are required, and can be quickly built and easily removed.

2.—WATER-SUPPLY.

There are three modes of Water-Supply for a single cottage as for the village. 1st, by rainfall and tanks; 2nd, by wells; 3rd, by conducted water. The first point to be ensured in all cases relates to the quality; the second as to the quantity obtainable.

As to the quality—1st, rain water as received in a rural district may be counted to be pure and "good for use." In many level districts it is necessary to carefully collect and store it in tanks, great care being taken as to the receptacle for storage. The quantity that can be obtained in England varies greatly between the west and east, and where it is most wanted the least is to be obtained. In the Nene level the case is becoming urgent, as I am informed by Mr. Wing, the Duke of Bedford's auditor. An average cottage may yield perhaps an average of 2 gallons per head a day, or nearly 3000 gallons annual, excluding loss by evaporation. A storage tank of 4000 gallons is not a great affair, but not to be lightly proposed. No owner of cottage property would willingly rely now on this source. Thatched roofs and lead gutters are not to be employed.

Whenever there is an adequate fall in the district, the superfluous rain gravitates to the nearest brook, after having

been caught at the cottage itself so as to keep full a large water-butt, or a cistern in the kitchen.

2nd. *The supply by wells.*—No data *generally* applicable to the very various geological conditions of England can be given. Local experience is generally adequate. The shallow wells, which are those commonly found in single cottages and in villages, are always liable to contamination from surface water, and such contamination is seldom absent. In agricultural districts such water has the double risk of contamination from surface manure, and from the excreta from the house. As a general rule, a cesspool and a well should not exist on the same premises, though in some strata such prohibition may not be necessary.

The chief Officer of Health should be able to supply the details of Well construction.

3rd. *Conveyed water* may be conducted to villages and cottages either by natural streams or rivers, or artificially as in towns. This mode of supply is that almost wholly relied upon in all the hill countries of the West of England, of Wales, and of Scotland. In the flatter districts of the Midland and Eastern Counties, both streams and rivers are less frequently the natural source of supply, even of the villages. In some places they have ceased to be safe. This subject requires further scientific investigation.

It is an error to suppose that the beautiful rivulets which we see in the hill country are all pure. Not infrequently, the cottage below the farm receives the bright draught contaminated by the farmyard above; just as many rivers have, as all know, "previous sewage contamination." All such sources of water-supply have to be considered locally, and in cases of doubt, referred to the public analyst through the medical officer of health. In rivulets from hill districts it is easy, at the cost of a few shillings, to arrange a miniature filter-bed on the stream above the cottage.

These observations are necessarily of the most perfunctory kind. The Public Health Water Act of 1878 has made such stringent provision in respect of the water-

supply of villages and cottages, that there is nothing to be added in the way of legal *power* to obtain whatever water arrangements the district admits.

Will may be wanting—and in that case the breakdown of all organisation is certain, if the will be absent in a vital part of the machinery. Inspectors of nuisances if well instructed, medical officers of health if trained by general and by scientific education, and the sanitary authorities if wisely chosen by an intelligent constituency, have together an instrument of precision in the Health Laws of this country, which should greatly protect us even against the germs of the period. Perhaps we expect too certain immunity in an order of things in which "Change and decay in all around we see," and in which the law of progress means also the necessity of death.

The valuable House of Commons Report on Water (1876), which led to the Public Health Amendment Act (1878), contains together with its evidence a full account of many of the difficulties of village administration. It illustrates with great force the necessity of a strong central authority, which should, however, interfere as little as possible in local details, save in the way of Instruction and Report. As regards the actual question of Water-supply for villages, it is very tersely stated in a paper by Mr. R. H. Paget at pp. 184–188 of the Report here referred to. The principles there explained are virtually carried out by the Act just named. In this Act it is laid down that it is the duty of every Rural Sanitary Authority to see that every occupied dwelling-house within its district has within a reasonable distance an available supply of wholesome water sufficient for the consumption and use for domestic purposes of the inmates of the house. Provisions are duly made for throwing the costs of this supply on the owner of the house, or on the district, as the case may be. It may happen that it is impracticable to provide the supply at a reasonable cost; or it may happen that the only available supply is so situated that it is out of the power of the owner to obtain it; and that for these and other reasons the expense should be borne by the district.

These exceptional circumstances are usually well understood in the localities; but as was shown to the Parliamentary Committee (p. 189), instances may and do occur where the local authority, or the majority of it, is indisposed from local reasons to act with justice on the facts. There is probably no single factor in Rural Health arrangements more complicated by numerous interests, requiring more care, or calling for more sound judgment, than this one of the regulation of the Water-supply in relation to village health and comfort.

3.—Removal of Refuse.

The refuse to be removed from a single cottage unit or from an aggregation of cottages is the same in kind as that from a town, excluding the products of manufactures. The principle of its disposal is, however, in some respects, not the same.

It consists of five portions: the rain water; the surface water; the house refuse, *i.e.* washings; the ashes; the excreta.

The water has to be partly stored and partly removed to the nearest brooks.

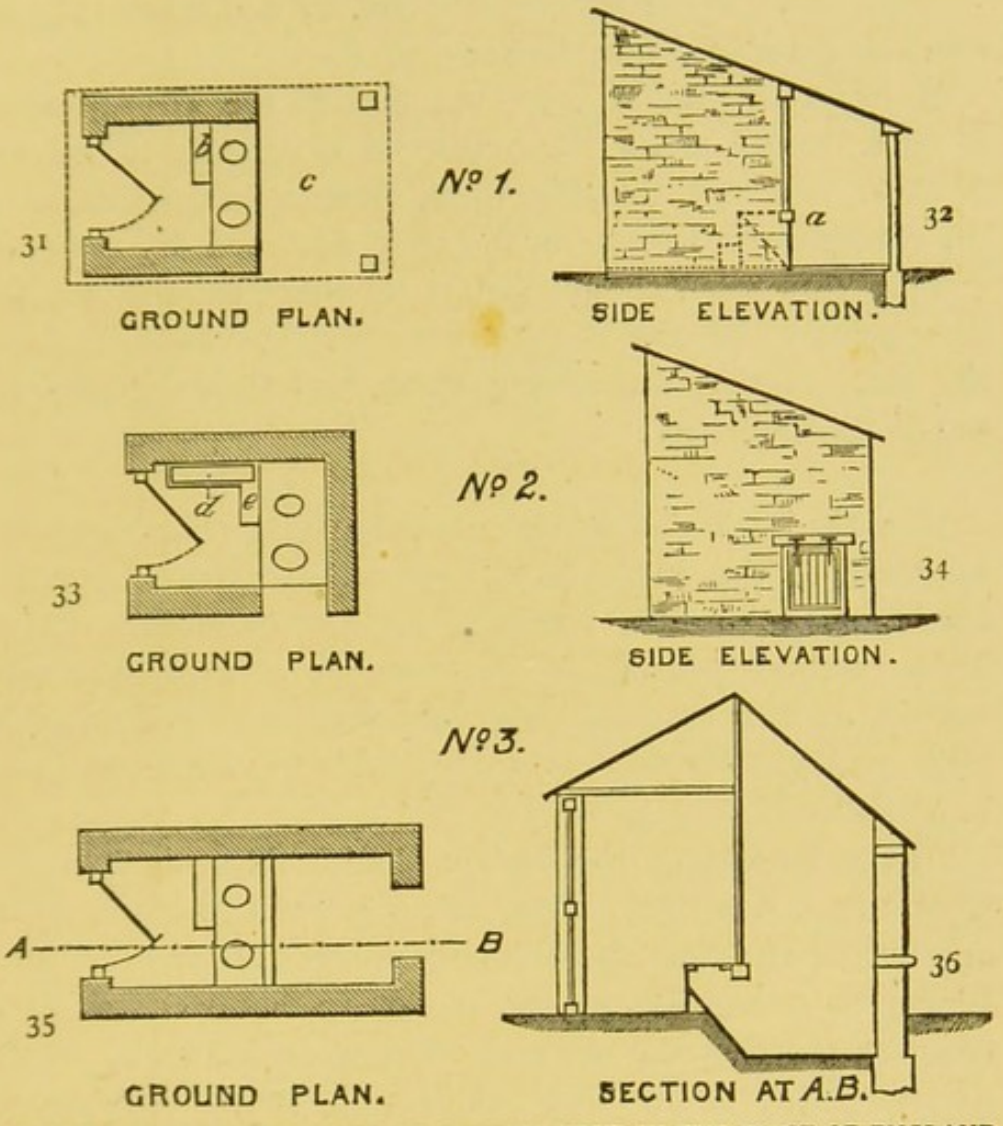
The house refuse, the ashes, and the excreta, go to the garden or the allotment, or the farm.

The following general arrangements seem to be desirable:

There is to be no private closet under the cottage roof. The *washings* are to be emptied into a sink, which communicates directly with either a small trap, through a grating (the pipe being disconnected with the trap), or, if there be a sufficient fall, to a garden, by an open gutter, or open tile drain leading thereto. The ashes and the human excreta are mixed together, and removed by the agency of one or other form of "Earth Closet," taking that term generally for an apparatus which is not a cesspool, and which has to be frequently emptied of its contents in a more or less dry state, and which is wholly above ground.

The annexed woodcut shows a good arrangement, in

which the principles are carried out in the simplest manner. They are these:



SIMPLE ASH OR EARTH COTTAGE-CLOSETS USED IN THE WEST OF ENGLAND.

a. Seat joist.
b. Step.
c. Covered flat; open.
d. Dry earth; flat enclosed.
No. 3. Sunk receptacle, concrete and cement; water-tight.

1st. All the human excreta, and no other refuse, are deposited in it, with the frequent daily addition of either dry earth or ashes.

2nd. The ashes are applied, on *every occasion*, by raising the cover on its hinges.

3rd. A sloping slate or slab directs all contents, either to a slightly inclined stone or concrete floor, which ought to be above the level of the surrounding ground; *or* into a receiving tank on low wheels. This mixture is conveyed

to the garden, or to the earth somewhere, once or twice in every week.

The rear of the closets is protected by a roof whereby no rain can enter to dilute the sewage.

It has to be noted here, 1st, that in the arrangements of Nos. 1 and 2, *all* the refuse is absolutely above the surface; and 2nd, that the worst known form of closet is the common garden one of the open, so-called dry cesspool.

The principle above stated applies equally to the arrangements of the pig-sty, viz., that the floor is above the level of the surrounding earth, and slopes gently towards the entrance.

Now the method of refuse removal just described is wholly opposed to the method of removal of refuse by water carriage—the ordinary sewage method of modern towns. This method practically presupposes a copious water-supply, an adequate fall, land available for irrigation, and a large outlay. How far it is applicable to villages will now be shown.

In the Report of the Public Health Amendments Bill Committee, April 5th, 1878, at pp. 92–104, there is a full account of the drainage of many villages in the Brixworth Union on the ordinary principle of town sewering. It is there stated that the method thoroughly answers. In the following Map, and in Woodcuts Nos. 37 to 44, the sewerage and water-supply of the village of Chapel Brampton, is given in detail. It is the best instance with which I am acquainted, where the modern methods of sewers and water-supply are complete as applied to a straggling rural village. It was executed for His Excellency Earl Spencer, now Lord Lieutenant of Ireland, by Mr. E. F. Griffith, his Sanitary Engineer.

The village of Chapel Brampton is distant about four miles from Northampton. It is situated on the River Nene, and stands on a slope about eighty feet above it. The stratum on which the village stands is chiefly ironstone, but near the river it is clay. The arrangements, both in con-

PLAN

SHEWING THE DRAINAGE & WATER SUPPLY

OF

CHAPEL BRAMPTON, NORTHAMPTONSHIRE.

COMPLETED APRIL 1881.

Note. The figures in red thus 106·75 refer only to Surface levels.

Note. *The Branch Drains are 4in diam.*

nection with the drainage and water-supply, are of the simplest kind, and will be readily understood from the various diagrams.

Before the village was drained there had been serious cases of illness, caused, it was believed, by bad water and bad drainage. The excreta were collected in the common privy, and the water-supply was obtained from wells situated very often close to it.

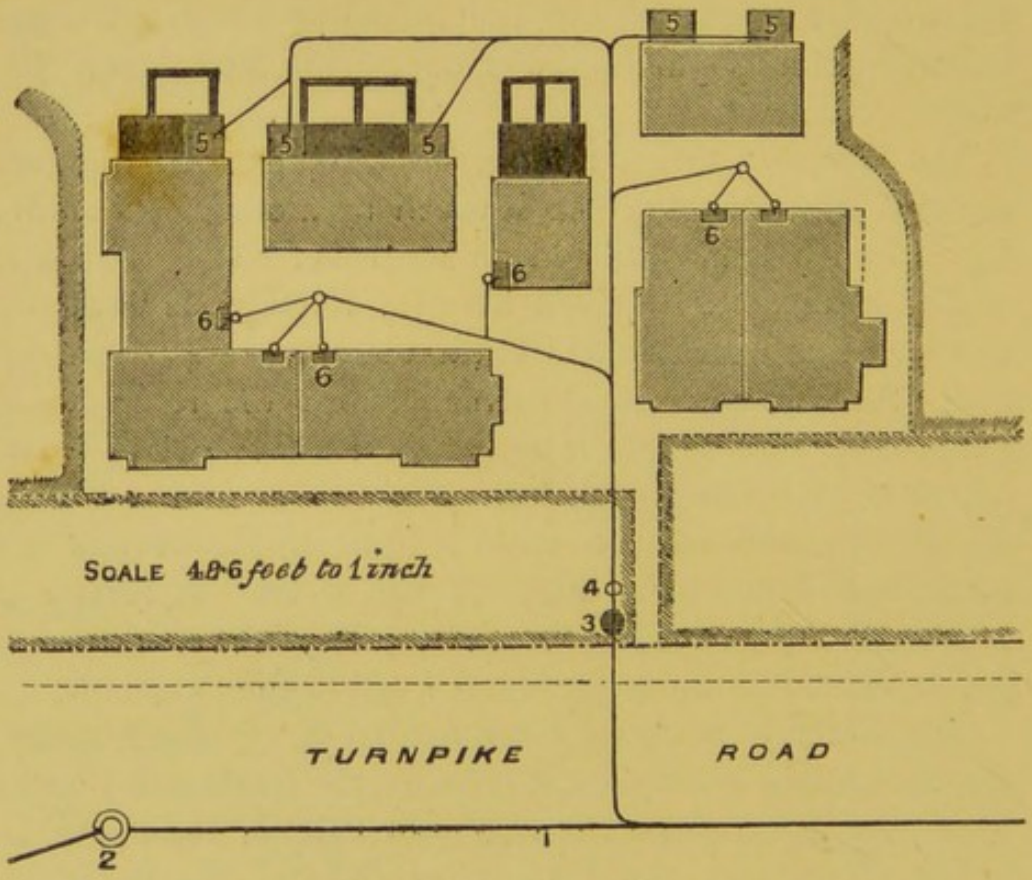
In the scheme of water-supply the works are made not only to supply the village of Church Brampton, about 1½ miles distant, but also several large farms. The water had to be supplied sometimes to as many as 200 head of cattle at one farm during the winter months. For the works first carried out, not including Church Brampton, the total population was about 360, and about 500 head of cattle.

The water is taken from a beautiful clear spring (see General Plan, No. 37). It is taken by a 6-inch stoneware pipe to an old mill situated on the River Nene. A wheel and pumps have been fixed here for forcing the water up to a reservoir near Sanders Farm, the lift being about 200 feet. A tower has been constructed near the reservoir on purpose to supply this farm, which is a very large one. There is only one 3-inch iron pipe to the reservoir from the pumps, and off this main all the house-services are taken, each house being supplied with water. A service is taken off a pipe leading to the scullery and to a three-gallon automatic waste-preventer fixed in the closet.

The water is perfectly clear, not requiring any filtering, and the supply is ample, not only for the farms and Chapel Brampton, but also for the village of Church Brampton, as before mentioned, about 1½ miles distant. Each service has a stop-cock fixed close to the main. The service is constant, as when the wheel is not working, the reservoir situated at Sanders Farm is made sufficiently large for three days' supply. There are no particular remarks to be made with regard to the water-supply, excepting two; of these the first is very important.

To each of the cottages a garden is attached, and in a dry summer the whole of the evening is occupied by the tenants in watering the gardens. The consequence is that the amount of water used, it being a constant service, is enormous as compared with the population. The next difficulty is with regard to the waste-preventers and frost; the closets being fixed outside in the garden, the waste-preventers are liable to freeze, especially as it is very difficult to get country people to pay attention to the means proper to provide against this difficulty.

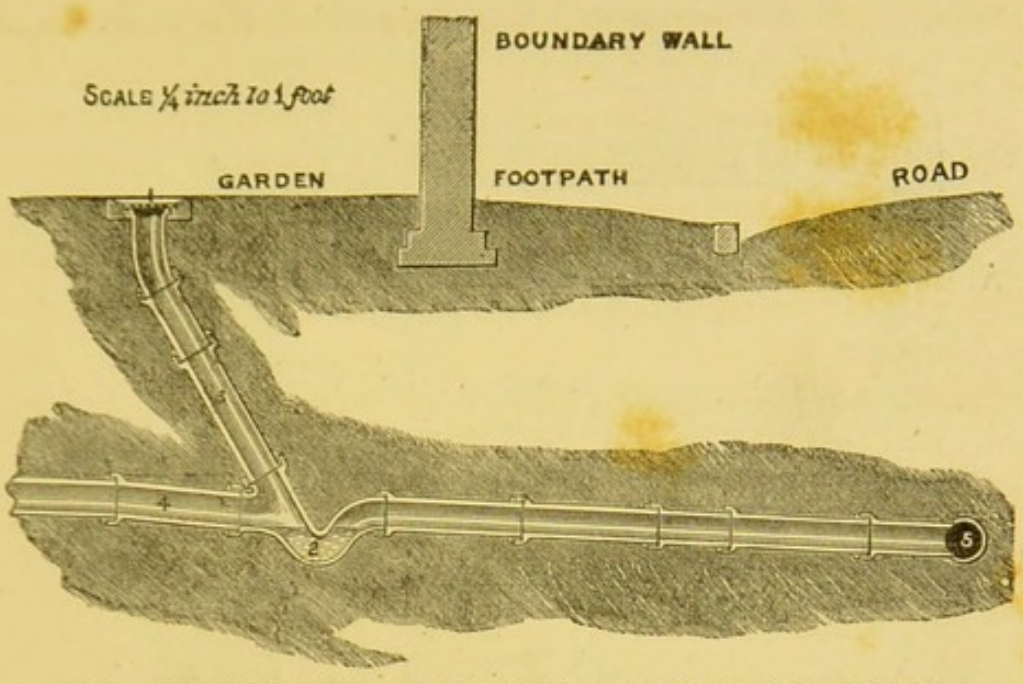
As regards the drainage, every house in the village has been completely drained. The main drainage, which con-



38.—DRAINAGE OF BLOCK PLAN OF FIVE COTTAGES.

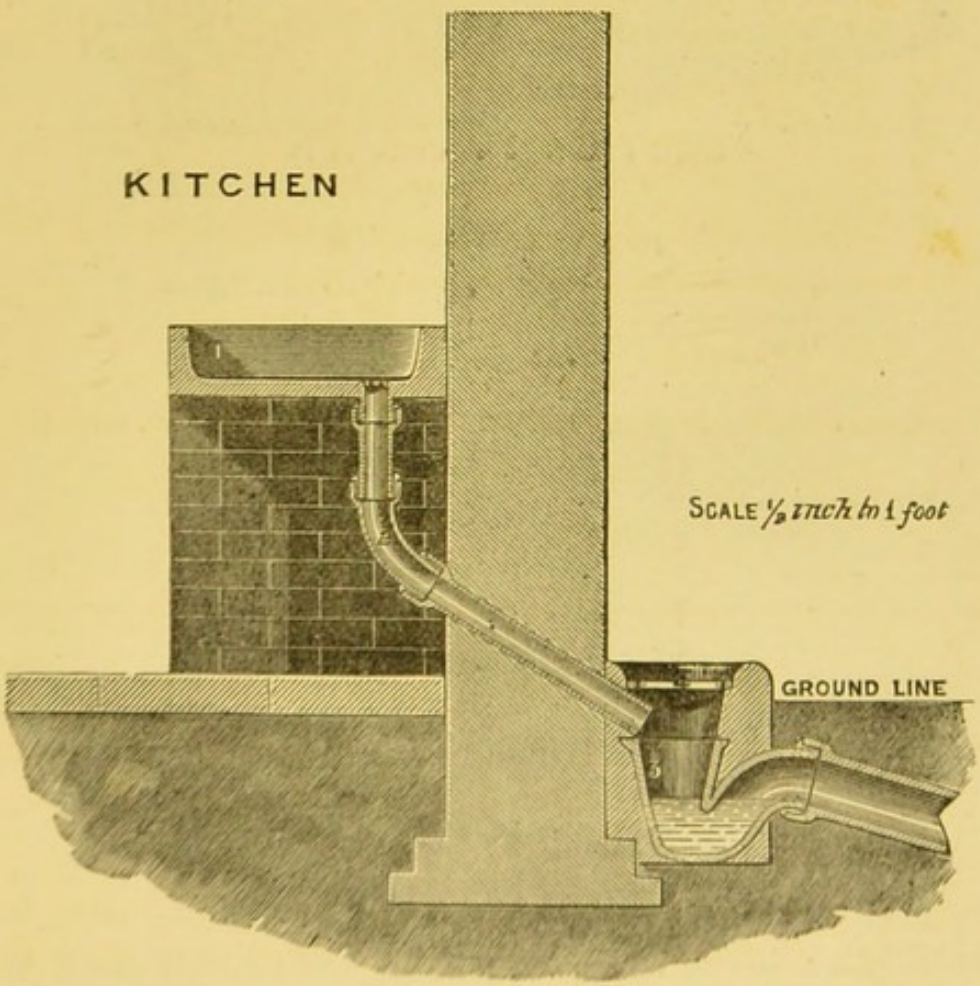
1. Main Sewer.
2. Manhole.
3. House Disconnection (See plate 39).
4. Ventilator.
5. Water Closets (See plate 44).
6. Sinks (See plate 40).

sists of a 6-inch stoneware pipe, is taken all on to an osier-bed, situated in a hollow some little way from the



39.—METHOD OF DISCONNECTING HOUSE DRAIN FROM SEWER.

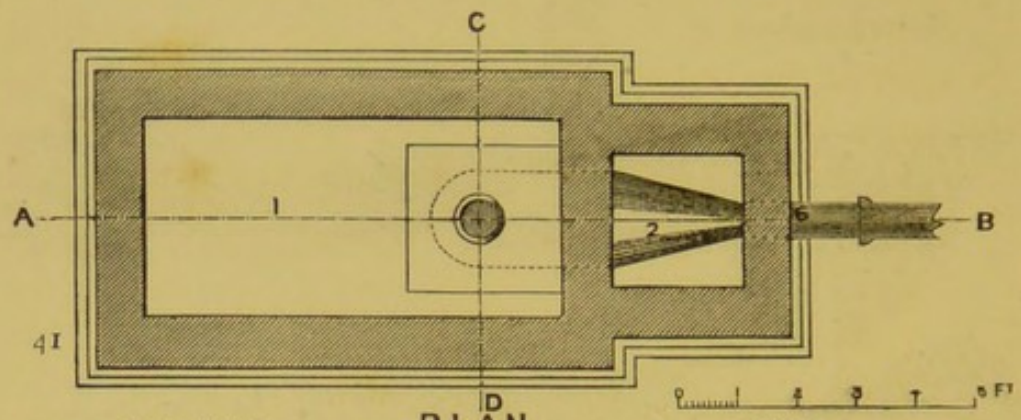
1. Removable Iron Ventilating grating.
2. 4-inch Syphon Trap.
3. 4-inch Ventilating Pipe.
4. House Drain 4-inch diam.
5. Main Sewer 6-inch diam.



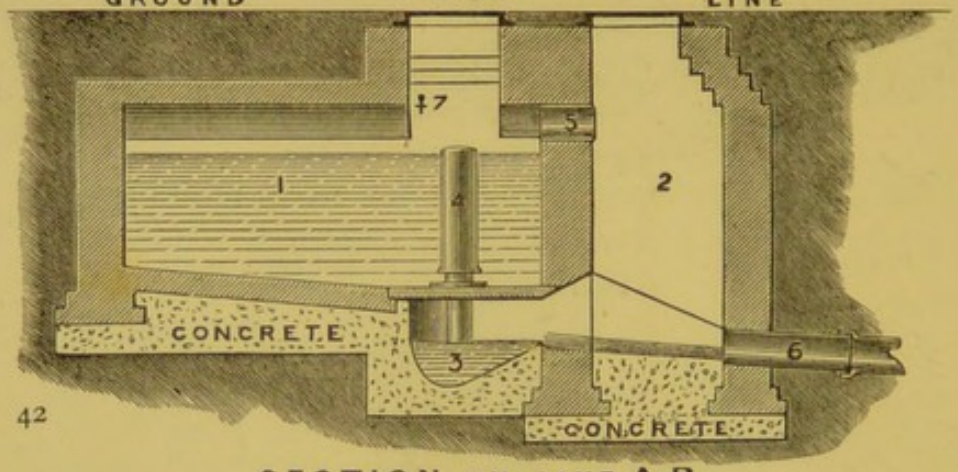
40.—DISCONNECTION OF SINK.

1. Stoneware Sink.
2. 2-inch Stoneware Waste Pipe.
3. Stoneware Gully.
4. Iron Grating.

village. It will be noticed that no part of the main drain



PLAN

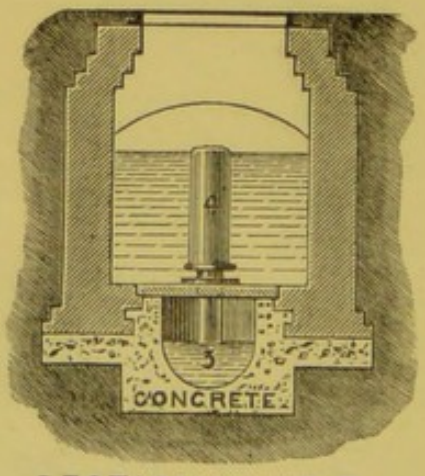


SECTION ON LINE A-B

FLUSH TANK.

See letter H on general Plan.

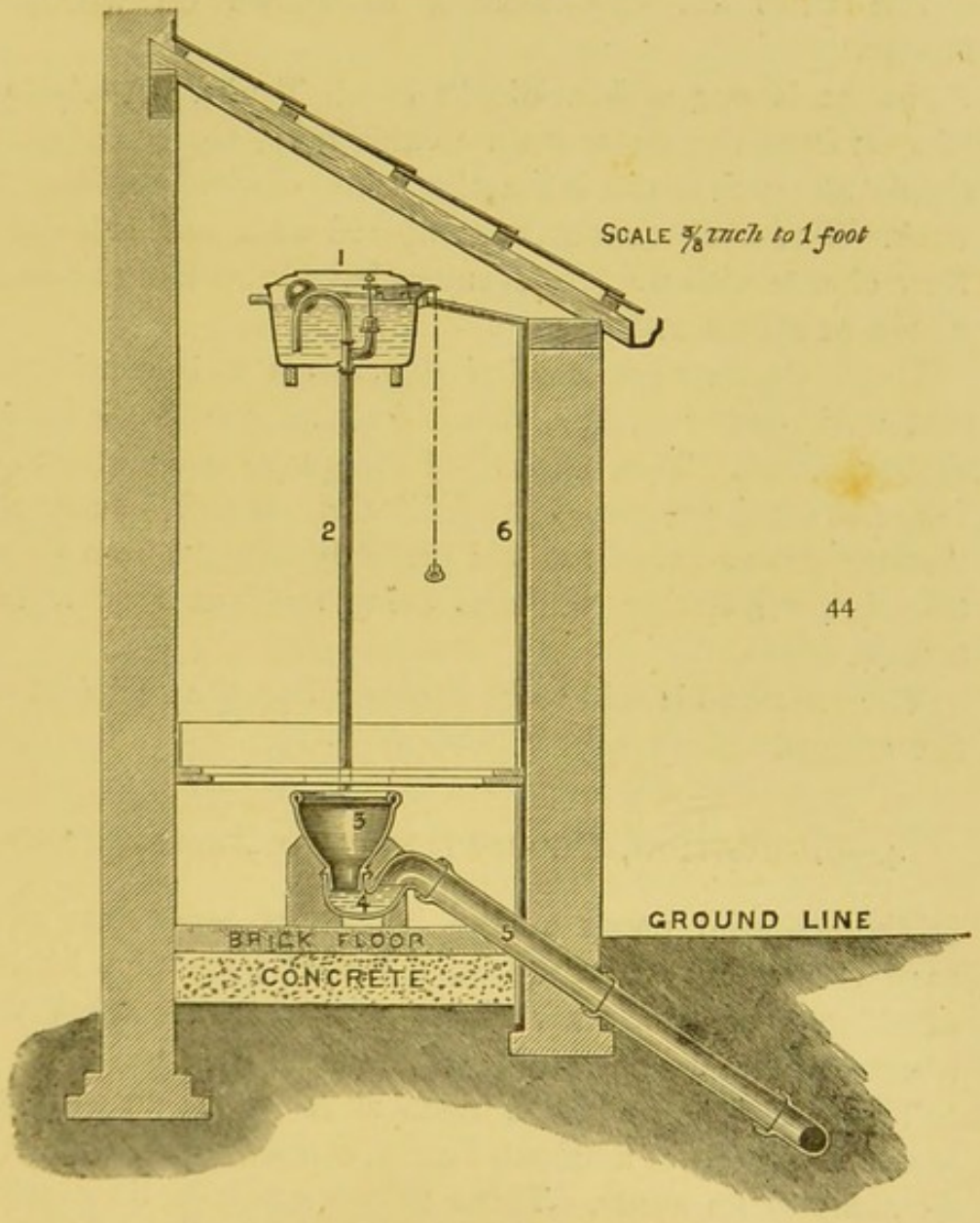
1. Tank.
2. Manhole.
3. Trap.
4. Field's Automatic Syphon.
5. 6-inch Overflow.
6. 6-inch Stoneware Drain.
7. Supply Cock.



SECTION THRO' C-D

is laid to a fall of less than 1 in 60, and that all the house-drains are laid to a fall of not less than 1 in 40. The drain

along the main road is of considerable depth, being about 13 feet deep; and the greater portion of this had to be blasted, the stratum being hard ironstone. The depth of the drain is due to the fact that the land slopes towards the river, and that one part of the road is very much higher than the other. Woodcut No. 38 shows the principle on



44.—CLOSET—METHOD OF FIXING HOPPER BASIN WITH WASTE PREVENTER.

1. Automatic Waste Preventer.
2. 1¼-inch Service Pipe.
3. Sharpe Cottage Basin.
4. Stoneware Trap.
5. 4-inch Stoneware Drain.
6. Service to Cistern.

which each block is drained. Nos. 3 and 4 on woodcut 38 correspond with the method of disconnecting the house-

drain shown on No. 39. The advantage of this form of disconnexion is, that if the Syphon No. 2 (see woodcut 39) becomes choked, it can be cleansed by removing the grating at No. 1 and passing a rod down to the syphon.

By examination of the woodcuts, it will be seen how the several disconnexions are effected.

The sinks are disconnected, as shown on woodcut No. 40.

No. 41 is one of Mr. Field's Flush Tanks. A pipe is laid on from the water-main to this tank, the cock being regulated so that the self-acting tank discharges twice a week. The cock cannot be tampered with, as it is locked. New closets with waste-preventers have been fixed at each house, as shown at No. 44.

These closets answer admirably, when it is considered that cabbage-leaves, hay, straw, &c., are constantly being thrown down. The number of stoppages are extremely few, and can be removed immediately. It will be noticed that the drains have been laid perfectly straight from point to point, ventilating-manholes being fixed at regular intervals.

The osier-bed is said to be successful as the recipient of the sewage.

4.—Education, Occupation, and Recreation.

The material needs of the individual tenements of a rural village, in respect to health, having been thus briefly considered, certain other circumstances which affect the whole community have to be as tersely alluded to.

The structure of a house, much as it has to do with the health condition of a human family, cannot directly provide for many of its wants. Three things specially lie outside its province. (1st) Education, (2nd) Occupation, (3rd) Recreation. On each of these a few words must be said, and but a few.

And first as to *Education*.

Although it is certain that the bad dwellings conduce to

every form of vice and misery, physical and mental, yet some of the meanest hovels are found within to be models of order and neatness. I have seen a widow, hardly maintaining herself by unceasing work with her needle, or with the laborious pillow for lace, with the fabric of her hut as bad as the hovel of the Hares, the floor bare earth, the roof but rugged poles and scanty thatch, yet all her little store as orderly as though it were in a palace. And I remember the saying of such an one. "They talk, sir, of putting me in a better house. Promise me I shall not leave this but in my coffin. Here my children were born and taught; here they and their father died. Oh, let me too follow the same road." How is this? It is simply the result of personal character! And what is personal character? The development of the higher moral nature through self-sacrifice, self-mastery, and generally through suffering. And self-sacrifice with suffering has given peace to human souls under every condition of development from pole to pole since the Race began, and will be so till the mysterious destiny of the Race has been fulfilled. This being so, I shall say little on Education. "L'Hygiène c'est LA MORALITÉ et L'AISANCE." Education is the just development of the whole faculties, with special attainment and knowledge according to the conditions. It has hitherto been mainly associated with religious teaching. A swing of the pendulum of thought seems now to point only to training by the faculties of observation and by logic, which lie at the root of Science. Dilute science appears to some minds to be the key to the formation of character. "And a knowledge of the Vertebrata," I once heard said at a public meeting, "and the still more weighty privilege and responsibility of children in comprehending the Invertebrata," seem to some to be the only methods calculated to train the infant mind the way it should grow, rather than obedience to parents, cheerfulness, unselfishness, reverence, and industry. But be this as it may, it may be assumed that the health of the Village will depend in large measure on the possession of the moral qualities exhibited in some form

by all great souls, howsoever obtained, and in what way soever applied, as the popular poet sings—

> Lives of great men all remind us
> We may make our lives sublime,
> And departing leave behind us
> Footprints in the sands of time.

Experience has shown that, on the whole, wretched habitations are incompatible with such elevation.

The Village School then, and the Village Church—interpret "School" and "Church" as you will—are essential to the development of Village Health. Without an intelligent and an orderly population you will not have a clean or healthy one. Without the "School" for the head, and the "Church" in the heart, are neither knowledge nor wisdom in the child.

And now a few thoughts upon *Occupation* and *Recreation.*

I have written the above words together with some reluctance. To the ordinary poet Village Life is one that suggests healthy occupation, and the warm delight of simple ways. And so it is, for those who have steady work, regular wages, happy homes, healthy families, and good masters. I know no happier life for a contented and unambitious soul, who lives in the strong faith of a Christian man, upon the estate of a true gentleman, who takes care of him, as soon as he is past work, as of a faithful friend.

Of the millions of labourers "who go forth to their work, and to their labour until the evening," to what number does this description apply? This question is harder now to answer than it was. But I put the two ideas of occupation and recreation together, because they are essentially correlative. The recreation, if we describe it as of a yeoman with a moderate farm, is not the same as that of a labourer. Many a small yeoman leads, or did, fifty years ago, lead in England a more anxious and precarious life than a modern steady and good farm-labourer in a permanent place.

What Colonel Waring, engineer, soldier, philanthropist, says of "slate-and-pencil farming" in Massachusetts is most true of the small English farmer. "Ten acres of land can be ploughed, manured, and planted with corn, and the crop can be well cultivated and harvested for so many dollars. Such land with such manuring and cultivation may be trusted to yield so many bushels of corn to the acre; and, after making due allowance for chance, the balance of the calculation shows a snug profit. In like manner we may figure out a corresponding return from the hay-fields, from the root-crops, from two or three acres of potatoes, and from a patch of garden-truck for which the neighbouring village will furnish a good market. Then the poultry will return a profitable income in eggs and in 'broilers;' and altogether it is easy for an enthusiastic person to show how interest on invested capital and good compensation for labour are to be secured in agriculture.

"But when the test of practice is applied to our well-studied and proven scheme; when we see how far our allowance for 'chances' has fallen below what is needed to cover the contingencies of late springs, dry summers, early frosts, grass-hoppers, wire-worms, Colorado beetles, midge, weevil, pip, murrain, garget, milk-fever, potato-rot, oats-rust, winter-killing, and all the rest; when we learn the degree of vigilance needed to keep every minute of hired labour and team-work effectively employed; and when we come finally to the items of low markets and bad debts,—we shall see how far these and similar drawbacks have undone our arithmetic, and how often our well-contrived balance must be taken into the footings of the other column of figures.

"In nearly every other occupation than farming, the hardest worker finds a daily relief from his toil, and from the suggestion of toil, in a home that is entirely apart from his industry. However arduous and anxious and long-continued the work, there comes a time when it is laid aside, and when the workman goes into a new sphere, where the atmosphere is entirely changed. His home is a

place of rest and pleasure, or at least a place of change. The pen and the hammer are left in the counting-room and in the shop ; and, however far the home may fall below his desires and ambition, it is at least free from the cares of the day's occupation."

Any one conversant with the detail of a small farmer's life knows how absolutely true this is. It is a life of unceasing toil, in all weathers, under every circumstance of success or disappointment alike, and one perpetual struggle with details which he cannot by any foresight influence. It is not my part to draw a comparison with other forms of life. Nor will I here say anything of the personal family history of the farmer with large capital, its risks, its successes, its skill. The steady labourer has another form of trial. It is one of weekly care. His health is his daily income. His income has no increase, variation or elasticity. It is the least on which he can live. And it is hardly won. What are his means of Recreation out of hours of toil? There seems to me to be mainly three. Chiefest of all, the peace of the Sabbath-day. Next, outside his home, his Allotment, and his garden, objects of personal interest and personal ambition ; and thirdly, his Village club. A treatise may be written on each of these, and nothing new then said. Each must be insisted on. An allotment is counted now almost a necessity for an agricultural labourer, and not to have it a misfortune and a waste. It may vary in size from the eighth of an acre to three or four acres.

The argument for co-operation, in allotments on a small scale, is becoming almost unanswerable. There is a parish in the Midland Counties where there were, twenty-five years ago, thirty cows—and now not five. In the days of commons many small proprietors had cows. Now none can keep them ; and, moreover, in very many grass parishes not a drop of milk can be bought. All the milk goes for the supply of the great towns. The children never taste it. This may become a great evil by weakening the stamina of the rural population. Cow co-operation is not easy, but is possible. But herein political and economical questions enter, and

so I pause. Here we deal with questions of Health. The allotment, if near, insures for the labourer careful use of the refuse from his home. It adds thus to his enjoyment, his kitchen, and his purse, and so to his Health.

Of these three factors of Recreation here named, the most that need now be said is of the Village Club. And here we have the great authority of Sir John Lawes. I propose to quote these words which he has kindly sent to me :—

"It will probably be asked, What are the benefits which the parish has derived from this club, and what inducements it holds out to others who contemplate the establishment of a somewhat similar institution? As a substitute for the public-house, it possesses many advantages. A man can hardly go into a public-house, and occupy a seat for the evening without also drinking beer there, for the publican must be paid in some way for providing fire and candles; whereas at the club no one is expected to drink, each member acting entirely in accordance with his own inclination. In villages where there are several public-houses, it is well known that each has its regular customers, and some houses have a bad reputation with the police; petty thefts, and even worse crimes, being often developed where small parties of men are frequently meeting. In a club of any size (Rothamsted has about 180 members) such things are impossible. Those who consider all public-houses an evil, and all drinking of alcohol in any form, and in whatever moderation, an unmitigated curse, are not likely to give any encouragement to an institution which has for one of its main objects the supply of beer to its members. As, however, we cannot prevent drinking, it appears to me desirable that we should endeavour to lessen and arrest some of the evils attendant upon it. If any one will picture to himself the limited accommodation of a labourer's cottage on a winter's evening, with one small fire entirely surrounded by his wife and children, he will hardly blame the man who seeks warmth, quiet, and the society of his fellow-labourers elsewhere. Some attempt made by me to substitute coffee for beer was not successful. It is true the

men drank it, and pronounced it very good, as long as I supplied it gratis, but they could not be persuaded to purchase it as a substitute for their beloved beer. To become a member of the club, it is necessary to possess an allotment-garden, the ordinary size of which is one-eighth of an acre, and the rent five shillings per annum, although some allotments are only half that size. I occasionally give prizes for the best cultivated gardens, and every second year we have a show of vegetables. The men take immense interest in these gardens, and should the Royal Agricultural Society offer a premium for the best set of allotment gardens, we should stand a very fair chance of carrying off the prize.

"At the Annual Dinner, which takes place the first Saturday in June, I have an opportunity of meeting almost all the members of the club, and of discussing subjects of mutual interest; even the delicate one of 'strikes' has not been avoided, and a discussion on the subject, bearing upon the relation between the employers of labour and the labourers, has not in any way altered the friendly feeling between them. The influence of the club upon the moral and religious condition of the members can hardly be discussed in these pages. I think, however, any one who reads over the rules of the club, and considers that they have been formed by a committee elected by the annual vote of every member of the club, and that they are not merely printed rules, but are rigidly enforced, must acknowledge that the members submitting to these rules must have arrived at a position considerably in advance of that generally accorded to the agricultural labourer in this country."

Rules and Regulations of the Rothamsted Allotment Club.

1. Every one elected as a member shall pay one shilling entrance fee; he shall sign his name to the rules, and shall pay one halfpenny weekly to the club, and threepence on the death of any member or his wife.

2. Any person wishing to take an allotment garden, can have his

name written on a board, to be hung up in the club-room, in the following form :—A. B. proposed by C. D., member.

3. When a vacancy occurs in an allotment-garden, the names of the candidates shall be taken in the order they are written on the board, and they shall be voted on at a meeting of the committee.

4. The club shall be managed by a committee of twelve members, who shall hold office for one year ; they shall have power to make rules, and the whole management of the club shall be in their hands.

5. The annual meeting of the club shall take place in the month of June, on which occasion the committee for the succeeding year shall be elected. The members of the committee may be re-elected, but it shall be competent for any member of the club to nominate any other member to serve on the committee. The election to be decided by a majority of votes.

6. Each member to draw the beer in order, according to the number of his allotment ; on failing to do so, a forfeit of one penny to be paid to the club.

7. The member who draws the beer shall be in attendance at the club-room every week-day at six o'clock: if he is not there at a quarter-past six, he shall be fined threepence ; if he does not attend at all he shall be fined sixpence. He is to remain until ten o'clock, but in the event of no member being present at nine o'clock, he may shut up the room at that hour.

8. The member whose turn it is to draw the beer shall receive from the previous member the oath book, sixteen shillings and sixpence, and half a barrel of beer, and shall deliver over these articles to the succeeding member. He shall also pay over to the brewer the sum of sixteen shillings and sixpence, and order half a barrel of beer. Any neglect of this rule shall make him liable to a penalty of five shillings, for which sum he shall be sued in the County Court, as well as for any deficiency in the amount of money entrusted to him.

9. Any member selling beer shall be expelled from the club.

10. Any member giving beer to any one except to his wife and children, or to his brother and sister, will be fined one shilling.

11. Any member drawing beer on a Sunday morning shall be liable to a penalty of one shilling, to be paid to the club.

12. Any member drawing beer after ten o'clock, except on a quarter night, when half an hour longer will be allowed, shall be liable to a penalty of sixpence, to be paid to the club.

13. Any member making, or causing others to make, any disturbance or row in the club-room, will be fined threepence.

14. Any member swearing, or repeating an oath in the club-room,

or under the verandah outside the door, shall be liable to a penalty of twopence each time, to be paid to the club.

15. Any member getting vegetables in the garden-fields after nine o'clock on a Sunday morning, by Rothamsted time, will be fined sixpence.

16. Any member not paying his money before ten o'clock on the quarter night will be fined threepence; if not paid within one month from that date, he will cease to be a member of the club, and will forfeit his garden; he can then only enter the club by a fresh election and the payment of a fine of one shilling.

17. Any member not keeping his allotment-garden clear from seed-weeds, or otherwise injuring his neighbours, may be turned out of his garden by the votes of two-thirds of the committee, after receiving proper notice.

18. Any member wishing to give up his allotment, must give notice to the committee, and the succeeding tenant can enter on any part of the allotment which is uncropped at the time of notice of the leaving tenant.

19. The committee shall meet four times every year for transacting the business of the club, namely, on the first Monday in January, the first Monday in April, the first Monday in July, and the first Monday in October, from seven to eight o'clock in the evening. Any member not attending, except in the event of illness, shall pay threepence to the funds; and no member shall allow his name to be put down to serve on the committee unless he is in a position to attend, and take an interest in the same.

20. As soon as possible after the death of a member of the club, the sum of two pounds shall be paid out of the funds of the club to the widow, or widower, or if the member is not married, to the nearest relation.

21. Any member drawing or giving beer to those who are expelled from the club, shall be fined threepence.

22. No member shall be entitled to the money paid at death until he has paid up all his subscriptions and fines for twelve months.

23. Any member breaking a mug, is to pay the cost of replacing the same.

24. Rents for the gardens are due on the 29th of September; if not paid within one month of that date, the members who have not paid will forfeit their allotments, and will be proceeded against by the committee for the amount due in the County Court. If paid between the 29th of September and the 29th of October, a fine of sixpence will have to be paid.

25. Any member or members belonging to this society found

fighting, or striking in the room or in the field, will be liable to a penalty of five shillings for each offence, to be paid to the club.

26. The books of this society shall be examined every half-year, and a full statement made of the income and expenditure of the society at a general meeting, and a full report shall be presented to the members at the annual meeting of the members in June.

27. Any member taking tools from another man's garden without leave, and not returning them the same day, will be fined one shilling.

28. Any member laying dung on the gravel roads, will be fined one shilling for the first offence, and for the second offence he will be expelled from the club.

29. Any member who sells the produce of his garden to a stranger, must be present himself—or some of his family must be present, or he must give notice to the man who attends to the walks to be present—when the produce is cut or removed. If the purchaser removes the produce without a witness, the owner of the garden will be fined one shilling.

30. When a member has drawn his barrel of beer, he must show himself in the club-room, and ask for the next member to take his place, or be fined one shilling; but if no one is there to take it, he can tap a second barrel.

31. Any member making a dispute about any of the rules, it shall be settled by the committee, and their decision shall be final.

The reader need not be detained by comments on the admirable remarks of Sir John Lawes, or on the Rules of his Allotment Club. Nor need I dilate on the kind of amusements which are in the present day accessible to the young of a contented rural district. With a good club there would certainly be good lectures. There are such now in many parts of the country. Most of our schools teach elementary science and art—the former not always the best, nor practical, yet still good and elevating. It is quite possible to provide science in such form that it may be neither difficult nor superficial, and to instil a love of nature and thereby of true art, so that it may lead to pure sentiments expressed without pedantry. These can thus be conveyed in a manner suitable to the true and simple natures of good and artless people. With such aims, and they exist now all through the land, there need be no lack any more of all the occupation and recreation which may

conduce to Village Health among a population advancing by inheritance and education in intelligence and capacity.

5.—Care in Sickness.

No village of any importance can be considered properly provided for, in respect of the health of the labouring classes, which has not four separate factors for ensuring care of them and their families in sickness. I do not include life insurance, or burial, clothing, or coal clubs. The four are a Cottage Hospital, a Dispensary-house, a Provident Dispensary Society, and a District Nurse. For a poor district where these are most needed, this may seem an excessive requirement, an expectation not to be realised.

It is manifest, however, on reflection, that all these may be combined in one house, and at little cost. Suppose now, a double cottage, in good sanitary condition—if an old farm house adapted, so much the better—suppose the district policeman, living in one half, paying only half the rent of the cottage, and his wife taking care of the other half. The downstairs front-room of the empty half being then the doctor's room, the back-kitchen being the waiting-room, and the upstairs room arranged to take two cases of accidents or acute illness. The doctor (the Union Surgeon) attends, in his room, at stated days and hours, to all parish cases, or provident dispensary cases. He keeps here a stock of his ordinary drugs, the requisite dispensing arrangements being provided for him by the Guardians. His bad cases from the neighbourhood send there for their medicines after he has seen and prescribed for them. His provident dispensary cases do the same. When a bad case requiring regular nursing is brought in, he gets from the nearest county nursing institution a skilled nurse for the time being—an arrangement according to the nature of the district being made for the payment of her services by the proper persons, legal, or charitable, or personal.

All the above, except the nurse, can be provided for ten pounds a year ; indeed, it can be paid out of the Provident

Dispensary Funds. The comfort to the surgeon and the poor is incalculable. Thirty years since, these simple arrangements were proposed by me to the then Poor Law Board—with this addition, that the Board of Guardians should pay the bill for the wholesale druggist, and that in large districts they should always provide a dispenser to relieve the surgeon of the labour as well as the expense of dispensing his Medicines. This last plan is now adopted in various Unions. Into the relative value of Charity Dispensaries and Provident Dispensaries there is no need to enter here. The latter, through the exertions mainly of Sir Charles Trevelyan, have been successful even in London, and are largely spreading in our towns, notably in Northampton. But the method is also extending to the country villages, to the satisfaction alike of the medical staff and of those who value the independence of the poor—whether among themselves or their richer friends.

The reader will observe that each of the arrangements here advocated, viz., hospital, dispensary, provident club, and district nurses, are here spoken of as they may be administered with advantage in the very poorest district and in the simplest form. Space forbids that I should trace the development from this simple type up to the fuller scale attainable or attained in the larger and more populous villages, or in the lesser borough towns, or in the neighbourhood of wealthy residents. District nurses, one or more always resident, exist in some county parishes ; quite different from the parish *sage femme*. District nurses always should be, and generally are, skilful persons trained to be nurses in suitable large hospitals. Every county hospital should be able to train and supply them to its county. It is so with some ; it might be so with all, and probably will be. Telegraphic wires run through all our chief villages, and the villages would often be better served by establishing a connexion with the nearest central Nursing Institution than by having one person often unemployed for many weeks, and then perhaps overtaxed by the distance she might be expected to travel.

The cottage hospital, as I have described it, in its rudimentary but useful shape, may, if necessary, grow up into the miniature but complete hospital such as exists in towns like Banbury; or, such as in Aylesbury rivals the large institutions of Provincial centres in providing both for curative and preventive medicine.

These two factors—the trained district nurses and the cottage hospitals—are slowly transforming the methods for the cure of the sick poor, and indirectly, too, affecting the well-being of the rich in country villages. The able and cultivated young men now passing in large numbers through the offices of trust, surgical and medical, of our Metropolitan and greater provincial schools, are able and willing to undertake with knowledge and with the confidence that knowledge gives, the management of almost all cases of disease and injury. For these, however, they need two things, when they are placed in rural districts, viz., a hospital and a skilled nurse, who may all be trained to dispense for the union surgeon, in the village dispensary. The public mind is seizing these conceptions. Both will be gradually provided, and capable practitioners will be found in all the principal villages which need them. Nothing seems to be more certain than this. There is only one fear, that the development of public interest in these directions will attract more workers than can live by their labour. On the other hand, as regards the Nurses, women of the highest character and education are leaving, for a time at least, some of the frivolities of town life for a more engrossing and healthy occupation, viz., the intelligent and skilful care of the sick poor. For such trained service, blessing and blessed, hospitals, workhouse dispensaries, cottage hospitals, and districts are offering ample opportunity in the remotest Village as well as among the denser dwellings of the Metropolis.

III.

THE LESSON LEARNT.

ILLUSTRATIONS FROM VARIOUS PARTS OF ENGLAND.

The tale of the village has been shortly told. The needs have been briefly stated. The lesson has to be learnt.

It has been shown how vile and terrible are some of the physical conditions of the poor. I do not care to discuss the relative misery of the bad portion of London, which I have known nearly as long as the huts of St. Kilda. The evils are different. The causes are in many respects dissimilar. It is not, however, certain that the remedies of both are not in some measure correlative. The people have crowded into the towns. Seeking to lighten their own burdens they have added to those of others, and have not diminished their own. In the towns gigantic efforts have been made and are being made to remedy the existing evils of the dwellings, and to check the rising tide of difficulty. The Shaftesbury Estate; the Peabody dwellings; the railway companies in various ways; Miss Octavia Hill's work, with a thousand other plans, have striven and are striving to stem the torrent in London. Two or three salient instances selected in the north and middle of England, and the records of great public bodies, will show something of that which has been attempted, and the principle on which it has been attempted for our village populations.

But it is certain that a foreigner crossing England from the Land's End to the Nore, or from Freshwater Gate to John O'Groat's House, would be as struck, as he went, by the contrasts in the rural dwellings of the tillers of the soil, as by the variety in the geological formation of the lands and of occupation of the people. He would read the "tale that has been told." He would also see the ornate and carefully-arranged habitations that are near the parks, and the mansions which are among the features of this island of

gardens. By a few salient instances I propose to show what is in progress in this direction of improvement and care, and the general principles on which it has proceeded.

Sandringham.

These principles, as regards labourers' dwellings, can be well shown in the east of England at Sandringham, and by the gracious permission of His Royal Highness the Prince of Wales I am enabled shortly to illustrate them by what I have observed there. This particular property is not extensive, and therefore the facts can most readily be seen.

1st. There are cottages in good order, ample for the wants of the parishes to which they belong.

2nd. These are of very various descriptions :

a. Old ones found on the property have been judiciously repaired when fit for repair, others have been removed.

b. They are of various descriptions, suited to the wants of rural labourers.

c. The village shop, which may be reckoned as a double cottage.

d. The dwellings for the labourers with a family are of two dimensions, the larger, or Alexandra cottages, the smaller or Louisa cottages. These each, however, contain sitting-room, scullery, pantry, store, three bedrooms, two having fireplaces, the staircases being conveniently arranged. A garden of about 20 poles.

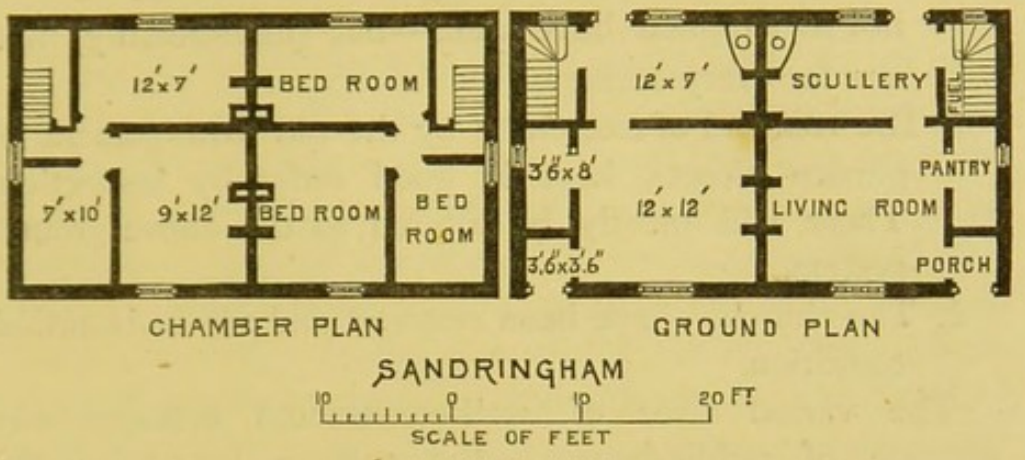
(Opposite are the ground plan and chamber plan of a pair. The same plan practically as the " Standard," No. 15.

The internal arrangements could not be more convenient ; though, as has been said, changes may be rung in applying the general principles.)

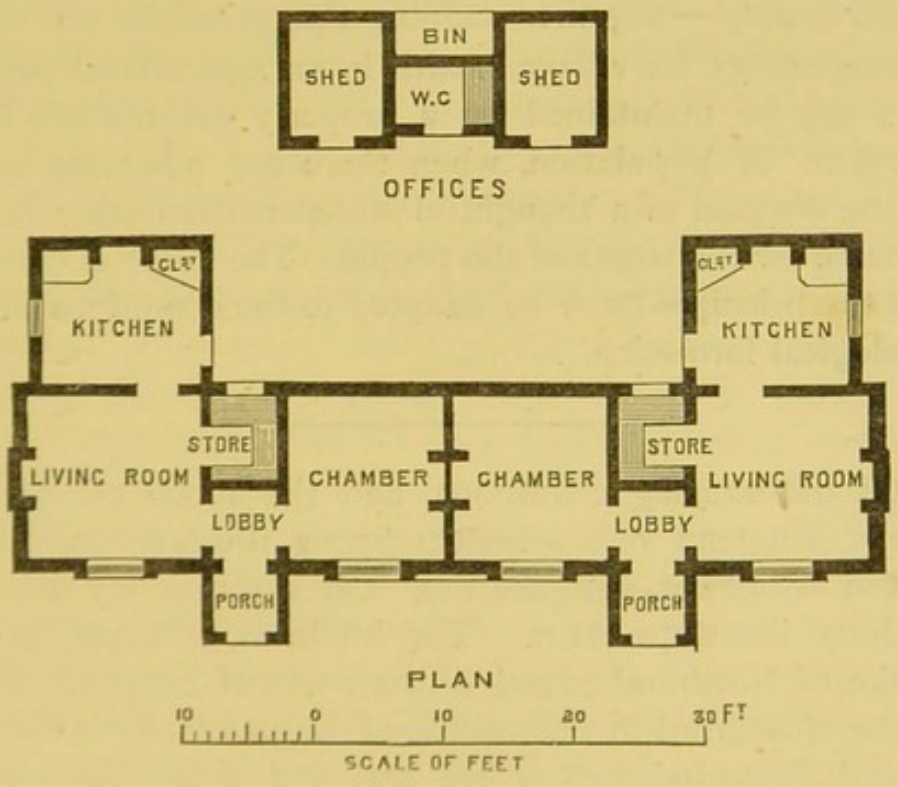
e. Smaller cottages on one floor for aged couples, or for couples without a family, with three rooms, each room having a fireplace.

f. A cottage hospital, wherein a married couple live

pursuing their respective avocations. Two airy furnished rooms, with possible supplementary apartments, are therefore always ready. A woman nurse can be obtained at any moment by telegram from a neighbouring institution.



45. PLAN OF A COTTAGE AT SANDRINGHAM.



46. PLAN OF A COTTAGE AT SANDRINGHAM.

g. There is no public-house in four adjoining parishes. Many of the villagers are wont to keep small casks of beer brought round from a neighbouring brewer.

h. A village club-house, or reading-room, is in course of erection in the present summer.

i. To a part of one village, as well as to Sandringham House, there is constant water-supply from a water-tower, the water being raised by steam-power from the chalk, and softened by Clark's process. Those not so supplied have wells—but (intentionally) not one for every cottage.

The removal of excreta is by the old arrangement of garden closets, kept in good order by inspection. These will mostly be altered to the above-ground system.

k. The churches have been restored and are in beautiful condition.

The varied sizes of well-constructed cottages—the absence of public-houses — the cottage hospital — the village club — the bright parish churches — the ample water-supply — together exhibit the principle on which arrangements for village health in an agricultural population can be maintained on a property where there is no pressure of population, when there are adequate means at the disposal of a thoughtful landowner to enable him to provide for the wants of the people. The mode of carrying out the principle must be adapted to the conditions of the geological formation.

Of the varying conditions, and the mode of meeting them, England offers multitudinous illustrations. It is not in my power, with the time and space at my disposal, to fully illustrate them. The kindness, however, of the Duke of Northumberland in the north of England, of the Duke of Bedford in the middle of England, of the Ecclesiastical Commissioners of England, and of the Honourable Charles Gore, Commissioner of Woods and Forests, enable me to name types of these conditions ; while His Excellency the Earl of Spencer, by permitting the description just given of Church Brampton, shows a case of complete

rural water-supply and water carriage of excreta; and the Earl of Rosebery and Mr. Cyril Flower have furnished me with examples of complete and successful superintendence of the other chief mode for the disposal of refuse.

Bedfordshire.

From the hundreds of examples which might be given of the views of great landowners on village arrangements, two only can be selected, one from the south and one from the north of England. Any one who desires to see a typical example of careful consideration bestowed over a long series of years might advantageously repair to Woburn. There is a valley to the east of the Abbey at Eversholt, where, beyond the circuit of the property of the Duke of Bedford, may be seen cottages of the type of Lowmarsh, with both the virtues and the faults of the tenements described there. There are the orthodox two rooms above and below, the upper with only some 600 cubic feet of space, the bedroom of a cheery couple, the man, of eighty-three, has lived there in health and happiness these sixty years, and would be heartbroken to leave this picturesque abode, full of the associations that belong to a large family brought up in contentment, in their little crowded home, or lives of labour.

Not far off may be seen a recent example of the Duke's anxious care to discover the rules for constructing an abode most fit for the peasant labourer. The old cottage just described is rented for a shilling a week; the latter, the result of every careful thought, for sevenpence more. It is a type of a simple unadorned structure, massive, and considered carefully in every point. It has overhanging eaves for dryness of foundations, hard-brick causeway surrounding it; a yard of asphalte laid on concrete, a little barn, and wash-house and earth-closet; the rain-water tank and protected well, with covered pump. The wooden floors and staircase, and ample rooms, two below and three above, contain everything which a moderate family would

desire, in any station of life, for real need. But then the cost? Not less than £370, without reckoning the ground and the spacious garden, or any expense of professional superintendence. I take these two cases as typically showing the two extremes of village life. The first case is that of a life not unhappily led through a long family history. The second is a complete illustration of careful arrangement without waste or ornament, but with a skilled consideration for the wants of the people. It is needless, almost, to add the words that as a commercial undertaking the Duke's cottage is out of the question with the present amount of peasants' earnings, or any that are probable in the future.

In and near Woburn may be seen similar effort bestowed in various manners and degrees. It would require a special treatise to record the several plans in detail in which, during forty years, these modes of village life have been studied and put in force in respect of education and of dwellings. It would be instructive to some outside critical observers did they know the extent of unceasing supervision of the most exact kind that has been and is employed to obtain the result that is everywhere to be seen. Had I, indeed, space to do this now, it would be to violate the trust which put every particular into my hands on the occasion of a recent examination made with Mr. Wing, His Grace's administrator. The cottages are all carefully repaired every six years, and on every change of tenants they are cleansed and whitewashed; they are quarterly inspected, the tanks and spoutings periodically cleansed and repaired, and every cottage fumigated and cleansed by the landlord after all infectious diseases. Indeed, the amount of thought that is bestowed on the thousands of cottages of this great proprietor in divers parts of England, is itself a lesson of lifelong exertion in the cause of the village labourer.

Northumberland.

I select one other example of village life on a great scale for a special object and to enforce a special lesson, not

theoretical, but practical. In the outset of the essay, certain standards of cottages were given with the conviction that no one standard or model is desirable or attainable. Any one acquainted with the populous villages of the pitmen in the North, and with the striking villages of the splendid fishing population of the Eastern Coast, must be aware how far they are removed, even in design, from any such model as has been shown here. Some of the solidly-built one-storied tenements are so associated with the notion of convenience and comfort in the minds of the inhabitants on those stormy localities, that they often refuse to inhabit what we call or consider better dwellings. Indeed, where land is of little value they are doubtless right. Visitors sometimes confuse the filthy surroundings with the type of the house itself. This is an incorrect impression. The *interior* of the northern pitmen's homes, and the dwellings of the fishers, are, in many cases, as remarkable for their neatness, their order, and their convenience, as their inhabitants are for courage and sagacity.

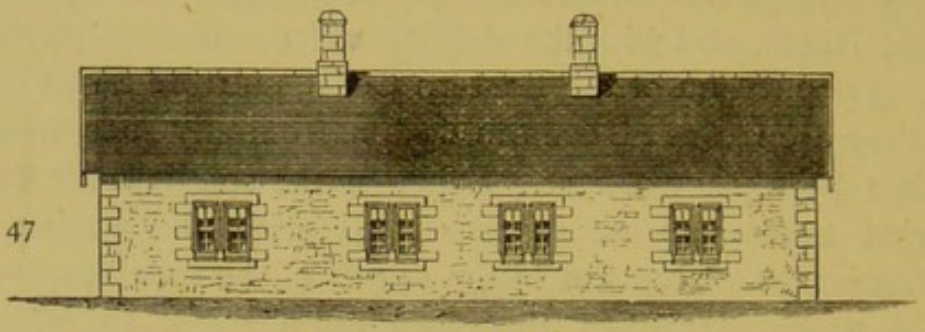
I therefore append two contrasting forms of cottage, which the Duke of Northumberland has provided on the great estates, for which his Grace has cared so much; spending annually several thousand pounds on these dwellings alone. No. 47 and 48 are the carefully-considered plans of a ground-floor double cottage of stone, with its snugly inclosed yard, its tanks, its ashpits, its piggeries.

By the Duke's kindness the design of other cottages more conformable to the notions of the public are here given. They are placed second that they may be near the admirable plans adopted in various parts of England by the Ecclesiastical Commissioners of England, and by her Majesty's Commissioners of Woods and Forests.

It will be noticed that in the Duke's plans, whether for the ground-floor houses or for the two-storied houses, the principle on which the outbuildings are here laid out is to inclose them in a common yard. They who have wandered on our eastern coasts, or on the cliffs and moors of Cornwall, must know well the comfort of the wall built in

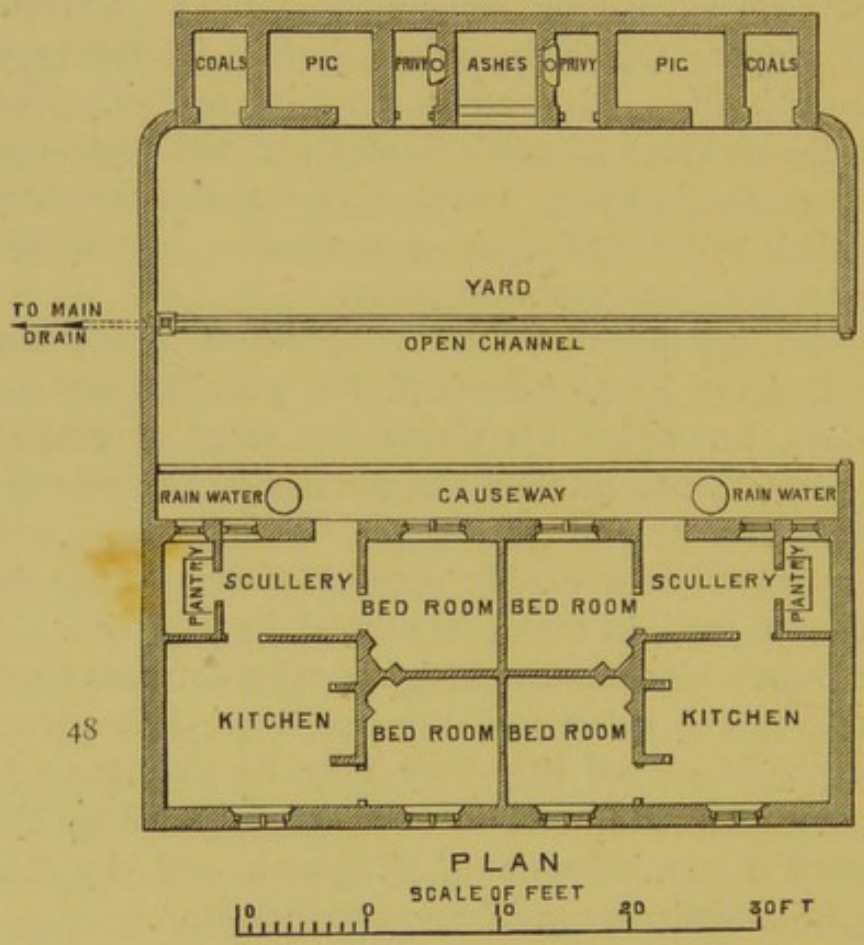
solid stone, a shelter against the cruel gale, and protection to the single house door at the back—an arrangement not desirable in situations less exposed.

47



FRONT ELEVATION

48

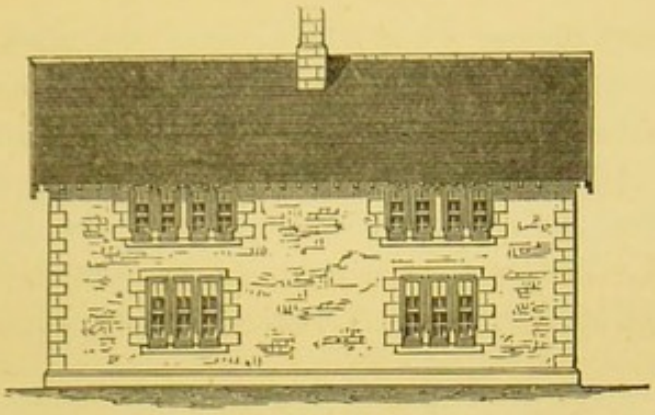


PLAN

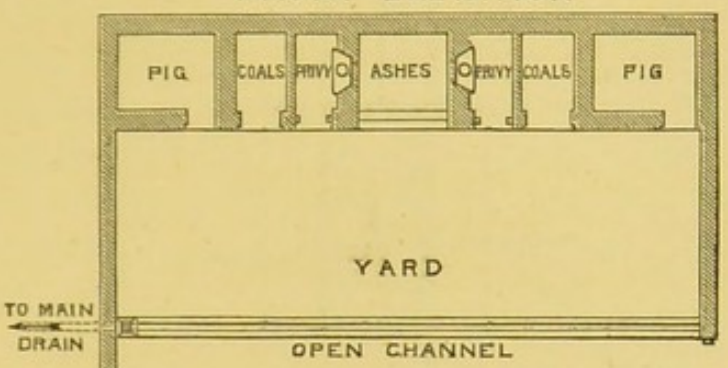
THE DUKE OF NORTHUMBERLAND'S ONE-FLOOR COTTAGES.

In contrast with this disposition of the court may be put at once the ground-plan lately adopted by the Commissioners of Woods and Forests and the Ecclesiastical Commissioners, which, by the kindness of Sir George

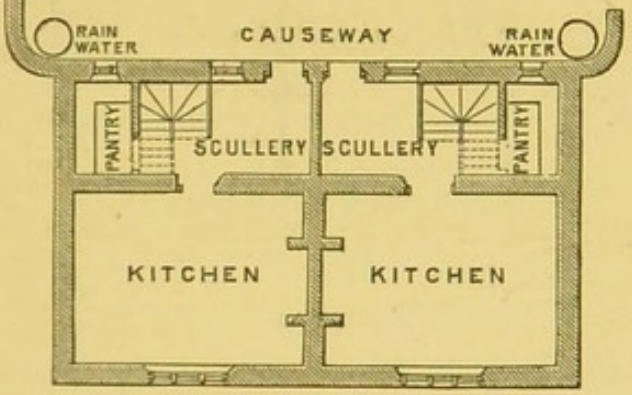
49



FRONT ELEVATION

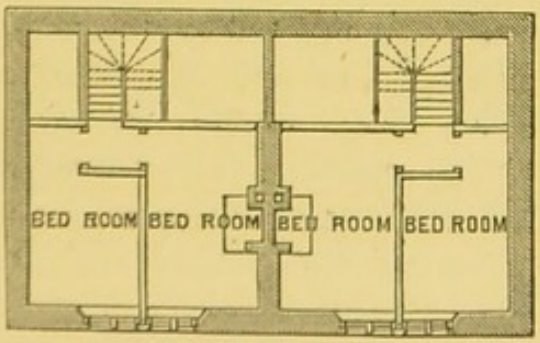


50

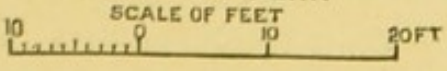


GROUND PLAN

51

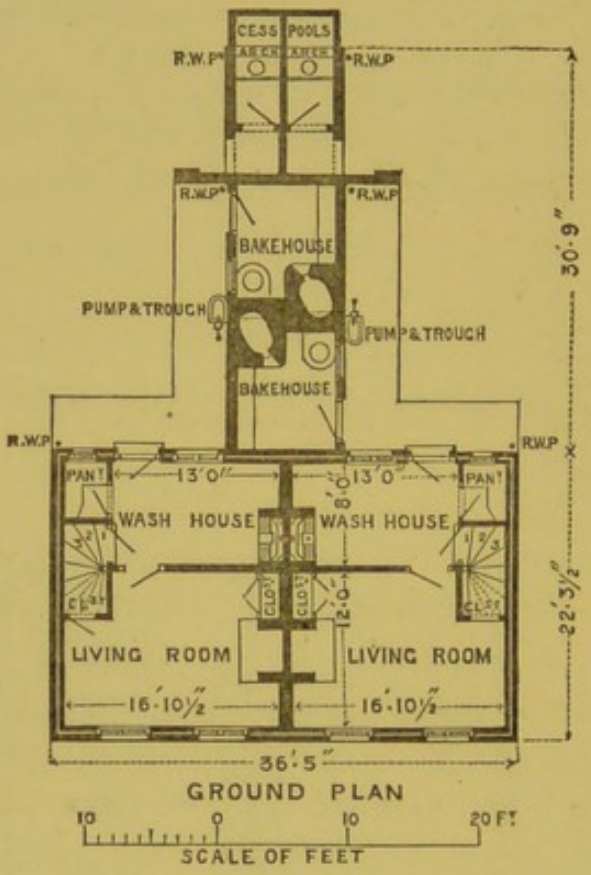


CHAMBER PLAN



THE DUKE OF NORTHUMBERLAND'S TWO-STOREY COTTAGE

Pringle and of the Hon. Mr. Gore, I am allowed to use as illustration. It will be noticed at once that in this southern cottage, of excellent arrangement (though the single house-door is a doubtful improvement), the back premises are constructed so as to entirely separate the houses in that direction. This is for the purpose of privacy. It illustrates in connexion with the Northumberland plan that which



52.—ECCLESIASTICAL COMMISSIONERS' COTTAGE.

cannot be too strongly insisted on, the necessity of freedom and variety of design, as well as of cost and dimensions, and the avoidance of any stereotyped method to be sown broadcast over the country, without regard to local experience. While venturing to compare the systems pursued in regulating the Northumberland and Bedford villages with those of two great National Offices, those of the Ecclesiastical Commissioners and the Commissioners of Woods and Forests, it is interesting to note how the private owner can use, if he be willing and able, a freer hand than

the trustees of the public purse. But the condition of the property of these great State offices, as bearing on this whole question of Village Health, is so instructive, and the good done throughout England so great, that I add a condensed statement with which I have been favoured.

The bulk of the estates now in possession of the Ecclesiastical Commissioners was, until within recent years, held on beneficial or renewable leases for years or lives, or on copyhold grants for lives, for the most part in numerous small holdings.

On the lapsing or purchase of the outstanding leasehold or copyhold interests, these properties usually came into the possession of the Commissioners in a dilapidated state, and the cottages which had been originally constructed of unsubstantial materials, were in many cases unfit for habitation.

The Commissioners have from the first recognised the obligation of providing suitable accommodation for the labourers employed on their farms, and, in addition to the improvement of such existing houses as were worth improving, they have erected some hundreds of new cottages on their estates, and on those which have been transferred to Ecclesiastical Corporations for permanent endowments.

The cottages so erected are substantially built with hollow walls, usually in pairs; they have each three separate bedrooms, and are provided with a proper water-supply and detached offices, so that their sanitary condition should be ensured.

As typical cases of estates in which improvements of this nature have been made in the habitations of the labouring poor, the two following may be selected, viz., Staverton and Thorverton in the county of Devon.

The estate now in possession of the Commissioners in the parish of Staverton is about 3700 acres, which have been acquired since 1862 by the purchase or lapsing of beneficial leasehold or copyhold interests, in nearly 100 holdings.

The houses and cottages standing on these small inter-

mixed holdings at the time of their acquisition by the Commissioners were generally of an inferior character, being timber-framed, cob and thatch buildings, and, in many instances, they had become greatly dilapidated from neglect.

The estate has now been thrown into farms of reasonable size and compactness, and comprises fourteen farms of 100 acres and upwards, and about thirty smaller occupations.

The cottage accommodation provided for these holdings consists of thirty-six new cottages, built by the Commissioners, and thirty-five cottages (partly old farmhouses converted), which have been altered and improved, so that they are now comfortable dwellings.

The estate in Thorverton, now in possession of the Commissioners in this parish, comprises about 1300 acres, and has been acquired since 1862 by the purchase and lapsing of leases and copyhold grants, as in the case of Staverton.

In this case the Commissioners have built eighteen new cottages, and altered and improved ten old ones.

Nearly the whole of the village of Thorverton was held on beneficial leases, and had got into a bad sanitary condition. Those of the houses which were unfit for habitation have from time to time been removed as the leases fell in, and those of a better class which were not needed for the farms were sold to the respective lessees, so that they might have an interest in aiding in the general improvement of the village.

The water-supply has been obtained from a spring on the estate at a distance from the village. The water is conducted by pipes into a reservoir near to the church, and the reservoir and works have been recently made over by the Commissioners to the Parish Authorities for the general use of the population.

It may be stated that the cost of building the new cottages on the estates above mentioned has been from £375 to £450 per pair, including outbuildings, nearly the same as those given above (p. 29.) The difference in

the cost arises not from alteration in design, but from the gradual increase in the cost of building during the last twenty years.

Nor less instructive is the following example:—

The Commissioners of Woods consider it essential that the cottages, situated on the Crown estates, and intended for the occupation of labourers on those estates, should be sufficient in number and suitable in size and construction.

Since 1851 the Commissioners have built 522 new cottages for labourers, and have enlarged, or otherwise improved, 311 existing cottages.

The new cottages are usually built with hollow walls, and almost invariably contain five rooms, with pantry, detached fuel-house and other conveniences, and also with garden and water-supply. Ovens are added where they are necessary. They are usually built in pairs, and, in recent years, the cost of a pair, under ordinary circumstances, has been upwards of £450.

In the enlargement of existing cottages, an endeavour is made to provide, in each case, as much accommodation as is provided in the new cottages.

But I must now draw these remarks to a close with one observation. If any one should be at the pains to read the depressing account of the villages of England published by Dr. Hunter, in the year 1864, in Mr. Simon's invaluable series of Reports to the Privy Council, and then reflect on the mass of effort that has been brought to bear on improving the healthy condition of our village dwellings as well by great owners as by public authorities, he will conclude, as I conclude from observation and from reason, that the present is wholly unlike the past; that we know at what to aim, and that the result is as sure as the aim is true. How to deal with small freeholds, the property of the needy, is a question in which I do not now enter. It is one to be approached with caution. Compulsory closing and destruction may lead to further evils in the country, and to more disastrous crowding into the town. The Royal Commission on the dwellings of the labouring classes will give all the advice which devotedness and ability can bring

to bear on this national problem: only let us seek to save if we can, the haven of simple English life, and peaceful peasant homes.

Earth Closets at Tring.

One point of detail in village administration remains. In a previous section the arrangements for removing excreta by water-carriage adopted by Earl Spencer were described as being typical of this thorough mode of refuse removal. An instance of the other method carried out by individuals with equal perfection on the Rothschild estates should be described, as it is the method best adapted to single or detached cottages, and straggling villages. The closets used are Moule's Patent. They are arranged as follows, every detail being carefully and well constructed:—An ample hut is constructed; on one side of it is a cupboard of about 7 feet high, and area of about 9 feet. This is a receptacle for storing clean dry earth, and will hold about a month's consumption.

Next to it, at the rear, is the door to the back of the closet; above, is the receptacle of dry earth, below, a tank about 2 feet deep for the dejecta.

For a small family about 1 cwt. of earth is required weekly; i.e., about 3 tons annually.

The tank is emptied weekly, i.e., for one cottage, one barrow load; for twenty cottages, one ton—a cart load. To do this, two men, a horse and cart with their care-taker, are practically required; but the same staff will keep 150 cottages, within a reasonable distance, taking 8 tons of dry earth to the cottages, and removing the same, plus the weight and mass of the excreta from the cottages, to the place of deposit; the distance to be traversed from the place where the earth is kept to the drying-house, then to each of the 150 cottages, back to the drying-house, and then ultimately to the land—all these manifestly imply factors varying in every locality. I speak, therefore, but roughly. Besides the man in charge of the drying stove, and the man for the horse and cart, one or more are needed to collect and prepare the untainted earth,

whencesoever obtained, for the 150 cottages; that is to say, about 300 tons annually, or about 1 ton a day. I first said 3 tons a year for each cottage, and here I have said 2 tons. The former amount was the quantity of the earth used by the cottages, I now speak of the *fresh* earth, freshly dug up. The meaning of this will appear directly. At Tring, on the estate of Sir Nathaniel Rothschild, is the central drying kiln, working for about 150 cottages, in five villages, including part of Aylesbury, seven miles off. But at Aylesbury the product is not returned. Only the 52 tons of *dry* earth travel thither annually, or a load weekly. I will not pursue these details, for as I said in every district they must vary. The cost, therefore, also must vary. The principle remains exactly the same. This central kiln supplies the Rothschild cottages at Tring, Aston-Clinton, Weston Turville, Aylesbury, and Buckland. The earth is the detritus of chalk, dug and screened small. This is baked on hot iron plates over a furnace, with an exposed surface of about 80 superficial feet. When heated and dried it is stored under a shed for use, and this is carried on actively in the summer so as to store up under cover for the winter's consumption the requisite tonnage of dry earth. The known quantity for 36 cottages in Tring is taken round weekly, with this reservation, that some cottagers may prefer to fill their closet from their own store, described as before. Therefore their store is supplied with four times the weekly load once a month. This again is only a matter of detail. The earth is taken in sacks, each holding about 200 lbs. This is emptied partly into the hopper, partly into the store closet, as implied above. Then once a week the removal tank is emptied by a handy scoop in a few minutes.

Now the tainted earth so removed is almost inodorous. It is taken back to the central store (weekly)—say from 20 cottages, each day; about 6 tons weekly is thus dried in the kiln, and put in store for a second use. This is taken round in due course, and returned; and this residue, after its second use, is carted to the woods or the fields for manure. These are, therefore, in store always: 1st, pure dry earth; 2nd, the first returns; 3rd, the second returns.

The shed is absolutely inodorous. The same was the case in every cottage that I visited.

The school was in striking contrast with the cottages. It is managed with ordinary so-called dry earth, and the arrangements are offensive and foul—a remark made not for criticism, but for instruction. Mr. Richardson, the intelligent manager of the cottage arrangements, was convinced that no ordinary dry earth (i.e., without kiln,) or ashes, could ever produce the effect always obtained by the method described. It only remains to be said that nothing can be more satisfactory than the result, save only the cost.

A confirmation of the above remarks is given me by the kindness of the Earl of Rosebery in the following statement by Mr. Knight Bruce. I have been unable to examine Mentmore personally, and I am the more indebted for this Paper :—

"At the present time we have about 150 earth closets built in connection with the cottages on the Mentmore estate, and we find the system working admirably. Each cottage, as a rule, is provided with a barn, and under the same roof an earth closet is fixed. The form of apparatus generally used is that known as the 'self-acting' apparatus. A charge of dry earth, about 1½ pints, is delivered automatically on the user of the closet rising from the seat, and effectually conceals the contents of the receptacle; this receptacle should be a water-tight vault of the same width as the closet, of about 4 feet from front to back, and from 2 to 4 feet in depth. The vault should be formed of brickwork and lined with cement. Into this vault the excreta and earth will fall, and when required to be emptied the material is removed through a small door at the back of the closet. After the vault is emptied, dry earth should be spread over the bottom. We find dry-sifted chalk a very good substitute for earth; at the same time it is a powerful absorbent. If the chalk is not sufficiently dry, we place it on the 'drying stone' before using. The product of the closet, namely, chalk and excreta, is placed in a covered shed open at one end, and when required for use is dried on the drying-stone, when it becomes perfectly

inodorous, and this material is used over again in the closet. I would prefer, instead of drying the product on the drying stone, to place it under an open shed, sheltered from rain, and exposing it to wind for about two months, and occasionally turning it over until it becomes sufficiently dry to use over again in the closet. Under this system its value as a manure would be increased.

"It has been estimated that earth used but once in a closet is worth, when dry, from £2 to £3 per ton. The value of the earth manure increases in proportion to the number of times it is passed through the closet.

"On this estate two, even with a horse and cart, are constantly employed emptying the earth-closet vaults. The cart is divided in the centre with a board, one side being used for dry chalk, the other for the contents removed from the closets. Each cottage has its earth-closet emptied twice a week regularly."

It is fair here to say that a well-known sanitary engineer writes to me that, "The difficulty which has always arisen has been caused by the trouble of keeping the closets regularly clean. It has been found by experience that the tenants themselves will not do this, and that the only way is for the sanitary authority in the village to do it themselves. This is all very well where the property belongs to one person, but to get over the difficulties is so serious a matter that in many cases it has proved a failure. In adopting the dry-earth system it must also be remembered that drains have to be laid to take the slop water, and consequently the cost of the earth system, if the village is properly drained, is not so cheap as it would appear at first sight."

From all my enquiries during many years I am satisfied that the Rothschild rural administration is the true and only one, viz. regular and compulsory supervision. This may be by voluntary arrangement in the case of great landlords, or by the sanitary authority, as in towns. But official charge of the scavenging there must be, if cleanliness is to be secured.

PROGRESS.

This brief review of facts in respect of Village Health is like some dramatic scene of horror and of beauty, wherein evil and good contend for victory. In the first pages were two sketches, one of St. Kilda, and one of huts under shadow of the great aqueduct of Carthage. I was impressed in my youth by these contrasts between the loathsomeness and degradation of filth, and the grandeur of efforts made by a great nation for a supply of one of the simple necessaries of man. I can never forget, I now often see, the vision of the massive walls that guarded the bright outpouring of the splendid stream above the oasis of Zagouan, which was conveyed to the city of Dido by an aqueduct, just as in the better-known Campagna of Rome. But so warned and so taught, with what strange amazement did the same youth stand by the wooden undershot wheel as it pumped water impregnated with sewage from the slums of St. Thomas's round the City and the University of Oxford until the year 1856. Not till the cholera year of 1854 was it known that in that famous city the gruel of the county prisoners was made from the same source. Almost till then a merry college-porter was Chairman of the Guardians of the City parishes. The foul cell for the unhappy prostitutes in the Workhouse now pulled down was more loathsome than country kennels which I knew. Most workhouses and workhouse hospitals are now, I believe, fairly good, and there is perhaps no place where the chance of health is greater than in a County Prison. The head of the Cathedral College of Oxford, himself as laborious in scholarship, as broad in his social, political, and scientific interests, was for years the active Chairman of the Committee which has given to this same city an efficient and masterly system of drainage, laid down on the most scientific principles. Fever dens in the hospital a disgrace to any institution, have been replaced by wards

as bright and as good as any fever-stricken wretch, whether poor or rich, could desire for care and for recovery ; while in the laboratories of the University, Burdon Sanderson and his colleagues are investigating the biological conditions under which zymotic diseases flourish or decay, with every appliance in preparation for the complete investigation of these astonishing phenomena.

This is but an example. What has happened in one central city has happened often more quickly, and on a larger scale, throughout the land. It could not be in England as it has been, and is, in the United States, that on virgin prairies there should be laid out with complete knowledge, scientific skill, and patriotic insight, the Model Village. We, with the proud inheritance of the making of England, have also the legacy of many a Lowmarsh. We have to deal with each of these amidst the growing difficulties of increasing population, with the fresh demands and new discontent which education and material surroundings, dazzling every sense, have brought in our day. We cannot, if we would, with Waring, lay out large territories of some square miles, beginning with the church and the school, planted at the central intersecting streets ; placing the cottages and the farm, precisely where on a settled plan they are most handy ; and arranging all their details of water-supply and drainage, just as we lay out the new parts of a modern suburban district. There are no places left where this can be done for the first time in rural England. The attempt was made by O'Connor at Minster Lovell, and it egregiously failed. What can be done has been long begun ; and has produced great fruits by individual and by combined exertion, viz., the education in this matter of the people, under the guidance of scientific and humane men, devoted to the prevention of sickness and of bodily suffering.

We have just seen examples of what the individual exertion of great landowners is doing and has done, we have glanced at the tentative efforts on a vast scale of such persons. The lessons are in every corner of our rural

districts. Public bodies, acting as trustees of the public funds, have long established all over the country examples of what should be aimed at, if even not to be obtained, of the greatest reasonable comfort with the least waste of capital expenditure. As we have gone on, difficulties, not imagined, have arisen and been met: difficulties of political economy, based on limited data; class difficulties, caused by infirmities on either side, by ignorance, and by prejudice. And yet what have we not seen in the last ten years! I pass by, as not belonging to this Paper, the vast exertions in our large cities, the local improvements, the weighty Acts, such as those of Torrens and Cross—I speak only of the position of our village population. On the advice of the Royal Sanitary Commission of 1871, a local authority was appointed for Sanitary affairs in every spot in the country. These were to be under the general guidance of a Central Government Board, which was to have an adequate staff of the most skilled Engineers, Medical advisers, and Administrators. There is no Hamlet, nay, no Cottage, on the remotest hill-side that is not in immediate relation to the central office, which, more probably than any Council in the world, has access to all that is known or can be known, that bears on the public health. And if we were called upon to show proof of the steps that have been gained, two only need be named. The first is the Report of Dr. Thorne and Mr. Power on hospital accommodation for infectious diseases issued two years ago by Dr. Buchanan, the admirable and overworked successor of Mr. John Simon as chief medical adviser to the Board; and the other, the model Bye-laws for Rural and Urban Authorities issued by that faithful and accomplished public servant, Sir John Lambert. This volume of Bye-laws, illustrated by Mr. Rogers Field, whose name is a guarantee for science and practice alike in this work, gives to every village authority that wills it, the exact details of all that is necessary for accurate sanitary appliances. What contrasts between the present and the past these two documents show! On the one hand, the prevention and the

treatment of the chief diseases that call for public surveillance, on the other the state of uncertainty and ignorance of twenty-five years ago. It is perhaps necessary to have lived in both periods to understand the force of this. How much has yet to be done in the arrangement of areas; in the mode of appointing health officers, and in their qualification; in collecting and distributing experience; in hindering wasteful experiments; in avoiding needless expense and needless interference,—need hardly here be said. Two things are certain—the one that the people are becoming rapidly educated in the idea that material order, work, and cleanliness, are among the needful portion of a good, and happy, and useful life; the other, that nothing in this direction should be compulsory by law, unless under the guidance of men of the widest experience and most exact knowledge of what is essential. Such men are being trained in ample numbers to supply the public service. The medical officers of health are the main-spring of the whole machinery. They must be men of strong common-sense, as well as of scientific education. The superior ones, not a large number, must not be in the practice of their profession, and should be responsible only to the higher Boards. All the local sanitary inspectors must make returns to them. Their reports on the multifarious affairs comprised in the term Public Health, should be annually published and presented to parliament, and displayed in every public library through the country. This step alone would disseminate and interchange the varied knowledge acquired throughout the country, and would so educate the whole community that the next generation would look with astonishment at the labours that have been requisite to lay down the principles, and to secure in future to our Garden Island the blessings, of A HEALTHY VILLAGE.

THE END, OR LOWMARSH REVISITED.

I am again on the parish road to Lowmarsh. A quarter of a century has passed by. What have we not seen in this period, whether of human progress, or only of change, or of both? Twice I have been in the United States, before and after the Rebellion, conversing intimately on past, present, and future, with strong backwood men in the clearings and with statesmen in the White House and the Capitol; seeing real life in the detail which builds it up, and hearing the vague generalities about it which mystify. Half-a-million of violent deaths caused by the American rebellion alone; the lightning flash of the Franco-German war; a legion of successes and disasters, bloody and bloodless, all about the world, are some fruits of our civilisation. But what changes, in another way, by the prevention of death and of disease through the awakened care of the Public Health! Since first I was here two Health Officers have been appointed to every district in the country. There is not a hamlet which is not looked after with more or less of discretion and of skill. Is this all sound and right? What has happened here? There, in the distance, are the college and the church. How shall I find them? I am to say something on the health of villages for the Exhibition which the Prince of Wales has set on foot. Yes, thirty years ago, the far-seeing Prince Consort studied with care, among a thousand other things, the dwellings of the poor, whether in villages or in towns. His son now does the same. Another son, Prince Leopold, was in all things nobly following his father's steps in this life—when he passed suddenly to the next. What a multitude of sorrows—and aspirations—what a tale of life! what deaths! But here again is the prim old chapel. It, at all events, is the same. "Here I am," it seems to say, "the World and the 'Bull-

dog' on one side of me—the School and the Church on the other. I stand at the entrance of things, great advocate for freedom and fight." "Maybe the hand-post is wrong: they often is," drily said a sceptical wayfarer once to me on the Chiltern Hills, as passing he saw me on a stormy winter's night struggling to decipher an old sign-post by aid of a coach-lamp. There is no one near me now. I choose the old road, and go once more towards the church. The post-office is there, and the wheelwright, and the dark pond. The cross has been mended. Opposite is a long row of pleasant and well-built cottages, with gardens and flowers. There is a terrace to the gardens keeping the children safe from the road, as they play about the wall of a well like Rachel's well in a drawing of Fra Angelico.

I come to the churchyard. It is larger and fuller. A rusty old iron frame stands erect at the gate to carry such light as old frames with new lamps can, to those who enter. I cannot cross to the college, for a strong wall is now there. I go round. The college is altered. The maidens' castle is gone. Several of the old hovels are renewed but not removed. Though not rivalling the new in appearance, they please the old folk better than the destruction of their young-life memories could have done. Ah! but the cottage with slush, and the muck-heaps, are there. The small free-holder cannot, however, now live in it, for the roof has fallen in. He, though a poor man, will not sell the soil. It is his birthright. "How is it with Stump Well," I said to a group of women with their children? "Oh! walled all round," they said. "The water runs in pipes under the ground all the way to Summers Town. There's taps in oak 'posties.' 'Waste not, Want not' is cut in them all along by the road," she said. "And I can't pitch mother's bucket into the well no more," said a little urchin, throwing a summersault like a Catherine wheel. "What a sell," he said, as he came up the other side. I returned on my way: there was a green path across a field. All around were allotments let by the parson; in them were well grown wheat, and green crops, and roots. Far beyond, too, many new cottages.

The sun was setting on them. One was a long low roof, where they told me was a dispensary, with a room for the doctor and his patients. The policeman lived there too in peace with his family. They help the doctor and the sick.

When I visited Lowmarsh first, no policeman would be safe. There was then a sullen savagery among the people. A post-boy hesitated to drive me through the village by night. Men connected with the Inclosures Act were more than once in fear of their lives, without any special cause. How different is it now! The cottages near the dispensary were set at different angles and aspects, apparently to show there were two ways of looking at things. There were clean well-built pigsties, and good gardens with flowers. It all seemed, however, incomplete. Order was evolving without force. I passed a recreation ground of five acres. There were boys still playing at cricket. I walked on: I came to the old pond again. There was my grey-eyed friend, himself greyer, watching some cattle as they drank. "Bless me," said he, "I thought you were the inspector about the pond again." "Oh, no," said I, "what about it?" "Oh," says he, "since we met we have had a lot of inspectors. Gentlemen say there oughn't to be no roadside ponds. But Beauty here," fondly patting the cow next him, "and I knows better. It's a way water has about here to run into hollows and bide there. 'Very natural,' Beauty thinks, I'll be bound, and very convenient," he said. "Couldn't do without. Some on 'em is all for getting it away. It won't go though. All for the best, and I am much obliged to them all the same," said he. "How are the Hares?" said I. "Oh, all gone, cottage and all. Canvas Hare, as we call him, went to the union at last. Where do you sleep to-night — not at the 'Bulldog'? Good people, though, at the 'Bulldog.' Come with me." We entered a small farmhouse. The passage and the room floor were of stone, clean as the delf-plates on the dresser. A white cloth was laid on an old oaken table with carved oak legs. Upon it were set a home-made loaf, a cheese and milk, and a mug of home-brewed beer. They were

waiting. "We'll say grace," he said; and we sat down three generations of us. The village carrier was there; the mug of beer was for him. In ten minutes we had finished. I observed that little was said during our meal. All rose. "The Lord be praised," he said. In a minute the few plates were gone. A Bible was set down before each of us. My grey-eyed friend began to read, "Blessed are the poor in spirit: for their's is the Kingdom of Heaven." We all read the first part of the Sermon on the Mount, each a verse; with just an occasional literary catastrophe from the youngest and from the carrier. Then the head of the family knelt and prayed a short prayer and rose. "You will sleep here," he said. "Is the room ready, Jane?" "Yes," said she; "and I hope the gentleman won't wonder if he hears us moving about in the morning." "Oh! no," I said, "I shall be up early too." "But it's churning morning," said Jane; "sisters and I begin churning at Three. That's early for such as you. You see, sir, we like to get churning done before the day's work begins at Six." "Do you see the empty chair there?" said the father; "that's her Mother's," said he; "tain't empty though exactly. The children all thinks she is there, and tries to do as she did or would wish them now. That keeps them up, you see. It's our way in Lowmarsh—always was. Don't know how it will be. They disputes so now. They's always making new laws. The've given up bidding us be law for ourselves as they used. It's all very well about cottages; I hold to 'em. But these Hares, the good ones was good in a bad cottage, and the bad one would be bad in a good one. Why, if those old maids was angels they couldn't love one another more than they did. One's gone home. Some on 'em came from London and held a meeting off the Plough t'other day. They said they was just come to throw over the parson and take the land and the farmers and the landlords and the whole lot of us. Many of them said 'Hoorray! come on!' They kept to that some time. Then the good lot said, 'Why, if you don't do your best as you be now, you won't be no better off then. Seems to me,'

says he, 'they that does their best is most ways happy.' Nobody s let alone, sir, now. With their politics and their disputings, life's all a fighting to the end. There is no peace, nor won't be this side of the churchyard. And then? ——"

Jane, who had been standing by the door, an old brass candlestick in her hand, smiling said, but half reprovingly, "Father, you know quite well every one's happy, if he finishes his churning before the day begins."

I observed she now said, "Finish churning before *the day* begins." She first had said "before the *day's work* begins." She now left the room, and I think she meant to give an answer to her father's faltering question, "And then?" And I think she meant "when our *life's work* ends, perhaps daylight begins." But I don't know how this may be.

I went to bed, and half woke as they went downstairs at Three. I know I then muttered "Won't be no rest till the churchyard," and "You have to finish your churning before the day begins." However, I went to sleep again, as we often do while others churn.

I resolved, though, to write one day what I had to tell about Village Health; this resolution was not one of Dante's, as these pages have shown. I wish I could as easily express what I owe to the lessons of Lowmarsh, and to the example of the poor.

If any gentle Reader has had patience to follow this slight sketch of Village Health through its dark hints and its dry details, he may perchance find his interest increased in the problem of Village Life.

For under the word VILLAGE, as we now understand it, even with the limitation of an agricultural, as distinguished from a mining, or a fishing, or a manufacturing village, there lie problems of deep significance in the evolution of society, whether in Indian communities, Teutonic, or British. It suggests much in the history of property and

in the future of the English people. I have not striven to conceal these deep questions, nor yet have I had the rashness, just now, or here, to discuss them. The movement, indeed, of the Rural and the Urban populations of England, as Dr. William Ogle has remarked to me, is one of the gravest subjects of our country districts and of our towns. It is not to be lightly written of. The Local Government Board and the Registrar General's offices are amassing facts and drawing inferences, such as, until the last few years, were unattainable, and such as will form the sound basis of much Social thought.

As regards the other word, HEALTH—Health *personal*, Health *national*, or that wider kind, *comparative* National Health, which looms large in the biological science of the future, and which treats of the development, the inheritance, the tolerations and adaptations of our race, and which lies closely allied to, and at the root of, those strange problems in comparative pathology, that are concerned with the causes and prevention of diseases common to the rest of the animal world and to man, or communicable from them to ourselves, I have not sought to veil my profound conviction, that while the material surroundings of man are important factors in the formation of his character, it will be a fatal plunge for any people that think that these alone can regulate their happiness or guide our Higher Nature to its appointed end.

IV.

Readers approaching the subject of this Paper for the first time may find the following Books useful as an introduction thereto :—

Handbook of Hygiene and Sanitary Science. By Dr. George Wilson.

Annotated Model Bye-laws of the Local Government Board. Knights.

Dangers to Health. By T. Pridgin Teale.

Observations on the Construction of Healthy Dwel'ings. By Captain Douglas Galton.

Village Communities. By Sir Henry J. Maine.

The English Village Community. By F. Seebohm.

The Sanitary Condition in City and Country Dwelling Houses. By George E. Waring.

Village Improvements and Farm Villages. By George E. Waring.

Village Politics. By C. W. Stubbs.

Public Hygiene in America. By H. J. Bowditch.

Handy Book of Cottage Hospitals. By Horace Swete.

Use and Influence of Hospitals for Infectious Diseases. Annual Report of the Local Government Board, 1880–81.

State of the Dwellings of Rural Labourers. By Dr. Hunter. Report of Medical Officer of Privy Council, (7th), 1864.

Report Public Health Act (1875) *Amendment Bill,* April 5, 1878.

The Dwellings of the Labouring Classes. By H. Roberts.

The Cottage Register. Forms for Registering the Sanitary Conditions of Villages. By Dr. Acland, F.R.S. (Parker, Oxford).

A Manual of Practical Hygiene. By E. A. Parkes.

Personal Care of Health. By E. A. Parkes.

NOTE ON REGISTERS OF COTTAGES.

After the Horwood Fever, to which allusion has been made in the text, it seemed to me that the first step to a complete reform of the condition of Cottages, of Villages, and of Artizans' dwellings in urban and suburban districts all over the kingdom, would be to obtain a Register of their condition.

With such a Register on his table, every Surveyor, Landowner, Clergyman, or Medical Officer would have the facts of the case before him.

The Form which here follows has been in use in some districts for many years, having been first issued in 1861. Extended knowledge has made me more than ever desire to see the use of such Forms universal.

Each leaf represents one Cottage. Every Cottage should have the door numbered to tally with the Register.

Any intelligent person can fill up the Forms. A village carpenter can fill in the record of a village in a day or two.

Every Vestry, Local Board, or Health Authority would find it very convenient to keep such Registers in its office.

The various Public Health Acts, imposing, as they do, the detailed charge of the Public Health on the Local Authorities, make it more than ever desirable that all Local Officers of Health should possess such records for reference of the state of the Cottages, Hamlets, and Villages within their districts. There is no doubt they do now possess such accounts more or less systematically over the whole country, either themselves or by means of their Sanitary Inspectors. It is not therefore so much for Authorities that I venture to take this opportunity of recommending these or some such Registers, but for owners of Cottage Property.

These Forms have been sold at cost price by Messrs. Parker, of Oxford, in covers with 50 and 100 leaves (or cottages) in each book. Every owner of cottages therefore can, and should, have such a record on his table. A benevolent and able landlord lately discovered by a systematic enquiry that he had near his own house sixty cottages without a fireplace in any bedroom. This fact alone may excite many non-resident owners to ascertain exactly in this simple way the state of every house. What he is to do is of course another and further question. To have the knowledge is one help to the solution.

FORM OF COTTAGE REGISTER, EACH LEAF IN A VOLUME OF 50, OR 100, REPRESENTING ONE COTTAGE.

*Date*_____ 18 .

PARISH OF_____ COTTAGE, NO._____

Situation_____

Owner_____

Tenant.	Employer.

Married?	Children.	Ages. Boys.	Girls.

Number and Dimensions of Rooms used as

Bed-room.	Living-room.	Wash-house.
ft. by . high.	ft. by . high.	
ft. by . high.	ft. by .	
ft. by . high.		

What rooms have fireplaces?

Windows?	How many square feet of glass?	Can they open fully?	Are they near the floor or ceiling?	Are there windows on opposite sides of Cottage?
In bedroom 1				
2				*Upstairs*
3				*Downstairs*
In downstairs rooms 1				
2				

Is there a porch, and back-door?

Are there, or when were there, any Lodgers; and how many, Male or Female?

Condition of Drainage and nature of Privy, Earth-closet, or analogous arrangement?

Pig-sty?

Surrounding Ground drained, or capable of Drainage?

State of Repair?

Probable Cost of repair?

Is the Cottage worth repair, or would it be better to re-build it?

Is it wanted in the Neighbourhood, or had it better be placed elsewhere; and where?

Water-Supply.
Well.
Spring.
Tank.
Conduit.
Quality.
Nearness to Cesspool or Drain.

GENERAL REMARKS.

Under this head may be recorded any social or other memoranda.

*Estimate made by*_____

Report { *made by*_____ / *examined by*_____